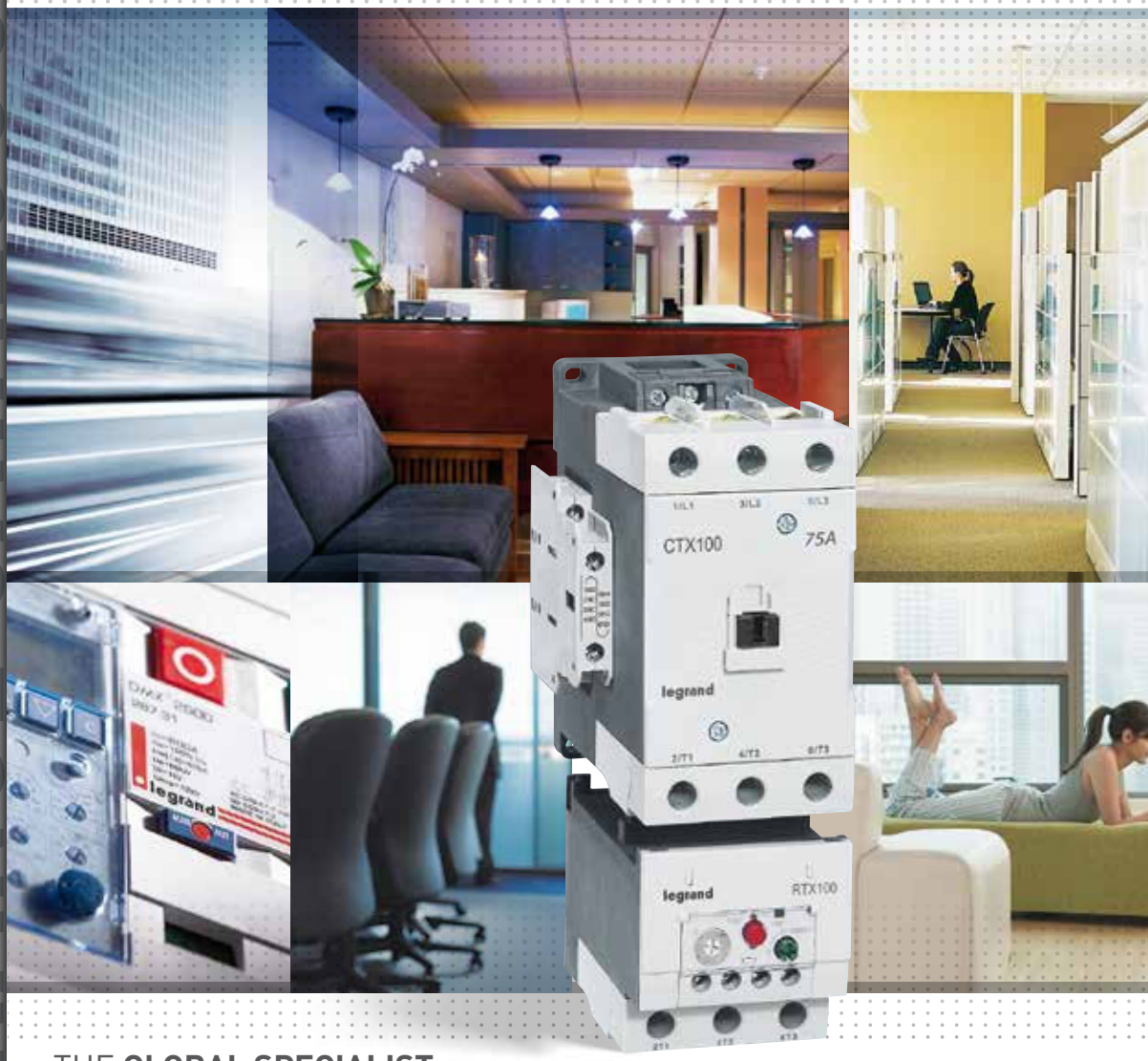
POWER & PROTECTION RANGE CATALOGUE



THE **GLOBAL SPECIALIST**
IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES

JULY
2016

legrand®
LIVE THE ADVANTAGE

DMX³

P. 00-00
DMX³ 2500/4000/6300 air circuit breakers from 630 to 6300 A

P. 00
DMX³ 2500/4000/6300 microprocessor based protection units

DRX

P. 00
DRX 100 thermal-magnetic MCCBs from 60 to 100 A

P. 00
DRX 100 accessories for DRX MCCBs

DPX³

P. 00-00
DPX³ 160 thermal magnetic MCCBs from 16 to 160 A

P. 00
DPX³ 160 equipment and mounting accessories

P. 00
DPX³ 630 thermal magnetic release MCCBs from 250 to 630 A

P. 00
DPX³ 630 S2 electronic release MCCBs from 250 to 630 A

P. 00
DPX³ 1600 thermal magnetic release MCCBs from 630 to 1250 A

P. 00-00
DPX³ 1600 S2 electronic release MCCBs from 630 to 1600 A

P. 00-00
Residual current relay and coils

P. 00
DPX³-I trip-free switches 160 to 1600 A

CTX³

P. 00
Mini contactors CTX³ 6 to 16 A industrial contactors

P. 00
Thermal relays and accessories for mini contactors

P. 00
CTX³ accessories

P. 00
CTX³ spare coils

Capacitors

P. 00
Alpivar² Capacitors

P. 00
Alpimatic Racks

P. 00
Alpican resin filled capacitor for reactors

P. 00
Reactors and power factor controllers

P. 00
DMX³-I
2500/4000/6300
trip free switches
from 1250 to 6300 A

P. 00-00
DMX³
2500/4000/6300
auxilliaries and
accessories

P. 00
DRX 100
electrical
accessories

P. 00
DPX³ 250
thermal magnetic
MCCBs from
100 to 250 A

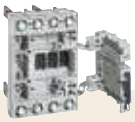
P. 00
DPX³ 250
electronic release
MCCBs from
40 to 250 A

P. 00
DPX³ 250
equipment
and mounting
accessories

P. 00
DPX³ 160 and
250 common
auxiliaries and
accessories

P. 00
DPX³ 630
Sg electronic release
MCCBs from 250 to
630 A

P. 00
DPX³ 630
earth leakage
modules



P. 00-00
DPX³ 630
equipment and
accessories

P. 00-00
DPX³ 1600
Sg electronic
release MCCBs
from 630 to 1600 A

P. 00-00
DPX³ 1600
equipment and
accessories

P. 00
DPX³ 630 and 1600
common auxiliaries

P. 00
DPX³ 160, 250,
630 and 1600
power supervision
system

P. 00
DPX³
automatic transfer
switch

P. 00
3-pole contactors
CTX³ 9 A to 100 A
industrial contactors

P. 00
3-pole contactors
CTX³ 130 A to
800 A industrial
contactors

P. 00-00
Thermal relays
RTX³ for CTX³
3-pole industrial
contactors

P. 00
4-pole contactors
CTX³ 40 A to
900 A industrial
contactors and
spare coils

P. 00
Control relays
CTX³

P. 00
MPCBs MPX³
motor protection
circuit breakers
from 0.16 A to
100 A

P. 00
MPCBs MPX³
accessories

P. 00
Alpimatic
Racks with
detuned reactors

P. 00-00
Alpimatic &
Alpistatic automatic
capacitor banks

P. 00
Alpican
resin filled
capacitors

P. 00
Alpican
gas filled
capacitors

DX³

P. 00
DX³ MCBs
MCBs for AC applications till 63 A

P. 00
DX³ MCBs
MCBs for AC applications 80 - 125 A

P. 00
DX³ MCBs - 50 kA
thermal magnetic MCBs from 10 A to 63 A

P. 00
DX³
for photovoltaic applications

P. 00
DX³ RCBOs
RCBOs assembled for AC applications upto 63 A

P. 00
DX³ RCBOs
RCBOs compact for AC applications upto 32 A, 6 kA

P. 00-00
DX³
time switches

P. 00
DX³
contactors

P. 00
EMDX³ electrical energy meters DIN rail mounting

P. 00
EMDX³ multi-function measuring units DIN rail mounting

P. 000
SPDs
Class II (T2) low voltage SPDs with integrated protection

P. 000
SPDs
SPDs for telephone lines

P17 Tempra Pro, Hypra and Plugs & Sockets

P. 000-000
P17 Tempra Pro IP 44 - LV 16 and 32 A sockets, plugs, mobile sockets, appliance inlets and interlocked switched sockets

P. 000
P17 Tempra - domestic pin configuration 16 A - 250 V

P. 000
P17 Tempra combined units LV 16 to 63 A interlocked switched sockets

P. 000
P17 worksites combined units individual units

P. 00
DX³ MCBs
MCBs for DC applications 63 A

P. 00
DX³ MCBs - 16 kA thermal magnetic MCB from 6 A to 125 A

P. 00
DX³ MCBs - 25 kA thermal magnetic MCBs from 6 A to 125 A

P. 00
DX³ MCBs - 36 kA thermal magnetic MCBs from 10 A to 80 A

P. 00
DX³
for RDSO

P. 00
DX³ isolators
ISs for AC applications upto 125 A

P. 00
DX³ RCCBs
RCCBs for AC applications upto 63 A

P. 00
DX³ RCCBs
RCCBs for AC applications 80 - 100 A

P. 00
DX³ RCD a
dd on module
For 125 A

P. 00
DX³ auxiliaries
Auxiliaries common for MCBs, Isolators, RCCBs & RCBOs

P. 246
DX³ auxiliaries
Manual changover switch

P. 276
DX³ RCD add on module with measurement & metering

P. 00
CX³ changeover switches, push-buttons, control switches and LED indicators

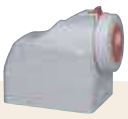
P. 00-00
EMDX³
communication and supervision

P. 00-00
EMDX³
measurement and control of electric equipment

P. 00
SPDs
Class I (T1) low voltage SPDs

P. 00
SPDs
Class II (T2) low voltage SPDs

P. 000
P17 Tempra IP 44 - ELV 16 and 32 A



P. 000-000
P17 Tempra Pro
IP 66/67
LV 16 and 32 A

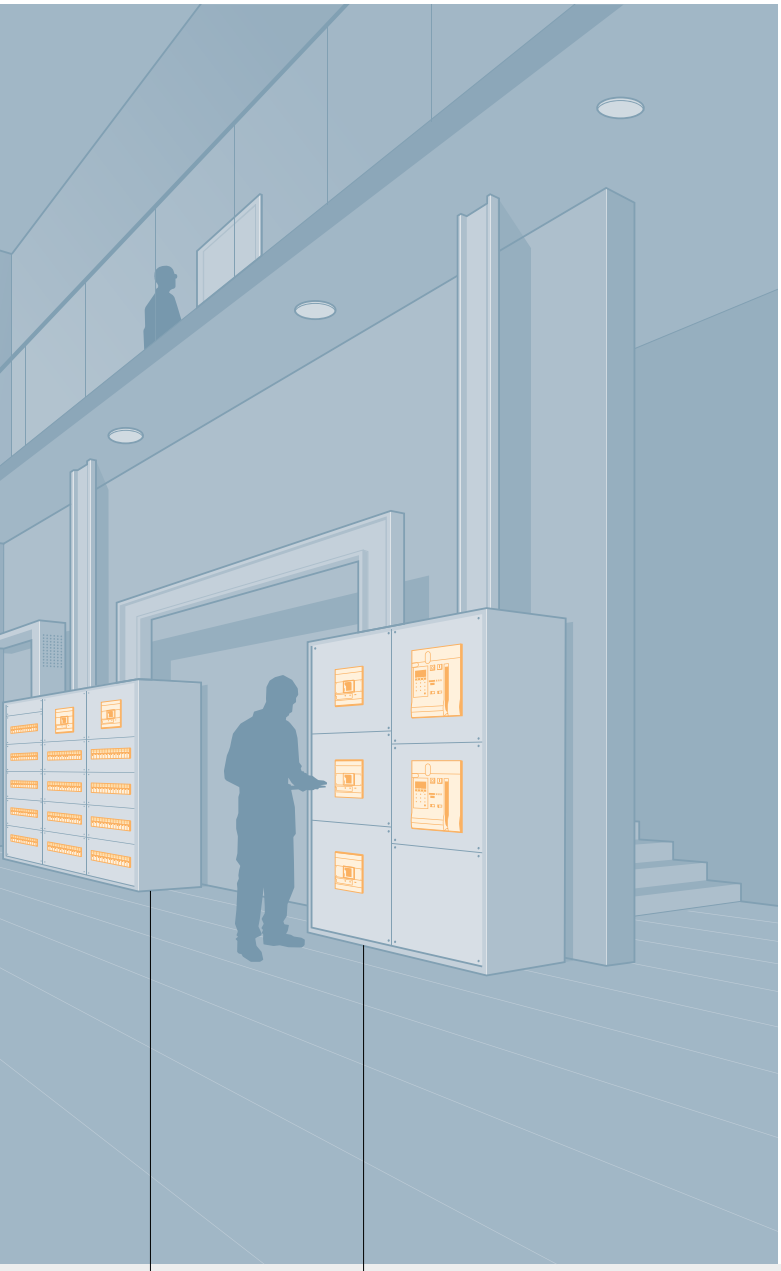
P. 000
P17 Tempra IP 66/67 - LV 63 and 125 A

P. 000-000
P17 Tempra combined units to be composed

P. 000
P17 worksites combined units floor cabinet

DMX³ ACB's

up to 6300 A



EFFICIENT PROTECTION AND CONTROL FOR ALL TYPE OF BUILDINGS

Electrical panel equipped with DPX³ MCCB's and modular MCB's up to 1600 A

Main electrical panel equipped with DMX³ ACB's and DPX³ MCCB's up to 6300 A

Thanks to DPX³ range of MCCB's and to DX³ MCB's you can benefit of the advantages of a complete protection system at any level of the installation

Optimized performance
up to 6300 A

- DMX³ air circuit breakers are available in three frame sizes for three breaking capacities:
  50 kA for the DMX³ N designation, 65 kA for DMX³ H and 100 kA for DMX³ L.
- The range covers 11 rated currents, between 630 A and 6300 A.
- All range of DMX3 air circuit breakers is available in fixed and draw-out version.

BREAKING CAPACITIES AND RATED CURRENTS

	630 A	800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A	5000 A	6300 A
DMX³-N	**50 kA** I FIXED/DRAW-OUT									-	
DMX³-H	**65 kA** I FIXED/DRAW-OUT									-	
DMX³-L	**100 kA** I FIXED/DRAW-OUT										

OVERAL DIMENSIONS AND WEIGHT

Fixed version

		Height	Depth	Width	Weight (1)
FRAME 1: DMX³-N 2500 DMX³-H 2500	**3P**	419 mm	354 mm	273 mm	41 kg
	4P	419 mm	354 mm	358 mm	48 kg
FRAME 2: DMX³-L 2500 DMX³-N/H/L 4000	**3P**	419 mm	354 mm	408 mm	59 kg
	4P	419 mm	354 mm	538 mm	76 kg
FRAME 3: DMX³-L 6300	**3P**	419 mm	354 mm	797 mm	118 kg
	4P	419 mm	354 mm	1067 mm	152 kg

Draw-out version

		Height	Depth	Width	Weight(1)
FRAME 1: DMX³-N 2500 DMX³-H 2500	**3P**	465 mm	433 mm	327 mm	77 kg
	4P	465 mm	433 mm	412 mm	94 kg
FRAME 2: DMX³-L 2500 DMX³-N/H/L 4000	**3P**	465 mm	433 mm	425 mm	108 kg
	4P	465 mm	433 mm	555 mm	137 kg
FRAME 3: DMX³-L 6300	**3P**	465 mm	433 mm	804 mm	216kg
	4P	465 mm	433 mm	1064 mm	274 kg

(1) For trip-free switches, please consult us
Note - Accuracy of dimensions = ± 2mm

OTHER ELECTRICAL FEATURES

Rated operational voltage Ue: 690 VAC 50/60 Hz
Rated insulation voltage Ui: 1000 VAC 50/60 Hz
Rated impulse withstand voltage Uimp: 12 kV
Category of use: B

Ambient temperature: -5° C to 70° C
Humidity: + 55° C with relative humidity of 95%, conforms to IEC 68-2-30

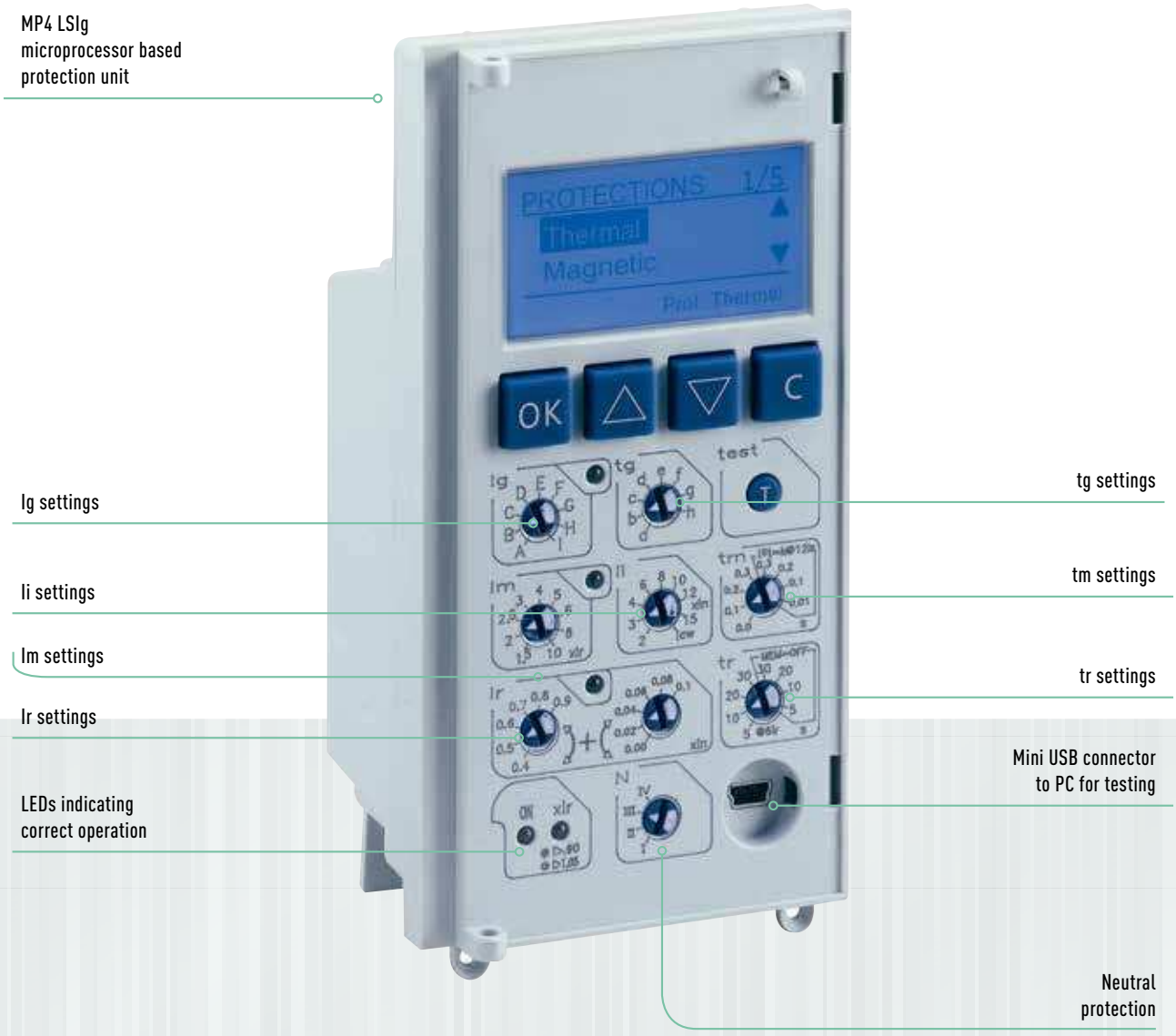
LEGRAND ADVANTAGE

The over all dimensions of the breaker contribute considerably to an efficient use of the space inside the electrical panel. The constant depth for all the rated currents facilitates connection of the busbars.

Precise & user friendly

LCD protection units

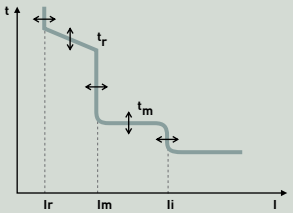
- Besides their easy mounting and connection, strength and good continuity of operation, 2 types of electronic units allow precise adjustment of different limits for current values and time delay.
  The result is an efficient protection against electrical faults while maintaining total discrimination with downstream breakers.
- The LCD display lets you monitor the measured current values and informs you on fault adjustment and log (the cause of last trip and maintenance operations).



MP4 LSI MICROPROCESSOR BASED PROTECTION UNIT CAT. N° 0288 01

The following settings are adjusted using rotary selector switches:

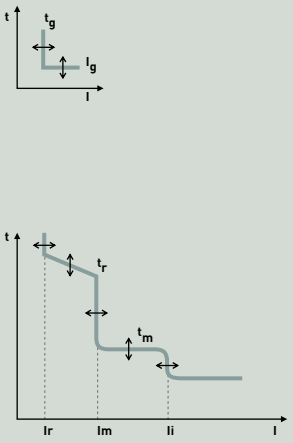
- Long time delay protection against overloads: Ir from 0.4 to 1 x In (6 +6 steps) on two selectors (0.4-0.9, by steps of 0.1 and 0.0-0.1, by steps of 0.02)
- Long delay protection operation time: tr - at 6 x Ir (4 + 4 steps) tr = 5-10-20-30s (MEM ON) 30-20-10-5s (MEM OFF)
- Short time delay protection against short circuits: Im from 1.5 to 10 x Ir (9 steps) Im = 1.5-2-2.5-3-4-5-6-8-10 x Ir
- Short time delay protection operation time: tm from 0 to 0.3s (4 + 4 steps) tm = 0-0.1-0.2-0.3s (t = cost), 0.3-0.2-0.1-0.01s (I^2t = cost)
- Instantaneous protection against very high short circuits Ii from 2 to 15 x In or Icw (9 steps) Ii = 2-3-4-6-8-10-12-15 x In or Icw
- Neutral protection IN = I-II-III-IV x Ir (0-50-100-100 %)



MP4 LSIg MICROPROCESSOR BASED PROTECTION UNIT CAT. N° 0288 02

The following settings are adjusted using rotary selector switches:

- Long time delay protection against overloads: Ir from 0.4 to 1 x In (6 +6 steps) on two selectors (0.4-0.9, by steps of 0.1 and 0.0-0.1, by steps of 0.02)
- Long delay protection operation time: tr - at 6 x Ir (4 + 4 steps) tr = 5-10-20-30s (MEM ON) 30-20-10-5s (MEM OFF)
- Short time delay protection against short circuits: Im from 1.5 to 10 x Ir (9 steps) Im = 1.5-2-2.5-3-4-5-6-8-10 x Ir
- Short time delay protection operation time: tm from 0 to 0.3s (4 + 4 steps) tm = 0-0.1-0.2-0.3s (t = constant), 0.3-0.2-0.1-0.01s (I^2t = constant)
- Instantaneous protection against very high short circuits Ii from 2 to 15 x In or Icw (9 steps) Ii = 2-3-4-6-8-10-12-15 x In or Icw
- Earth fault current: Ig from 0,2 to 1 x In (9 steps)
- Time delay on earth fault tripping: tg from 0,1 to 1 x In (4 steps) both for "t" and "I^2t" constant
- Neutral protection IN = I-II-III-IV x Ir (0-50-100-100 %)



INFORMATION

All DMX³ breakers are factory equipped with any MP4/MP6 protection unit LSI or LSIg according to your requirements.
You just need to select and indicate the 2 catalogue numbers (1 for the breaker and 1 for the tripping unit).

LEGRAND ADVANTAGE

All protection units are equipped with batteries so you can monitor the parameters even when the breaker is not connected.

Innovative & user friendly
touch screen protection units

- MP6 electronic protection units are equipped with a colour touch screen, particularly user friendly, thanks to intuitive icon-based navigation system. The colour display provides a clear presentation of the parameters of the installation.
- Touch screen protection units integrate all the functions of LCD tripping units and have an advanced measurement function which, in addition to monitoring currents, can also be used to display voltages, active and reactive powers, frequency, power factor, harmonics and also energy.
- Alarms can be programmed on a number of these parameters: max. voltage, min. voltage, voltage imbalance, max. and min. frequency, etc.

Colour touch screen

Settings lock

LEDs indicating correct operation, pre-alarm and alarm for overload and temperature

Mini USB port for PC connection

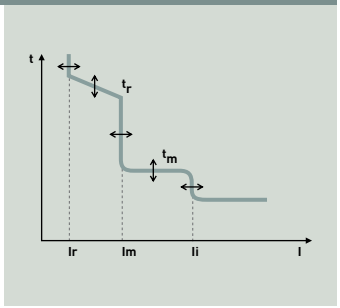
ON button

MP6 LSI TOUCH SCREEN PROTECTION UNIT CAT.NO 0288 03

Tripping curve preview

The following settings are adjusted using the touch screen:

- Long time delay protection against overloads: **Ir**
- Long delay protection operation time: **tr**
- Short time delay protection against short circuits: **Im**
- Short time delay protection operation time: **tm**
- Instantaneous protection against very high short circuits: **Ii**
- Neutral protection: **N**

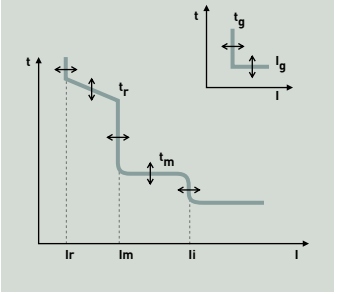


MP6 LSIG TOUCH SCREEN PROTECTION UNIT CAT.NO 0288 04

Earth fault tripping curve preview

The following settings are adjusted using the touch screen:

- Long time delay protection against overloads: **Ir**
- Long delay protection operation time: **tr**
- Short time delay protection against short circuits: **Im**
- Short time delay protection operation time: **tm**
- Instantaneous protection against very high short circuits: **Ii**
- Earth fault current: **Ig**
- Time delay on earth fault tripping: **tg**
- Neutral protection: **N**



LEGRAND ADVANTAGE

The icon-based interface of the management software and the innovative touch screen technology used for MP6 tripping units simplify setting and preparing operations of the DMX³ circuit breaker.

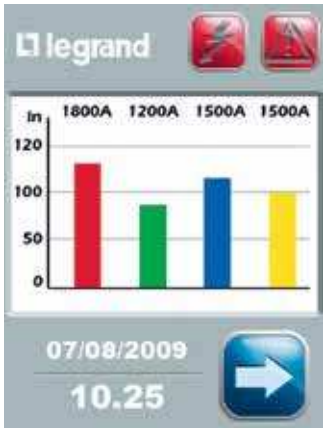
INFORMATION

The MP4 and MP6 electronic protection units can communicate via an RS-485 port.
This port is used for remote monitoring and management of the devices in the installation, using the MODBUS protocol. It is therefore possible to control circuit breaker opening and closing, display the electrical parameters and detect all the alarms generated by each device, from a PC.

Innovative & user friendly
touch screen protection units (contd.)

- MP6 electronic protection units collect all the useful information in 5 sections, each one easily reachable via the main menu in order to allow an efficient control. Navigation through these sections is very simple thanks to the arrows at the bottom of each page.
- MP6 electronic protection units have an intuitive graphical interface. All useful information and selected settings are easy to understand and visible at a glance. For example current values can be visualized on the starting page thanks to a histogram. Different other settings can be simultaneously displayed on the "settings" screen in order to have a global view.

STARTING MENU



This menu displays the values of I_1, I_2, I_3 and I_N as a diagram, the date and the hour, and the alarm icon.
If the breaker opens following an electrical fault a specific icon will appear on the upper part of the screen.
Pressing this icon will open a new window showing the cause of the last event.

Other possible actions:
- Right arrow icon: access the main menu
- Alarm icon: preview the cause of the alarm in course

MAIN MENU

The main menu allows accessing different windows for setting different parameters of the breaker or previewing measured values, battery status, tripping history, etc.

The following accesses are possible:

1 Setting according to the tripping curves (current and time)
2 Access tripping unit settings (luminosity, contrast and sound volume)
3 Access to general information of the breaker
4 Back to the previous page
5 Access measured values menu
6 Access archives
7 Preview battery charging status

INFORMATION

• The following events and values are registered into memory and can be accessed via specific menu: cause of the last event, event counter, events history with date and hour, alarms history with date and hour

• MP6 tripping units allow following application: logical selectivity, management of non priority loads, contact management (with Cat.No 0288 12)

• MP6 tripping units allow following alarms: power reverse, current imbalance, maximum and minimum voltage values U1N, U2N, U3N, maximum currents I1, I2, I3, voltage imbalance (phase-neutral), inversed phase rotation, maximum and minimum frequency values.

PROTECTIONS SETTING MENU

Vertical arrows allow scrolling between different electrical parameters:
Ii, Im, tm, Ir, tr, Ig, tg, etc.
Pressing horizontal icons gives access to corresponding windows allowing value settings. Each value can be increased/decreased, validated or suppressed.
The values need to be saved into memory at the end of the process, for each setting.

MEASURED VALUES MENU

This window allows previewing of measured values for:
• Currents
• Voltages (Ph/N and Ph/Ph)
• Active and reactive powers
• Power factor (total and per phase)
• Active and reactive energy
• Harmonics (for currents and voltages)
Pressing **I**, **m**, **M** and **avg** icons at the bottom of the window will display respectively:
instantaneous, minimum, maximum and average value of electrical parameters.

Fast clipping control accessories

- You can remotely control the DMX^3 with the help of its accessories: shunt trips, undervoltage releases, motor operators and closing coils.
- All the control accessories are simply clipped on to the front panel of the circuit breaker, which is especially configured in order to facilitate the clipping.
- Every type of accessory is compatible with its own location, in order to avoid any possible mistake.

All control accessories can be easily installed without any special tool and in a very short time.
The installation is to be done on the front panel of the air circuit breaker. In that way, the separation between power and control circuits is guaranteed.

SHUNT TRIP

Shunt trips are devices used for the remote instantaneous opening of the air circuit breaker. They are generally controlled trough an NO type contact. The actual offer of shunt trips proposes different supply voltages (from 24 V to 415 V), compatibles with AC and DC currents. The shunt trips are already equipped with a special fast connector, to be directly inserted into auxiliary contacts block. An auxiliary contact is connected in series with the coil, cutting off its power supply when the main poles are open.

Technical characteristics:
- Nominal voltage Un: 24 V~/⎓; 48 V~/⎓; 110 V~/⎓; 220 V~/⎓; 415 V~
- Tolerance on nominal voltage: 70 to 110% Vn
- Maximum power consumption (max.power for 180 ms): 500 VA~/500 W ⎓
- Continuous power: 5 VA~/5 W ⎓
- Maximum opening time: 30 ms
- Insulation voltage: 2 500 V 50 Hz for 1min
- Endurance on pulse: surge proof 4 kV 1.2/50 µs

UNDERVOLTAGE RELEASE

Undervoltage releases are devices which are generally controlled by an NC type contact. The trigger instantaneous opening of the circuit breaker if their supply voltage drops below a certain threshold and in particular if the control contact opens. These releases are equipped with a device for limiting their consumption after the circuit has been closed.

Technical characteristics:
- Nominal voltage Un: 24 V~/⎓; 48 V~/⎓; 110 V~/⎓; 220 V~/⎓; 415 V~
- Tolerance on nominal voltage: 85 to 110% Vn
- Maximum power consumption (max.power for 180 ms): 500 VA~/500 W ⎓
- Continuous power: 5 VA~/5 W ⎓
- Opening time: 60 ms
- Insulation voltage: 2500 V 50 Hz for 1min
- Endurance on pulse: surge proof 4 kV 1.2/50 µs

CLOSING COILS

These coils are used for remotely controlling the closing of the power contacts of the circuit breaker. The springs of the circuit breaker are to be loaded prior to the action of the closing coils. They are controlled byan NO type contact.

Technical characteristics:
- Nominal voltage Un: 24 V~/⎓; 48 V~/⎓; 110 V~/⎓; 220 V~/⎓; 415 V~
- Tolerance on nominal voltage: 70 to 110% Vn
- Maximum power consumption (max.power for 180 ms): 500 VA~/500 W ⎓
- Continuous power: 5 VA~/5 W ⎓
- Maximum closing time: 50 ms
- Insulation voltage: 2500 V 50 Hz for 1min
- Endurance on pulse: surge proof 4 kV 1.2/50 µs

LEGRAND ADVANTAGE

Electrical connection is made in no time thanks to the fast connector supplied on all above accessories.

NUMBER OF CONTROL AUXILIARIES FOR DMX³ = 3

Shunt trip: 1
Undervoltage release: 1
Closing coils: 1

Easy identification of control accessories

- Electrical auxiliaries are connected on the front panel on terminal blocks
  provided for this purpose. Accessories are identified on the front panel.
- As the cover has window, it is easy to know which devices are fitted on the device breaker.

MOTOR OPERATORS

Motor operators, are used for remotely reloading the springs of the circuit breaker mechanism immediately after the device closes. The device can thus be re-closed almost immediately after an opening operation.
To motorise a DMX³ it is necessary to add a release coil (undervoltage release or shunt trip) and a closing coil.
If the supply voltage of the controls fails, it is still possible to reload the springs manually. Motor-driven controls have "limit switch" contacts which cut off the power supply of their motor after the springs have been reloaded. Motor operators are easy to mount, with only three screws.

Technical characteristics:
- Nominal voltage Un:
  24 V~/⎓, 48 V~/⎓, 110 V~/⎓,
  230 V~/⎓ , 415 V~
- Tolerance on nominal voltage:
  85 to 110% Vn
- Spring reloading time: 5s
- Maximum power consumption:
  140 VA~/140 W ⎓
- Starting current: 2 up to 3 In 0.1 s
- Maximum cycle: 2/min

SAFETY AND PADLOCKING ACCESSORIES FOR AN INCREASED SECURITY

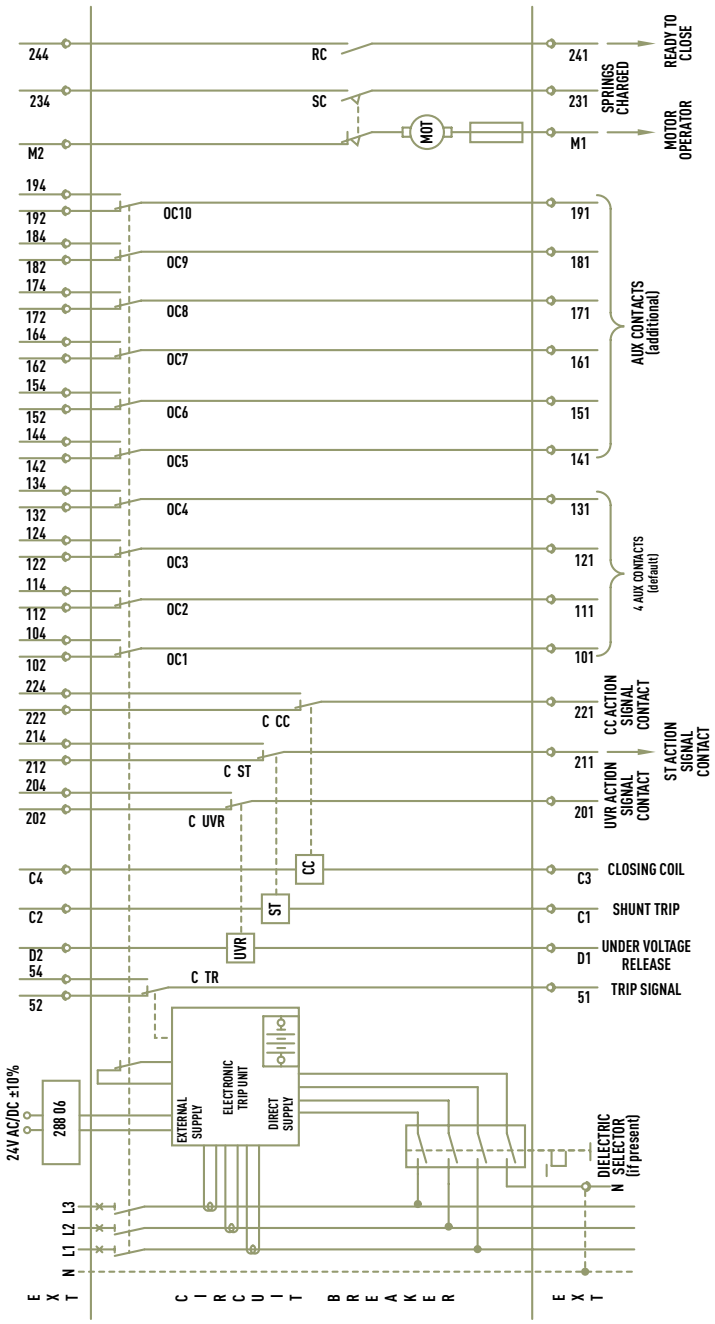
The DMX³ circuit breakers draw-out types are delivered as standard with safety padlocking shutters preventing access to live terminals. They have a number of other safety devices, such as:
- Key-operated locks:
  Main contacts open
  Circuit breaker in draw-out position
- Padlocks for:
  Main contacts open
  Contact shutters closed (for draw-out position)
- Door locking in order to prevent the opening of the electrical switchboard door when the contacts of the ACB are closed.

Fixed version equipped with padlocking system

Draw-out version equipped with key-operated locks

SIGNALLING CONTACTS

All DMX³ air circuit breakers are equipped as standard with 4 auxiliary contacts (2 NO and 2 NC type) and one signalling contact for the shunt trip (NO type).



Connection: maximum adaptability

- The fixed version of DMX^3 is equipped with rear terminals for horizontal connection with bars.
- You can change connection type according to your needs.

FIXED VERSION-CHOOSE YOUR CONNECTION ACCESSORIES: 3 POSSIBILITIES

The type of rear terminals
can be easily changed according to your needs.

The breaker is supplied with rear terminals for horizontal connection

REAR TERMINALS FOR FLAT CONNECTION

Frame 1:	Frame 2:	Frame 3:
3P: Cat. N°. 0288 84	3P: Cat. N°. 0288 92	3P: Cat. N°. 0288 92 x 2
4P: Cat. N°. 0288 85	4P: Cat. N°. 0288 93	4P: Cat. N°. 0288 93 x 2

REAR TERMINALS FOR VERTICAL CONNECTION

This type of connection uses 2 accessories:
the previous rear terminals for flat connection,
which must be equipped with the vertical ones.

Frame 1:	Frame 2 and 3(1):
3P: Cat. N°. 0288 84 + 0288 82	3P: Cat. N°. 0288 92 + 0288 94
4P: Cat. N°. 0288 85 + 0288 83	4P: Cat. N°. 0288 93 + 0288 95

(1) For frame 3 the quantity is multiplied by 2

SPREADERS

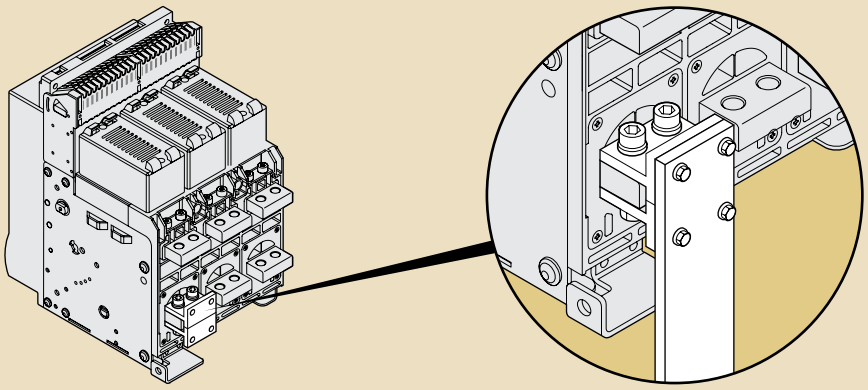
For any situation requiring a bigger width
for a safe connection (i.e. aluminium bus bars).

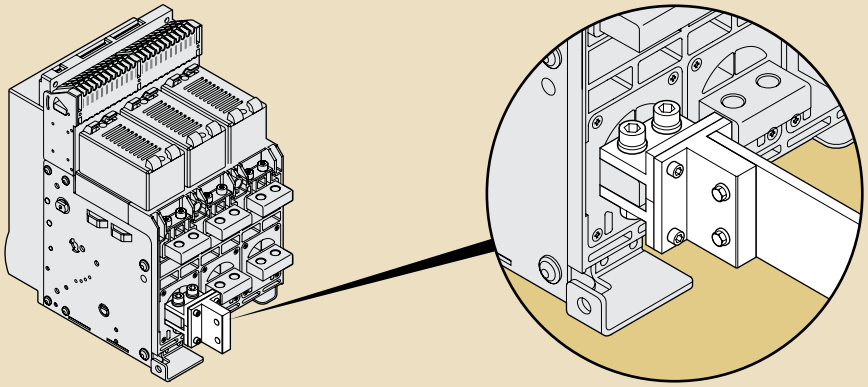
Frame 1:
3 types of accessories
- For flat connection
3P: Cat. N°. 0288 86
4P: Cat. N°. 0288 87

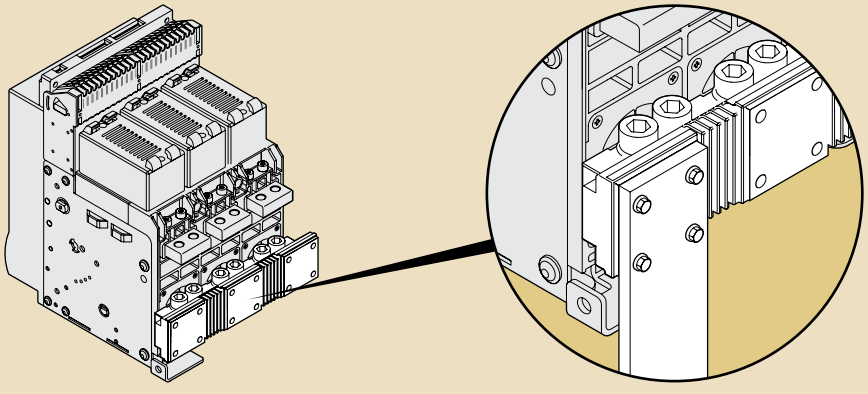
- For vertical connection
3P: Cat. N°. 0288 88
4P: Cat. N°. 0288 89

- For horizontal connection
3P: Cat. N°. 0288 90
4P: Cat. N°. 0288 91

FIXED VERSION: EXAMPLES OF CONNECTIONS







Connection:
maximum adaptability (contd.)

The draw-out version is equipped with rear terminals for flat connection with bars.

DRAW-OUT VERSION-CHOOSE YOUR CONNECTION ACCESSORIES

Draw-out version of the DMX³ breakers is supplied with rear terminals for flat connection with bars. You can easily transform those terminals into vertical or horizontal type by using the unique reversible connector.

2 TYPES OF FIXING
Reversible connector for vertical or ...

... horizontal connection.

Frame 1:	Frame 2:	Frame 3:
3P: Cat. N°. 0288 96	3P: Cat. N°. 0288 94	3P: Cat. N°. 0288 94 x 2
4P: Cat. N°. 0288 97	4P: Cat. N°. 0288 95	4P: Cat. N°. 0288 95 x 2

The breaker is supplied with rear terminals for flat connection

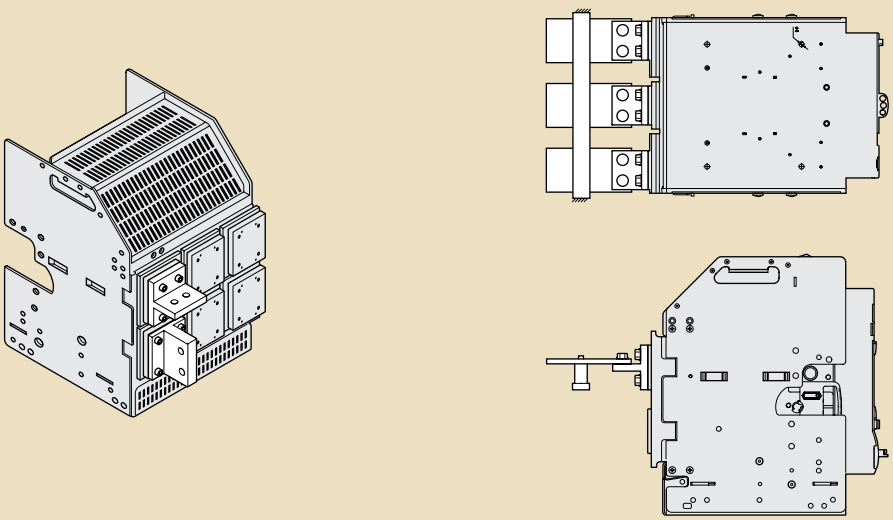
FLAT CONNECTION USING THE REAR TERMINALS OF THE BREAKER

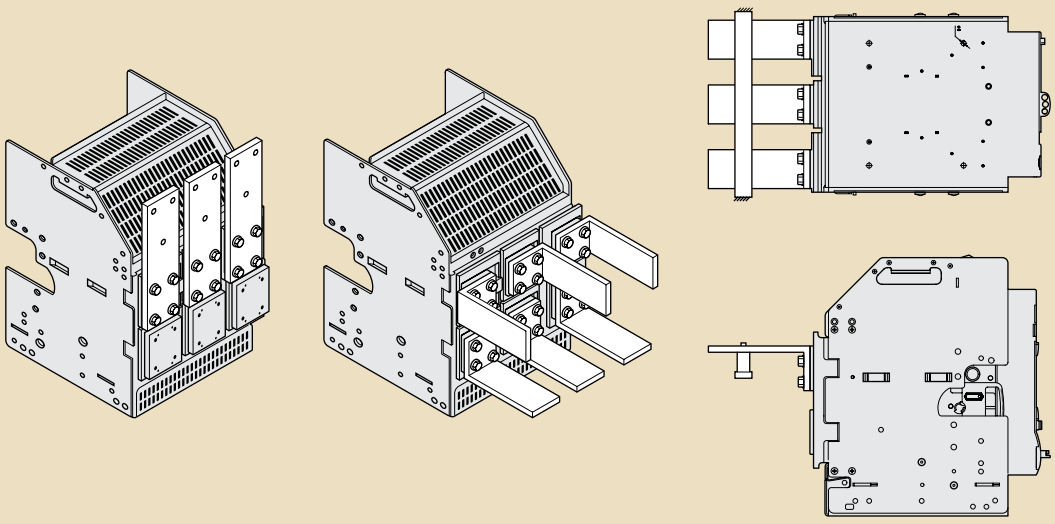
CONNECTIONS: A FEW RECOMMENDATIONS !

Connections provide the electrical connection of equipment and are also responsible for a considerable proportion of their heat dissipation.
Connections must never be under-sized.
Plates or terminals must be used over a maximum area.
Heat dissipation is encouraged by arranging the bars vertically. If an uneven number of bars is connected, place the higher number of bars on the upper part of the terminal.
Avoid bars running side by side: this causes poor heat dissipation and vibrations.
Place spacers between the bars to maintain a distance between them which is at least equivalent to their thickness.

DRAW-OUT VERSION: EXAMPLES OF CONNECTIONS

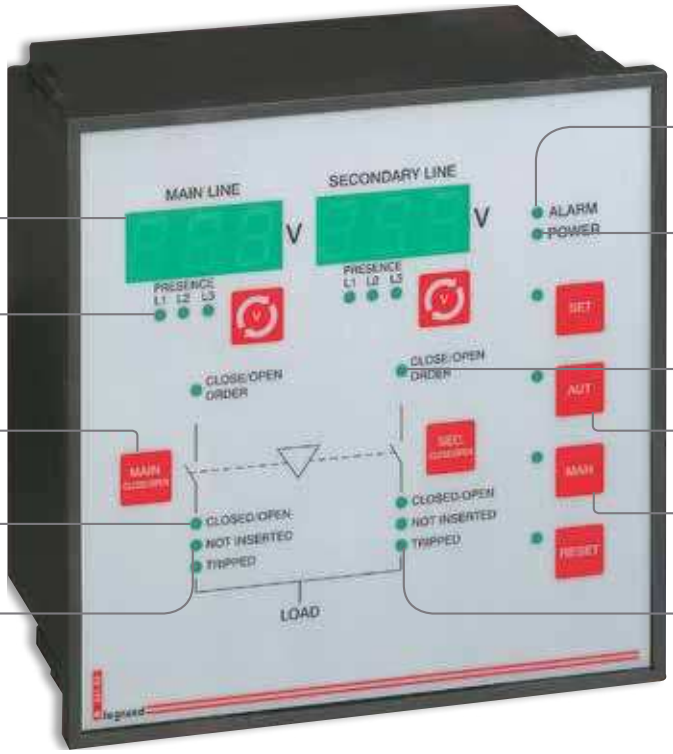
Draw-out version of the DMX^3 breakers is supplied with rear terminals for flat connection with bars.
You can easily transform those terminals into vertical or horizontal type by using the unique reversible connector.





Continuity of service and increased safety

Supply invertors answer the double need of continuity of service and greater safety (security). Traditionally used in hospitals, public buildings, industries with continuous manufacturing processes, airports and military applications, supply invertors become increasingly required for new applications such as telecommunications and computing treatment or in the management of energy sources, notably those say "renewable energies".



Voltage value display

LED voltage presence (red = voltage present)

Opening/Closing circuit breakers line Main/Sec

LED circuit breaker status opened (=green) or closed (=red)

LED circuit breaker not inserted (=red)

LED alarm (if red)

LED electronic control box supply (OK if green)

LED electronic control box order: circuit breaker closing (=red) circuit breaker opening (=green)

AUTOMATIC mode

MANUAL mode

LED circuit breaker tripped (=red)

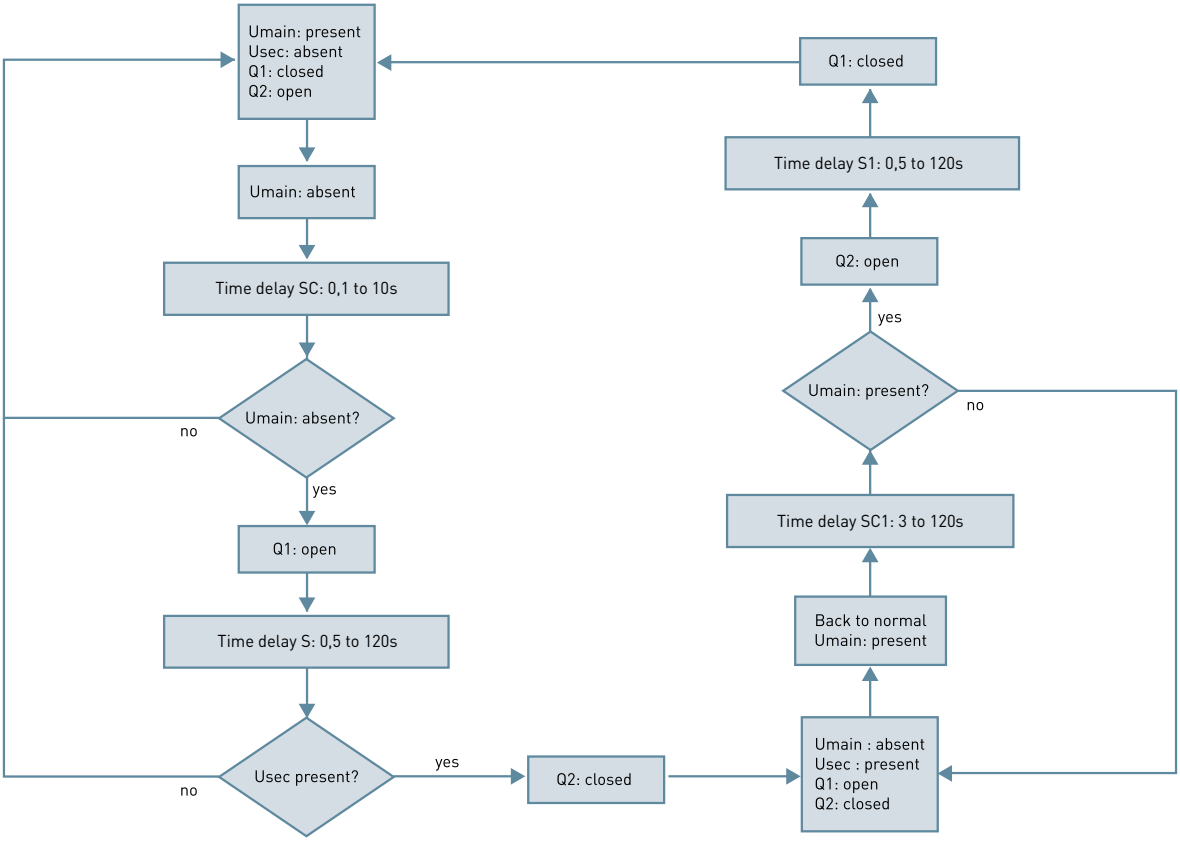
LEGRAND ADVANTAGE

Thanks to its digital displays and different LEDs is possible to watch permanently the state of the invertor, as well as the presence and the value of the voltages on each source.

AUTOMATIC SUPPLY INVERTORS

All DMX³ air circuit breakers (fixed and draw-out version) can be fitted with an interlocking system which guarantees “mechanical safety” in the event of supply inversion. Interlocking is achieved using a cable system and interlocking units mounted on each circuit breaker.
Every circuit breaker composing the supply invertor must be equipped with one interlocking unit.
This system allows devices of different sizes and types (3P, 4P, fixed, draw-out) to be interlocked. DMX³ devices can be installed in different configurations inside the enclosure.
This mechanical interlocking system can be supplemented by motorised operators and an automation control unit making the invertor fully automatic.
The Legrand automatic control unit allows to easily manage the automatic switching of two sources.
Controlled by a microprocessor, the unit is fully programmable.
All the parameters are adjustable: values of the thresholds of voltage, temporization between switching, starting up of a generator ...

Control panel of a supply invertor with automation control unit Cat. N°. 4226 80



Example of algorithm for the functioning of an automatic supply invertor

CROSS REFERENCES

Old Cat.No	New Cat.No	Desciption
0261 93	422680	422680 is a basic control unit
0261 93	422682	4226 82 is an advance crontrol unit which has additional features as compared to 0261 93
0261 94	422682 + 422689	Add 422689 for Modbus communication

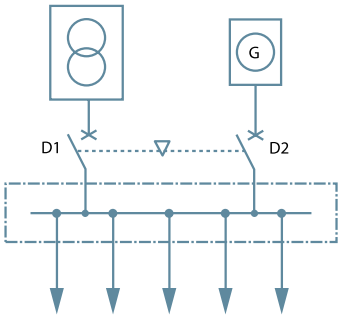
Flexible configurations

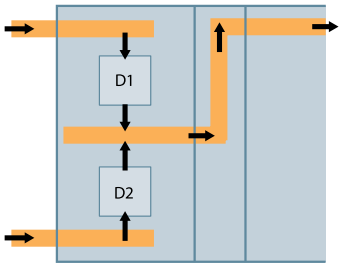
(Examples of supply invertors)

Supply invertor assures the following functions:

- Switching between a main source and a secondary source in order to supply the circuits requiring continuous service (for safety reasons) or for energy saving purpose (when the secondary source is different from the network).
- Management of the functioning of the secondary source (power generator) supplying the safety circuits.

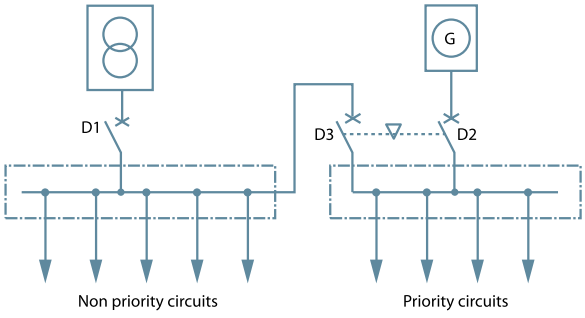
STAND-BY POWER SUPPLY (WITHOUT LOAD SHEDDING)

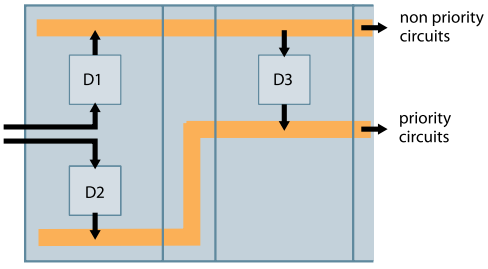




The two DMX³ devices (D1 and D2) are connected to a central common busbar. Since they are not simultaneously on-load, they can be in the same enclosure.

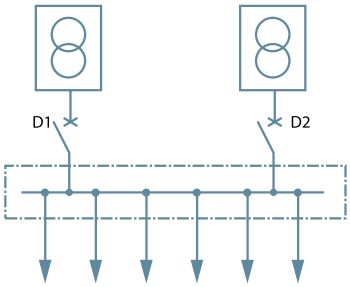
STAND-BY POWER SUPPLY (WITH LOAD SHEDDING)

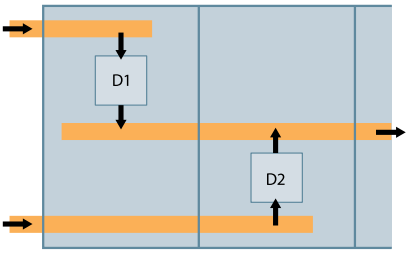




The two DMX³ devices (D1 and D2) are not on-load simultaneously and can therefore be installed in the same enclosure. D3 can be on-load at the same time as D1, and must be installed in another enclosure.

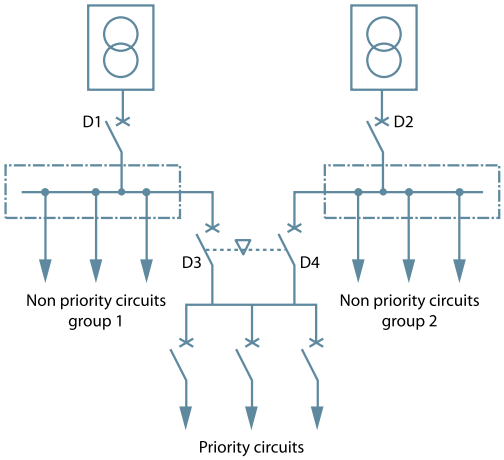
DUAL POWER SUPPLY (TOTAL POWER)

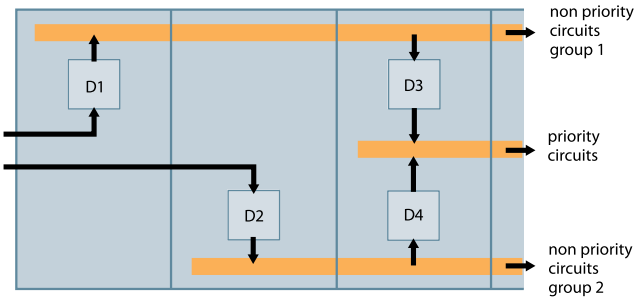




The two DMX³ devices (D1 and D2) draw current on a common busbar. They can only be installed in the same enclosure if the sum of their currents does not exceed the permissible value for the recommended size.

DUAL POWER SUPPLY (REDUCED POWER WITH PRIORITY LOADS)



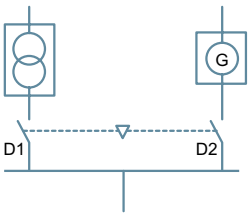


Flexible configurations

(Examples of supply invertors) (contd.)

- DMX³ and DMX³-I devices can be fitted with an interlocking mechanism which guarantees “mechanical safety” in the event of supply inversion.
- Interlocking is achieved using interlocking units mounted on the side of the devices and a cable system.

MECHANICAL INTERLOCK FOR 2 CIRCUIT BREAKERS

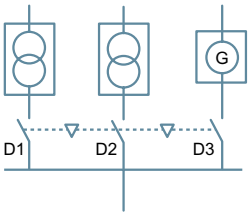


D1 is used for the main power supply of the installation (normal functioning), D2 for emergency power supply via power generator (in case of mains fault).
For this configuration the two breakers can be simultaneously open, but can not be closed in the same time.

D1	D2
0	0
1	0
0	1

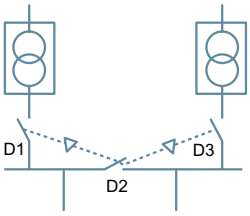
0 = circuit breaker is open
1 = circuit breaker is closed

MECHANICAL INTERLOCK FOR 3 CIRCUIT BREAKERS



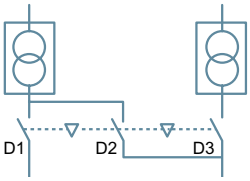
The three DMX³ circuit breakers are connected to one common busbar. D1 and D2 breakers are supplying the energy from two different power transformers and D3 from a power generator (in case of emergency). For this configuration all the three breakers can be simultaneously open. At any time, only one single circuit breaker can be on-load. The following table presents all possible combinations of mechanical interlock of the 3 breakers.

D1	D2	D3
0	0	0
1	0	0
0	1	0
0	0	1



The following example presents three circuit breakers with double mechanical interlock for D2 circuit breaker. D1 and D3 breakers are supplying the electricity form 2 power transformers. There are 6 interlocking combinations possible.

D1	D2	D3
0	0	0
1	0	0
0	0	1
0	1	0
1	1	0
0	1	1
1	0	1



The following example presents three circuit breakers with double mechanical interlock for D2 circuit breaker. It is a possible version of the previous scheme, presenting four combinations. D1 and D3 breakers supply energy for independent circuits. D2 breaker is used in case of emergency for priority circuits.

D1	D2	D3
0	0	0
1	0	0
0	0	1
1	0	1
0	1	0

0 = circuit breaker is open
1 = circuit breaker is closed

INFORMATION

This system allows devices of different sizes and types to be interlocked.
The cable system provides the flexibility to install DMX³ devices in a vertical configuration in the same enclosure or in a horizontal configuration in different columns.

DMX³

technical characteristics

DMX³ according to IEC 60947-2	AIR CIRCUIT BREAKERS							TRIP FREE SWITCHES		
	0286 56 + 0288 02			0286 74 + 0288 02			0289 51 + 0288 02	0286 96		
Devices	**DMX³ 2500**			**DMX³ 4000**			**DMX³ 6300**	**DMX³-I**		
	50 kA	**65 kA**	**100 kA**	**50 kA**	**65 kA**	**100 kA**	**100 kA**	**2500**	**4000**	**6300**
Frames	1	1	2	2	2	2	3	1	2	3
No. of poles	3P - 4P			3P - 4P			3P - 4P	3P - 4P	3P - 4P	3P - 4P
Version	Fixed Drawout			Fixed Drawout			Fixed Drawout	Fixed Drawout		
Operating characteristics										
In rated current at 40 °C (A)	630-800-1000-1250-1600-2500			3200-4000			5000-6300	1250-1600-2000-2500	3200-4000	6300
Rated insulation voltage	1000			1000			1000	1000	1000	1000
Rated impulse withstand voltage Uimp (kV)	12			12			12	12	12	12
Rated operational voltage (50/60 Hz) Ue (V)	690			690			690	690	690	690
Neutral protection (% Ir)	OFF-50-100			OFF-50-100			OFF-50-100	-	-	-
Utilization category	B			B			B	-	-	-
Isolation behavior	Yes			Yes			Yes	Yes	Yes	Yes
Ultimate breaking capacity Icu (kA)										
230 V∿	50	65	100	50	65	100	100	-	-	-
415 V∿	50	65	100	50	65	100	100	-	-	-
500 V∿	50	65	100	50	65	100	100	-	-	-
600 V∿	50	60	75	50	65	75	75	-	-	-
690 V∿	50	55	65	50	65	65	65	-	-	-
Service breaking capacity Ics (% Icu)	100			100			100	-	-	-
Short circuit making capacity Icm (kA)										
230 V∿	105	143	220	105	143	220	220	143	220	220
415 V∿	105	143	220	105	143	220	220	143	220	220
500 V∿	105	143	220	105	143	220	220	143	220	220
600 V∿	105	132	165	105	143	165	165	132	165	165
690 V∿	105	121	143	105	143	143	143	121	143	143
Short time withstand current Icw (kA) for t = 1 s										
230 V∿	50	65	85	50	65	85	100	65	85	100
415 V∿	50	65	85	50	65	85	100	65	85	100
500 V∿	50	65	85	50	65	85	100	65	85	100
600 V∿	50	60	75	50	65	75	75	60	75	75
690 V∿	50	55	65	50	65	65	65	55	65	65
Response time										
Opening time	15 ms			15 ms			15 ms	-	-	-
Closing time	30 ms			30 ms			30 ms	-	-	-
Endurance (cycles)										
Mechanical	10000			10000			5000	10000	10000	5000
Electrical	10000			10000			2500	5000	5000	2500
Temperature										
Operating	-5 °C to + 70 °C			-5 °C to + 70 °C			-5 °C to + 70 °C	-5 °C to + 70 °C	-5 °C to + 70 °C	-5 °C to + 70 °C
Storage	-25 °C to +85 °C			-25 °C to + 85 °C			-25 °C to + 85 °C	-25°C to +85 °C	-25°C to +85 °C	-25 °C to + 85 °C

*Sensing time shall be additional.

DMX³

technical characteristics

	PROTECTION UNITS			
	0288 03	0288 04	0288 01	0288 02
Microprocessor based protection unit	**Touch screen LCD**		**Monochrome LCD**	
	LSI	**LSIg**	**LSI**	**LSIg**
Long time delayed overload protection				
Ir adjustable from 0.4 to 1.0 x **In** in steps of 0.02(3)	•	•	•	•
tr adjustable 5-10-20-30 s	•	•	•	•
Short time delayed short circuit protection				
Im adjustable from 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 x Ir	•	•	•	•
tm adjustable : 0-0,1-0,2-0,3-1(1) s	•	•	•	•
Instantaneous protection				
Ii adjustable : OFF- 2, 3, 4, 6, 8, 10, 12, 15 x In	•	•	•	•
Earthfault protection				
Ig adjustable : OFF- 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 1 x In		•		•
tg adjustable : 0.1, 0.2, 0.5, 1 s		•		•
Display				
Touchscreen LCD	•	•		
monochrome LCD			•	•
Measures and displays (Instantaneous, maximum and average, adjustable delay)				
Current	•	•	•	•
Voltage Ph/N and Ph/Ph	•	•		
Power (P, Q, A) total and per phase	•	•		
Frequency	•	•		
Total power factor and per phase	•	•		
Energy (active and reactive)	•	•		
Total harmonic distortion	•	•		
Position ON/OFF/Default	•	•	•	•
Date, time and cause of last trip	•	•	•	•
Protection required	•	•	•	•
Memory				
Trip counter	•	•	•	•
Last trip	•	•	•	•
Date, time and cause of last trip	•	•	•	•
Date of last 20 alarms	•	•		
External link				
USB port for diagnostic software	•	•	•	•
Terminal block for auxilliary	•	•	•	•
Supervision (port RS 485 / Modbus)(3)	option	option	option	option
Signalling and Alarms				
Overheating > 75 °C	•	•	•	•
Logical Selectivity	•	•	•	•
Non priority load management(3)	•	•		
Reverse power 0.1 to 20s - 5 to 100 % Ir(3)	•	•		
Unbalance current 1 to 3600s - 100 to 600 V(3)	•	•		
Voltage Ph/N max : 0.1 to 20s - 60 to 400 V(3)	•	•		
Voltage Ph/N min : 0.1 to 20s - 10 to 400 V(3)	•	•		
Unbalance voltage Ph/N : 0.1 to 20s - Instant(3)	•	•		
Reversing phase rotations	•	•		
Max & Min frequency: 45 to 500 Hz - 0.1s to 20s(3)	•	•		

(1) Only for touchscreen protection unit
(2) For DMX³ 3P, 4 wire system add Cat.No 0288 11
(3) For touchscreens : Ir adjustable from 0.1 to 10 x In steps of 0.01

DMX³ 2500/4000/6300

air circuit breakers from 630 to 6300 A

0286 56 + 0288 03 (p. 29) + 0289 03 + 0289 10 (p. 31)

0286 74 + 0288 02 (p. 29)

0287 56 + 0288 02 (p. 33)

Dimensions **p. 32-37**
Technical characteristics **p. 39-44**

Air circuit breakers eqipped with microprocessor based protection unit (to be ordered together for factory assembly)
Door sealing frame and 4 NO/NC auxilliary contact + 1 trip contact
Flat terminal for draw - out version and horizontal terminals for fixed version

Pack	Cat.Nos 3P	Cat.Nos 4P	Fixed version	In(A)
			Supplied with rear terminals for horizontal connections	
			DMX³ 2500 - 50 kA Breaking capacity Icu 50 kA (415 V~) Frame 1	
1	0286 20	0286 30		630
1	0286 21	0286 31		800
1	0286 22	0286 32		1000
1	0286 23	0286 33		1250
1	0286 24	0286 34		1600
1	0286 25	0286 35		2000
1	0286 26	0286 36		2500
			DMX³ 2500 - 65 kA Breaking capacity Icu 65 kA (415 V~) Frame 1	
1	0286 40	0286 50		630
1	0286 41	0286 51		800
1	0286 42	0286 52		1000
1	0286 43	0286 53		1250
1	0286 44	0286 54		1600
1	0286 45	0286 55		2000
1	0286 46	0286 56		2500
			DMX³ 2500 - 100 kA Breaking capacity Icu 100 kA (415 V~) Frame 2	
1	0286 60	0286 70		630
1	0286 61	0286 71		800
1	0286 62	0286 72		1000
1	0286 63	0286 73		1250
1	0286 64	0286 74		1600
1	0286 65	0286 75		2000
1	0286 66	0286 76		2500
			DMX³ 4000 - 50 kA Breaking capacity Icu 50 kA (415 V~) Frame 2	
1	0286 27	0286 37		3200
1	0286 28	0286 38		4000
			DMX³ 4000 - 65 kA Breaking capacity Icu 65 kA (415 V~) Frame 2	
1	0286 47	0286 57		3200
1	0286 48	0286 58		4000
			DMX³ 4000 - 100 kA Breaking capacity Icu 100 kA (415 V~) Frame 2	
1	0286 67	0286 77		3200
1	0286 68	0286 78		4000

Pack	Cat.Nos 3P	Cat.Nos 4P	Drawout version	In(A)
			Supplied with a base equipped with flat rear terminals and lockable safety shutters	
			DMX³ 2500 - 50 kA Breaking capacity Icu 50 kA (415 V~) Frame 1	
1	0287 20	0287 30		630
1	0287 21	0287 31		800
1	0287 22	0287 32		1000
1	0287 23	0287 33		1250
1	0287 24	0287 34		1600
1	0287 25	0287 35		2000
1	0287 26	0287 36		2500
			DMX³ 2500 - 65 kA Breaking capacity Icu 65 kA (415 V~) Frame 1	
1	0287 40	0287 50		630
1	0287 41	0287 51		800
1	0287 42	0287 52		1000
1	0287 43	0287 53		1250
1	0287 44	0287 54		1600
1	0287 45	0287 55		2000
1	0287 46	0287 56		2500
			DMX³ 2500 - 100 kA Breaking capacity Icu 100 kA (415 V~) Frame 2	
1	0287 60	0287 70		630
1	0287 61	0287 71		800
1	0287 62	0287 72		1000
1	0287 63	0287 73		1250
1	0287 64	0287 74		1600
1	0287 65	0287 75		2000
1	0287 66	0287 76		2500
			DMX³ 4000 - 50 kA Breaking capacity Icu 50 kA (415 V) Frame 2	
1	0287 27	0287 37		3200
1	0287 28	0287 38		4000
			DMX³ 4000 - 65 kA Breaking capacity Icu 65 kA (415 V~) Frame 2	
1	0287 47	0287 57		3200
1	0287 48	0287 58		4000
			DMX³ 4000 - 100 kA Breaking capacity Icu 100 kA (415 V~) Frame 2	
1	0287 67	0287 77		3200
1	0287 68	0287 78		4000

DMX³ 2500/4000/6300

air circuit breakers from 630 to 6300 A

0289 51 + 0288 02

Dimensions **p. 37**
Technical characteristics **p. 39-44**

Air circuit breakers eqipped with microprocessor based protection unit (to be ordered together for factory assembly)
Door sealing frame and 4 NO/NC auxilliary contact + 1 trip contact
Flat terminal for draw - out versionand horizontal terminals for fixed version

Pack	Cat.Nos.		
			Fixed version
			Supplied with rear terminals for horizontal connections
			DMX³ - L 6300
	Frame 3		Breaking capacity Icu 100 kA (415 V~)
	3P	4P	In(A)
1	0289 50	0289 60	5000
1	0289 51	0289 61	6300
			Draw-out version
			Supplied with a base equipped with flat rear terminals and lockable safety shutters
			DMX³ - L 6300
	Frame 3		Breaking capacity Icu 100 kA (415 V~)
	3P	4P	In(A)
1	0289 52	0289 62	5000
1	0289 53	0289 63	6300

DMX³ 2500/4000/6300

microprocessor based protection units

0288 01

0288 02

0288 04

Technical Characteristics **p. 40**

DMX³ circuit breakers can be equipped with MP4 or MP6 microprocessor based protection units enabling very precise adjustments of the protection conditions, while maintaining total discrimination with downstream devices.
MP4 or MP6 protection units can be equipped with batteries for powering in case of mains fault or when the breaker is open or not connected.

Pack	Cat.Nos	
		LCD Display (MP4)
		Microprocessor based LCD screen
		Unit LSI
1	0288 01	Settings : Ir, tr, Im, tm, Ii
		Unit LSIg
1	0288 02	Settings : Ir, tr, Im, tm, Ii, Ig, tg
		Touch screen display (MP6)
		Measure and display current, voltage, power, Energy, Harmonics Signalling and fault history Graphical visualisation of parameters
		Unit LSI
1	0288 03	Settings : Ir, tr, Im, tm and Ii
		Unit LSIg
1	0288 04	Settings : Ir, tr, Im, tm, Ii, Ig, tg
		Accessories for microprocessor based protection unit
1	0288 06	12 V DC external power supply for DMX³ microprocessor based protection unit
1	0288 05(1)	Communication module (optional) for DMX³ microprocessor based protection unit
1	0288 10(1)	External neutral for DMX³ 6300
1	0288 11(1)	External neutral for DMX³ 2500 and 4000
1	0288 12(1)	Module programmable output

(1) Optional accessories, to be ordered while ordering microprocessor protection unit and DMX³ air circuit breakers for factory assembly

DMX³-I 2500/4000/6300

trip free switches from 1250 to 6300 A

0286 96

0287 96

Dimensions **p. 32-37**

Trip free switches equipped with:
Rear terminals
Auxiliary contacts 4NO/4NC

Pack	Cat.Nos 3P	Cat.Nos 4P	Fixed version
			Equipped with rear terminals for connection to the horizontal
			DMX³-I 2500
			Frame 1
	3P	4P	In(A)
1	0286 83	0286 93	1250
1	0286 84	0286 94	1600
1	0286 85	0286 95	2000
1	0286 86	0286 96	2500
			DMX³-I 4000
			Frame 2
1	0286 87	0286 97	3200
1	0286 88	0286 98	4000
			DMX³-I 6300
			Frame 3
1	0289 70	0289 71	6300

Pack	Cat.Nos 3P	Cat.Nos 4P	Drawout version
			Supplied with a base equipped with flat rear terminals and lockable safety shutters
			DMX³-I 2500
			Frame 1
	3P	4P	In(A)
1	0287 83	0287 93	1250
1	0287 84	0287 94	1600
1	0287 85	0287 95	2000
1	0287 86	0287 96	2500
			DMX³-I 4000
			Frame 2
1	0287 87	0287 97	3200
1	0287 88	0287 98	4000
			DMX³-I 6300
			Frame 3
1	0289 77	0289 78	6300

DMX³ 2500/4000/6300

auxilliaries and accessories

0288 37

0288 33

0288 51

0288 44

0288 58

Pack	Cat.Nos	Motor operators
1	0288 34	24 V∿/ ⎓
1	0288 35	48 V∿/ ⎓
1	0288 36	110 V∿/ ⎓
1	0288 37	230 V∿/ ⎓
1	0288 38	415 V∿/ ⎓

		Control and signalling auxiliaries
		Shunt trip
1	0288 48	24 V∿/ ⎓
1	0288 49	48 V∿/ ⎓
1	0288 50	110 V∿/ ⎓
1	0288 51	230 V∿/ ⎓
1	0288 52	415 V∿/ ⎓
		Closing coils
1	0288 41	24 V∿/ ⎓
1	0288 42	48 V∿/ ⎓
1	0288 43	110 V∿/ ⎓
1	0288 44	230 V∿/ ⎓
1	0288 45	415 V∿/ ⎓
		Undervoltage releases
1	0288 55	24 V∿/ ⎓
1	0288 56	48 V∿/ ⎓
1	0288 57	110 - 130 V∿/⎓
1	0288 58	230 V∿/ ⎓
1	0288 59	415 - 480 V∿
		Contact for motorised control
1	0288 14	Contact "ready to close" with charges spring
		Contact for signalling - Drawout
1	0288 13	Inserted/Test/Drawout contact, 3 changecover contacts per position
		Programmable module
1	0288 12	Module with 6 programmable output

		Locking
		Key lock in "open" position
1	0288 28	2 hole support frame for Ronis locks Cat.No 0288 30
1	0288 29	Set of 5 Ronies key barrel
1	0288 31	Ronis lock (Key included) - to be fitted on the frame Cat.No 0288 28
1	0288 30	Profalux lock (Key included) - to be fitted on the frame Cat.No 0288 28
		Key locking in the Drawout position
		Mounting of the lock on the base 3 Position: inserted /test/drawout
1	0288 33	Ronis Lock (key included)
1	0288 32	Profalux lock (key included)
		Padlocking in "open" postion
1	0288 21	Padlocking system for ACB (padlock not supplied)
1	0288 24	Padlock for button
1	0288 26	Padlocking system for shutters (padlock not supplied)

DMX³ 2500/4000/6300

auxilliaries and accessories (continued)

0288 64

4226 82

0289 20

0288 84

0288 82

0288 91

0289 02

Pack	Cat.Nos	Locking (Continued)
		Door locking
		Prevent opening of the door with circuit breaker closed
1	0288 20	Left-hand and Right-hand side mounting
		Equipement for supply investors
		The mechanical interlock is set up using cables and can interlock 2 or 3 devices, which may be different type in a vertical or horizontal configuration The interlock unit is mounted on the right-hand side of the device Cable length to be specified according to every configuration
1	0288 64	Interlock for DMX³ 2500
1	0288 65	Interlock for DMX³ 4000
1	0288 66	Interlock for DMX³ 6300
		Cable Interlock
1	0289 20	Type 1 (2600 mm)
1	0289 21	Type 1 (3000 mm)
1	0289 22	Type 1 (3600 mm)
1	0289 23	Type 1 (4000 mm)
1	0289 24	Type 1 (4600 mm)
1	0289 25	Type 1 (5600 mm)
		Automation control unit
		For setting the conditions for supply inversion, generator on/off, status acquisition for DMX³ and DPX³ circuit-breakers, open / closed Power Supply: 230 V~ and 12-24-48 V= connection by plug-in termionals
1	4226 80	Basic 2 ways control unit
1	4226 82	Advanced 2 ways control unit
1	4226 83	2 Sources / 3 breakers control unit
1	0261 93	Standard Unit
1	0261 94	Communication Unit, enabling data transmission
		Accessories
1	4226 86	Dual supply module
1	4226 87	Usb connector for PC
1	4226 88	Wifi connector
1	4226 89	RS485 expansion module
1	4226 90	4 Static outputs expansion module
1	4226 91	2 Relay output 5a 250V expansion module
1	4226 92	2 Digital input, 2 relay output expansion module
1	0288 15	Sets of additional signalling contact
1	0288 25	Rating mis-insertion device Prevents the insertion of a draw-out circuit breaker in an incompatible base
1	0288 23	Operations counter Counts total number of operation cycles of the device
1	0288 79	Lifting plate
1	0288 24	Locking device for I/O button
1	0288 22	Door sealing frame
		Communication supervision
1	0288 05	Option to the supervision of DMX³

Dimensions **p. 37**

Pack	Cat.Nos 3P	Cat.Nos 4P	Real terminals
			For DMX³ 2500 fixed version - frame 1
1	0288 84	0288 85	For flat connection with bars To be fixed on to horizontal rear terminals of the circuit breaker
1	0288 82	0288 83	For vertical connection with bars those terminal are used in order to transform a flat connection in to a vertical one to be fixed onto Cat.Nos 0288 84/85 according to the number of poles
			For DMX³ fixed version - frame 2 & 3
1	0288 92	0288 93	For flat connection with bars To be fixed on to horizontal rear terminals of the circuit breaker
			For DMX³ draw-out version - frame 1
1	0288 96	0288 97	For vertical or horizontal connection with bars to be fixed onto plate rear terminal of the circuit breaker
1	0288 96A	0288 97A	For vertical or horizontal aluminium connection with bars to be fixed onto plate rear terminal of the circuit breaker
			For DMX³ draw-out version - frame 2 & 3
1	0288 94	0288 95	For vertical or horizontal connection with bars
1	0288 94A	0288 95A	For vertical or horizontal aluminium connection with bars
			Spreaders for DMX³ 2500 fixed version - frame 1
	3P	4P	To be fixed on to horizontal rear terminals of the circuit breaker
1	0288 86	0288 87	For flat connection with bars
1	0288 88	0288 89	For Vertical Connection With bars
1	0288 90	0288 91	For Horizontal Connection With bars
			Equipment for conversion of a fixed device into draw-out device
	3P	4P	**Bases for draw-out device**
1	0289 02	0289 03	For DMX³/DMX³-I 2500 - frame 1
1	0289 04	0289 05	For DMX³/DMX³-I 4000 - frame 2
1	0289 13	0289 14	For DMX³/DMX³-I 6300 - frame 3
			Transformation kit for draw-out version
1	0289 09	0289 10	For DMX³/DMX³-I 2500 - frame 1
1	0289 11	0289 12	For DMX³/DMX³-I 4000 - frame 2
1	0289 15	0289 16	For DMX³/DMX³-I 6300 - frame 3

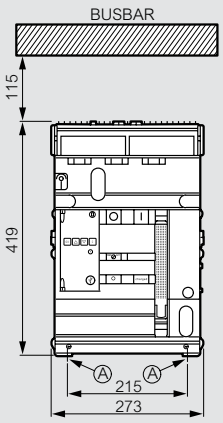
DMX³ 2500 and DMX³-I 2500 - frame 1

dimensions

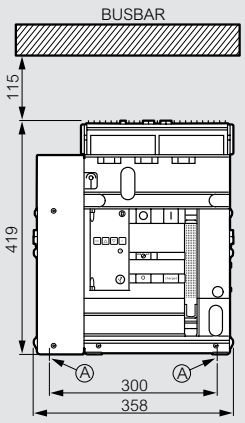
Fixed version - frame 1

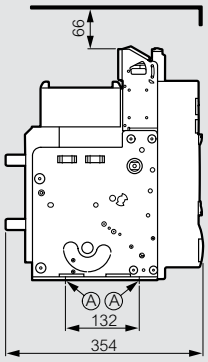
Overall dimensions

3P version



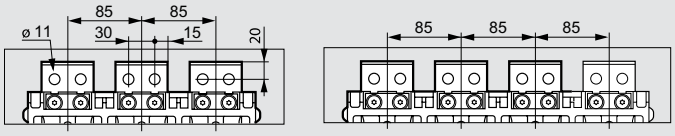
4P version



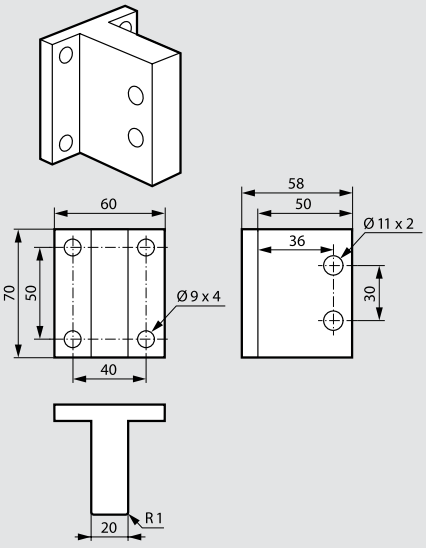


A = fixing point on plate of enclosure

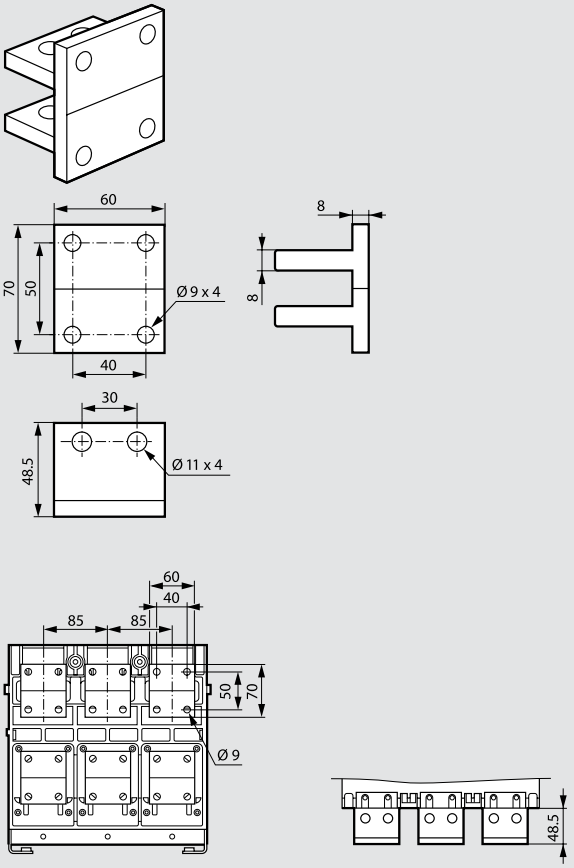
Rear terminals fixed version 630 - 2500 A



Rear terminals for vertical connection with bars
Cat.Nos 0288 82/83



Rear terminals for flat connection with bars
Cat.Nos 0288 84/85



All dimensions are in mm
1 inch = 25.4 mm
Accuracy of dimensions = ± 2 mm

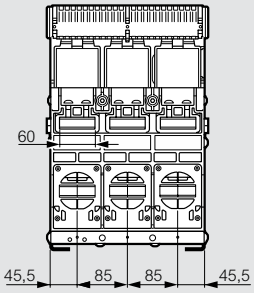
DMX³ 2500 and DMX³-I 2500 - frame 1

dimensions (continued)

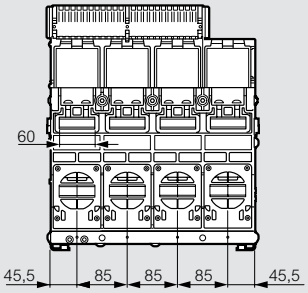
Fixed version - frame 1 (continued)

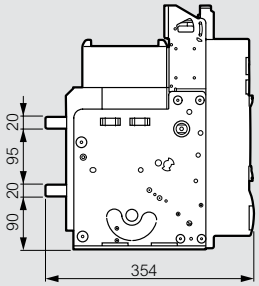
Rear terminals for horizontal connection with bars

3P version



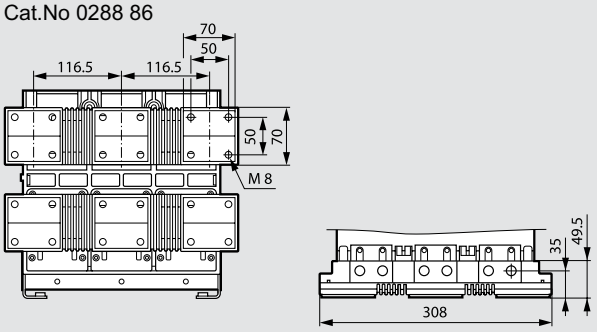
4P version



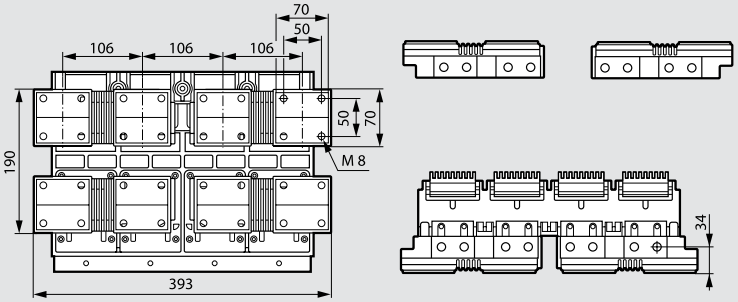


Spreaders for flat connection with bars

Cat.No 0288 86

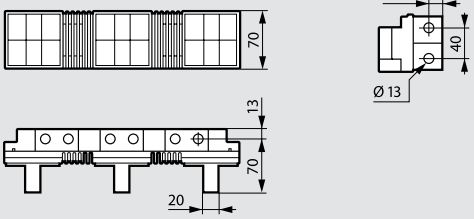


Cat.No 0288 87



Spreaders for vertical connection with bars

Cat.No 0288 88



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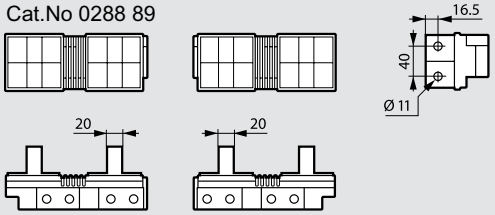
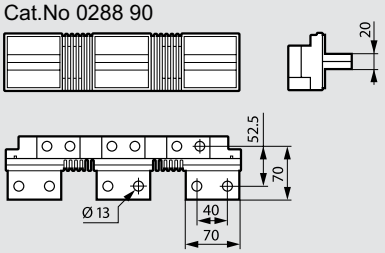
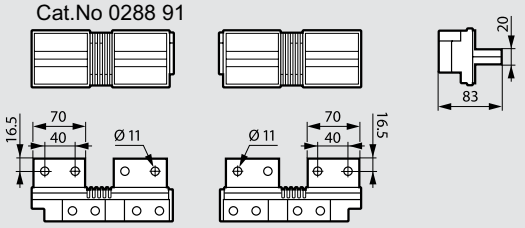


Spreaders for horizontal connection with bars

Cat.No 0288 90



Cat.No 0288 91



All dimensions are in mm
1 inch = 25.4 mm
Accuracy of dimensions = ± 2 mm

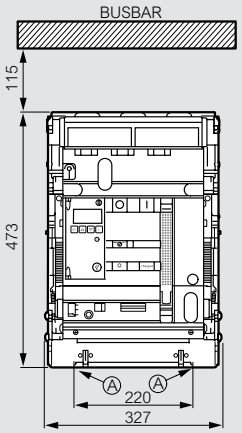
DMX³ 2500 and DMX³-I 2500 - frame 1

dimensions (continued)

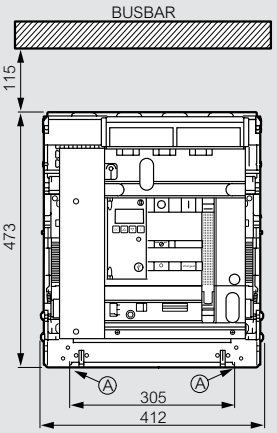
Draw-out version - frame 1

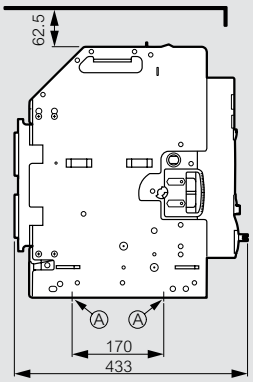
Overall dimensions

3P version



4P version

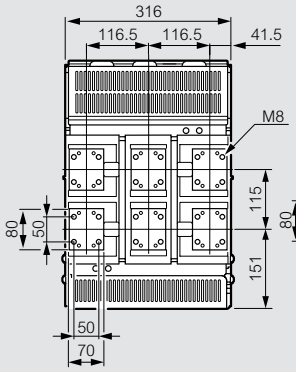




A = fixing point on plate of enclosure

Rear terminals for flat connection with bars

3P version



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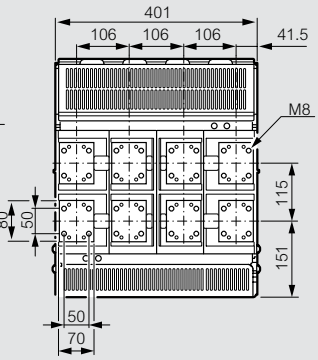
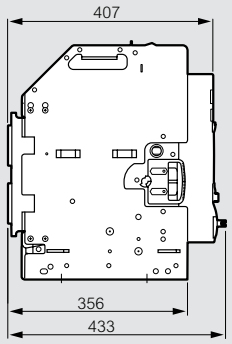
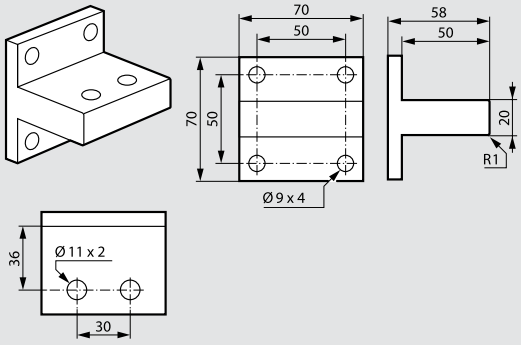


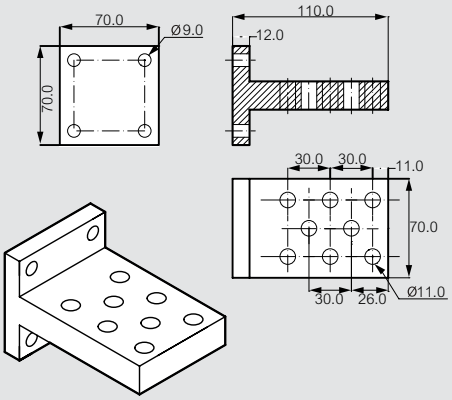


Rear terminals for vertical or horizontal connection with bars

Cat.Nos 0288 96/97

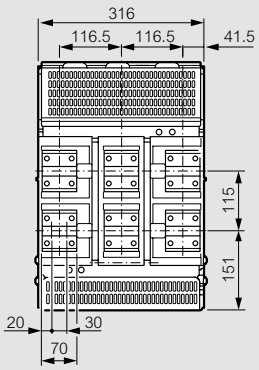


Cat.Nos 0288 96 A/97 A

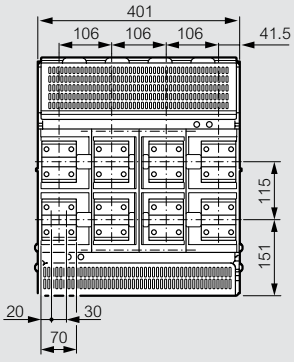


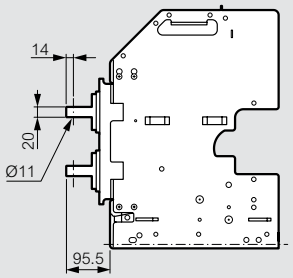
Rear terminals for horizontal connection with bars - Cat.Nos 0288 96/97

3P version



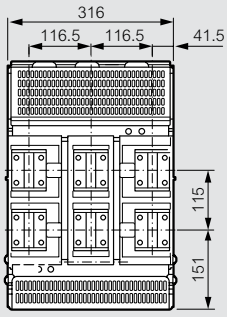
4P version



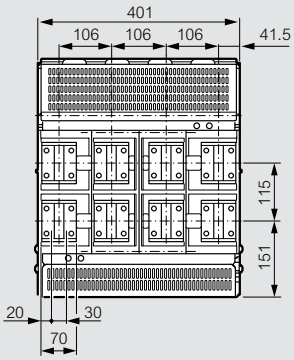


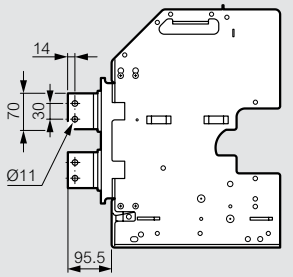
Rear terminals for vertical connection with bars - Cat.Nos 0288 96/97

3P version



4P version





All dimensions are in mm
1 inch = 25.4 mm
Accuracy of dimensions = ± 2 mm

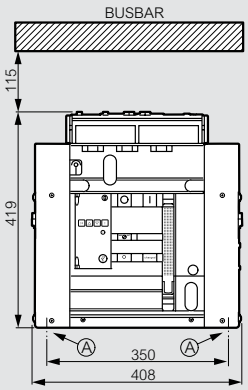
DMX³ 4000 and DMX³-I 4000 - frame 2

dimensions

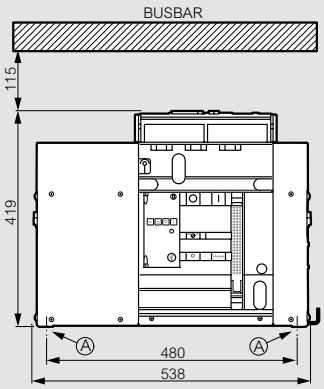
Fixed version - frame 2

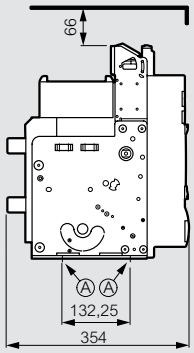
Overall dimensions

3P version



4P version

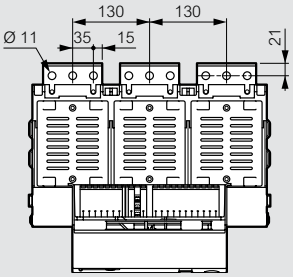




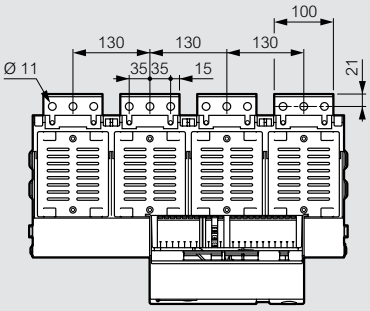
A = fixing point on plate of enclosure

Rear terminals fixed version 3200 - 4000 A

3P version

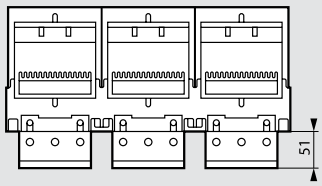


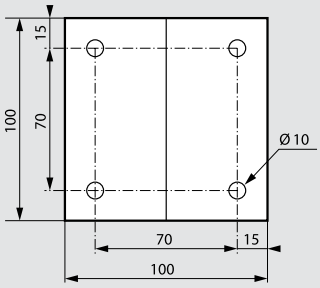
4P version

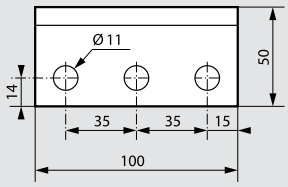


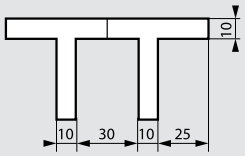
Rear terminals for flat connection with bars

Cat.Nos 0288 92/93

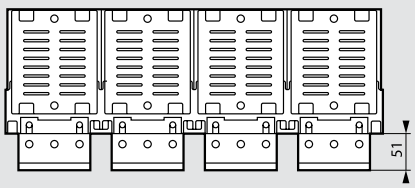






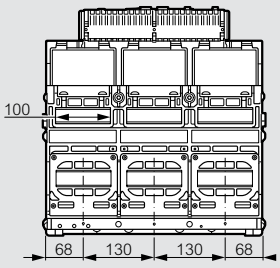


Cat.No 0288 93

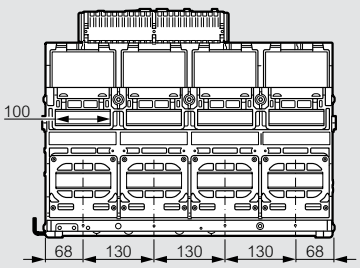


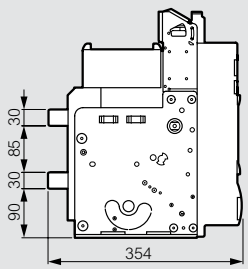
Rear terminals

3P version



4P version





All dimensions are in mm
1 inch = 25.4 mm
Accuracy of dimensions = ± 2 mm

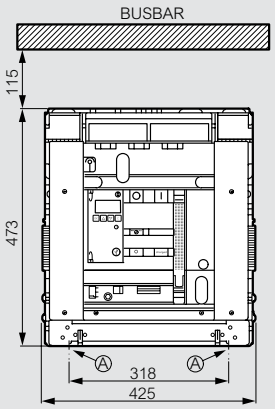
DMX³ 4000 and DMX³-I 4000 - frame 2

dimensions (continued)

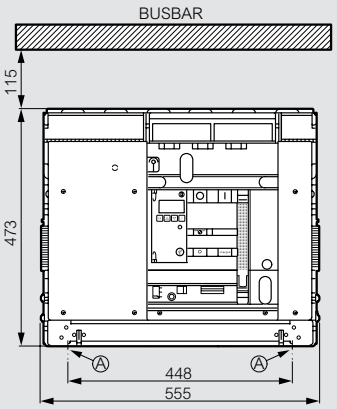
Draw-out version - frame 2

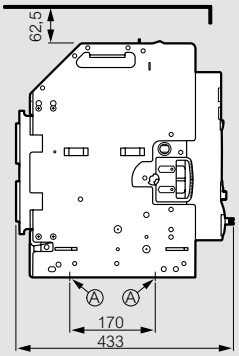
Overall dimensions

3P version



4P version

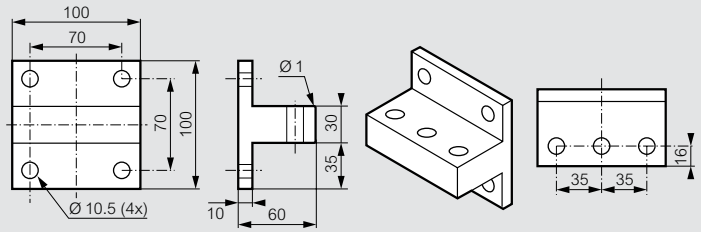




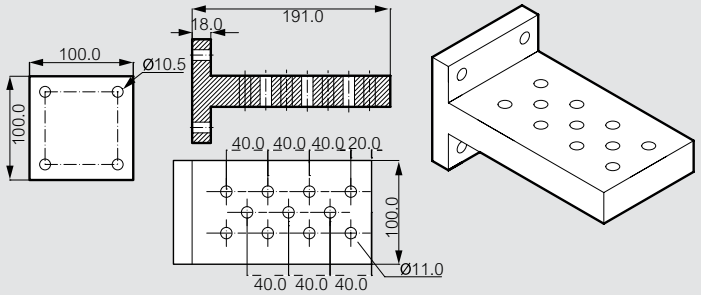
A = fixing point on plate of enclosure

Rear terminals for vertical or horizontal connection with bars

Cat.Nos 0288 94/95

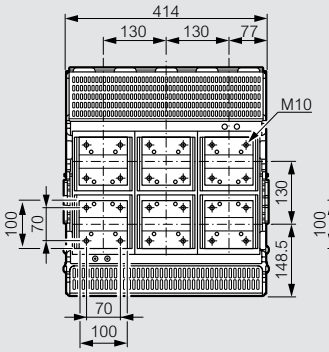


Cat.Nos 0288 94 A/95 A

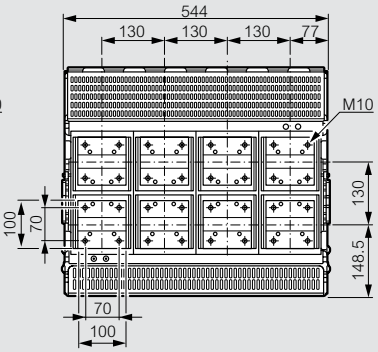


Rear terminals for flat connection with bars

3P version



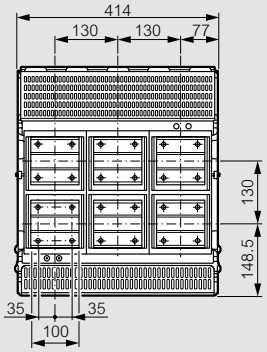
4P version

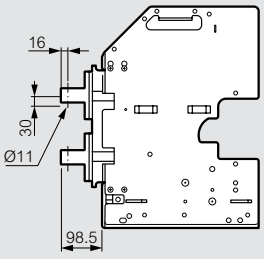


Rear terminals for horizontal connection with bars

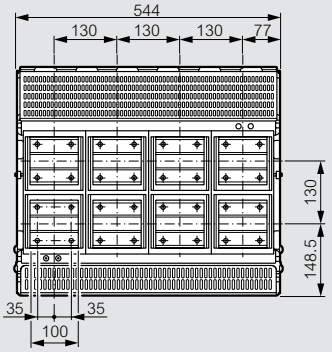
Cat.Nos 0288 94/95

3P version





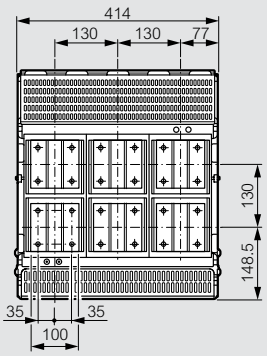
4P version

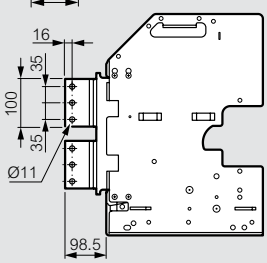


Rear terminals for vertical connection with bars

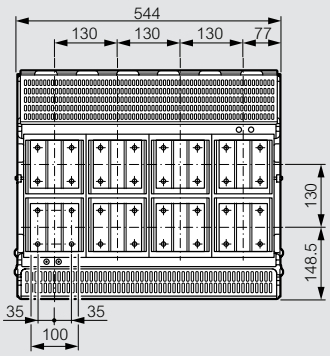
Cat.Nos 0288 94/95

3P version





4P version

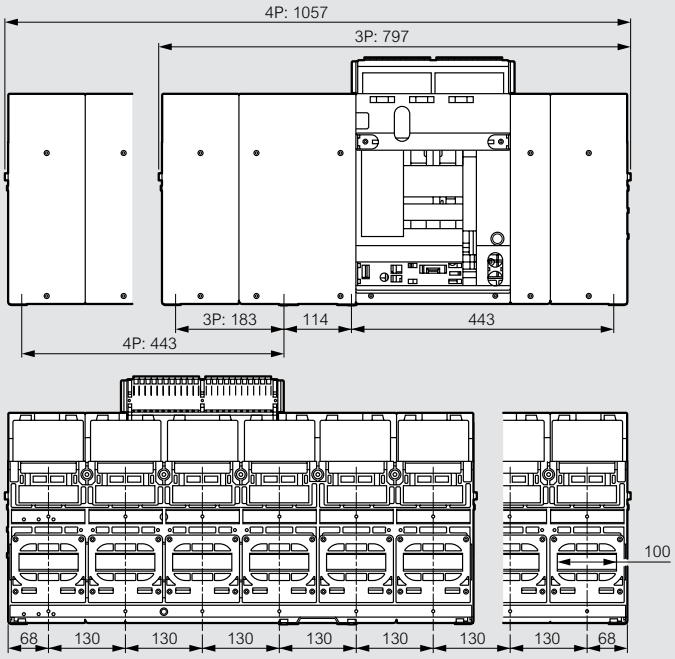


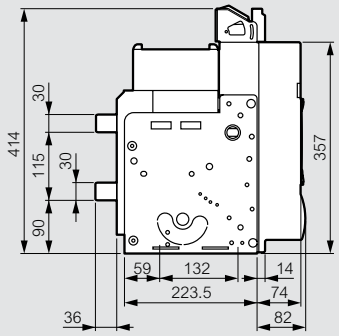
All dimensions are in mm
1 inch = 25.4 mm
Accuracy of dimensions = ± 2 mm

DMX³ 6300 and DMX³-I 6300 - frame 3

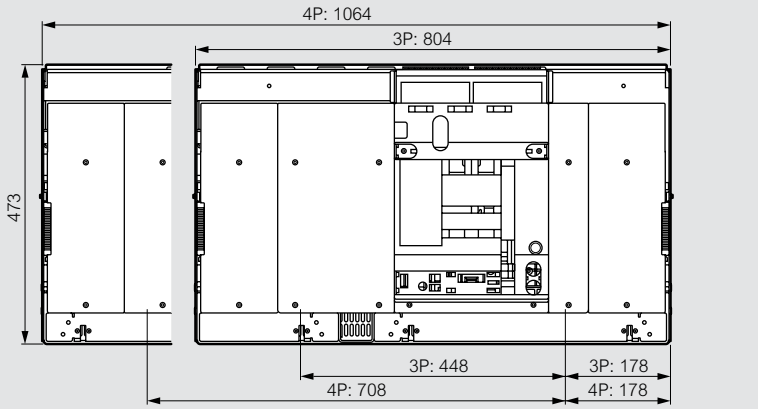
dimensions

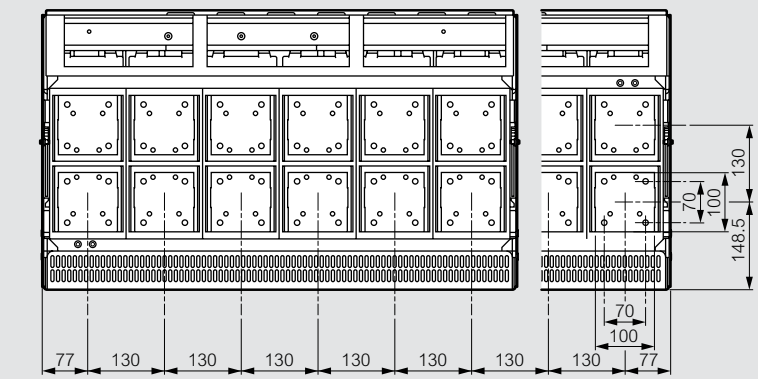
Fixed version - frame 3

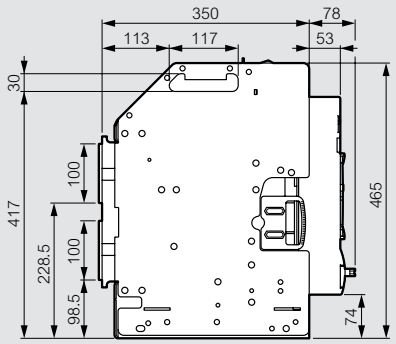




Draw-out version - frame 3





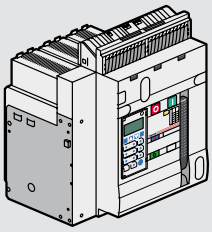


All dimensions are in mm
1 inch = 25.4 mm
Accuracy of dimensions = ± 2 mm

DMX³

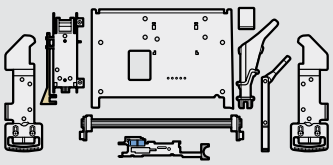
transformation fixed/drawout

Transformation DMX³ Fixed to Drawout



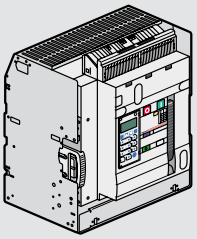
DMX³ fixed

+



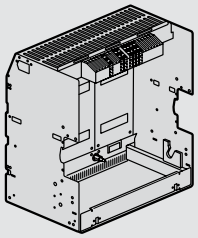
Transformation kit for drawout version

=



DMX³ draw out

+

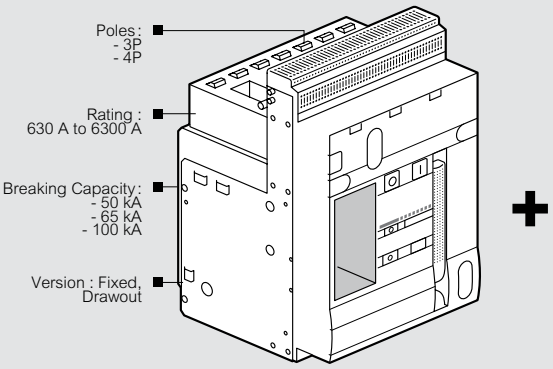


Base

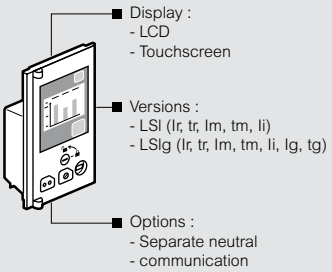
DMX³ & DMX³-I

customisation

Assembly

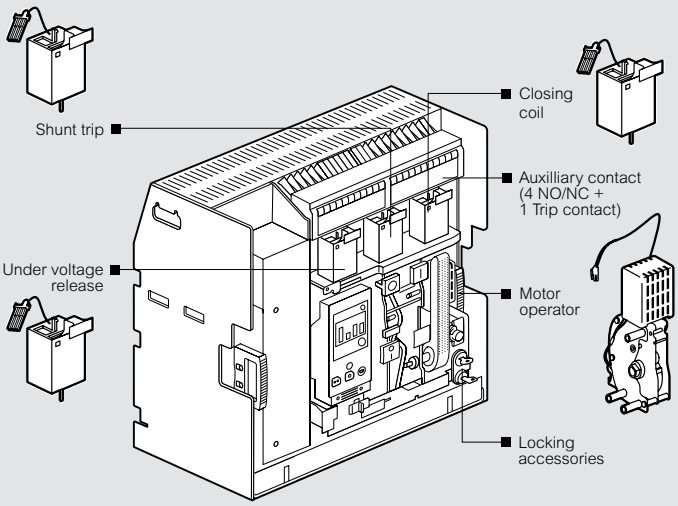


AIR CIRCUIT BREAKER

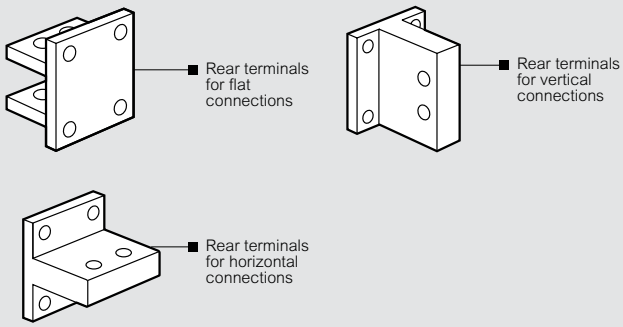


Microprocessor based protection unit

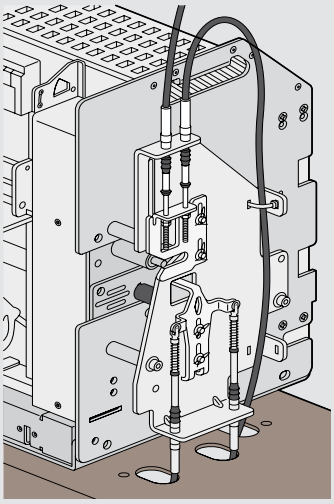
Auxiliaries and Accessories



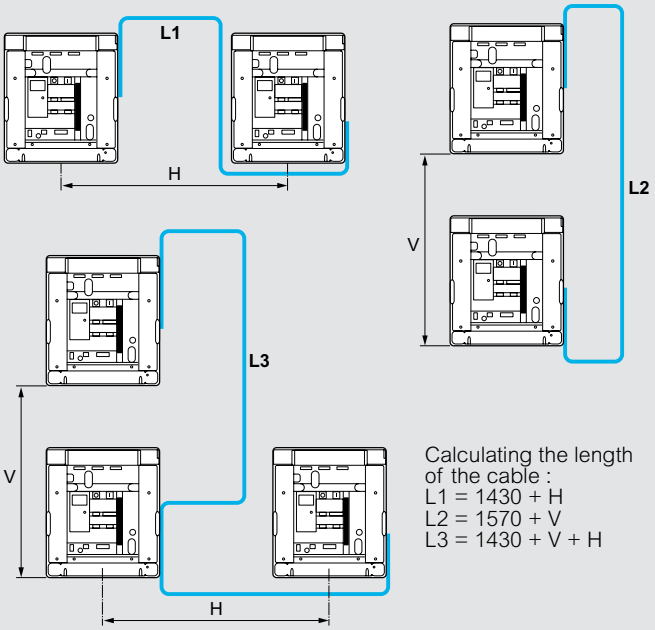
Connection



Mounting the interlocking mechanism



Choice of cable interlock



Calculating the length of the cable :
L1 = 1430 + H
L2 = 1570 + V
L3 = 1430 + V + H

Cable length selection table

Length (mm)	Type	Cat.Nos
2600	1	0289 20
3000	2	0289 21
3600	3	0289 22
4000	3	0289 23
4600	5	0289 24
5600	6	0289 25

Examples for 3 air circuit breakers

Distance between air circuit breakers (mm)		Horizontal			
		725 mm	1000 mm	1450 mm	2000 mm
Vertical	800 mm	Type 2	Type 3	Type 4	Type 5
	1000 mm	Type 3	Type 3	Type 4	Type 5
	1600 mm	Type 4	Type 5	Type 5	Type 6
	2000 mm	Type 5	Type 5	Type 6	Type 6

Technical characterstics

Power supply : 187 to 264 V~
9 to 65 V⎓

Frequency : 45 to 65 Hz
Un : 80 to 690 V~
Control relay (1 and 4) : 1 NO - 12 A - 250 V~
1 NO - 5 A - 250 V~
1 NO/NC - 5 A - 250 V~
Cable cross section : 0.2 to 2.5 mm²
Dimensions (width x height x depth) : 144 x 144 x 90 mm
Protection : IP 20 at the rear
IP 41 at the front
IP 54 at the front with protective screen
Operating temperature:- -20 °C to + 60 °C

	Operating ranges
Main/Secondary minimum voltage range	70-98 % Un
Main/Secondary voltage absence range	60-85 % Un
Main/Secondary minimum voltage delay	0.1-900 s
Main/Secondary voltage absence delay	0.1-30 s
Generator operating delay	0-900 s
Main/Secondary switching delay	0.1-90 s
Main line presence delay	1-3600 s
Secondary to main switching delay	0.1-90 s
Generator set stopping delay	1-3600 s

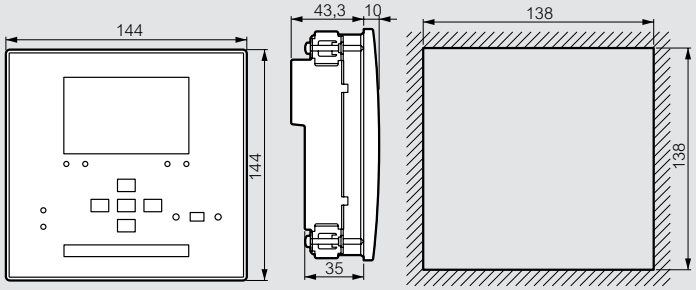
Functions

Standard unit Cat.No 0261 93 / 4226 80 / 4226 82
Used to adjust and manage the source inversion operating conditions (DMX³) :
- Remote control (Opening/Closing) of ACBs
- Microprocessor output from unit (Positive Safety)
- Programmable I/O
- Voltage reading : 3 Phase
phase-neutral
phase-phase
- Control (on/off) of generator set
- Indication of the state of the ACBs (open/closed/tripped)
- Source inversion blocked in theevent of:
  - Tripping of 1 or 2 devices
  - If a draw-out ACB is not inserted in its base, as the open/close command of the unit is inoperative

The use of frontal side dongles (WiFi or USB), to communicate with device without any panel maintenance working (plug & play)

Communicating unit Cat.No 0261 94 / 4226 82 + 4226 89
All the standard functions plus:
- Maximum voltage reading
- Reading of phase rotation direction
- Frequency reading
- Communication: data transmission via the RS 485 port (Modbus protocol)

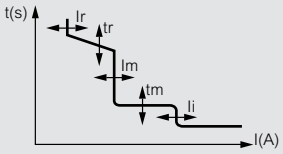
Dimension and panel board faceplate cut-out



Settings of the microprocessor protection units

MP4 LSI

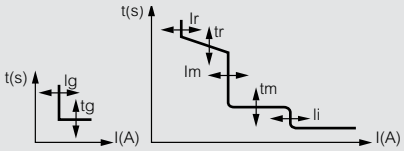
Ir, tr, Im, tm, Ii adjustment on front panel



- **Long time delay protection against overloads**
Ir from 0.4 to 1 x In (6 + 6 steps) on two selectors (0.4 ÷ 0.9, by steps of 0.1 and 0.0 ÷ 0.1, by steps of 0.02)
- **Long delay protection operation time**
tr - at 6 x Ir (4 + 4 steps) tr = 5-10-20-30 s (MEM ON) 30-20-10-5 s (MEM OFF)
- **Short time delay protection against short circuits**
Im from 1.5 to 10 x Ir (9 steps) Im = 1.5-2-2.5-3-4-5-6-8-10 x Ir
- **Short time delay protection operation time**
tm from 0 to 0.3 s (4 + 4 steps) tm = 0-0.1-0.2-0.3 s (t = cost), 0.3-0.2-0.1-0.01 s (I^2t = constant)
- **Instantaneous protection against very high short circuits**
Ii from 2 to 15 x In or Icw (9 steps) Ii = off-2-3-4-6-8-10-12-15 x In or Icw
- **Neutral protection:** IN = I-II-III-IV x Ir (0-50-100-100 %)

MP4 LSIg

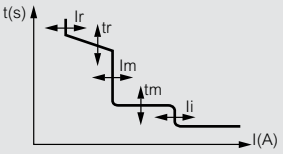
Ir, tr, Ii, Ig, tg, Im, tm, adjustment on front panel



- **Long time delay protection against overloads**
Ir from 0.4 to 1 x In (6 +6 steps) on two selectors (0.4 ÷ 0.9, by steps of 0.1 and 0.0 ÷ 0.1, by steps of 0.02)
- **Long delay protection operation time**
tr - at 6 x Ir (4 + 4 steps) tr = 5-10-20-30 s (MEM ON) 30-20-10-5 s (MEM OFF)
- **Short time delay protection against short circuits**
Im from 1.5 to 10 x Ir (9 steps) Im = 1.5-2-2.5-3-4-5-6-8-10 x Ir
- **Short time delay protection operation time**
tm from 0 to 0.3 s (4 + 4 steps) tm = 0-0.1-0.2-0.3 s (t=constant), 0.3-0.2-0.t01 s (I^2t=constant)
- **Instantaneous protection against very high short circuits**
Ii from 2 to 15 x In or Icw (9 steps) Ii = OFF-2-3-4-6-8-10-12-15 x In or Icw
- **Earth fault current**
Ig from 0.2 to 1 x In (9 steps) Ig = 0.2-0.3-0.4-0.5-0.6-0.7-0.8-1 x In, OFF)
- **Time delay on earth fault tripping**
tg from 0.1 to 1 x In (4 steps) Tg = 0,1-0,2-0,5-1 s (both t = constant and I^2t = constant)
- **Neutral protection:** IN = I-II-III-IV x Ir (0-50-100-100 %)

MP6 LSI

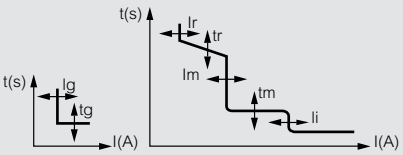
Ir, tr, Im, tm, Ii adjustment on front panel



- **Long time delay protection against overloads**
Ir from 0.4 to 1 x In (7 steps) Ir = 0.4-0.5-0.6-0.7-0.8-0.9-1 x In
- **Long delay protection operation time**
tr - at 6 x Ir (4 steps) tr = 5-10-20-30 s (both MEM ON and MEM OFF)
- **Short time delay protection against short circuits**
Im from 1.5 to 10 x Ir (9 steps) Im = 1.5-2-2.5-3-4-5-6-8-10 x Ir
- **Short time delay protection operation time**
tm from 0.03 to 1 s (11 steps) tm = 0.03-0.1-0.2-0.3-0.4-0.5-0.6-0.7-0.8-09-1 s (both t = constant and I^2t = constant)
- **Instantaneous protection against very high short circuits**
Ii from 2 to 15 x In or Icw (9 steps) Ii = 2-3-4-6-8-10-12-15 x In or Icw
- **Neutral protection:** IN = I-II-III-IV x Ir (0-50-100-100 %)

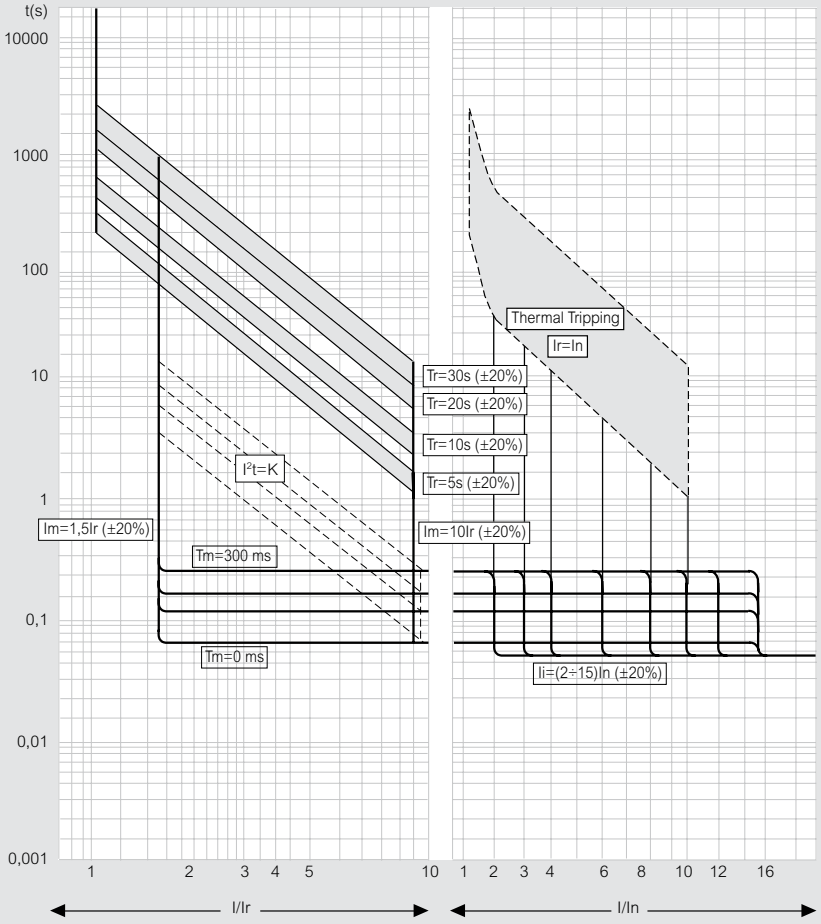
MP6 LSIg

Ir, tr, Ii, Ig, tg, Im, tm, adjustment on front panel



- **Long time delay protection against overloads**
Ir from 0.4 to 1 x In (7 steps) Ir = 0.4-0.5-0.6-0.7-0.8-0.9-1 x In
- **Long delay protection operation time**
tr - at 6 x Ir (4 steps) tr = 5-10-20-30 s (both MEM ON and MEM OFF)
- **Short time delay protection against short circuits**
Im from 1.5 to 10 x Ir (9 steps) Im = 1.5-2-2.5-3-4-5-6-8-10 x Ir
- **Short time delay protection operation time**
tm from 0.03 to 1 s (11 steps) tm = 0.03-0.1-0.2-0.3-0.4-0.5-0.6-0.7-0.8-09-1 s (both t = constant and I^2t = constant)
- **Instantaneous protection against very high short circuits**
Ii from 2 to 15 x In or Icw (9 steps) Ii = 2-3-4-6-8-10-12-15 x In or Icw
- **Earth fault current**
Ig from 0.2 to 1 x In (9 steps) Ig = 0.2-0.3-0.4-0.5-0.6-0.7-0.8-1 x In, OFF
- **Time delay on earth fault tripping**
tg from 0.1 to 1 x In (4 steps) Tg = 0,1-0,2-0,5-1 s (both t = constant and I^2t = constant)
- **Neutral protection:** IN = I-II-III-IV x Ir (0-50-100-100 %)

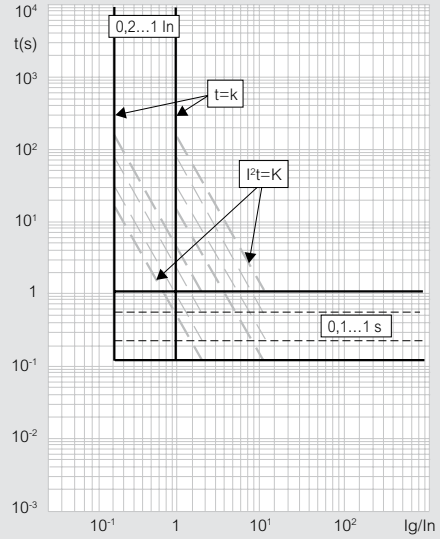
Selective time-current tripping characteristic for MP4 protection units



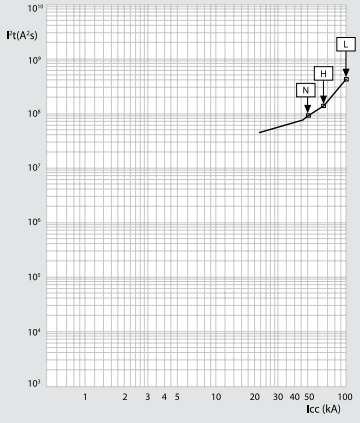
If short-circuit current is higher than Icw value or Ii is setted at Icw position, tripping time is equal to 30ms

Ir = long time setting current
Tr = long time delay
Im = short time setting current
Tm = short time delay
If = istantaneous intervention current

Ground fault tripping curve for MP4 LSIg protection unit



Let through energy characteristics



Icc (kA) = estimated short circuit symmetrical current (RMS value)
I²t (A²s) = pass-through specific energy

DMX³ 2500/4000/6300

selectivity & discrimination

Limits of selectivity DMX³ / DPX™ (three phase circuit at 400 V~)

Downstream MCCB		Upstream ACB									
	In	DMX³ 2500 (50 kA / 65 kA / 100 kA)						DMX³ 4000 (50 kA / 65 kA / 100 kA)		DMX³ 6300 (100 kA)	
		800	1000	1250	1600	2000	2500	3200	4000	5000	6300
DPX³ 160 T/M (16 kA / 25 kA / 36 kA / 50 kA)	16	T	T	T	T	T	T	T	T	T	T
	25	T	T	T	T	T	T	T	T	T	T
	40	T	T	T	T	T	T	T	T	T	T
	63	T	T	T	T	T	T	T	T	T	T
	80	T	T	T	T	T	T	T	T	T	T
	100	T	T	T	T	T	T	T	T	T	T
	125	T	T	T	T	T	T	T	T	T	T
	160	T	T	T	T	T	T	T	T	T	T
DPX³ 160 T/M with electronic earth leakage module (16kA / 25kA / 36kA / 50kA)	16	T	T	T	T	T	T	T	T	T	T
	25	T	T	T	T	T	T	T	T	T	T
	40	T	T	T	T	T	T	T	T	T	T
	63	T	T	T	T	T	T	T	T	T	T
	80	T	T	T	T	T	T	T	T	T	T
	100	T	T	T	T	T	T	T	T	T	T
	125	T	T	T	T	T	T	T	T	T	T
	160	T	T	T	T	T	T	T	T	T	T
DPX³ 250 T/M with electronic earth leakage (25kA / 36kA / 50kA / 70kA / 100 kA)	100	T	T	T	T	T	T	T	T	T	T
	160	T	T	T	T	T	T	T	T	T	T
	200	T	T	T	T	T	T	T	T	T	T
	250	T	T	T	T	T	T	T	T	T	T
DPX³ 250 T/M with electronic earth leakage/metering (25kA / 36kA / 50kA / 70kA / 100kA)	40	T	T	T	T	T	T	T	T	T	T
	100	T	T	T	T	T	T	T	T	T	T
	160	T	T	T	T	T	T	T	T	T	T
	250	T	T	T	T	T	T	T	T	T	T
DPX³ 250 T/M (25 kA / 36 kA / 50 kA / 70 kA / 100 kA)	40	T	T	T	T	T	T	T	T	T	T
	63	T	T	T	T	T	T	T	T	T	T
	100	T	T	T	T	T	T	T	T	T	T
	160	T	T	T	T	T	T	T	T	T	T
	250	T	T	T	T	T	T	T	T	T	T
DPX³ 250 S1 / S2 (36 kA / 70 kA / 100 kA)	40	T	T	T	T	T	T	T	T	T	T
	100	T	T	T	T	T	T	T	T	T	T
	160	T	T	T	T	T	T	T	T	T	T
	250	T	T	T	T	T	T	T	T	T	T
DPX³ 630 T/M (36 kA / 70 kA / 100 kA)	250	T	T	T	T	T	T	T	T	T	T
	320	T	T	T	T	T	T	T	T	T	T
	400	T	T	T	T	T	T	T	T	T	T
	500	T	T	T	T	T	T	T	T	T	T
	630	T	T	T	T	T	T	T	T	T	T
DPX³ 630 S1 / S2 (36 kA / 70 kA / 100 kA)	250	T	T	T	T	T	T	T	T	T	T
	400	T	T	T	T	T	T	T	T	T	T
	630	T	T	T	T	T	T	T	T	T	T
DPX³ 1250 T/M (50 kA / 70 kA)	800	-	T	T	T	T	T	T	T	T	T
	1000	-	-	T	T	T	T	T	T	T	T
	1250	-	-	-	T	T	T	T	T	T	T
DPX³ 1600 S1 / S2 (50 kA / 70 kA)	800	-	T	T	T	T	T	T	T	T	T
	1250	-	-	-	T	T	T	T	T	T	T
	1600	-	-	-	-	T	T	T	T	T	T

Limits of selectivity DMX³ / DMX³ (three phase circuit at 400 V~)

Upstream / Downstream		DMX³									
		800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A	5000 A	6300 A
DMX³	800 A			T	T	T	T	T	T	T	T
	1000 A				T	T	T	T	T	T	T
	1250 A					T	T	T	T	T	T
	1600 A						T	T	T	T	T
	2000 A							T	T	T	T
	2500 A								T	T	T
	3200 A									T	T
	4000 A										T
	5000 A										
	6300 A										

T: total selectivity, up to downstream circuit breaker breaking capacity according to IEC 60947-2
Icu of downstream circuit breaker ≤ Icu of upstream circuit breaker
Selectivity values are intended with protection unit properly adjusted

Technical characteristics

DMX³ 2500

DMX³ according to IEC 60947-2		DMX³ 2500																	
		800			1000			1250			1600			2000			2500		
		N	H	L	N	H	L	N	H	L	N	H	L	N	H	L	N	H	L
Number of poles		3P - 4P			3P - 4P			3P - 4P			3P - 4P			3P - 4P			3P - 4P		
Rating In (A)		800			1000			1250			1600			2000			2500		
Rated insulation voltage Ui (V)		1000			1000			1000			1000			1000			1000		
Rated impulse withstand voltage Uimp (kV)		12			12			12			12			12			12		
Rated operational voltage (50/60Hz) Ue (V)		690			690			690			690			690			690		
Frame		1		2	1		2	1		2	1		2	1		2	1		2
Ultimate breaking capacity Icu (kA)	230 V~	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100
	415 V~	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100
	500 V~	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100
	600 V~	50	60	75	50	60	75	50	60	75	50	60	75	50	60	75	50	60	75
	690 V~	50	55	65	50	55	65	50	55	65	50	55	65	50	55	65	50	55	65
Service breaking capacity Ics (% Icu)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Short-circuit making capacity Icm (kA)	230 V~	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220
	415 V~	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220
	500 V~	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220
	600 V~	105	132	165	105	132	165	105	132	165	105	132	165	105	132	165	105	132	165
	690 V~	105	121	143	105	121	143	105	121	143	105	121	143	105	121	143	105	121	143
Short time withstand current Icw (kA) for t = 1s	230 V~	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85
	415 V~	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85
	500 V~	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85
	600 V~	50	60	75	50	60	75	50	60	75	50	60	75	50	60	75	50	60	75
	690 V~	50	55	65	50	55	65	50	55	65	50	55	65	50	55	65	50	55	65
Category of use		B			B			B			B			B			B		
Isolation behavior		Yes			Yes			Yes			Yes			Yes			Yes		
Endurance (cycles)	mechanical	10000			10000			10000			10000			10000			10000		
	electrical	5000			5000			5000			5000			5000			5000		

DMX³ 4000

DMX³ according to IEC 60947-2		DMX³ 4000					
		3200			4000		
		N	H	L	N	H	L
Number of poles		3P - 4P			3P - 4P		
Rating In (A)		3200			4000		
Rated insulation voltage Ui (V)		1000			1000		
Rated impulse withstand voltage Uimp (kV)		12			12		
Rated operational voltage (50/60Hz) Ue (V)		690			690		
Frame		2			2		
Ultimate breaking capacity Icu (kA)	230 V~	50	65	100	50	65	100
	415 V~	50	65	100	50	65	100
	500 V~	50	65	100	50	65	100
	600 V~	50	60	75	50	60	75
	690 V~	50	55	65	50	55	65
Service breaking capacity Ics (% Icu)		100	100	100	100	100	100
Short-circuit making capacity Icm (kA)	230 V~	105	143	220	105	143	220
	415 V~	105	143	220	105	143	220
	500 V~	105	143	220	105	143	220
	600 V~	105	132	165	105	132	165
	690 V~	105	121	143	105	121	143
Short time withstand current Icw (kA) for t = 1s	230 V~	50	65	85	50	65	85
	415 V~	50	65	85	50	65	85
	500 V~	50	65	85	50	65	85
	600 V~	50	60	75	50	60	75
	690 V~	50	55	65	50	55	65
Category of use		B			B		
Isolation behavior		Yes			Yes		
Endurance (cycles)	mechanical	10000			10000		
	electrical	5000			5000		

DMX³ 6300

DMX³ according to IEC 60947-2		DMX³ 6300	
		5000	6300
		L	L
Number of poles		3P - 4P	3P - 4P
Rating In (A)		5000	5000
Rated insulation voltage Ui (V)		1000	1000
Rated impulse withstand voltage Uimp (kV)		12	12
Rated operational voltage (50/60Hz) Ue (V)		690	690
Frame		3	3
Ultimate breaking capacity Icu (kA)	230 V~	100	100
	415 V~	100	100
	500 V~	100	100
	600 V~	75	75
	690 V~	65	65
Service breaking capacity Ics (% Icu)		100	100
Short-circuit making capacity Icm (kA)	230 V~	220	220
	415 V~	220	220
	500 V~	220	220
	600 V~	165	165
	690 V~	143	143
Short time withstand current Icw (kA) for t = 1s	230 V~	100	100
	415 V~	100	100
	500 V~	100	100
	600 V~	75	75
	690 V~	65	65
Category of use		B	B
Isolation behavior		Yes	Yes
Endurance (cycles)	mechanical	5000	5000
	electrical	2500	2500

Technical characteristics

Trip free switch DMX³-I		2500	4000	6300
Frame		1	2	3
Rating In à 40 °C (A)		1250 1600 2000 2500	3200 4000	6300
Rated insulation voltage Ui (V)		1000	1000	1000
Rated impulse withstand voltage Uimp (kV)		12	12	12
Rated operational voltage (50/60Hz) Ue (V)		690	690	690
Isolation behaviour		Yes	Yes	Yes
Short-circuit making capacity Icm (kA)	230 V~	143	220	220
	415 V~	143	220	220
	500 V~	143	220	220
	600 V~	132	165	165
	690 V~	121	143	143
Short time withstand current Icw (kA) pour t = 1 s	230 V~	65	85	100
	415 V~	65	85	100
	500 V~	65	85	100
	600 V~	60	75	75
	690 V~	55	65	65
Endurance (cycles)	mechanical	10000	10000	5000
	electrical	5000	5000	2500
Temperature	operation	-5 °C to +70 °C	-5 °C to +70 °C	-5 °C to +70 °C
	storage	-25 °C to +85 °C	-25 °C to +85 °C	-25 °C to +85 °C

Temperature derating

Fixed version

	Temperature									
	40 °C		50 °C		60 °C		65 °C		70 °C	
	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In
DMX³-I 2500	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
	2500	1	2450	0.98	2350	0.94	2250	0.9	2150	0.86
DMX³-I 4000	3200	1	3200	1	3200	1	3136	0.98	3008	0.94
	4000	1	3920	0.98	3680	0.92	3440	0.86	3120	0.78
DMX³-I 6300	6300	1	6300	1	6048	0.96	5796	0.92	5544	0.88

Draw-out version

	Temperature									
	40 °C		50 °C		60 °C		65 °C		70 °C	
	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In
DMX³-I 2500	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1875	0.94
	2500	1	2400	0.96	2250	0.9	2100	0.84	1950	0.78
DMX³-I 4000	3200	1	3200	1	3200	1	3072	0.96	2880	0.9
	4000	1	3760	0.94	3440	0.86	3200	0.8	2960	0.74
DMX³-I 6300	6300	1	6174	0.98	5985	0.95	5796	0.92	5292	0.84

Temperature derating
Fixed version

Tempe-rature	40 °C		50 °C		60 °C		65 °C		70 °C	
	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In
DMX³ 2500	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
	2500	1	2450	0.98	2350	0.94	2250	0.9	2150	0.86
DMX³ 4000	3200	1	3200	1	3200	1	3136	0.98	3008	0.94
	4000	1	3920	0.98	3680	0.92	3440	0.86	3120	0.78
DMX³ 6300	5000	1	5000	1	5000	1	5000	1	5000	1
	6300	1	6300	1	6048	0.96	5796	0.92	5544	0.88

Draw-out Version

Tempe-rature	40 °C		50 °C		60 °C		65 °C		70 °C	
	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In
DMX³ 2500	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1875	0.94
	2500	1	2400	0.96	2250	0.9	2100	0.84	1950	0.78
DMX³ 4000	3200	1	3200	1	3200	1	3072	0.96	2880	0.9
	4000	1	3760	0.94	3440	0.86	3200	0.8	2960	0.74
DMX³ 6300	5000	1	5000	1	5000	1	5000	1	5000	1
	6300	1	6174	0.98	5985	0.95	5796	0.92	5292	0.84

Derating at different altitudes

Air circuit breaker	DMX³ 2500, DMX³ 4000 and DMX³ 6300			
Altitude H (m)	< 2000	3000	4000	5000
Rated current (at 40 °C) In (A)	In	0.98 x In	0.94 x In	0.90 x In
Rated voltage Ue (V)	690	600	500	440
Rated insulation voltage Ui (V)	1000	900	750	600

Connection bars minimum recommended dimension per pole (fix) for copper conductors

In (A)	Vertical bars (mm)	Horizontal bars (mm)
630	50 x 10	60 x 10
800	60 x 10	60 x 10
1000	80 x 10	80 x 10
1250	80 x 10	2 x 60 x 10
1600	2 x 60 x 10	2 x 80 x 10
2000	2 x 80 x 10	3 x 80 x 10
2500	3 x 80 x 10	3 x 80 x 10
3200	3 x 100 x 10	3 x 100 x 10
4000	4 x 100 x 10	5 x 100 x 10
5000	6 x 100 x 10	6 x 100 x 10
6300	7 x 100 x 10	7 x 100 x 10

Note: The tables presenting the minimum recommended dimensions of connection plates and bars per pole should be used solely as a general guideline for selecting products. Due to extensive variety of switchgear constructions shapes and conditions that can affect the behavior of the apparatus, the solution used must always be verified

XL³ enclosure for safety and flexibility

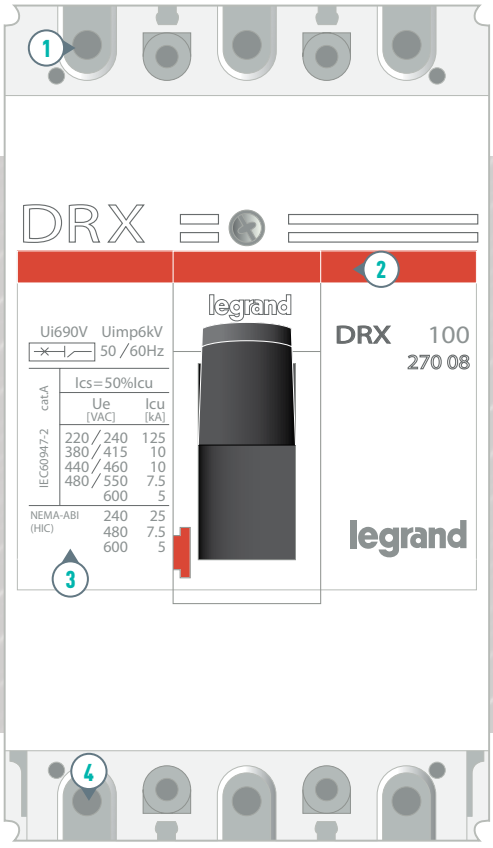
Protection & distribution up to 6300 A

- Totally type-tested system as per IEC 61439-I & 2
- Completely bolted system for ease of assembly
- Modular design for numerous configurations
- Short time current withstand capacity upto 110 kA
- Design suitable for Form 4b
- IP 55 degree of protection also available
- Fire resistance of 750 ^{0}C for 30 sec
- Compatible with Zucchini busbar trunking system
- Adjustable plinth height for the better spreading of cables
- Permanent earthing for internal components and external faceplates
- Perfectly house the whole range of Legrand ACBs, MCCBs, Capacitors, Contactors, MCBs, Metering devices and OMPs like VSP, MPCB etc.

MCCBs: DRX™

DRX100...the universal solution for residential and commercial

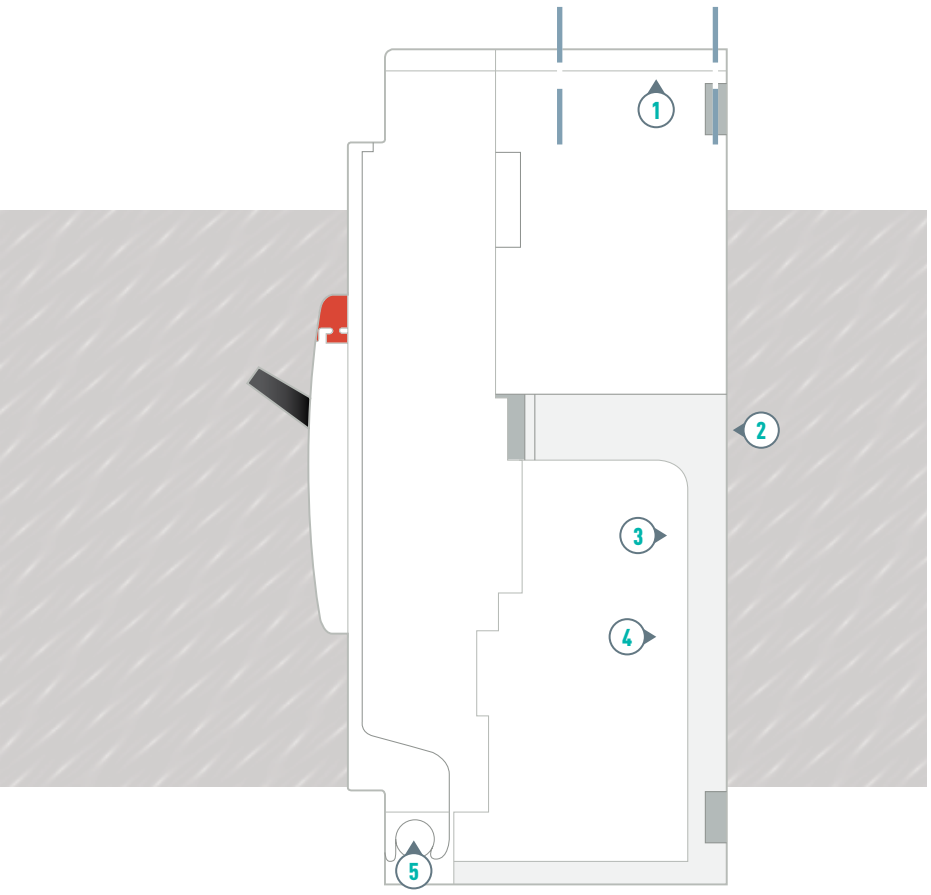
Thermal-magnetic MCCBs



1. DRX 100: 3 and 4 poles
2. Exclusive system: with a single action, change from the 50 mm standard to the 45 mm DIN standard
4.
   - Thermal-magnetic protection
   - Nominal currents from 60 to 100 A
   - 10 kA
   - No temperature derating at +50 °C
6. 2 types of connection: standard and with cage terminals

ADVANTAGES

- Electrical accessories mounted by simply clipping on front panel
- Electrical accessories common to the whole range
- Up to 3 locks (padlock) in open position (off)
- Direct and vari-depth rotary handle
- Certifications: LOVAG (IEC 60947-1-2)



1. 24 mm distance between base and terminal, for mounting in busbars
2. Suitable for all environments (tropicalization, pollution, salt corrosion, etc.)
3. Removable plate that clips onto a DIN rail
4. Installation in any position
5. Standard dimensions
   - 3-pole DRX 100: 75 x 60 x 130 mm
   - 4-pole DRX 100: 100 x 60 x 130 mm
6. Hinged front cover

DRX™ 100

thermal-magnetic MCCBs from 60 to 100 A

0270 08

0270 18

0270 08 (Hinged cover)

Dimensions (p. 51)
Technical characteristics and operating curves (p. 52-53)

For switching, control, isolation and protection of low-voltage electrical lines in conformity with standard IEC 60947-2
Fixed thermal and fixed magnetic
Supplied with:
- M8 Terminals
- Fixing screws
- Insulating shields (2 for 3 PI and 3 for 4P)

Pack	Cat.Nos	DRX 100
		Icu breaking capacity 10 kA (415 V±)
	3P	In
1/12	0270 06*	60 A
1/12	0270 39	63 A
1/12	0270 07*	75 A
1/12	0270 08*	100 A
	4P	In
1/12	0270 16	60 A
1/12	0270 29	63 A
1/12	0270 17	75 A
1/12	0270 18	100 A

* For enclosures refer page 216

DRX™ 100

accessories for DRX MCCBs

0271 76

0271 83

0271 71

Pack	Cat.Nos	Plate for fixing on rail
1	0271 87	DIN rail adaptor for DRX 100
		Rotary handles
		Direct on DRX
1	6271 76	For DRX 100
1	6687 70	For DRX 100
		Vari-depth handle
		Comprises: the connecting rod, the bracket, the drilling template, the mounting accessories, the door locking mechanism
1	6271 77	For DRX 100
1	6687 71	For DRX 100
		Padlocking
1	0271 80	Accessory for locking in “OFF” position
		Connection accessories
		Insulating shields
		Insulate connection between each pole
1	0271 81	Set of 2 shields for 3 pole
		Sealable terminal shields
1	0271 83	For DRX 100 - 3 pole
		Cage terminals
1	0271 71	For DRX 100 - 3 pole
		Spreader links
1	6250 10	3 links set for TP
1	6250 11	4 links set for FP

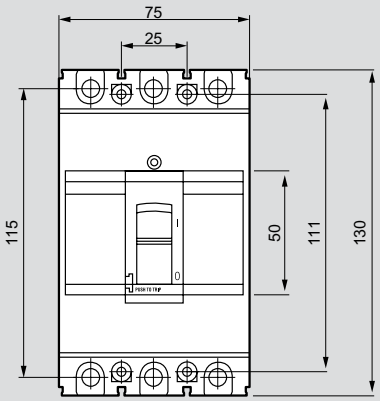
0271 40

0271 54

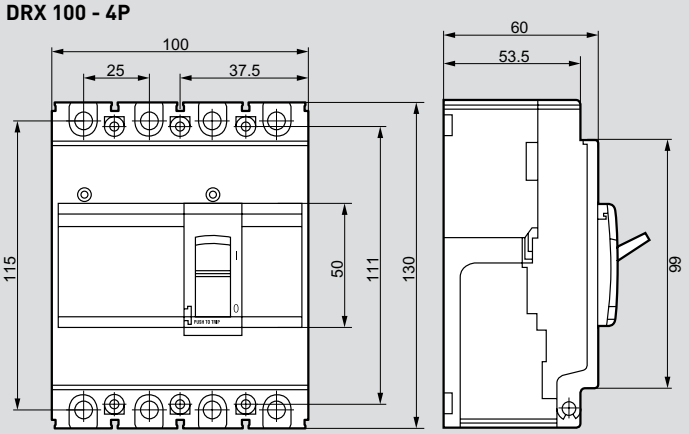
Pack	Cat.Nos	Electrical accessories
		Auxiliary contact blocks
		For left-hand mounting only
1	0271 40	Block with 1 auxiliary (1 AUX)
1	0271 41	Block with 1 alarm (1 AL)
1	0271 42	Block with 1 auxiliary + 1 alarm (1 AUX + 1 AL)
		Current shunt coils
		For mounting on either the left or right-hand side of the MCCB
1	0271 54	200/277 V~ and ⎓
1	0271 55	380/480 V~ and ⎓
		Undervoltage release coils
		For mounting on either the left or right-hand side of the MCCB
1	0271 64	200/240 V~
1	0271 65	380/415 V~

Dimensions

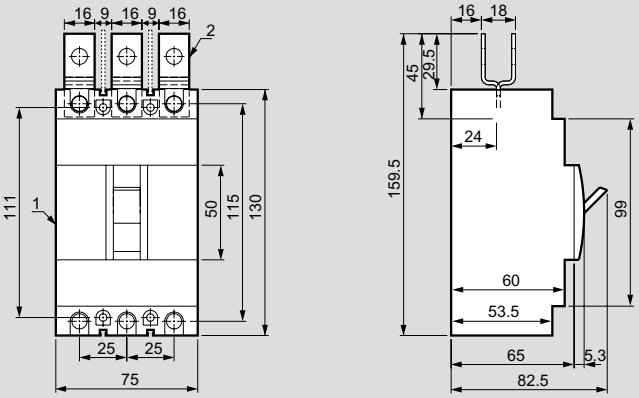
DRX 100 - 3P



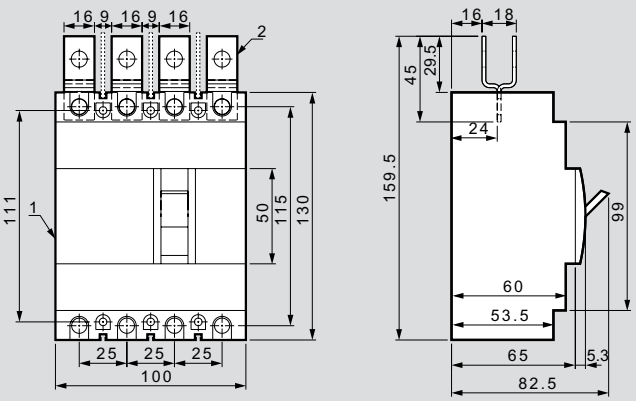
DRX 100 - 4P



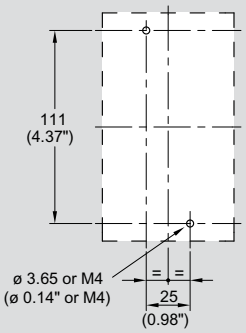
DRX 100 - 3P with spreaders

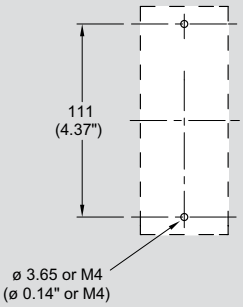


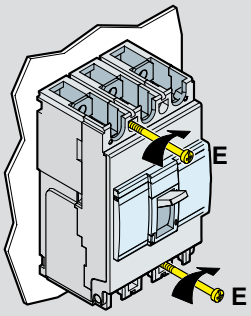
DRX 100 - 4P with spreaders



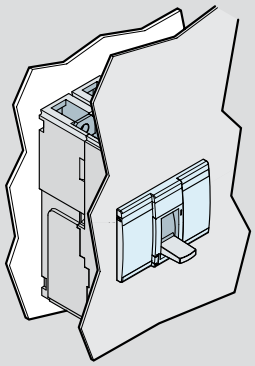
Fixing on plate

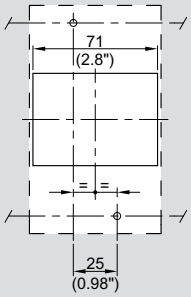


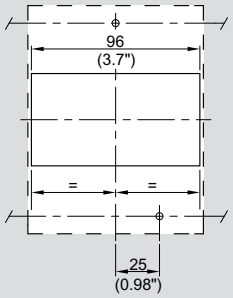


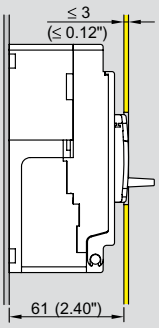


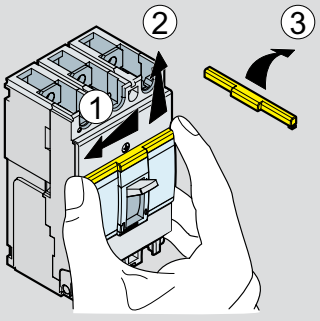
Door cut-out

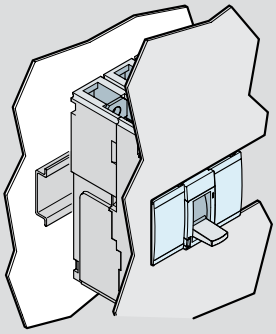


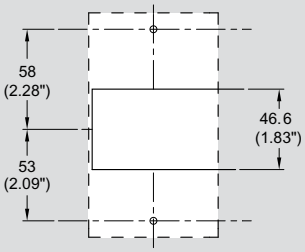


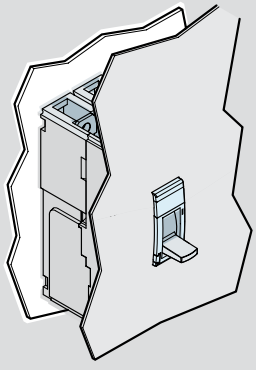


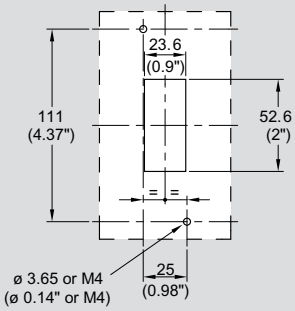


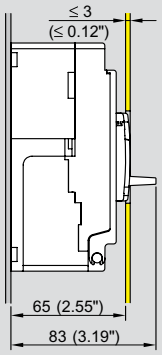










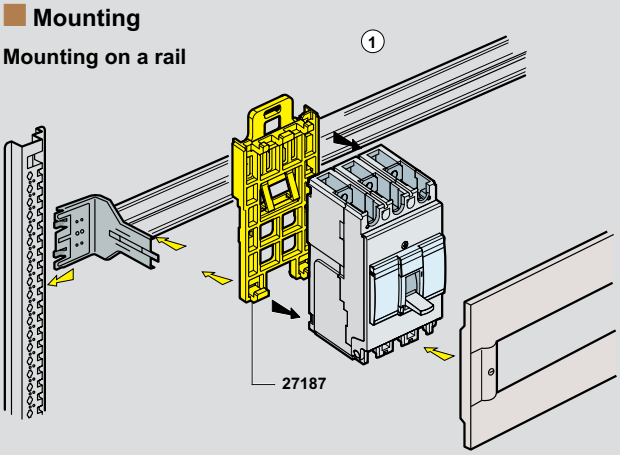


DRX™ 100

technical characteristics

Mounting

Mounting on a rail

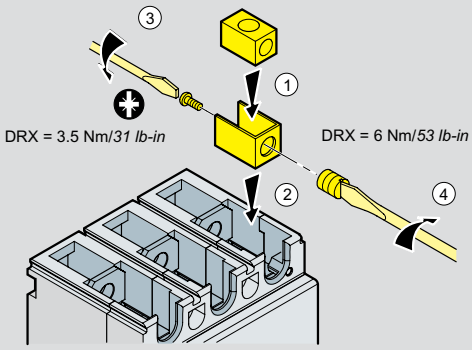


Connection

DRX front terminal

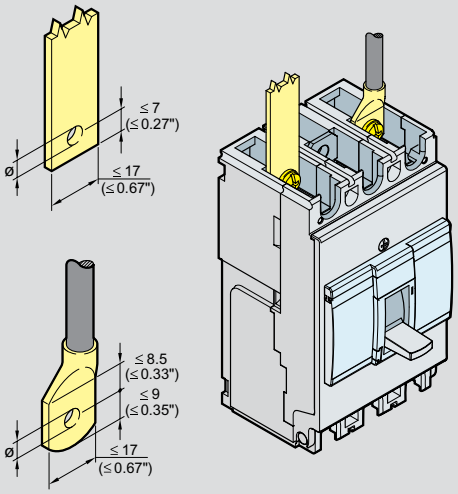
Cable connection

DRX = 27171 (3 P)
27173 (4 P)



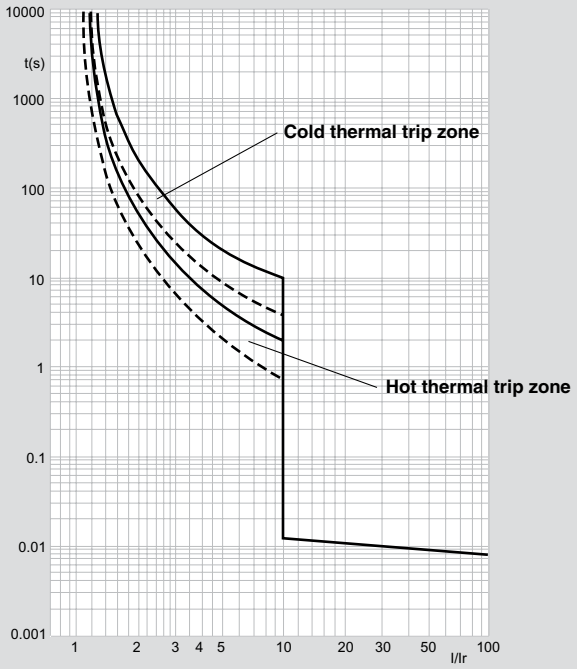
DRX ≤ 50 A	DRX > 50 A
Flexible 2,5 ❷ 10 mm²10 ❷ 35 mm² #14 ❷ #8 AWG or 12 0.47" Solid 2,5 ❷ 16 mm²10 ❷ 50 mm² #14 ❷ #6 AWG	Flexible #8 ❷ #2 AWG 14 0.55" Solid #8 ❷ #1/0 AWG
2,5 to 4 mm² #14 to #10 AWG flexible cables connection via crimped end-barrels	

Busbar connection



Curve

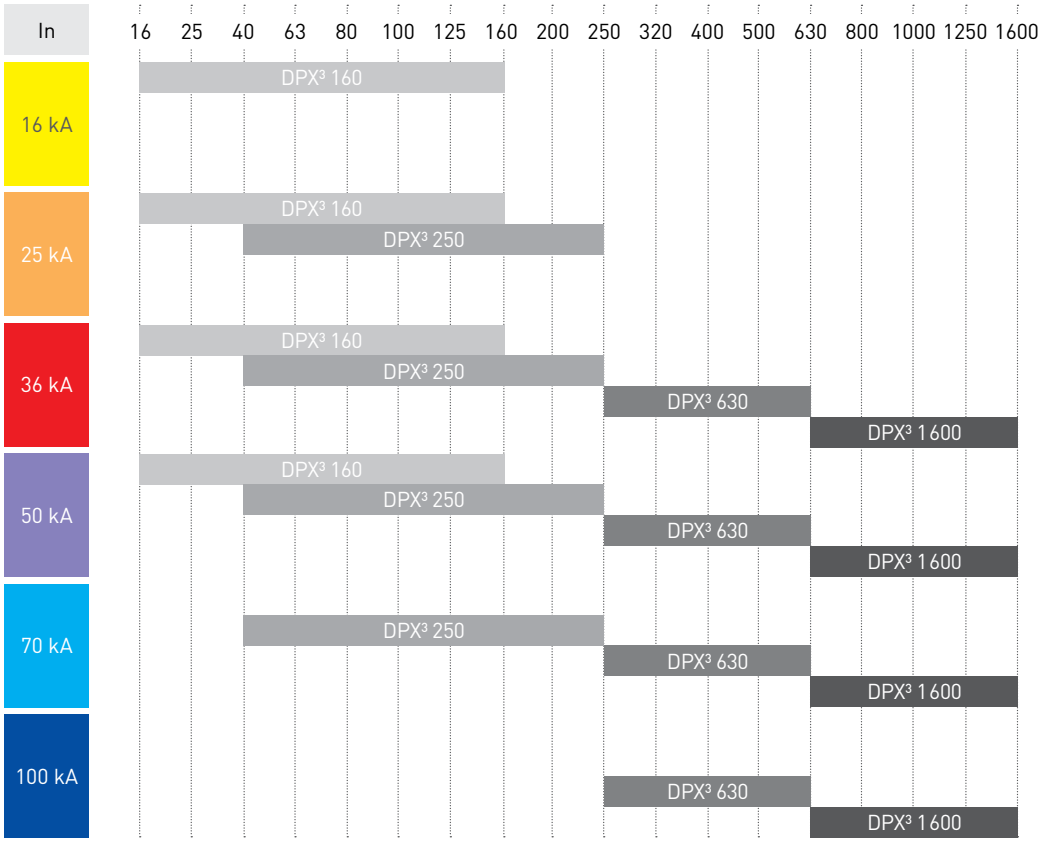
DRX 100 Imax = 100 A 3P - 4P



Technical characteristics		DRX
Number of poles		3P - 4P
Nominal current In (A)		60 -100
Neutral protection for 4 P version (%)		100
Rated insulation voltage Ui (V)		690
Rated impulse withstand current Uimp (kV)		6
Rated operating voltage (50/60 Hz) Ue (V)		600
Ultimate breaking capacity Icu (kA) EC 60947-2	220/240 V~	25
	380/415 V~	10
	440/460 V~	10
	480/550 V~	7.5
	600 V~	5
Standard breaking capacity Ics (% Icu)		50
Utilization category		A
Suitable for isolation		YES
Endurance (cycles)	mechanical	20000
	electrical	8000

A comprehensive range
for all your requirements
from 16 to 1600 A

The DPX³ range features four sizes of moulded case circuit breakers with breaking capacities ranging from 16 to 100 kA.



DPX³ 160
Mounting on rail or plate

DPX³ 250
Mounting on rail or plate

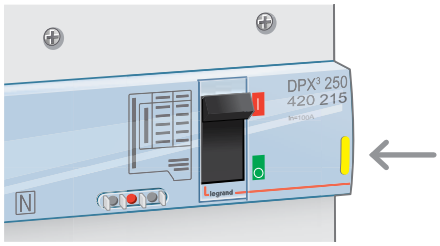
DPX³ 630
Mounting on plate

DPX³ 1600
Mounting on plate

Easy identification of the breaking capacity by the coloured tab:

16 kA 25 kA 36 kA

50 kA 70 kA 100 kA



Different versions for all types of installation

The DPX³ range includes a wide range of versions to meet all requirements:

- Thermal-magnetic and electronic releases according to the required level of protection
- Fixed, draw-out and plug-in versions according to the required level of maintenance

A WIDE RANGE OF VERSIONS

		DPX³ 160	DPX³ 250	DPX³ 630	DPX³ 1600
Number of poles	3 P	•	•	•	•
	4 P	•	•	•	•
Version	Fixed	•	•	•	•
	Plug-in	•	•	•	
	Draw-out			•	•
Release	Thermal-magnetic	•	•	•	•
	S1 electronic			•	•
	S2 electronic		•	•	•
	Sg electronic			•	•
Options	Integrated residual current protection	•	•		
	Integrated measurement		•(2)	•(2)	•(2)

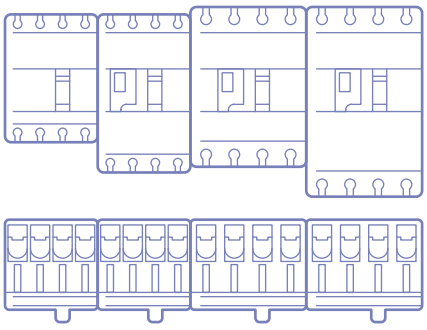
¹: thermal-magnetic only - ²: S2 or Sg electronic only

SELECTION OF THE TYPE OF RELEASE

	Protection against overloads		Protection against short-circuits			Protection against earth faults	
	Ir	tr	short delay		instantaneous	Ig	tg
			Isd	tsd	Ii		
thermal-magnetic	A	F			A(1)		
S1 electronic	A	F	A	F	F		
S2 electronic	A	A	A	A	A		
Sg electronic	A	A	A	A	A	A	A

A: adjustable (see catalogue pages for the adjustment ranges)
F: fixed
1: except for DPX³ 160: fixed Ii

Electronic DPX³ units are adjusted using pushbuttons and the settings are shown on the LCD screen



OPTIMISED INTEGRATION
The DPX³ 160 and 250 are the same depth and can therefore be installed on the same row.

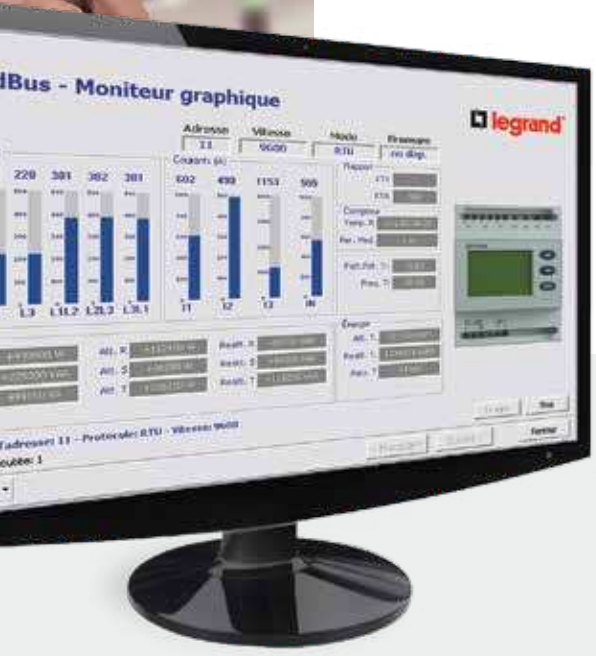
Currents, voltages, frequency, power, energy, THD.

Integrated measurement
from 40 to 1600 A

With the new DPX³ electronic circuit breakers with integrated measurement, it is very easy to monitor the parameters of the various circuits in the installation without using any external device.

The measured values are displayed directly on the LCD screen on the front of the devices.

Integrated measurement is available on the DPX³ 250, 630 and 1600.



The measurement data can also be viewed remotely on a PC equipped with supervision software, via a communication interface.

INTERNAL BATTERY
The protection unit has an internal battery, so it can be adjusted even if the circuit breaker is switched off. Tests can be carried out and faults viewed directly via the LCD screen of the MCCBs

Integrated measurement: choosing a more compact solution

DPX³ units with integrated measurement combine an electronic circuit breaker and a high-performance measurement control unit with LCD display in a single device.

Integrated measurement means:
- Protection of the installation against electrical faults
- Measurement and display of the installation's parameters
- Time-saving as a result of simplified installation and wiring
- Space-saving in the enclosure

CONVENTIONAL SOLUTION
Legrand also has a complete range of meters, measurement control units and for installations equipped with devices without integrated measurement.

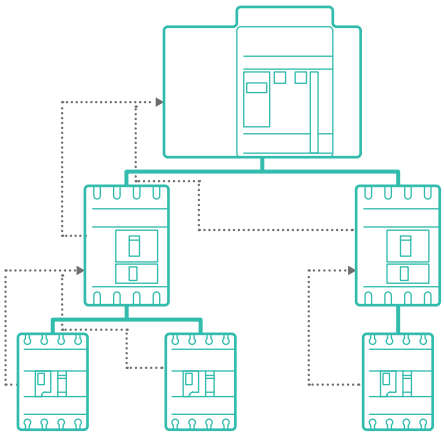
Integrated measurement is available on the DMX³, DPX³ and DX³ ranges. The panel board display is an innovative solution, allowing to integrate informations coming from 8 different devices DX³, DPX³, DMX³ or EMDX³.

NEW FUNCTIONS
TO SIMPLIFY USE

Total selectivity
for optimum
continuity of service

Selectivity between Legrand circuit breakers, which ensures continuity of service, is optimised by the improved performance of the DPX³ devices.

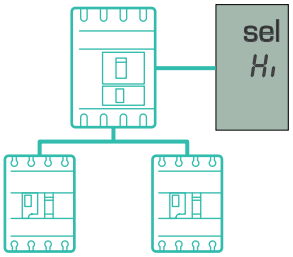
In critical configurations, the dynamic and logical selectivity offered by the new electronic DPX³ protection units provide total selectivity in all situations.



LOGICAL SELECTIVITY

This is "smart" selectivity, obtained by means of communication between DPX³ (and/or DMX³) electronic circuit breakers that are connected together via an external wired link. It enables there to be total selectivity between several levels, as well as a reduction of the thermal and electrodynamic stresses on the cables or bars, thus optimising the installation.

Connection cable for logical selectivity

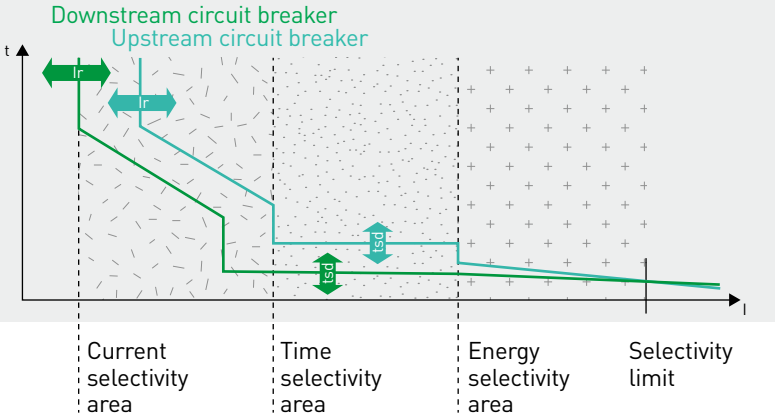


DYNAMIC SELECTIVITY

Electronic DPX³ units have 2-position adjustment:

- Low for normal selectivity level
- High for high selectivity level

When electronic circuit breakers are set to High there is a slight tripping delay, enabling a high level of selectivity to be obtained, even for the highest short-circuit currents.



CURRENT SELECTIVITY AND TIME SELECTIVITY

The precision of the settings on electronic DPX³ units ensures optimum current and time selectivity.

A range of auxiliaries and accessories
for an optimum configuration

With the huge range of possibilities offered by the numerous auxiliaries and accessories, DPX³ units can be adapted to fit any installation and any panel configuration.

ELECTRICAL AUXILIARIES

- The same auxiliary or fault signal contacts for the whole range
- Shunt trips or undervoltage releases

ROTARY HANDLES AND MOTOR-DRIVEN HANDLES

- One version for both DPX³ 160 and 250
- Previous DPX versions for DPX³ 630 and 1600

CONNECTION ACCESSORIES

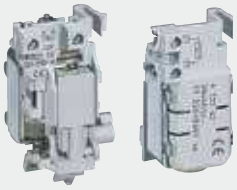
- Cage terminals, extensions, spreaders, rear terminals, etc. to adapt the DPX³ to suit all wiring configurations and simplify panel builder's work

Auxiliaries that are easy to install and wire

For emergency breaking, automatic or remote control and feedback on the status of the device, all DPX³ circuit breakers can be equipped very easily with a comprehensive range of electrical auxiliaries.

AUXILIARY CONTACTS
or fault signal contacts:
the same for all DPX³

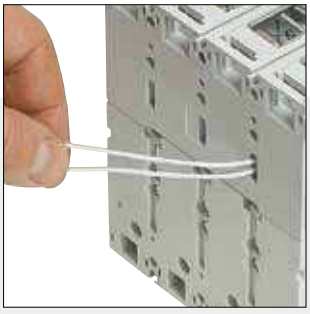
CURRENT SHUNT TRIPS
and undervoltage releases
for DPX³ 160 and 250



NEW RELEASES
with boxes for
DPX³ 630 and 1600

NUMBER OF AUXILIARIES THAT CAN BE INSTALLED PER DEVICE

	Auxiliary contacts	Fault signal contacts	Releases
DPX³ 160	1	1	1
DPX³ 250	1	1	1
DPX³ 630	2	2	1
DPX³ 1600	3	1	1



DPX³ have three options for
the outgoing connection wires.

Auxiliaries are installed in
dedicated locations under
the front panel.

The side motor-driven handle is mounted on the rail beside the DPX³.

Motorisation
and supply inverters for DPX³ 160/250

Motor-driven handles for DPX³ 160 and 250 are available in two versions, side and front.

They can take a wide range of DC and AC voltages, from 24 to 230 V.

The front motor-driven handle leaves space for access to the connections and for adjustment.

DPX³ 630 and 1600 can be equipped with front motor-driven handles. Supply inverters consist of a plate and an interlocking device, and are factory-assembled.

The interlocking device for DPX³ 160 and 250 greatly simplifies the installation of a supply inverter:

- Extremely easy to install
- Compact
- No adjustment required
- Rail mounting, enabling installation in small cabinets

DPX³ 160 and a DPX³ 250 can be used together for a supply inverter.

With motor-driven handles and the Legrand automation control unit, DPX³ supply inverters can be controlled and managed remotely.

Connection accessories for all configurations

Connection plates, cage terminals, spreaders, rear terminals, etc.

The DPX³ range has all the accessories needed for upstream and downstream connection of the circuit breakers via cables or bars in all configurations.

ALL CONNECTION ACCESSORIES

	Cage terminals		Screw terminals for bars	Connection extensions	Adaptors for lugs	Spreaders	Rear terminals
	Standard capacity	Large capacity					
DPX³ 160	•	•	•			•	•
DPX³ 250	•	•	•			•	•
DPX³ 630	•	•		•	•	•	•
DPX³ 1600	•	•		•		•	•

SPREADERS
These are used for connection via large cross-section cables.

FLAT REAR TERMINALS
These can be turned horizontally or vertically.

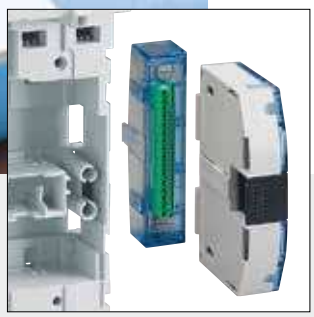
TERMINAL SHIELDS
These provide IP 2X protection of the connections.

DPX³ 160 AND 250
The large capacity cage terminals enable connection via large cross-section copper or aluminium cables (see catalogue pages for more detailed information).

Plug-in and draw-out DPX³ for optimum continuity of service

The plug-in and draw-out versions enable a faulty device to be replaced in just a few minutes without having to switch off the power supply to the other circuits.

The bases for plug-in and draw-out devices have the same connection options as fixed circuit breakers.



With the optional connector, the power can be disconnected while the auxiliaries remain operational for tests.

With its internal battery, the electronic DPX³ protection unit can be set in the workshop before the circuit breaker is inserted on its base.

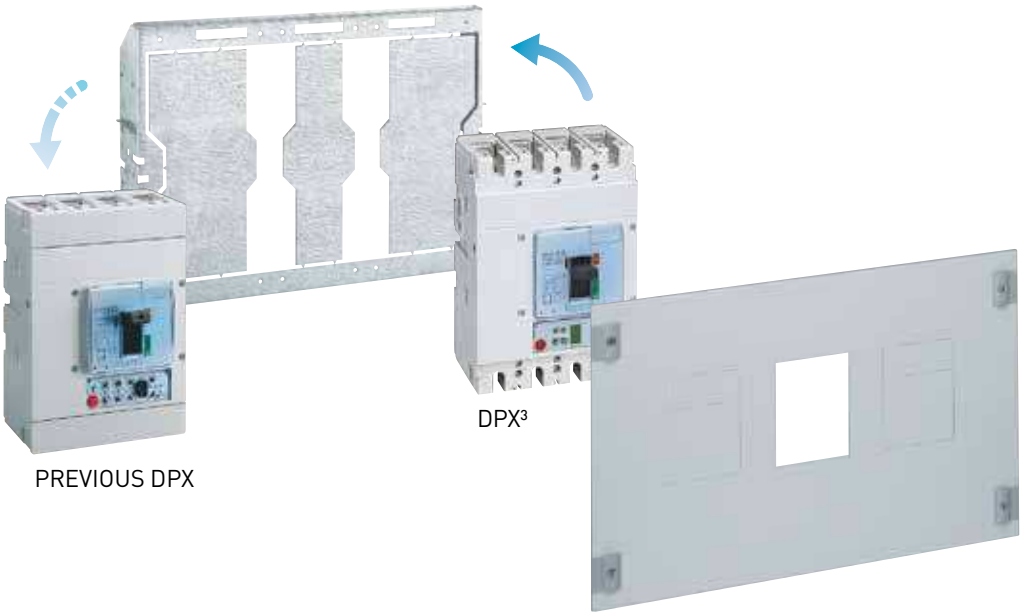
Locking via a key or a padlock prevents the device being switched on, while on its base, during maintenance operations.

DRAW-OUT DPX³ 630 AND 1600
The "debro-lift" mechanism is very easy to install and fixes onto the support bases. Connection/disconnection is carried out via a mechanism with a handle.
The mechanism has three positions, shown by coloured indicators:

connected test drawn out

DPX³ 630/1600: easy maintenance and upgrades

Retrofitting: to ensure panels are easy to maintain and upgrade, the new DPX³ 630 and 1600 use the same mounting plates as the previous DPX 630 and 1600.



The fixed version DPX³ 160 and 250 with front terminals are mounted on ⊔ rails using an adaptor.

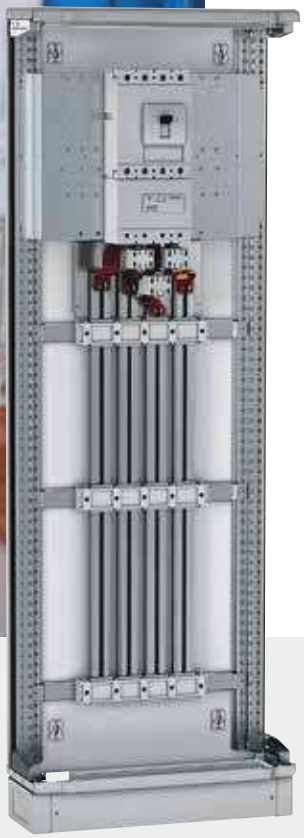
HX³ 250 and 400 A row distribution block for DPX³ and modular devices

Distribution systems that are safe and reliable

Optimised distribution provides a complete, coherent system for distributing electricity in the panel:

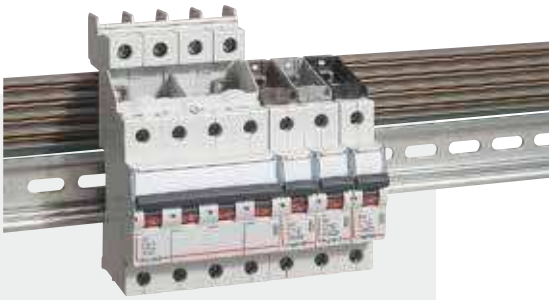
- Optimised busbars (C-section zinc-plated copper aluminium)
- Prefabricated links for connecting devices to busbars
- Horizontal distribution blocks with automatic connection of devices (can be connected while power is on)

All these components, which have been tested with Legrand devices, can be used to create safe, easy to maintain panels that comply with standard IEC 61439, reduce installation times and optimise the size of the enclosures.



VX³ C-section busbar and power supply kit

Prefabricated connection kits for DPX³



Plug-in HX³ 80/125 A row distribution block for modular devices

The XL³ range:
enclosures
for all requirements

From the XL³ 400 cabinet to the XL³ 6300 enclosure, the Legrand range fulfils all requirements for quality, strength and attractive appearance.

The XL³ range includes numerous practical innovations for quick, safe assembly, real freedom of configuration and considerable time-saving during maintenance and extension operations.

A comprehensive range for all distribution panels up to 6300 A

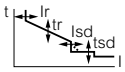
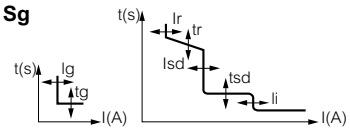
Ergonomic or locking handle, and solid or glazed doors.

Faster access and work with faceplates on hinges.

1/4 turn faceplates with handle.

DPX³

electrical characteristics

DEVICES	DPX³ 160 thermal magnetic				DPX³ 250 thermal magnetic				DPX³ 250 electronic release			
Mounting	On rail ⎓ or on plate				On rail ⎓ or on plate				On rail ⎓ or on plate			
Breaking capacity (kA) (EN 60947-2 and IEC 60947-2)	**16 kA**	**25 kA**	**36 kA**	**50 kA**	**25 kA**	**36 kA**	**50 kA**	**70 kA**	**25 kA**	**36 kA**	**50 kA**	**70 kA**
380/415 V~	16	25	36	50	25	36	50	70	25	36	50	70
220/240 V~	25	35	50	65	40	60	100	100	40	60	100	100
Breaking capacity (% Icu)	100	100	100	100	100	100	100	100	100	100	100	100
Characteristic of use												
Nominal frequency	50/60 Hz											
Maximum rated operating voltage Ue	690 V (500 V with integrated e.l.c.bs)				690 V (500 V with integrated e.l.c.bs)				690 V (500 V with integrated e.l.c.bs)			
Category of use	A				A				A			
Thermal magnetic adjustment												
Thermal	0,8 to 1 In				0,8 to 1 In				-			
Magnetic	10 In (400 A for 16 A and 25 A sizes)				5 to 10 In				-			
Electronic protection adjustment												
S2 	-				-				Ir : 0,4 to 1 In Isd : 1,5 to 10 Ir			
Sg 												
Maximum cable cross-section	**Standard version**				**High capacity**							
Rigid cable	95 mm²				150 mm²				150 mm²			
Flexible cable	70 mm²				120 mm²				120 mm²			
Copper bar and lug width	14 mm				18 mm				28.5 mm(1)			
Tightening torque	8 Nm				8 Nm				10 Nm			
Nominal current (In) at 40 °C (A)												
In (A)	16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250
Phase	16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250
N	16	25	40	63	80	100	125	160	100	160	200	250	0 - 50 -100 % of phase value(3)			
N/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnetic threshold (Im) (A)(2) of DPX³ thermal magnetic	**Fixed**								**Adjustable**				**Adjustable**			
In (A)	16	25	40	63	80	100	125	160	100	160	200	250	-			
Phase	400	400	400	630	800	1000	1250	1600	125-250	200-400	315-630	500-1000	-			
N	400	400	400	630	800	1000	1250	1600	125-250	200-400	315-630	500-1000	-			
N/2	-	-	-	-	-	-	-	-	-	-	-	-	-			
Endurance (cycles)																
Electrical	8000								8000				8000			
Mechanical	25000								20000				20000			
Electronic earth leakage module																
Type	without or integrated								without or integrated				without or integrated			

1: Copper bars only
2: Trip current for 50/60 Hz. For direct current, multiply by 1.5
3: For maximum values related to In phase limit

	DPX³ 630 thermal magnetic				DPX³ 630 electronic release				DPX³ 1600 thermal magnetic				DPX³ 1600 electronic release			
	On plate				On plate				On plate				On plate			
	36 kA	50 kA	70 kA	100 kA	36 kA	50 kA	70 kA	100 kA	36 kA	50 kA	70 kA	100 kA	36 kA	50 kA	70 kA	100 kA
	36	50	70	100	36	50	70	100	36	50	70	100	36	50	70	100
	70	100	120	170	70	100	120	170	70	100	120	170	70	100	120	170
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	50/60 Hz															
	690 V~				690 V~				690 V~				690 V~			
	A				A: In 630 A - B: In 200 to 400 A				A				B			
	0.8 to 1 In				-				0.8 to 1 In				-			
	5 to 10 In				-				5 to 10 In				-			
	-					S2	Sg		-					S2	Sg	
					Ir = 0.4 - 1 x In	•	•						Ir = 0.4 - 1 x In	•	•	
					tr = 3-30 s	•	•						tr = 3-30 s	•	•	
					Isd = 1.5 - 10 Ir	•	•						Isd = 1.5 - 10 Ir	•	•	
					tsd (I=K) = 0-500 ms	•	•						tsd (I=K) = 0-500 ms	•	•	
					tsd(I^2t=K) = 0-500 ms	•	•						tsd(I^2t=K) = 0-500 ms	•	•	
					Ig = 0.2 - 1 x In		•						Ig = 0.2 - 1 x In		•	
					tg = 0.1 - 1 s		•						tg = 0.1 - 1 s		•	
	300 mm² or 2 x 240 mm²				300 mm² or 2 x 240 mm²				2 or 4 x 240 mm²				2 or 4 x 240 mm²			
	240 mm² or 2 x 185 mm²				240 mm² or 2 x 185 mm²				2 or 4 x 185 mm²				2 or 4 x 185 mm²			
	32 mm				32 mm				50 mm				50 mm			
	15 Nm								20 Nm							
	250	320	400	500	630	250	320	400	500	630	500	630	800	1000	1250	500	630	800	1000	1250	1600
	250	320	400	500	630	250	320	400	500	630	500	630	800	1000	1250	500	630	800	1000	1250	1600
	250	320	400	500	630	0 - 50 - 100 % of phase value(3)					500	630	800	1000	1250	0 - 50 - 100 % of phase value(3)					
	-	250	250	250	320	-					-	-	-	500	630	-					
	Adjustable																				
	250	320	400	500	630	-					500	630	800	1000	1250	-					
	1250-2500	1600-3200	2000-4000	2500-5000	3150-6300	-					2500-5000	3150-6300	4000-8000	5000-10000	6250-12500	-					
	1250-2500	1600-3200	2000-4000	2500-5000	3150-6300	-					2500-5000	3150-6300	4000-8000	5000-10000	6250-12500	-					
	-	1000-2000	1250-2500	1600-2500	2000-4000	-					-	-	-	2500-5000	3150-5000	-					
	5000				5000				4000				4000			
	10000				20000				10000				10000			
	downstream e.l.c.bs.				downstream e.l.c.bs.				-				-			

DPX³ 160 thermal magnetic

MCCBs from 16 to 160 A

4200 00

4200 10

Electrical characteristics **p. 78-79**
Dimensions **p. 109**

Can be mounted on rail ⊔
MCCBs for switching, control isolation and protection of low voltage electrical lines
Supplied with cage terminals 70 mm² max. (flexible cable) or 95 mm² max. rigid cable with accessories
Can be fitted with accessories and DPX³ common auxiliaires
Conform to IEC 60947-2
Ics = 100% Icu

Pack	Cat.Nos	MCCBs - fixed version
		Thermal adjustable from 0,8 to 1 In Magnetic fixed at 10 In (fixed at 400 A for In 16 A and 25 A)
		Breaking capacity Icu 16 kA (400 V~)
	3P	In (A)
1	4200 00	16
1	**4200 01**	25
1	**4200 02**	40
1	**4200 03**	63
1	**4200 04**	80
1	**4200 05**	100
1	**4200 06**	125
1	4200 07	160
		Breaking capacity Icu 25 kA (400 V~)
1	4200 40	16
1	**4200 41**	25
1	**4200 42**	40
1	**4200 43**	63
1	**4200 44**	80
1	**4200 45**	100
1	**4200 46**	125
1	4200 47	160
		Breaking capacity Icu 36 kA (400 V~)
1	4200 80	16
1	4200 81	25
1	4200 82	40
1	**4200 83**	63
1	**4200 84**	80
1	**4200 85**	100
1	**4200 86**	125
1	**4200 87**	160
		Breaking capacity Icu 50 kA (400 V~)
1	4201 20	16
1	4201 21	25
1	4201 22	40
1	4201 23	63
1	4201 24	80
1	4201 25	100
1	4201 26	125
1	4201 27	160

Pack	Cat.Nos	MCCBs - fixed version
		Thermal adjustable from 0,8 to 1 In Magnetic fixed at 10 In (fixed at 400 A for In 16 A and 25 A)
		Breaking capacity Icu 16 kA (400 V~)
	4P	In (A)
1	4200 10	16
1	4200 11	25
1	**4200 12**	40
1	**4200 13**	63
1	**4200 14**	80
1	**4200 15**	100
1	**4200 16**	125
1	4200 17	160
		Breaking capacity Icu 25 kA (400 V~)
1	4200 50	16
1	4200 51	25
1	**4200 52**	40
1	**4200 53**	63
1	4200 54	80
1	**4200 55**	100
1	**4200 56**	125
1	4200 57	160
		Breaking capacity Icu 36 kA (400 V~)
1	4200 90	16
1	4200 91	25
1	4200 92	40
1	**4200 93**	63
1	4200 94	80
1	**4200 95**	100
1	**4200 96**	125
1	**4200 97**	160
		Breaking capacity Icu 50 kA (400 V~)
1	4201 30	16
1	4201 31	25
1	4201 32	40
1	4201 33	63
1	4201 34	80
1	4201 35	100
1	4201 36	125
1	4201 37	160

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

DPX³ 160 thermal magnetic

MCCBs from 16 to 160 A

4200 37

4201 57

Electrical characteristics **p. 78-79**
Dimensions **p. 109**

Can be mounted on rail ⊔
MCCBs for switching, control isolation and protection of low voltage electrical lines Supplied with cage terminals 70 mm² max. (flexible cable) or 95 mm² max. rigid cable with accessories Can be fitted with accessories and DPX³ common auxiliaires
Conform to IEC 60947-2
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs with electronic earth leakage module - fixed version**
		Thermal adjustable from 0,8 to 1 In Magnetic fixed at 10 In (fixed at 400 A for In 16 A and 25 A) Equipped with earth leakage module with LCD screen Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable tripping: 0 - 0.3 - 1 - 3s (with 0.03 A possible only 0 s)
		Breaking capacity Icu 16 kA (400 V~)
	4P	In (A)
1	4200 30	16
1	4200 31	25
1	4200 32	40
1	4200 33	63
1	4200 34	80
1	4200 35	100
1	4200 36	125
1	4200 37	160
		Breaking capacity Icu 25 kA (400 V~)
1	4200 70	16
1	4200 71	25
1	4200 72	40
1	4200 73	63
1	4200 74	80
1	4200 75	100
1	4200 76	125
1	4200 77	160
		Breaking capacity Icu 36 kA (400 V~)
1	4201 10	16
1	4201 11	25
1	4201 12	40
1	4201 13	63
1	4201 14	80
1	4201 15	100
1	4201 16	125
1	4201 17	160
		Breaking capacity Icu 50 kA (400 V~)
1	4201 50	16
1	4201 51	25
1	4201 52	40
1	4201 53	63
1	4201 54	80
1	4201 55	100
1	4201 56	125
1	4201 57	160

DPX³ 160 equipment and mounting accessories

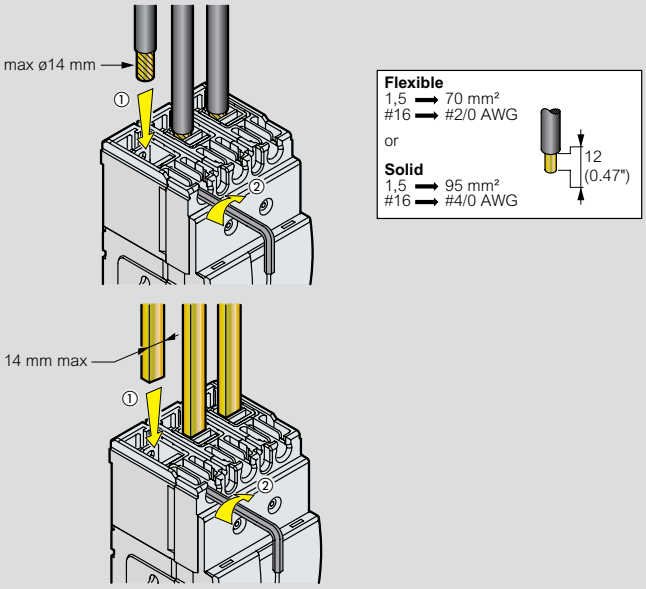
4210 40

4210 36

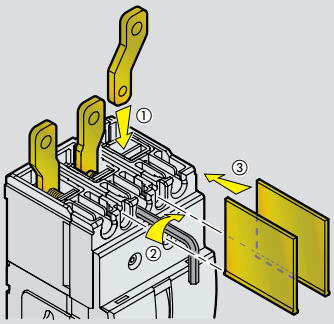
Pack	Cat.Nos	**Equipment for plug-in version**
		A plug-in version DPX³ is a fixed version DPX³ mounted on a plug-in base
		Plug-in bases for DPX³ 160
		Front or rear terminal mounting base
1	4210 40	For DPX³ 160 - 3P
1	4210 41	For DPX³ 160 - 4P with or without earth leakage module
		Connectors for auxiliary contacts
1	4210 44	Set of connectors
		Padlocks for plug-in base
1	4210 45	Key barrel and flat key
1	4210 46	Key barrel and star key
1	4210 47	Padlock accessory
		Connection accessories
		High capacity cage terminals
		For Cu/Al cables, 1 x 120 mm² for flexible cables and 1 x 150 mm² for rigid cable and 18 mm bars
1	4210 26	Set of 3 terminals
1	4210 27	Set of 4 terminals
		Insulated shields
1	4210 70	Set of 3 insulated shields
		Screw terminals for bars connection
		For copper bars
1	4210 28	Set of 3 terminals
1	4210 29	Set of 4 terminals
		Spreaders
		For incoming bars or cable lugs
1	6250 02	Set of 3 spreaders for DPX³ 160 3P
1	6250 06	Set of 4 spreaders for DPX³ 160 4P
		Rear terminals
		Flat swivel terminals Used to convert a fixed version with front terminals to a fixed version with rear terminals
1	4210 36	Set of 3 rear terminals for DPX³ 160 3P
1	4210 37	Set of 4 rear terminals for DPX³ 160 4P
		Sealable terminal shields
		For front terminals
1	4210 54	For DPX³ 160 3P
1	4210 55	For DPX³ 160 3P
		For rear terminals
1	4210 50	For DPX³ 160 3P
1	4210 51	For DPX³ 160 4P
		Fixing plates
		For fixing DPX³ 160 on ⊔ rail or on plate
1	4210 71	For DPX³ 160 3P/4P without earth leakage module
1	4210 73	For DPX³ 160 4P with earth leakage module
1	4210 68	For DPX³ 160 3P/4P with side mounting motor operator

Connection

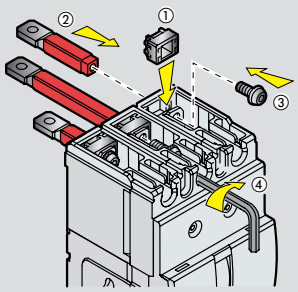
Direct connection



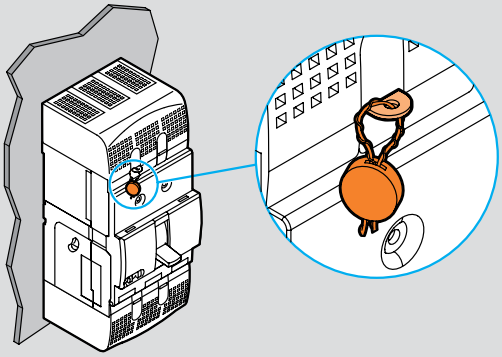
Spreaders



Rear terminals



Sealable terminal shield



4202 05

Electrical characteristics **p. 78-79**
Dimensions **p. 110**

Can be mounted on rail ⊔
MCCBs for switching, control isolation and protection of low voltage electrical lines
Supplied with insulated shileds, cage terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories
Can be fitted with accessories and DPX³ common auxiliaires
Conform to IEC 60947-2
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs - fixed version**
		Thermal adjustable from 0,8 to 1 In Magnetic adjustable from 5 to 10 In
		Breaking capacity Icu 25 kA (400 V∿)
	3P	In (A)
1	4202 05	100
1	4202 07	160
1	4202 08	200
1	4202 09	250
		Breaking capacity Icu 36 kA (400 V∿)
1	4202 35	100
1	4202 37	160
1	**4202 38**	200
1	**4202 39**	250
		Breaking capacity Icu 50 kA (400 V∿)
1	4202 65	100
1	4202 67	160
1	4202 68	200
1	**4202 69**	250
		Breaking capacity Icu 70 kA (400 V∿)
1	4206 05	100
1	4206 07	160
1	4206 08	200
1	4206 09	250
	4P	**Breaking capacity Icu 25 kA (400 V∿)**
1	4202 15	100
1	4202 17	160
1	4202 18	200
1	4202 19	250
		Breaking capacity Icu 36 kA (400 V∿)
1	4202 45	100
1	4202 47	160
1	**4202 48**	200
1	**4202 49**	250
		Breaking capacity Icu 50 kA (400 V∿)
1	4202 75	100
1	4202 77	160
1	4202 78	200
1	**4202 79**	250
		Breaking capacity Icu 70 kA (400 V∿)
1	4206 15	100
1	4206 17	160
1	4206 18	200
1	4206 19	250

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Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

DPX³ 250 thermal magnetic

MCCBs from 100 to 250 A (continued)

4202 25

Electrical characteristics **p. 78-79**
Dimensions **p. 110**

Can be mounted on rail ⊔
MCCBs for switching, control isolation and protection of low voltage electrical lines
Supplied with insulated shileds, cage terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories
Can be fitted with accessories and DPX³ common auxiliaires
Conform to IEC 60947-2
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs with electronic earth leakage module - fixed version** Thermal adjustable from 0,8 to 1 In Magnetic adjustable from 5 to 10 In Equipped with earth leakage module with LCD screen Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable tripping: 0 - 0.3 - 1 - 3s (with 0.03 A possible only 0s)
		Breaking capacity Icu 25 kA (400 V∿)
	4P	In (A)
1	4202 25	100
1	4202 27	160
1	4202 28	200
1	4202 29	250
		Breaking capacity Icu 36 kA (400 V∿)
1	4202 55	100
1	4202 57	160
1	4202 58	200
1	4202 59	250
		Breaking capacity Icu 50 kA (400 V∿)
1	4202 85	100
1	4202 87	160
1	4202 88	200
1	4202 89	250
		Breaking capacity Icu 70 kA (400 V∿)
1	4206 25	100
1	4206 27	160
1	4206 28	200
1	4206 29	250

DPX³ 250 electronic release

MCCBs from 40 to 250 A

4203 69

Electrical characteristics **p. 78-79**
Dimensions **p. 110**

Can be mounted on rail ⊔
MCCBs for switching, control isolation and protection of low voltage electrical lines
Supplied with insulated shileds, cage terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories
Can be fitted with accessories and DPX³ common auxiliaires
Conform to IEC 60947-2
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs - fixed version** Protection against overloads: Ir adjustable from 0.4 to 1 x In tr adjustable from 3 to 15s Protection against short circuits: Isd adjustable from 1.5 to 10 x Ir tsd adjustable from 0 to 0.5s
		Breaking capacity Icu 25 kA (400 V∿)
	3P	In (A)
1	4203 02	40
1	4203 05	100
1	4203 07	160
1	4203 09	250
		Breaking capacity Icu 36 kA (400 V∿)
1	4203 32	40
1	4203 35	100
1	4203 37	160
1	4203 39	250
		Breaking capacity Icu 50 kA (400 V∿)
1	4203 62	40
1	4203 65	100
1	4203 67	160
1	4203 69	250
		Breaking capacity Icu 70 kA (400 V∿)
1	4206 35	40
1	4206 37	100
1	4206 38	160
1	4206 39	250
	4P	**Breaking capacity Icu 25 kA (400 V∿)**
1	4203 12	40
1	4203 15	100
1	4203 17	160
1	4203 19	250
		Breaking capacity Icu 36 kA (400 V∿)
1	4203 42	40
1	4203 45	100
1	4203 47	160
1	4203 49	250
		Breaking capacity Icu 50 kA (400 V∿)
1	4203 72	40
1	4203 75	100
1	4203 77	160
1	4203 79	250
		Breaking capacity Icu 70 kA (400 V∿)
1	4206 45	40
1	4206 47	100
1	4206 48	160
1	4206 49	250

DPX³ 250 electronic release

MCCBs from 40 to 250 A (continued)

4203 25

Electrical characteristics **p. 78-79**
Dimensions **p. 110**

Can be mounted on rail
MCCBs for switching, control isolation and protection of low voltage electrical lines
Supplied with insulated shileds, cage terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories
Can be fitted with accessories and DPX³ common auxiliaires
Conform to IEC 60947-2
Ics = 100% Icu

Pack	Cat.Nos	MCCBs with electronic earth leakage module - fixed version
		Protection against overloads: Ir adjustable from 0.4 to 1 x In tr adjustable from 3 to 15s Protection against short circuits: Isd adjustable from 1.5 to 10 x Ir tsd adjustable from 0 to 0.5s Equipped with earth leakage module with LCD screen Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable tripping: 0 - 0.3 - 1 - 3s (with 0.03 A possible only 0s)
		Breaking capacity Icu 25 kA (400 V~)
	4P	In (A)
1	4203 22	40
1	4203 25	100
1	4203 27	160
1	4203 29	250
		Breaking capacity Icu 36 kA (400 V~)
1	4203 52	40
1	4203 55	100
1	4203 57	160
1	4203 59	250
		Breaking capacity Icu 50 kA (400 V~)
1	4203 82	40
1	4203 85	100
1	4203 87	160
1	4203 89	250
		Breaking capacity Icu 70 kA (400 V~)
1	4206 55	40
1	4206 57	100
1	4206 58	160
1	4206 59	250

Pack	Cat.Nos	MCCBs with energy metering central unit - fixed version
		Protection against overloads: Ir adjustable from 0.4 to 1 x In tr adjustable from 3 to 15s Protection against short circuits: Isd adjustable from 1.5 to 10 x Ir tsd adjustable from 0 to 0.5s Integrated energy metering central unit with LCD screen; currents, voltage, frequency, power, energy and harmonics
		Breaking capacity Icu 25 kA (400 V~)
	3P	In (A)
1	4204 02	40
1	4204 05	100
1	4204 07	160
1	4204 09	250
		Breaking capacity Icu 36 kA (400 V~)
1	4204 32	40
1	4204 35	100
1	4204 37	160
1	4204 39	250
		Breaking capacity Icu 50 kA (400 V~)
1	4204 62	40
1	4204 65	100
1	4204 67	160
1	4204 69	250
		Breaking capacity Icu 70 kA (400 V~)
1	4206 65	40
1	4206 67	100
1	4206 68	160
1	4206 69	250

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

DPX³ 250 electronic release

MCCBs from 40 to 250 A (continued)

4206 79

4204 25

Electrical characteristics **p. 78-79**
Dimensions **p. 110**

Can be mounted on rail
MCCBs for switching, control isolation and protection of low voltage electrical lines
Supplied with insulated shileds, cage terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories
Can be fitted with accessories and DPX³ common auxiliaires
Conform to IEC 60947-2
Ics = 100% Icu

MCCBs with energy metering central unit - fixed version

Protection against overloads:
Ir adjustable from 0.4 to 1 x In
tr adjustable from 3 to 15s
Protection against short circuits:
Isd adjustable from 1.5 to 10 x Ir
tsd adjustable from 0 to 0.5s
Integrated energy metering central unit with LCD screen; currents, voltage, frequency,power, energy and harmonics

Pack	Cat.Nos	4P In (A)
		Breaking capacity Icu 25 kA (400 V~)
1	4204 12	40
1	4204 15	100
1	4204 17	160
1	4204 19	250
		Breaking capacity Icu 36 kA (400 V~)
1	4204 42	40
1	4204 45	100
1	4204 47	160
1	4204 49	250
		Breaking capacity Icu 50 kA (400 V~)
1	4204 72	40
1	4204 75	100
1	4204 77	160
1	4204 79	250
		Breaking capacity Icu 70 kA (400 V~)
1	4206 75	40
1	4206 77	100
1	4206 78	160
1	4206 79	250

MCCBs with energy metering central unit and electronic earth leakage module - fixed version

Protection against overloads:
Ir adjustable from 0.4 to 1 x In
tr adjustable from 3 to 15s
Protection against short circuits:
Isd adjustable from 1.5 to 10 x Ir
tsd adjustable from 0 to 0.5s
Equipped with earth leakage module with LCD screen
Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A
Adjustable tripping: 0 - 0.3 - 1 - 3s
(with 0.03 A
possible only 0s) Integrated energy metering central unit with LCD screen; currents, voltage, frequency, power, energy and harmonics

Pack	Cat.Nos	4P In (A)
		Breaking capacity Icu 25 kA (400 V~)
1	4204 22	40
1	4204 25	100
1	4204 27	160
1	4204 29	250
		Breaking capacity Icu 36 kA (400 V~)
1	4204 52	40
1	4204 55	100
1	4204 57	160
1	4204 59	250
		Breaking capacity Icu 50 kA (400 V~)
1	4204 82	40
1	4204 85	100
1	4204 87	160
1	4204 89	250
		Breaking capacity Icu 70 kA (400 V~)
1	4206 85	40
1	4206 87	100
1	4206 88	160
1	4206 89	250

DPX³ 250 electronic release

MCCBs from 40 to 250 A (continued)

4205 49

Electrical characteristics **p. 78-79**
Dimensions **p. 110**

Can be mounted on rail ⊔
MCCBs for switching, control isolation and protection of low voltage electrical lines
Supplied with insulated shileds, cage terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories
Can be fitted with accessories and DPX³ common auxiliaires
Conform to IEC 60947-2
Ics = 100% Icu

Pack	Cat.Nos	Electronic release Sg MCCBs - fixed version
		Protection against averloads: Ir adjustable from 0.4 to 1 x In tr adjustable from 3 to 15s Protection against short circuits: Isd adjustable from 1.5 to 10 x Ir tsd adjustable from 0 to 0.5s Protection against earth fault: Ig adjustable: from 0.2 to 1 x In and OFF position tg adjustable from 0.1 to 1s
		Breaking capacity Icu 25 kA (400 V∿)
	3P	In (A)
1	4205 02	40
1	4205 05	100
1	4205 07	160
1	4205 09	250
		Breaking capacity Icu 36 kA (400 V∿)
1	4205 22	40
1	4205 25	100
1	4205 27	160
1	4205 29	250
		Breaking capacity Icu 50 kA (400 V∿)
1	4205 42	40
1	4205 45	100
1	4205 47	160
1	4205 49	250
		Breaking capacity Icu 70 kA (400 V∿)
1	4206 92	40
1	4206 95	100
1	4206 97	160
1	4206 99	250

Pack	Cat.Nos	Electronic release Sg MCCBs - fixed version
		Protection against averloads: Ir adjustable from 0.4 to 1 x In tr adjustable from 3 to 15s Protection against short circuits: Isd adjustable from 1.5 to 10 x Ir tsd adjustable from 0 to 0.5s Protection against earth fault: Ig adjustable: from 0.2 to 1 x In and OFF position tg adjustable from 0.1 to 1s
		Breaking capacity Icu 25 kA (400 V∿)
	4P	In (A)
1	4205 12	40
1	4205 15	100
1	4205 17	160
1	4205 19	250
		Breaking capacity Icu 36 kA (400 V∿)
1	4205 32	40
1	4205 35	100
1	4205 37	160
1	4205 39	250
		Breaking capacity Icu 50 kA (400 V∿)
1	4205 52	40
1	4205 55	100
1	4205 57	160
1	4205 59	250
		Breaking capacity Icu 70 kA (400 V∿)
1	4207 02	40
1	4207 05	100
1	4207 07	160
1	4207 09	250

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Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
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DPX³ 250 equipment and mounting accessories

4210 44

4210 31

4210 72

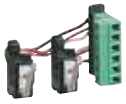
Pack	Cat.Nos	Equipment for plug-in version
		A plug-in version DPX³ is a fixed version DPX³ mounted on a plug-in base
		Plug-in bases for DPX³ 250
		Front or rear terminal mounting base
1	4210 42	For DPX³ 250 - 3P
1	4210 43	For DPX³ 250 - 4P with or without earth leakage module
		Connectors for auxiliary contacts
1	4210 44	Set of connectors
		Padlocks for plug-in base
1	4210 45	Key barrel and flat key N° ABA90GEL6149
1	4210 46	Key barrel and star key N° HBA90GPS6149
1	4210 47	Padlock accessory
		Connection accessories
		Cage terminals
		For Cu/Al cables, 1 x 120 mm² for flexible cables and 1 x 150 mm² for rigid cables and lugs 28.5 x 8 x 8.5 mm
1	4210 30	Set of 3 terminals
1	4210 31	Set of 4 terminals
		Insulated shields
1	4210 70	Set of 3 insulated shields
		Spreaders
		For incoming bars or cable lugs
1	6250 14	Set of 3 spreaders for DPX³ 250 3P
1	6250 18	Set of 4 spreaders for DPX³ 250 4P
		Rear terminals
		Flat swivel terminals Used to convert a fixed version with front terminals to a fixed version with rear terminals
1	4210 38	Set of 3 rear terminals for DPX³ 250 3P
1	4210 39	Set of 4 rear terminals for DPX³ 250 4P
		Sealable terminal shields
		For front terminals
1	4210 56	For DPX³ 250 3P
1	4210 57	For DPX³ 250 4P
		For rear terminals
1	4210 52	For DPX³ 250 3P
1	4210 53	For DPX³ 250 4P
		Fixing plates
		For fixing DPX³ 250 on ⊔ rail or on plate
1	4210 72	For DPX³ 250 3P/4P without earth leakage module
1	4210 74	For DPX³ 250 4P with earth leakage module
1	4210 69	For DPX³ 250 3P/4P with side mounting motor operator

Ekinoxe™ MCCB DBs for DPX³ MCCBs

- As per IS 8623
- Available in 4, 6, 8 and 12 ways
- Fully insulated busbars and neutral bars
- Reversible doors for IP43 and IP54 distribution boards
- Provision for DPX³ 160 and DPX³ 250 MCCB as incomer and SP/TP MCBs as outgoing

DPX³ 160 and 250 common auxiliaries and accessories

4201 60



4210 10

4210 11

4210 16

4210 22

Pack	Cat.Nos	Supply invertor type
		Plate for mounting and interlocking of 2 DPX³ For 2 DPX³ 160 or 2 DPX³ 250 or 1 DPX³ 160 and 1 DPX³ 250
1	4210 58	For fixed version
1	4210 59	For plug-in and draw-out version
		Rotary handles
		Direct handles
1	6210 00	Standard handle for thermal magnetic DPX³ without earth leakage module
1	6210 01	Standard handle for electronic DPX³ and/or with earth leakage module
1	4201 60	Direct Rotary handle- DPX³ 160 & 250
		Vari-depth handles
		For all version of DPX³
1	6210 04	Standard handle
1	4201 61	Vary Depth Rotary handle- DPX³ 160 & 250
		Locking accessories
1	4210 06	Ronis for direct handle
1	4210 07	Profalux for direct handle
1	4210 08	Ronis for vari-depth handle
1	4210 09	Profalux for vari-depth handle
1	4201 64	Key lock for DIR RH - DPX³ 160 & 250
1	4201 67	Key lock for VD RH - DPX³ 160 & 250
1	4201 65	Key lock for DIR RH Type A - DPX³ 160 & 250
1	4201 68	Key lock for VD RH Type A - DPX³ 160 & 250
1	4201 66	Key lock for DIR RH Type B - DPX³ 160 & 250
1	4201 69	Key lock for VD RH Type B - DPX³ 160 & 250
		Motor-driven handles
		Motor operators 24 to 230 V~/⎓
1	4210 60	Side motor operator
1	4210 61	Front motor operator
		Locking accessories
1	4210 62	Ronis key barrel for front motor operator
1	4210 63	Profalux key barrel for front motor operator
1	4210 64	Padlock for front motor operator
1	4210 65	Ronis key barrel for side motor operator
1	4210 66	Profalux key barrel for side motor operator
1	4210 67	Padlock for side motor operator

Pack	Cat.Nos	Auxiliaries
		Auxiliary contacts
1	**4210 10**	1 N/C + 1 N/O auxiliary contact for rotary handles
1	**4210 11**	Auxiliary contact or fault signalling contact
1	4210 48	Signalling contact plugged-in / drawn-out (for DPX³ plug-in version)
		Shunt releases
1	4210 12	12 V~/⎓
1	4210 13	24 V~/⎓
1	4210 14	48 V~/⎓
1	4210 15	110-130 V~/⎓
1	**4210 16**	200-277 V~/⎓
1	**4210 17**	380-480 V~/⎓
		Undervoltage releases
1	4210 18	12 V~/⎓
1	4210 19	24 V~/⎓
1	4210 20	48 V~/⎓
1	4210 21	110-130 V~/⎓
1	**4210 22**	200-240 V~/⎓
1	4210 23	277 V~
1	**4210 24**	380-415 V~
1	4210 25	440-480 V~
		Locking accessory
1	4210 49	Padlock for locking in "open" position
		Communication interface
1	4210 75	Modbus

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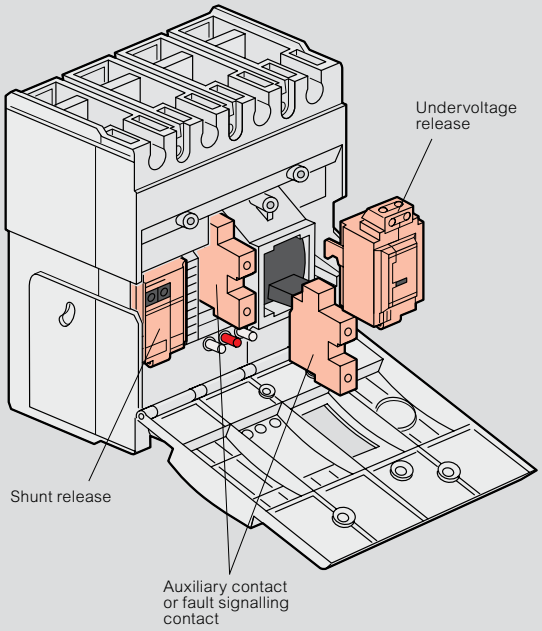
Red catalogue numbers : new products.

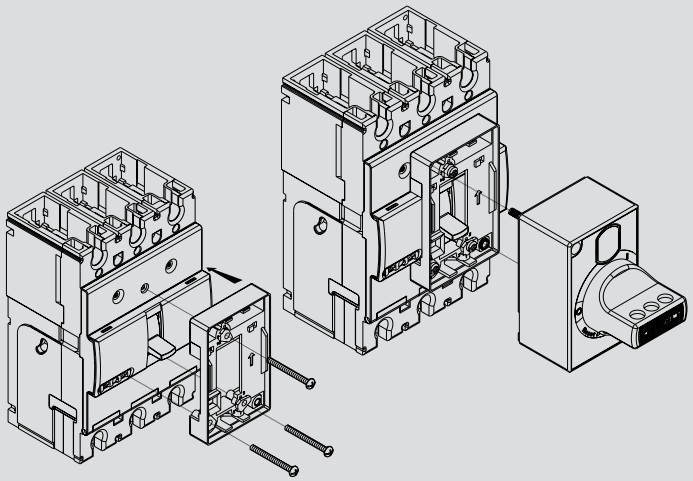
DPX³ 160/250

installation principle

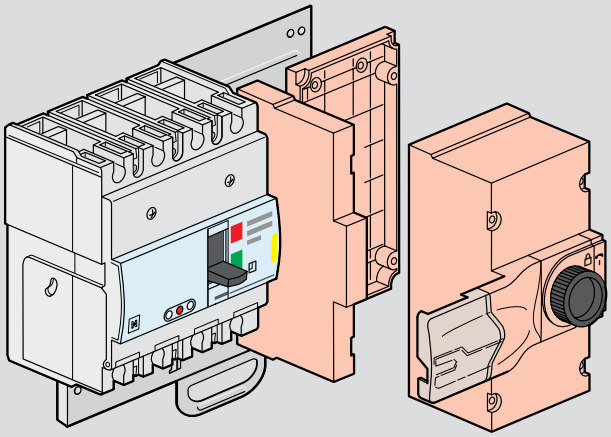
Auxiliaries mounting



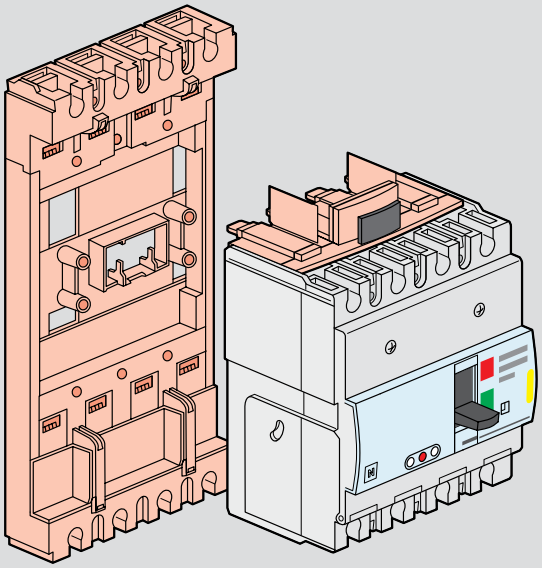
Direct



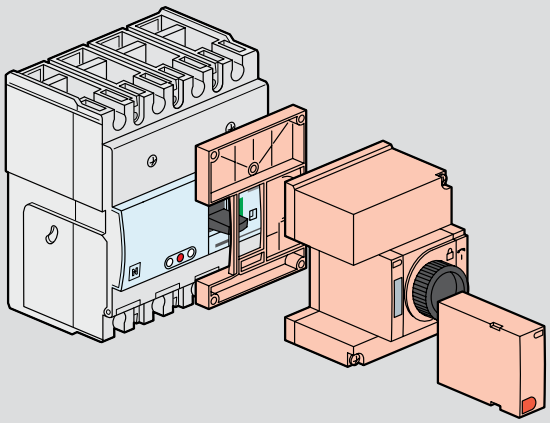
Side mounting motor-driven handle



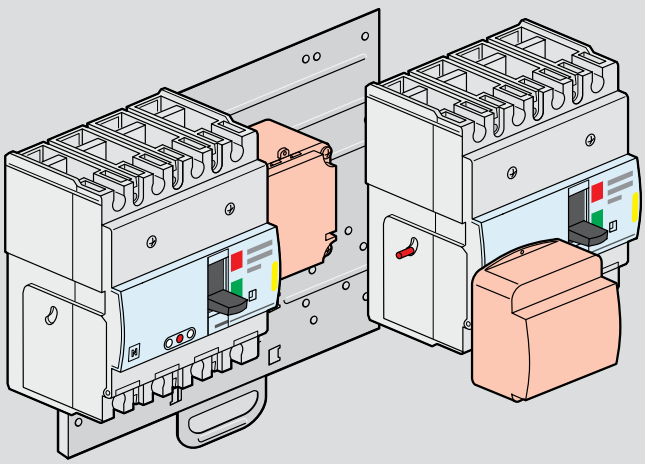
Plug-in version



Front mounting motor-driven handle



Supply invertor type



DPX³ 630

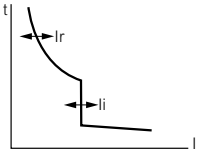
thermal magnetic release MCCBs from 250 to 630 A

4220 02

4220 07

Dimensions **p. 112**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries
Can be used with earth leakage modules (p. 105) or with residual current re lays
Supplied complete with:
- connection plates for bars
- terminal shields
Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs thermal magnetic release - fixed version**
		Thermal adjustable from 0.8 to 1 In Magnetic adjustable from 5 to 10 In
		
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4220 01	320
1	4220 02	400
1	4220 03	500
1	4220 04	630
		Breaking capacity Icu 50 kA (400 V~)
1	4220 15	320
1	4220 16	400
1	4220 17	500
1	4220 18	630
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4220 06	320
1	4220 07	400
1	4220 08	500
1	4220 09	630
		Breaking capacity Icu 50 kA (400 V~)
1	4220 20	320
1	4220 21	400
1	4220 22	500
1	4220 23	630

Pack	Cat.Nos	**MCCBs thermal magnetic release - fixed version (continued)**
		Breaking capacity Icu 70 kA (400 V~)
	3P	In (A)
1	4220 29	320
1	4220 30	400
1	4220 31	500
1	4220 32	630
		Breaking capacity Icu 100 kA (400 V~)
1	4220 43	320
1	4220 44	400
1	4220 45	500
1	4220 46	630
		Breaking capacity Icu 70 kA (400 V~)
	4P	In (A)
1	4220 34	320
1	4220 35	400
1	4220 36	500
1	4220 37	630
		Breaking capacity Icu 100 kA (400 V~)
1	4220 48	320
1	4220 49	400
1	4220 50	500
1	4220 51	630

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Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
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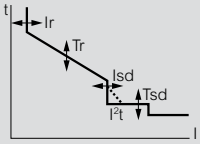
DPX³ 630/1600

electronic release

Performance data

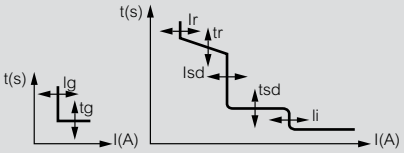
S2 - Adjustment of Ir, tr, Isd, tsd



Protection against overloads:
- Ir adjustable from 0.4 to 1 x In
- tr adjustable from 3 to 15 s

Protection against short circuits:
- Isd adjustable from 1.5 to 10 x Ir
- tsd adjustable from 0 to 0.5 s

Sg - Adjustment of Ir, tr, Isd, tsd, Ig, tg



Protection against overloads:
- Ir adjustable from 0.4 to 1 x In
- tr adjustable from 3 to 15 s

Protection against short circuits:
- Isd adjustable from 1.5 to 10 x Ir
- tsd adjustable from 0 to 0.5 s

Protection against earth fault:
- Ig adjustable: from 0.2 to 1 x In and OFF position
- tg adjustable from 0.1 to 1 s

DPX³ 630

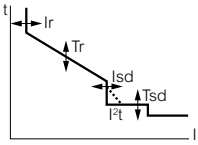
S2 electronic release MCCBs from 250 to 630 A

4220 60

Dimensions **p. 112**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries
Can be used with earth leakage modules or with residual current relays
Supplied complete with:
- connection plates for bars
- terminal shields

Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs electronic release S2 - fixed version**
		Adjustment of Ir, Isd, tr, tsd Instantaneous protection If = 5 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel
		
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4220 57	320
1	4220 58	400
1	4220 59	500
1	4220 60	630
		Breaking capacity Icu 50 kA (400 V~)
1	4220 67	320
1	4220 68	400
1	4220 69	500
1	4220 70	630
		Breaking capacity Icu 70 kA (400 V~)
1	4220 77	320
1	4220 78	400
1	4220 79	500
1	4220 80	630
		Breaking capacity Icu 100 kA (400 V~)
1	4220 87	320
1	4220 88	400
1	4220 89	500
1	4220 90	630

DPX³ 630

S2 electronic release MCCBs from 250 to 630 A (continued)

4220 65

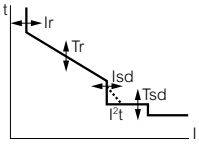
Dimensions **p. 112**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries
Can be used with earth leakage modules (p. 105) or with residual current relays
Supplied complete with:
- connection plates for bars
- terminal shields

Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

MCCBs electronic release S2 - fixed version

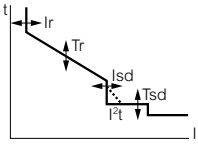
Adjustment of Ir, Isd, tr, tsd Instantaneous protection
If = 5 kA
Green indicator lamp
Connector for test unit
Logic and dynamic selectivity
4P version: adjustement of neutral on front panel



Pack	Cat.Nos	4P In (A)
		Breaking capacity Icu 36 kA (400 V~)
1	4220 62	320
1	4220 63	400
1	4220 64	500
1	4220 65	630
		Breaking capacity Icu 50 kA (400 V~)
1	4220 72	320
1	4220 73	400
1	4220 74	500
1	4220 75	630
		Breaking capacity Icu 70 kA (400 V~)
1	4220 82	320
1	4220 83	400
1	4220 84	500
1	4220 85	630
		Breaking capacity Icu 100 kA (400 V~)
1	4220 92	320
1	4220 93	400
1	4220 94	500
1	4220 95	630

MCCBs electronic release S2 with energy metering central unit - fixed version

Adjustment of Ir, Isd, tr, tsd Instantaneous protection
If = 5 kA
Green indicator lamp
Connector for test unit
Logic and dynamic selectivity
4P version: adjustement of neutral on front panel



Pack	Cat.Nos	3P In (A)
		Breaking capacity Icu 36 kA (400 V~)
1	4220 97	320
1	4220 98	400
1	4220 99	500
1	4221 00	630
		Breaking capacity Icu 50 kA (400 V~)
1	4221 07	320
1	4221 08	400
1	4221 09	500
1	4221 10	630
		Breaking capacity Icu 70 kA (400 V~)
1	4221 17	320
1	4221 18	400
1	4221 19	500
1	4221 20	630
		Breaking capacity Icu 100 kA (400 V~)
1	4221 27	320
1	4221 28	400
1	4221 29	500
1	4221 30	630

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Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

DPX³ 630

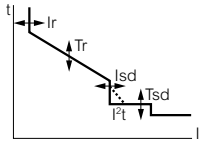
S2 electronic release MCCBs from 250 to 630 A (continued)

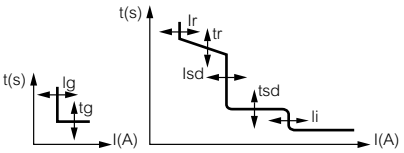
4221 38

Dimensions **p. 112**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries
Can be used with earth leakage modules (p. 105) or with residual current relays
Supplied complete with:
- connection plates for bars
- terminal shields

Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	MCCBs electronic release S2 with energy metering central unit - fixed version
		Adjustment of Ir, Isd, tr, tsd Instantaneous protection If = 5 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel 
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4221 02	320
1	4221 03	400
1	4221 04	500
1	4221 05	630
		Breaking capacity Icu 50 kA (400 V~)
1	4221 12	320
1	4221 13	400
1	4221 14	500
1	4221 15	630
		Breaking capacity Icu 70 kA (400 V~)
1	4221 22	320
1	4221 23	400
1	4221 24	500
1	4221 25	630
		Breaking capacity Icu 100 kA (400 V~)
1	4221 32	320
1	4221 33	400
1	4221 34	500
1	4221 35	630

Pack	Cat.Nos	MCCBs electronic release Sg - fixed version
		Adjustment of Ir, Isd, Ig, tr, tsd, tg Instantaneous protection If = 5 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel 
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4221 37	320
1	4221 38	400
1	4221 39	500
1	4221 40	630
		Breaking capacity Icu 50 kA (400 V~)
1	4221 47	320
1	4221 48	400
1	4221 49	500
1	4221 50	630
		Breaking capacity Icu 70 kA (400 V~)
1	4221 57	320
1	4221 58	400
1	4221 59	500
1	4221 60	630
		Breaking capacity Icu 100 kA (400 V~)
1	4221 67	320
1	4221 68	400
1	4221 69	500
1	4221 70	630

DPX³ 630

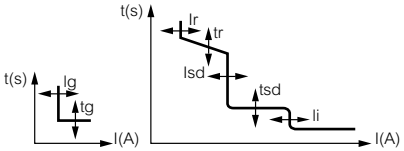
Sg electronic release MCCBs from 250 to 630 A (continued)

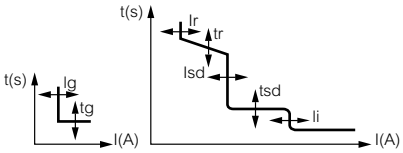
4221 43

Dimensions **p. 112**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries (p. 104)
Can be used with earth leakage modules (p. 105) or with residual current relays (p. 105)
Supplied complete with:
- connection plates for bars
- terminal shields

Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	MCCBs electronic release Sg - fixed version
		Adjustment of Ir, Isd, Ig, tr, tsd, tg Instantaneous protection If = 5 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel
		
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4221 42	320
1	4221 43	400
1	4221 44	500
1	4221 45	630
		Breaking capacity Icu 50 kA (400 V~)
1	4221 52	320
1	4221 53	400
1	4221 54	500
1	4221 55	630
		Breaking capacity Icu 70 kA (400 V~)
1	4221 62	320
1	4221 63	400
1	4221 64	500
1	4221 65	630
		Breaking capacity Icu 100 kA (400 V~)
1	4221 72	320
1	4221 73	400
1	4221 74	500
1	4221 75	630

Pack	Cat.Nos	MCCBs electronic release Sg with energy metering central unit - fixed version
		Adjustment of Ir, Isd, Ig, tr, tsd, tg Instantaneous protection If = 5 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel
		
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4221 77	320
1	4221 78	400
1	4221 79	500
1	4221 80	630
		Breaking capacity Icu 50 kA (400 V~)
1	4221 87	320
1	4221 88	400
1	4221 89	500
1	4221 90	630
		Breaking capacity Icu 70 kA (400 V~)
1	4221 97	320
1	4221 98	400
1	4221 99	500
1	4222 00	630
		Breaking capacity Icu 100 kA (400 V~)
1	4222 07	320
1	4222 08	400
1	4222 09	500
1	4222 10	630

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Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

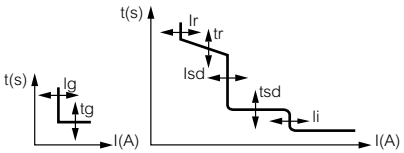
DPX³ 630 - Sg electronic release

MCCBs from 250 to 630 A (continued)

4221 85

Dimensions **p. 112**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries (p. 104)
Can be used with earth leakage modules (p. 105) or with residual current relays (p. 105)
Supplied complete with:
- connection plates for bars
- terminal shields
Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	MCCBs electronic release Sg with energy metering central unit - fixed version
		Adjustment of Ir, Isd, Ig, tr, tsd, tg Instantaneous protection If = 5 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel
		
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4221 82	320
1	4221 83	400
1	4221 84	500
1	4221 85	630
		Breaking capacity Icu 50 kA (400 V~)
1	4221 92	320
1	4221 93	400
1	4221 94	500
1	4221 95	630
		Breaking capacity Icu 70 kA (400 V~)
1	4222 02	320
1	4222 03	400
1	4222 04	500
1	4222 05	630
		Breaking capacity Icu 100 kA (400 V~)
1	4222 12	320
1	4222 13	400
1	4222 14	500
1	4222 15	630

DPX³ 630

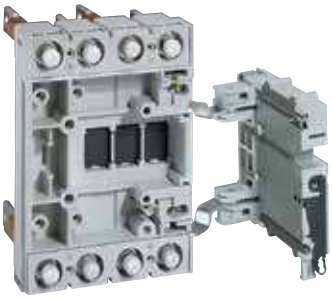
earth leakage modules

0260 63

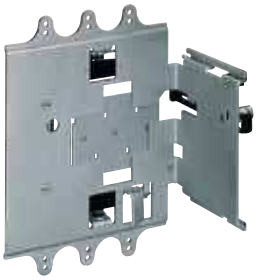
Pack	Cat.Nos	Earth leakage modules
		Can be fitted onto DPX³/DPX³-I 630 Adjustable, sealable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable, time delay: 0 - 0.3 - 1 - 3 s Test push-button Reset push-button Remote earth fault signalling contact Switch for mechanical tests (installation insulation test) Mounted underneath 230-500 V~
		Standard
	3P	In (A)
1	0260 60	400
1	0260 64	630
	4P	**Standard**
1	0260 61	400
1	0260 65	630
		LED version
		Monitors the isolation state of the installation via a series of LEDs
1	0260 63	400
1	0260 67	630

DPX³ 630

equipment and accessories



4222 25



4222 32

Pack	Cat.Nos	Plug-in version
		A plug-in is a DPX³ fitted with special terminals and mounted on a plug-in base
		Special terminals for plug-in/draw-out base
	3P	
1	4222 20	Set of incoming and outgoing terminals (6 terminals for 3P DPX³ or 8 terminals for 4P DPX³)
	4P	
1	4222 21	Set of incoming and outgoing terminals (6 terminals for 3P DPX³ or 8 terminals for 4P DPX³)
	3P	**Bases for DPX³ only**
		Accept DPX³/DPX³-I fitted with special terminals
1	4222 22	Front terminal mounting base
1	4222 24	Flat rear terminal mounting base
	4P	
1	4222 23	Front terminal mounting base
1	4222 25	Flat rear terminal mounting base
	4P	**Bases for DPX³ with earth leakage module**
1	4222 26	Front terminal mounting base
1	4222 27	Flat rear terminal mounting base
		Fixing plate for signalling contacts
1	4222 37	For fixing the signalling contact Cat.No 0 265 74 on a DPX³ plug-in version
		Accessories
1	4222 28	Set of 2 extractor handle
1	4222 29	Set of connectors (24-pin)

Pack	Cat.Nos	Draw-out version
		A DPX³ draw-out version is a plug-in DPX³ fitted with a "Debro-lift" mechanism which can be used to withdraw the DPX³ while keeping it on its base
		"Debro-lift" mechanism
		Supplied with a rigid slide and handle for drawing-out
	3P	
1	4222 31	For DPX³ base only
	4P	
1	4222 32	For DPX³ base only
1	4222 33	For DPX³ base with earth leakage module
		Key-lock for "Debro-lift" mechanism
		Enable locking of DPX³ in drawn-out position
		Flat key
	Flat key	Star key
1	0265 76	One key for DPX³ only
1	0265 78	Two keys (one key supplied) for motorised DPX³ or with rotary handle
	Star key	Star key
1	0263 48	One key for DPX³ only
1	0265 77	Two keys (one key supplied) for motorised DPX³ or with rotary handle
		Accessories for "Debro-lift" mechanism
1	0265 75	Handle for drawing-out
1	0265 74	Signalling contact (plugged-in/drawn-out)
		Fixing plate for signalling contacts
1	4222 36	For fixing the signalling contact Cat.No 0265 74 on a DPX³ draw-out version
		Blocks of auxiliary contacts
1	4222 30	Block of 6 automatic auxiliary contacts for DPX³ draw-out version (up to 2 blocks by DPX³)

Pack	Cat.Nos	Supply invertor type
		Factory assembled
		A supply invertor type is composed of one plate with interlock for 2 devices
1	0264 09	Plate for MCCB or trip-free switch fixed version
1	0264 04	Plate for MCCB or trip-free switch plug-in and draw-out version

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DPX³ 630

equipment and accessories (continued)

0261 40

0262 50

0262 51

0262 48

Pack	Cat.Nos	Rotary handles
		Direct on DPX³
1	0262 41	Standard (grey)
1	4201 62	Direct Rotary Handle- DPX³ 630
		Vari-depth handle IP 55
		Comprising: connection rod, bracket, self-adhesive drilling template, mounting accessories and door lock mechanism
1	0262 89	Standard (grey)
1	4201 63	Vary Depth Rotary Handle- DPX³ 630
		Locking accessories
		For vary-depth handle
1	0262 93	Key barrel and flat key
1	0262 94	Key barrel and star key
1	4201 70	Key lock for VD RH - DPX³ 630
1	4201 71	Key lock for VD RH Type A - DPX³ 630
1	4201 72	Key lock for VD RH Type B - DPX³ 630
		Motor-driven handles
		Front operated
1	0261 40	24 V~/⎓
1	0261 41	48 V~/⎓
1	0261 44	230 V~
		Accessories
1	0261 59	Lock and flat key
1	0261 58	Lock and star key

Pack	Cat.Nos	Accessories
		Insulated shields
1	0262 30	Set of 3
	3P	**Sealable terminal shields**
1	0262 44	Set of 2
	4P	**Sealable terminal shields**
1	0262 45	Set of 2
		Padlock
1	0262 40	For locking in "OPEN" position
		Adaptor for lug
		For connecting bare cables with wide lugs
1	0262 46	Set of 4 adaptors + insulated shields
		Extended front terminals
1	0262 47	Set of 4
	3P	**Spreaders**
1	6250 04	Set of incoming or outgoing spreaders
	4P	
1	6250 08	Set of incoming or outgoing spreaders
	3P	**Rear terminals**
		Used to convert the fixed version with front terminals to the fixed version with rear terminals
1	0263 50	Set of incoming or outgoing swivel terminals
1	0263 52	Set of incoming or outgoing flat terminals
	4P	
1	0263 51	Set of incoming or outgoing swivel terminals
1	0263 53	Set of incoming or outgoing flat terminals
		IP 20 terminal covers
	3P	
1	4222 34	Set of 2 terminal covers
	4P	
1	4222 35	Set of 2 terminal covers

DPX³ 1600

thermal magnetic release MCCBs from 630 to 1250 A

4222 78

4222 83

Dimensions **p.113**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries
Can be used with residual current relays
Supplied complete with:
- connection plates for bars
- terminal shields
Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs thermal magnetic release fixed version**
		Thermal adjustable from 0.8 to 1 In Magnetic adjustable from 5 to 10 In
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4222 52	800
1	4222 53	1000
1	4222 54	1250
		Breaking capacity Icu 50 kA (400 V~)
1	4222 64	800
1	4222 65	1000
1	4222 66	1250
		Breaking capacity Icu 70 kA (400 V~)
1	4222 76	800
1	4222 77	1000
1	4222 78	1250
		Breaking capacity Icu 100 kA (400 V~)
1	4222 88	800
1	4222 89	1000
1	4222 90	1250

Pack	Cat.Nos	**MCCBs thermal magnetic release fixed version**
		Thermal adjustable from 0.8 to 1 In Magnetic adjustable from 5 to 10 In
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4222 57	800
1	4222 58	1000
1	4222 59	1250
		Breaking capacity Icu 50 kA (400 V~)
1	4222 69	800
1	4222 70	1000
1	4222 71	1250
		Breaking capacity Icu 70 kA (400 V~)
1	4222 81	800
1	4222 82	1000
1	4222 83	1250
		Breaking capacity Icu 100 kA (400 V~)
1	4222 93	800
1	4222 94	1000
1	4222 95	1250

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DPX³ 1600

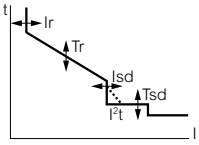
S2 electronic release MCCBs from 630 to 1600 A

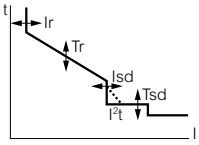
4223 27

4223 33

Dimensions **p. 113**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries
Can be used with residual current relays
Supplied complete with:
- connection plates for bars
- terminal shields
Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs electronic release S2 fixed version**
		Adjustment of Ir, Isd, tr, tsd Instantaneous protection If = 20 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel
		
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4223 00	800
1	4223 01	1000
1	4223 02	1250
1	4223 03	1600
		Breaking capacity Icu 50 kA (400 V~)
1	4223 12	800
1	4223 13	1000
1	4223 14	1250
1	4223 15	1600
		Breaking capacity Icu 70 kA (400 V~)
1	4223 24	800
1	4223 25	1000
1	4223 26	1250
1	4223 27	1600
		Breaking capacity Icu 100 kA (400 V~)
1	4223 36	800
1	4223 37	1000
1	4223 38	1250

Pack	Cat.Nos	**MCCBs electronic release S2 fixed version**
		Adjustment of Ir, Isd, tr, tsd Instantaneous protection If = 20 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel
		
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4223 06	800
1	4223 07	1000
1	4223 08	1250
1	4223 09	1600
		Breaking capacity Icu 50 kA (400 V~)
1	4223 18	800
1	4223 19	1000
1	4223 20	1250
1	4223 21	1600
		Breaking capacity Icu 70 kA (400 V~)
1	4223 30	800
1	4223 31	1000
1	4223 32	1250
1	4223 33	1600
		Breaking capacity Icu 100 kA (400 V~)
1	4223 42	800
1	4223 43	1000
1	4223 44	1250

DPX³ 1600

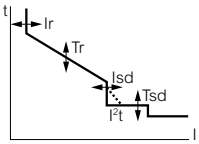
S2 electronic release MCCBs from 630 to 1600 A (continued)

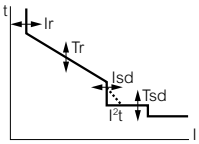
4223 51

4223 54

Dimensions **p. 113**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries (p. 104)
Can be used with residual current relays (p. 105)
Supplied complete with:
- connection plates for bars
- terminal shields
Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs electronic release S2 with energy metering central unit fixed version** Adjustment of Ir, Isd, tr, tsd Instantaneous protection If = 20 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel 
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4223 48	800
1	4223 49	1000
1	4223 50	1250
1	4223 51	1600
		Breaking capacity Icu 50 kA (400 V~)
1	4223 60	800
1	4223 61	1000
1	4223 62	1250
1	4223 63	1600
		Breaking capacity Icu 70 kA (400 V~)
1	4223 72	800
1	4223 73	1000
1	4223 74	1250
1	4223 75	1600
		Breaking capacity Icu 100 kA (400 V~)
1	4223 84	800
1	4223 85	1000
1	4223 86	1250

Pack	Cat.Nos	**MCCBs electronic release S2 with energy metering central unit fixed version** Adjustment of Ir, Isd, tr, tsd Instantaneous protection If = 20 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel 
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4223 54	800
1	4223 55	1000
1	4223 56	1250
1	4223 57	1600
		Breaking capacity Icu 50 kA (400 V~)
1	4223 66	800
1	4223 67	1000
1	4223 68	1250
1	4223 69	1600
		Breaking capacity Icu 70 kA (400 V~)
1	4223 78	800
1	4223 79	1000
1	4223 80	1250
1	4223 81	1600
		Breaking capacity Icu 100 kA (400 V~)
1	4223 90	800
1	4223 91	1000
1	4223 92	1250

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DPX³ 1600

Sg electronic release MCCBs from 630 to 1600 A

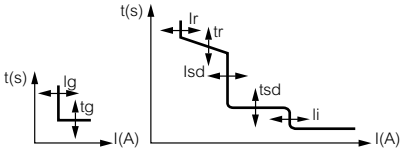
4224 23

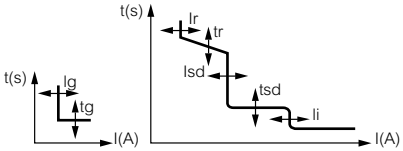
4224 29

Dimensions **p. 113**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries
Can be used with residual current relays
Supplied complete with:
- connection plates for bars
- terminal shields

Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs electronic release Sg fixed version**
		Adjustment of Ir, Isd, Ig, tr, tsd, tg Instantaneous protection If = 20 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel
		
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4223 96	800
1	4223 97	1000
1	4223 98	1250
1	4223 99	1600
		Breaking capacity Icu 50 kA (400 V~)
1	4224 08	800
1	4224 09	1000
1	4224 10	1250
1	4224 11	1600
		Breaking capacity Icu 70 kA (400 V~)
1	4224 20	800
1	4224 21	1000
1	4224 22	1250
1	4224 23	1600
		Breaking capacity Icu 100 kA (400 V~)
1	4224 32	800
1	4224 33	1000
1	4224 34	1250

Pack	Cat.Nos	**MCCBs electronic release Sg fixed version**
		Adjustment of Ir, Isd, Ig, tr, tsd, tg Instantaneous protection If = 20 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel
		
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4224 02	800
1	4224 03	1000
1	4224 04	1250
1	4224 05	1600
		Breaking capacity Icu 50 kA (400 V~)
1	4224 14	800
1	4224 15	1000
1	4224 16	1250
1	4224 17	1600
		Breaking capacity Icu 70 kA (400 V~)
1	4224 26	800
1	4224 27	1000
1	4224 28	1250
1	4224 29	1600
		Breaking capacity Icu 100 kA (400 V~)
1	4224 38	800
1	4224 39	1000
1	4224 40	1250

DPX³ 1600

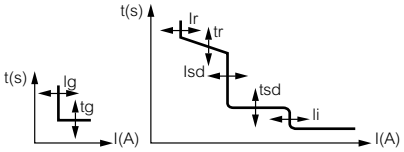
Sg electronic release MCCBs from 630 to 1600 A (continued)

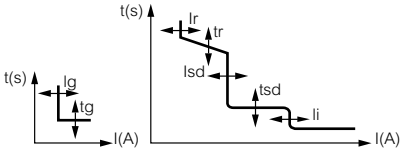
4224 47

4224 65

Dimensions **p. 113**
Electrical characteristics **p. 78-79**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries
Can be used with residual current relays
Supplied complete with:
- connection plates for bars
- terminal shields
Conform to IEC 60947-2 - Sealable adjustment
Ics = 100% Icu

Pack	Cat.Nos	**MCCBs electronic release Sg with energy metering central unit fixed version** Adjustment of Ir, Isd, Ig, tr, tsd, tg Instantaneous protection If = 20 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel 
		Breaking capacity Icu 36 kA (400 V~)
	3P	In (A)
1	4224 44	800
1	4224 45	1000
1	4224 46	1250
1	4224 47	1600
		Breaking capacity Icu 50 kA (400 V~)
1	4224 56	800
1	4224 57	1000
1	4224 58	1250
1	4224 59	1600
		Breaking capacity Icu 70 kA (400 V~)
1	4224 68	800
1	4224 69	1000
1	4224 70	1250
1	4224 71	1600
		Breaking capacity Icu 100 kA (400 V~)
1	4224 80	800
1	4224 81	1000
1	4224 82	1250

Pack	Cat.Nos	**MCCBs electronic release Sg with energy metering central unit fixed version** Adjustment of Ir, Isd, Ig, tr, tsd, tg Instantaneous protection If = 20 kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustement of neutral on front panel 
		Breaking capacity Icu 36 kA (400 V~)
	4P	In (A)
1	4224 50	800
1	4224 51	1000
1	4224 52	1250
1	4224 53	1600
		Breaking capacity Icu 50 kA (400 V~)
1	4224 62	800
1	4224 63	1000
1	4224 64	1250
1	4224 65	1600
		Breaking capacity Icu 70 kA (400 V~)
1	4224 74	800
1	4224 75	1000
1	4224 76	1250
1	4224 77	1600
		Breaking capacity Icu 100 kA (400 V~)
1	4224 86	800
1	4224 87	1000
1	4224 88	1250

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

DPX³ 1600

equipment and accessories

4225 88 + 4225 93

Pack	Cat.Nos	Draw-out version
		A DPX³ draw-out version is a DPX³ fitted with draw-out base and a "Debro-lift" mechanism which can be used to withdraw the DPX³ while keeping it on its base
		Draw-out base
		For DPX³ 1600 already equipped with "Debro-lift" mechanism
	3P	Cat.No 4225 93 or 4225 94
1	4225 86	Front terminals
1	4225 88	Rear terminals
	4P	
1	4225 87	Front terminals
1	4225 89	Rear terminals
	3P	**"Debro-lift" mechanism**
1	4225 93	For DPX³ 1600 Used to transform a fixed version circuit breaker into the movable part of a withdrawable circuit breaker
	4P	
1	4225 94	For DPX³ 1600 Used to transform a fixed version circuit breaker into the movable part of a withdrawable circuit breaker
		Fixing plate for signalling contacts
1	4225 95	For fixing the signalling contact Cat.No 0265 74 on a DPX³ draw-out version
		Key-lock for "Debro-lift" mechanism
		Enable locking of DPX³ in drawn-out position
	Flat key	Star key
1	0265 76	One key for DPX³ only
1	0265 80	Two key (one key supplied) for motorised DPX³ or with rotary handle
	Star key	
1	0263 48	One key for DPX³ only
1	0265 79	Two key (one key supplied) for motorised DPX³ or with rotary handle
		Accessories for "Debro-lift" mechanism
1	0265 75	Handle for drawing-out
1	0265 74	Signalling contact (plugged-in/drawn-out)
		Block of auxiliairy contacts
1	4222 30	Block of 6 automatic auxiliairy contacts for DPX³ draw-out version (up to 2 blocks by DPX³)

Pack	Cat.Nos	Supply invertor type
		A supply invertor type is composed of one plate with interlock for 2 devices
1	0264 10	Plate for MCCBs or trip-free switch fixed version
1	0264 05	Plate for MCCBs or trip-free switch plug-in and draw-out version

		Rotary handles
		Direct on DPX³
1	0262 61	Standard (black)
		Vari-depth handle IP 55
		Comprising: connection rod, bracket, self-adhesive drilling template, mounting accessories and door lock mechanism
1	0262 83	Standard (black)
		Locking accessories
1	0262 93	Key barrel and flat key
1	0262 94	Key barrel and star key

0262 60

0262 67 + 0262 68

4226 82

Pack	Cat.Nos	Motor-driven handles
		Factory assembled
		Front operated
1	0261 54	230 V~
		Customer assembled
		Front operated
1	0261 24	24 V~/⎓ for In ≤ 1250 A
1	0261 25	48 V~/⎓ for In ≤ 1250 A
1	0261 26	110 V~/⎓ for In ≤ 1250 A
1	0261 23	230 V~/⎓ for In ≤ 1250 A
1	0261 19	24 V~/⎓ for In = 1600 A
1	0261 28	48 V~/⎓ for In = 1600 A
1	0261 29	110 V~/⎓ for In = 1600 A
1	0261 27	230 V~/⎓ for In = 1600 A
		Locking accessories
1	0261 59	Key and flat key
1	0261 58	Key and star key

		Accessories
		Insulated shields
		Used to isolate the connections between each pole
1	0262 66	Set of 3
	3P	**Sealable terminal shields**
1	0262 64	Set of 2
	4P	
1	0262 65	Set of 2
		Padlock
1	0262 60	For locking in "open" position
		Ex tended front terminals
		Set of 4
1	0262 67	Short terminals for 630 - 1250 A (2 bars max. per pole)
1	0262 68	Long terminals for 1600 A (3 bars max. per pole)
	3P	**Spreaders (Set of incoming or outgoing)**
1	0262 73	For 1600 A / 1250 A
1	4226 24	For 800 A / 1000 A
	4P	
1	0262 74	For 1600 A / 1250 A
1	4226 25	For 800 A / 1000 A
		Rear terminals
		Used to convert the fixed version with front terminals to the fixed version with rear terminals
	3P	Set of incoming or outgoing rear terminals
1	0263 80	Short terminals
1	0263 81	Long terminals
	4P	
1	0263 82	Short terminals
1	0263 83	Long terminals
		IP 20 terminal covers
	3P	
1	4225 90	Set of 2 terminal covers
	4P	
1	4225 91	Set of 2 terminal covers
		External neutral
1	4225 92	External neutral

Pack	Cat.Nos	Auxiliary contact or fault signal
1	4210 11	For signalling the state of the contacts or opening of the MCCB on a fault For DPX³/DPX³-I Changeover switch 3 A - 240 V~

		Releases
		Allow remote tripping of a DPX³
		Shunt releases
		For DPX³ and DPX³-I Shunt inrush power 300 VA
1	4222 39	Coil voltage 24 V~ / ⎓
1	4222 40	Coil voltage 48 V~ / ⎓
1	4222 41	Coil voltage 110 V~ / ⎓
1	4222 42	Coil voltage 230 V~ / ⎓
1	4222 43	Coil voltage 400 V~ / ⎓
		Undervoltage releases
		For DPX³ and DPX³-I Shunt inrush power 300 VA
1	4222 44	Coil voltage 24 V⎓
1	4222 45	Coil voltage 24 V~
1	4222 46	Coil voltage 48 V~ / ⎓
1	4222 47	Coil voltage 110 V~ / ⎓
1	4222 48	Coil voltage 230 V~ / ⎓
1	4222 49	Coil voltage 400 V~ / ⎓
		Time-lag undervoltage releases (800 ms)
		Allow remote tripping of the MCCB Prevent false tripping in the event of power supply microbreaks. Require a time-lag module connected to the undervoltage release Cat.No 4226 23
1	0261 90	Time-lag module 230 V~ 3 module
1	0261 91	Time-lag module 400 V~ 3 module
1	4226 23	Undervoltage release for DPX³ 630 and 1600

		Automation control unit
		Can control supply inversion between two cricuit breakers, manage generator start / stop, control single-phase, two-phase and three-phase networks, control phase-phase voltages For DPX³ and DMX³ circuit breakers Power supply: 230 V~ or 12/24/48 V⎓ Plug-in terminals
1	4226 80	Basic 2 ways control unit
1	4226 82	Advanced 2 ways control unit
1	4226 83	2 Sources / 3 breakers control unit
1	0261 93	Standard Unit
1	0261 94	Communication Unit, enabling data transmission

DPX³ 160, 250, 630 and 1600

power supervision system

0261 78

0261 56

Pack	Cat.Nos	Auxiliary power supply for DPX³
1	4210 83	For supplying DPX³ electronic units when the circuit breaker is open or when the current passing through it is insufficient Input voltage 24 V~ / ⎓ 2 modules Output 250 mA: can supply several circuit breakers Consumption: - Thermal-magnetic DPX³ with residual current protection: 42 mA - Electronic DPX³: 30 mA - Electronic DPX³ with measurement: 54 mA - Electronic DPX³ with residual current protection: 54 mA - Electronic DPX³ with residual current protection and measurement: 54 mA
		RS485 Modbus communication interface
		DPX³ electronic interface
1	4210 75	For connecting thermal-magnetic DPX³ with residual current protection and electronic DPX³ to an RS485 Modbus communication network All the information managed by the circuit breaker's electronic card will be shared on the Modbus network Dimension: 2 modules Power supply: 24 V~ / ⎓ RS 485 link (2-wire) Address, speed and coding can be modified with configurator kit
		Modular power supply
1	0035 67	230 V~ - 27 V⎓ - 0.6 A 2 modules
		Communication and supervision
		Web servers
		Enable remote viewing, via a web browser on PCs, smartphones, web viewers, tablet computers such as iPads, Archos, etc., of values collected on electricity meters and multi-function measuring units
1	0261 78	For 32 metering points (meters or multi-function measuring units)
1	0261 79	For an unlimited number of metering points (meters or multi-function measuring units)
		Legrand Software
		For displaying the values collected from electricity meters or multi-function measuring units on a PC connected to the network
1	0261 88	For 32 metering points (supplied on CD)
1	0261 89	For an unlimited number of metering points (supplied on CD)
		Panel board display
1	0261 56	Allows to chek information comming from different protection devices: DX³-HP, DPX³, DMX³ or EMDX³ Can manage up to 8 devices Power supply: 18-30 V⎓ For mounting on door or solid faceplate Door cut: 96 x 96 mm

Residual current relay and coils

0260 88

0260 98

0260 93 coil for use with relay

Add residual current protection to DPX trip-free switches and DPX MCCBs equipped with release

Pack	Cat.Nos	Residual current relay
1	0260 88	Detects fault currents, and, when used with a shunt trip or an undervoltage release, it gives the trip command to a MCCB or a switch • Comprises: - a tinged, sealable window - an auxiliary contact - a green Led indicating energisation - 3 yellow Leds indicating respectively the max. phase earth insulation current: 20, 40 and 60 % - a red Led indicating Fixed: exceeding of the insulation fault current value Flashing: breaking of one of the connections between coils and relays • For use with coils: - Ø35 and 80 mm Adjustable sensitivity: 0.03, 0.05, 0.075, 0.1, 0.15, 0.2, 0.3, 0.5, 0.75, 1, 1.5, 2, 3, 5, 7.5, 10, 15, 20, 30 A - Ø110 to 210 mm Adjustable sensitivity: 0.3, 0.5, 0.75, 1, 1.5, 2, 3, 5, 7.5, 10, 15, 20, 30 A - Ø150 mm Adjustable sensitivity: 0.5, 0.75, 1, 1.5, 2, 3, 5, 7.5, 10, 15, 20, 30 A - Ø300 mm Adjustable sensitivity: 1, 1.5, 2, 3, 5, 7.5, 10, 15, 20, 30 A • Adjustable trip: 0, 0.15, 0.25, 0.5, 1, 2.5, 5 seconds • Supply voltage: 230/240 V - 50/60 Hz Residual current relay to clip on module 2 rail ⎍
		Coils
		For use with residual current relay Cat.No 0260 88 1 coil per DPX
1	0260 92	Coil Ø35 mm
1	0260 93	Coil Ø80 mm
1	0260 94	Coil Ø110 mm
1	0260 95	Coil Ø140 mm
1	0260 96	Coil Ø210 mm
1	0260 97	Coil Ø150 mm - open
1	0260 98	Coil Ø300 mm - open

Residual current relay and coils

0261 37

Dimensions **p. 57**

Add earth leakage protection to DPX³/DPX trip-free switches and DPX³/DPX MCCBs equipped with release

Pack	Cat.Nos	**Measurement and control of electric equipment**
		Central position
		Front operated
1/2	0261 35	Allows you to collect all information of a line Three phase (voltage phase / neutral and phase to phase, phase currents, active and reactive powertotal active power reactive power factor) Dimensions: 4 DIN modules Power supply: 24 V ∿ / = RS 485 (2 wires)
		Microprocessor Interface
1/3	0261 37	Used to record information of a DPX microprocessor version S2 & Sg (identified currents Phase 1, 2 and 3, records of currents in neutral temperature (microprocessor card), rated current, DPX playback control) Size: 2 DIN modules Power supply: 24 V ∿ / = RS 485 (2 wires) Address, speed and coding modified hardening with kitconfi gurator
		Interface signaling and control
1/2	0261 36	Allows through 24 entries to meet the information of DPX and DPX³ / DMX³ (contact Auxiliary Position Open (1 entry) or position open and closed (2 entries), signal failure (1 entry)) and with 6 outputs to drive the circuit breakers (Controlling motor circuit breakers (2 outputs), controlling the triggers of breakers set for test (1 output)) Dimensions: 6 DIN modules Power supply: 24 V ∿ / = RS 485 (2 wires) Address, speed and coding modified hardening with kit configurator
		Kit Configurator
1/4	0261 45	To configure the card input / output and DPX interface (jumper 0-9)
		Stabilized power
1/20	0466 23	Connects power communication devices 5 A/120 W Dimensions: 4 DIN modules

DPX³-I trip-free switches

160 to 1600 A

4202 99

Dimensions **p. 57**

Trip-free switches for on-load circuit breaking and isolation of low voltage electrical circuits
Can be associated to earth leakage modules or to corresponding DPX³ residual current relays
Mount on rail ⊔ up to DPX³ 250 with plate Cat.No 4210 72 (DPX³-I 160) and Cat.No 4210 71 (DPX³ 250)
Conform to IEC 60947-3
Category of use AC 23 A
Connection identical to corresponding DPX³

Pack	Cat.Nos	**DPX³-I 160**
	3P	In (A)
1	4201 98	160
	4P	
1	4201 99	160
	4P with earth leakage module	
1	4201 97	160
		DPX³-I 250
	3P	In (A)
1	4202 99	250
	4P	
1	4203 00	250
	4P with earth leakage module	
1	4202 98	250
		DPX³-I 630
	3P	In (A)
1	4222 16	400
1	4222 17	630
	4P	
1	4222 18	400
1	4222 19	630
		DPX³-I 1600
	3P	In (A)
1	4224 90	630
1	4224 91	800
1	4224 92	1250
1	4224 93	1600
	4P	
1	4224 94	630
1	4224 95	800
1	4224 96	1250
1	4224 97	1600

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Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
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DPX³ MCCB

selection chart

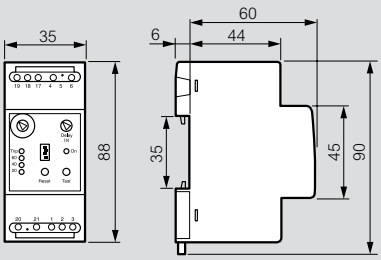
	DPX³		DPX³ 160	DPX³ 250	DPX³ 630	DPX³ 1600			
	Ratings		upto 160 A	40 A - 250 A	250 - 630 A	800 A	1000 A	1250 A	1600 A
Rotary Handles	Direct		4201 60		4201 62	0262 61			
	Vary Depth		4201 61		4201 63	0262 83			
Motor Operator	Side	24 - 230 V	4210 60		-	-	-	-	-
	Front	24 V	4210 61		0261 40	0261 24			0261 19
		48 V			0261 41	0261 25			0261 28
		110 V			-	0261 26			0261 29
		230 V			-	0261 23			0261 27
		230V F			0261 44	0261 54			
Aux Contacts	1 NO + 1NC for RoH		4210 10		-	-	-	-	-
	Fault Signalling / ON-OFF		4210 11						
Shunt Release	12 V		4210 12		-	-	-	-	-
	24 V		4210 13		4222 39				
	48 V		4210 14		4222 40				
	110-130 V / 110 V		4210 15		4222 41				
	200-277 V / 230 V		4210 16		4222 42				
	380-480 V / 400 V		4210 17		4222 43				
UV Release	12 V		4210 18		-	-	-	-	-
	24V DC		-	-	-	4222 44			
	24 V		4210 19		4222 45				
	48 V		4210 20		4222 46				
	110-130 V / 110 V		4210 21		4222 47				
	200-240 V / 230 V		4210 22		4222 48				
	277 V		4210 23		-	-	-	-	-
	380-415 V / 400 V		4210 24		4222 49				
	440-480 V		421025		-	-	-	-	-
Spreaders	3P		6250 02	6250 14	6250 04	4226 24		0262 73	
	4P		6250 06	6250 18	6250 08	4226 25		0262 74	

Rotary Handles for DPX³

- Smaller dimension of rotary handle base for better visibility of parameters and better access to trip unit
- Only 3 parts for easy installation
- Spring for better play
- Door defeat mechanism for easy maintenance
- ON / OFF indication on the knob
- Pad Locking on the knob – upto 3 Locks

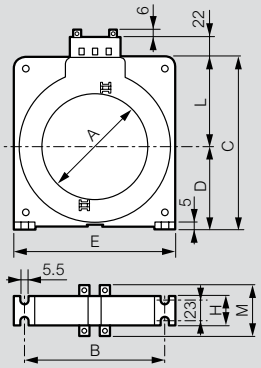
Residual current relay

Cat.No 0260 88

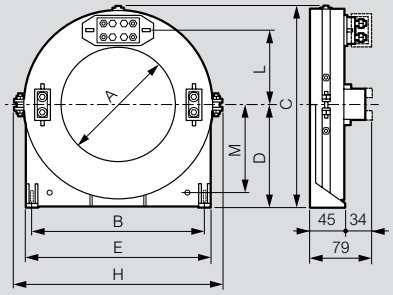


Coils

Cat.Nos 0260 92/93/94/95/96

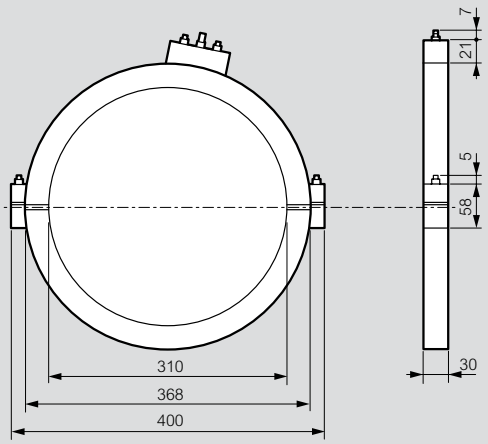


Cat.No 0260 97



Cat.Nos	A	B	C	D	E	H	L	M
0260 92	35	75	85	42	92	36	43	56
0260 93	80	108	132	67	125	36	65	56
0260 94	110	148	170	86	165	36	84	56
0260 95	140	177	206	104	200	36	102	56
0260 96	210	270	295	150	290	44	145	64
0260 97	150	225	259	133	245	275	95	113

Cat.No 0260 98



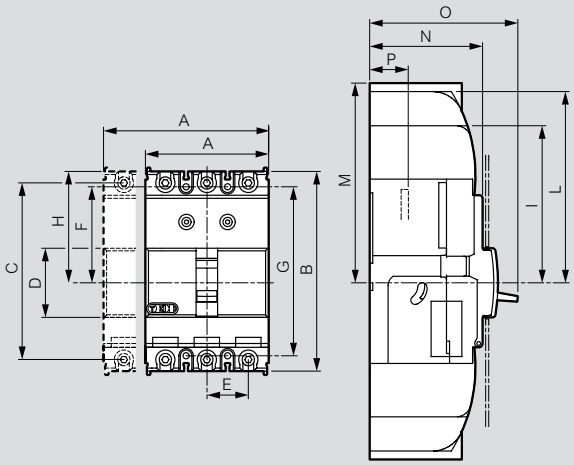
Electrical characteristics

		DPX³-I 160	DPX³-I 250	DPX³-I 630	DPX³-I 1600
Rated operating voltage Ue (V)	50/60 Hz	690(1)	690(1)	690	690
	direct	250	250	250	250
Rated insulation voltage Ui (V~)		800	800	690	690
Rated impulse withstand voltage Uimp (kV)		8	8	8	8
Rated closing capacity on 400 V short circuit Icm (kA)		3	3	6.5(3) / 13(4)	40
Short-time resistive current t = 1 s Icw (kA)		1.7	1.7	4(3) / 7.6(4)	10(5) / 15(6) / 20(7)
Endurance (o.c. cycle)	mechanical	25000	25000	15000	10000
	electrical	8000	8000	5000	2000(2)
Conventional thermal current (A)		160	250	630	1600
Nominal current of use (A) AC 23 A (690 V~)		160 (160 V)	250 (250 V)	630	1600
DC 23 A (250 V~)		160	160	630	-

1: 500 V for DPX³-I with earth leakage module
2: Up to 1250 A
3: In = 400 A
4: In = 630 A
5: In = 800 A
6: In = 1250 A
7: In = 1600 A

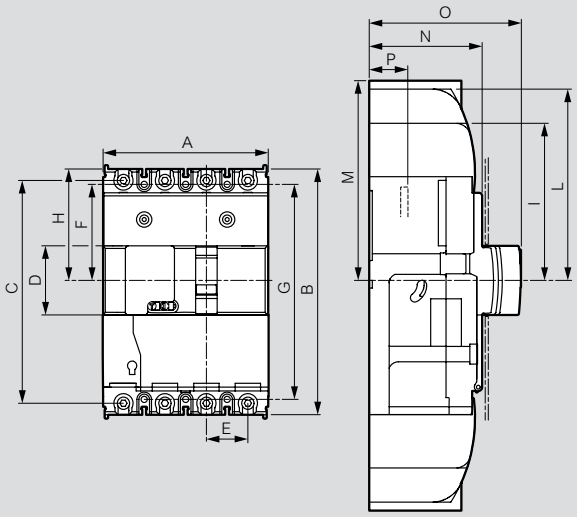
Dimensions

Fixed version

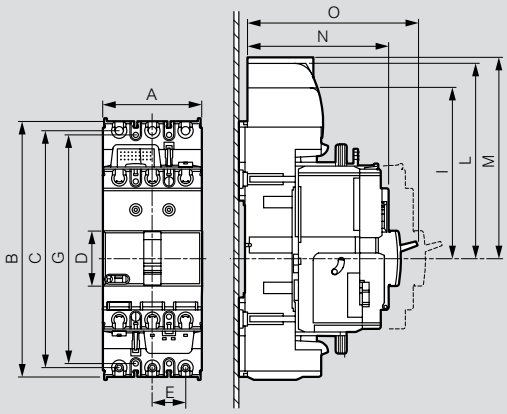


	A	B	C	D	E	F	G	H	I	L	M	N	O	P
3P	81	130	115	45	27	62,5	110	72,5	102,5	125	-	74	100	18
4P	108	130	115	45	27	62,5	110	72,5	102,5	125	-	74	100	18
e.l.c.bs	108	160	145	45	27	62,5	140	72,5	102,5	125	-	74	100	18

Fixed version with earth leakage module

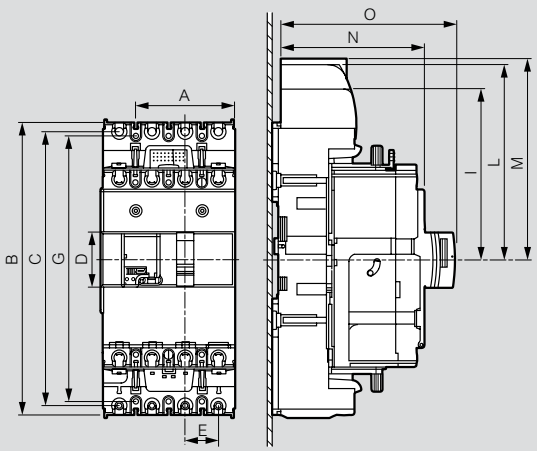


Plug-in version



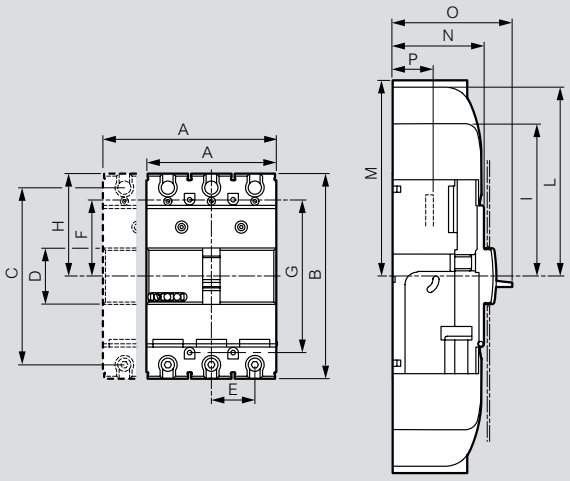
	A	B	C	D	E	F	G	H	I	L	M	N	O	P
3P	81	208	193	45	27	100,5	186	111,5	141,5	164	-	122	148	-
4P	108	238	223	45	27	100,5	216	111,5	141,5	164	-	122	148	-
e.l.c.bs	108	230	223	45	27	100,5	216	111,5	141,5	164	-	122	148	-

Plug-in version with earth leakage module



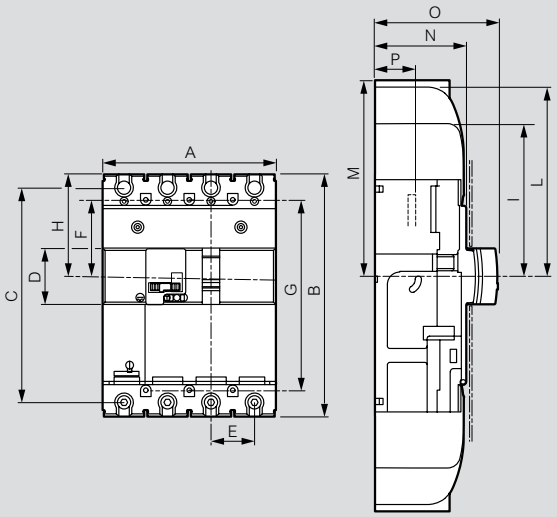
Dimensions

Fixed version

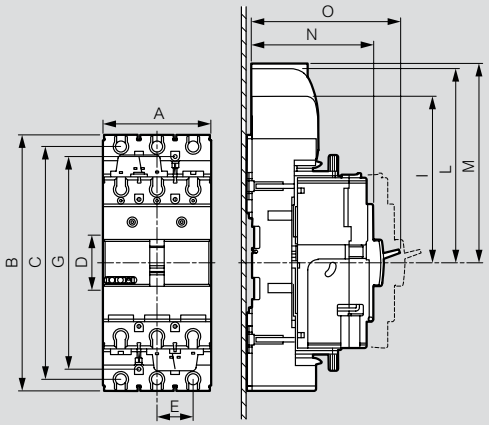


	A	B	C	D	E	F	G	H	I	L	M	N	O	P
3P	105	165	142,5	45	35	61,5	123	82,5	112,5	150	-	74	100	18
4P	140	165	142,5	45	35	61,5	123	82,5	112,5	150	-	74	100	18
e.l.c.bs	140	195	172,5	45	35	61,5	153	82,5	112,5	150	-	74	100	18

Fixed version with earth leakage module

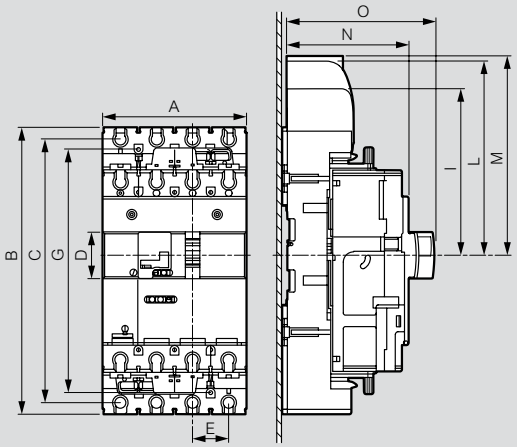


Plug-in version



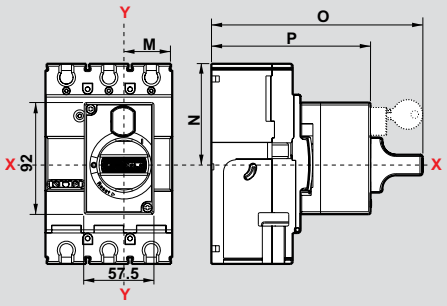
	A	B	C	D	E	F	G	H	I	L	M	N	P
3P	105	248	225,5	45	35	103	206	150	180	217,5	-	122	148
4P	140	278	225,5	45	35	103	236	150	180	217,5	-	122	148
e.l.c.bs	140	278	225,5	45	35	103	236	150	180	217,5	-	122	148

Plug-in version with earth leakage module



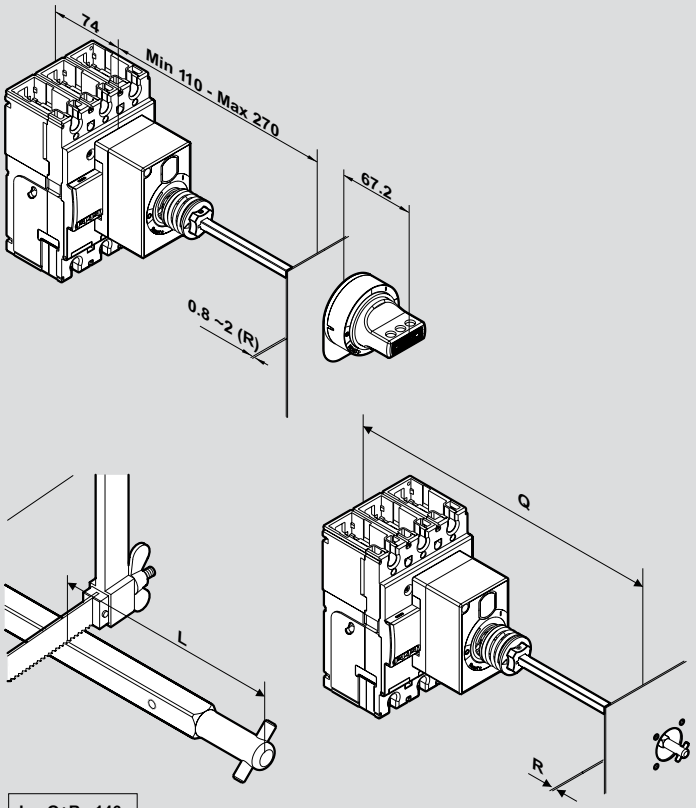
Dimensions

Rotary handles Cat.No 4201 60



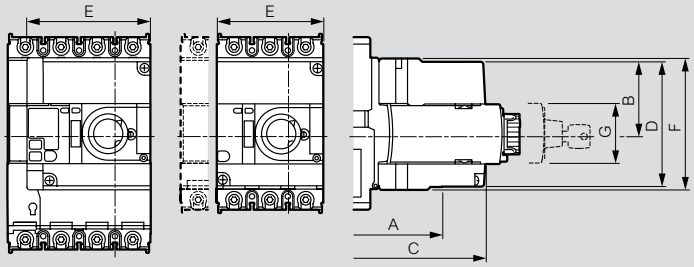
	DPX³ 160	DPX³ 250
Cat.No	4201 60	
M	28	40
N	76	83.5
O	174.5	174.5
P	131	131

Rotary handles Cat.No 4201 61



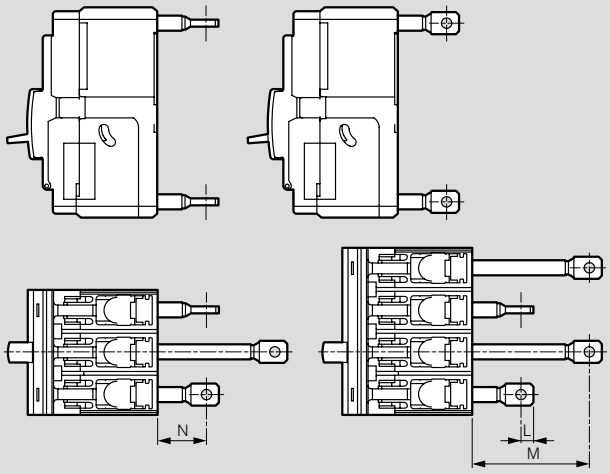
L = Q+R - 146

Front motor-driven handle Cat.No 4210 61

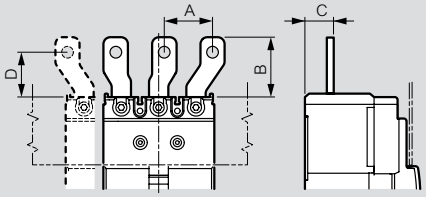


	A	B	C	D	E	F	G	H
160	125	54.5	154	94	80.5	99	45	74
160 with e.l.c.bs	125	54.5	154	94	93	99	45	74
250	125	54.5	154	94	80.5	99	45	74
250 with e.l.c.bs	125	54.5	154	94	93	99	45	74
250 electronic release	125	54.5	154	94	93	99	45	74
250 electronic release with e.l.c.bs	125	54.5	154	94	93	99	45	74

Rear terminals Cat.Nos 4210 36/37/38/39



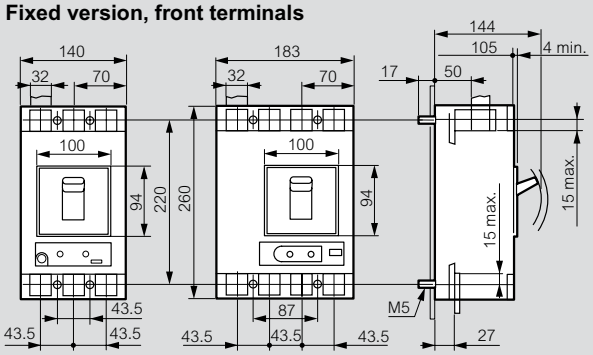
Incoming spreaders Cat.Nos 4210 32/33/34/35



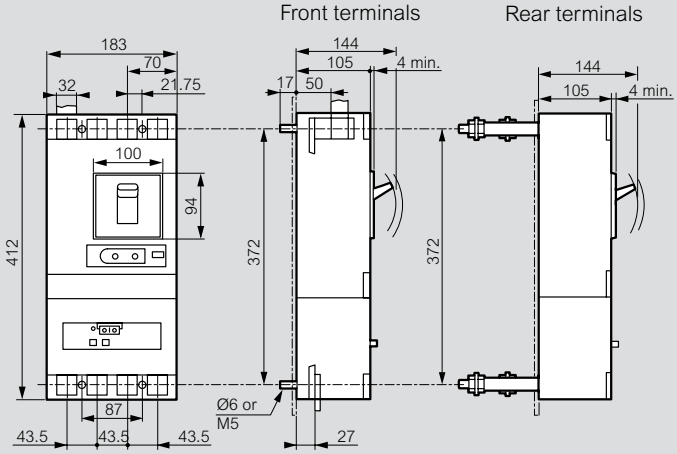
	A	B	C	D
160	35	41	23	33
160 with e.l.c.bs	35	41	23	33
250	48.5	55	23	39
250 with e.l.c.bs	48.5	55	23	39

Dimensions

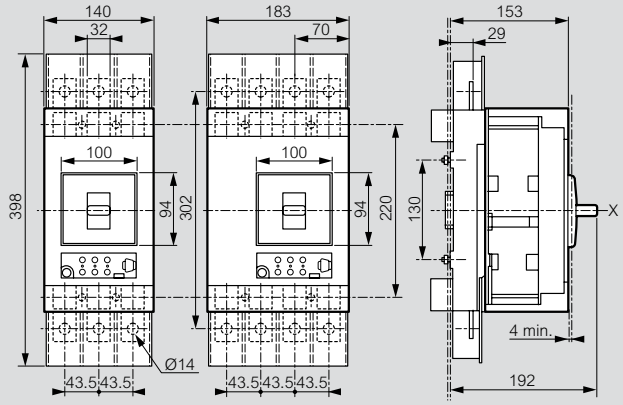
Fixed version, front terminals



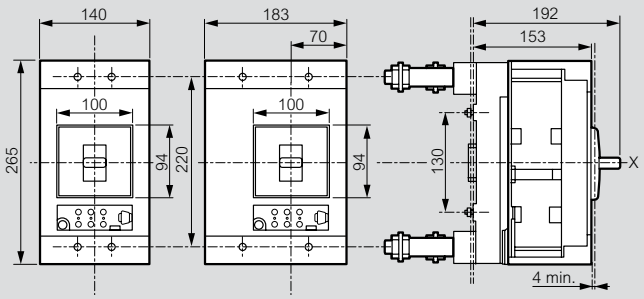
Fixed version with earth leakage module mounted underneath



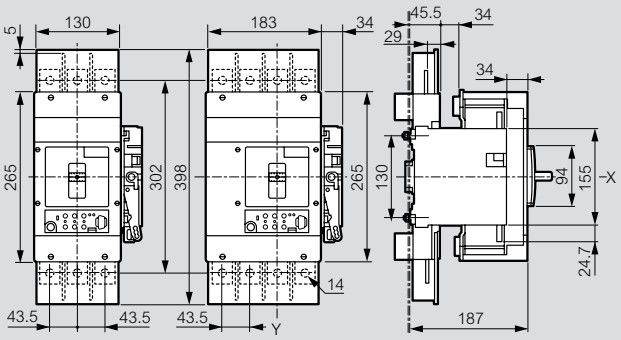
Plug-in version, front terminals



Plug-in version, rear terminals

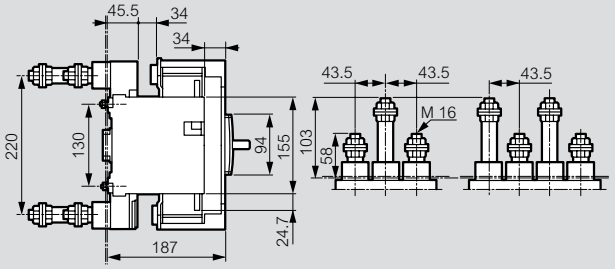


Draw-out version, front terminals

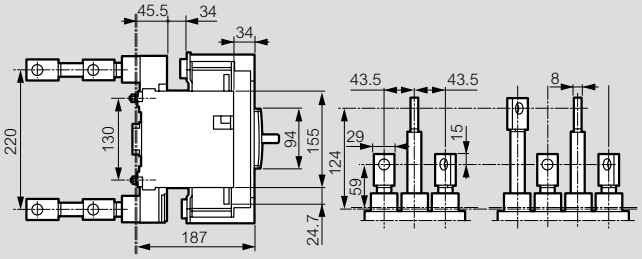


Draw-out version, rear terminals

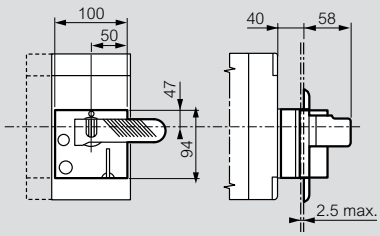
Rear terminal with threaded rod



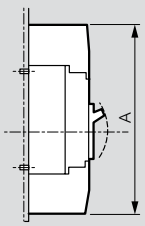
Flat rear terminal



Rotary handle-direct on DPX³



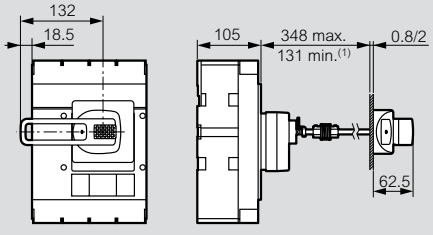
Terminal shields



	A(mm)
DPX 630	390
DPX 630 + earth leakage module	542

Rotary handle-vari-depth handle on door

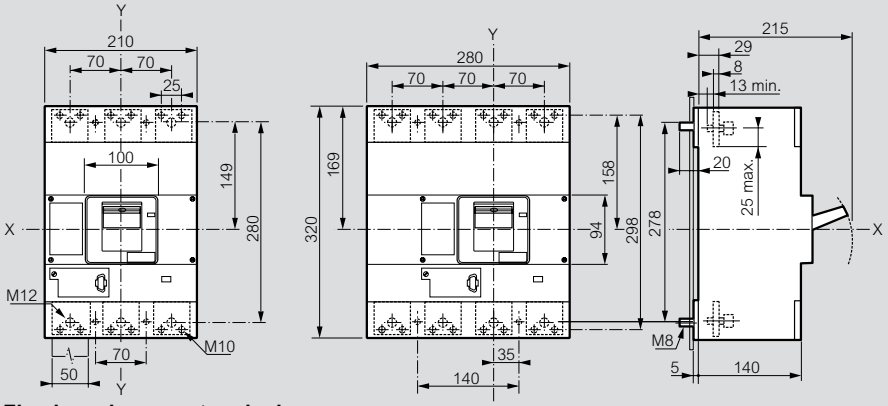
Mounting with flexible seal



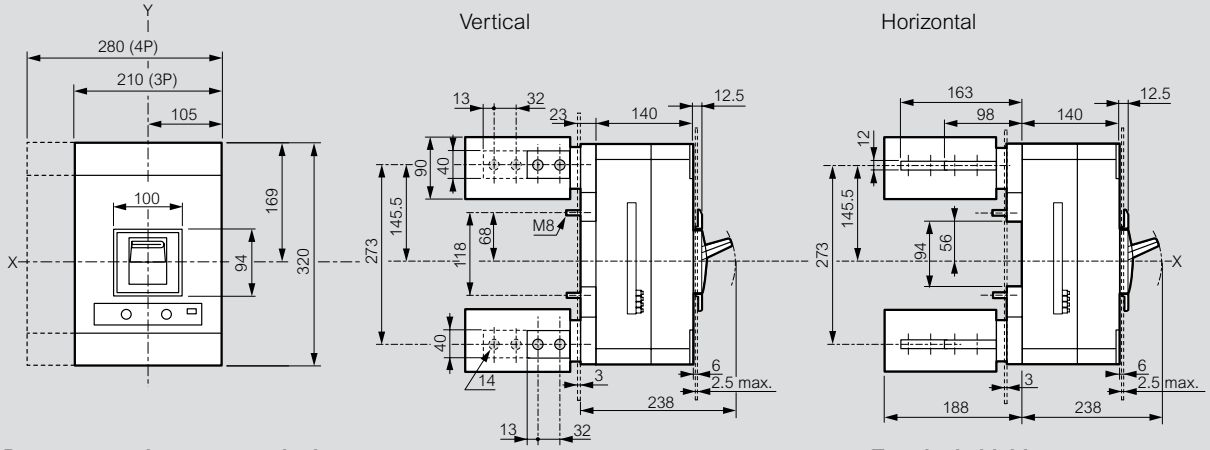
1: 75 mm without mechanical system

Dimensions

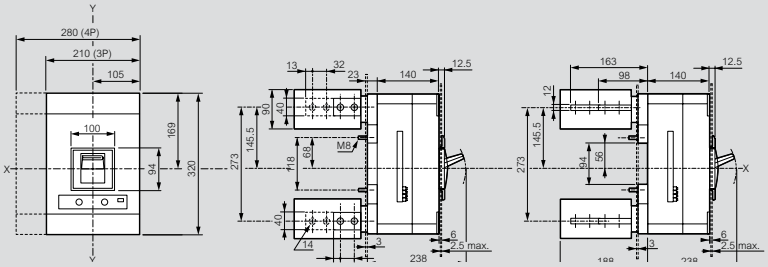
Fixed version, front terminals



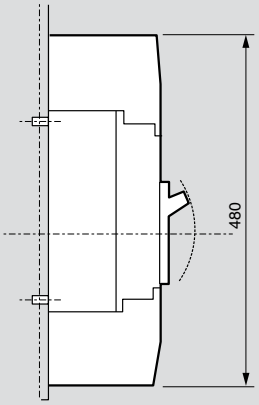
Fixed version, rear terminals



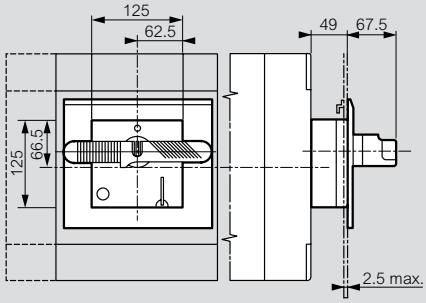
Draw-out version, rear terminals



Terminal shields

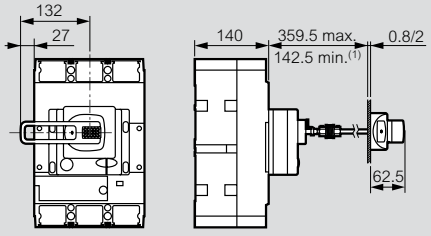


Rotary handle-direct on DPX³



Rotary handle-vari-depth handle on door

Mounting with flexible seal



1: 75 mm without mechanical system

Technical characteristics (at 40°)

MCCBs		DPX³ 160 thermal magnetic				DPX³ 160 with electronic earth leakage module			
		16 kA	25 kA	36 kA	50 kA	16 kA	25 kA	36 kA	50 kA
Nominal current In (A)		16-25-40-63-80-100-125-160				16-25-40-63-80-100-125-160			
Rated insulation voltage (V)	50-60Hz	800				600			
Rated operational voltage (V)	50-60Hz	690				500			
	Continuous	500				500			
Rated impulse withstand current Uimp (kV)		8				8			
Category of use		A				A			
Ultimate breaking capacity (kA) in AC	220/240 V~	25	35	50	65	25	35	50	65
	380/415 V~	16	25	36	50	16	25	36	50
	440 V~	10	18	25	30	10	18	25	30
	480/500 V~	8	10	12	15	8	10	12	15
	690 V~	5	5	8	10	5	5	8	10
Ultimate breaking capacity (kA) in DC	125 V⎓ (1)	32	50	60	80	32	50	60	80
	250 V⎓ (1)	16	25	30	40	16	25	30	40
	400 V⎓ (2)	16	25	30	40	16	25	30	40
	500 V⎓ (2)	10	20	25	35	10	20	25	35
Standard breaking capacity Ics (% Icu)		100	100	100	100	100	100	100	100
Short-circuit making capacity Icm (kA)	415 V~	32	52,5	75,6	105	32	52,5	75,6	105
Breaking capacity on 1 pole Isu (kA) For IT neutral earthing system	220/240 V~	6,25	8,75	12,5	16,3	6,25	8,75	12,5	16,3
	380/415 V~	4	6,25	9	12,5	4	6,25	9	12,5
	440 V~	2,5	4,5	6,25	7,5	2,5	4,5	6,25	7,5
	480/500 V~	2	2,5	3	3,75	2	2,5	3	3,75
	690 V~	1,25	1,25	2	2,5	1,25	1,25	2	2,5

MCCBs		DPX³ 250 thermal magnetic				DPX³ 250 electronic release			
		25 kA	36 kA	50 kA	70 kA	25 kA	36 kA	50 kA	70 kA
Nominal current In (A)		100-160-200-250				40-100-160-250			
Rated insulation voltage (V)	50-60Hz	800 (with integrated e.l.c.bs: 500)				800 (with integrated e.l.c.bs: 600)			
Rated operational voltage (V)	50-60Hz	690 (with integrated e.l.c.bs: 500)				690 (with integrated e.l.c.bs: 500)			
	Continuous	500				500			
Rated impulse withstand current Uimp (kV)		8				8			
Category of use		A				A			
Ultimate breaking capacity (kA) in AC	220/240 V~	40	60	80	100	40	60	80	100
	380/415 V~	25	36	50	70	25	36	50	70
	440 V~	20	30	40	60	20	30	40	60
	480/500 V~	10	25	30	40	10	25	30	40
	690 V~	8	16	18	20	8	16	-	20
Ultimate breaking capacity (kA) in DC	125 V⎓ (1)	50	72	80	90	50	72	80	90
	250 V⎓ (1)	25	36	40	45	25	36	40	45
	400 V⎓ (2)	30	45	50	55	30	45	50	55
	500 V⎓ (2)	25	36	40	45	25	36	40	45
Standard breaking capacity Ics (% Icu)		100	100	100	100	100	100	100	100
Breaking capacity on 1 pole Isu (kA) For IT neutral earthing system	220/240 V~	10	15	20	25	15	15	20	25
	380/415 V~	6,25	9	12,5	17,5	6,25	9	12,5	17,5
	440 V~	5	7,5	10	15	5	7,5	10	15
	480/500 V~	2,5	6,25	7,5	10	2,5	6,25	7,5	10
	690 V~	2	4	4,5	5	-	-	-	-

Temperature derating

DPX³ 160

In (A)	Temperature (°C)											
	-25	-20	-10	-5	0	10	20	30	40	50	60	70
16	23	22	21	21	20	19	18	17	16	15	15	14
25	37	35	34	33	32	30	28	26	25	23	22	21
40	55	54	52	51	50	47	43	42	40	38	36	34
63	88	87	84	83	81	76	69	66	63	60	57	55
80	115	113	111	109	107	97	87	84	80	78	75	72
100	135	133	130	123	115	108	100	100	100	95	90	85
125	160	158	155	153	150	138	125	125	125	118	112	105
160	224	221	214	210	205	192	176	168	160	152	145	139

DPX³ 250

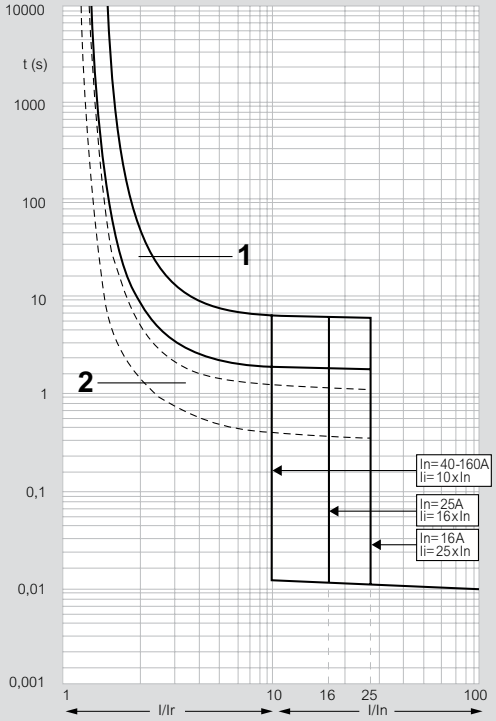
In (A)	Temperature (°C)											
	-25	-20	-10	-5	0	10	20	30	40	50	60	70
40	54	53	51	50	49	48	45	41	40	38	36	34
100	135	132	128	126	123	120	112	102	100	94	90	84
160	216	211	205	201	197	192	179	163	160	151	143	134
200	270	264	256	251	246	240	224	203	200	189	179	168
250	338	330	320	314	308	300	280	254	250	236	224	210

1: 2 poles in series
2: 3 poles in series

Derating at different altitudes

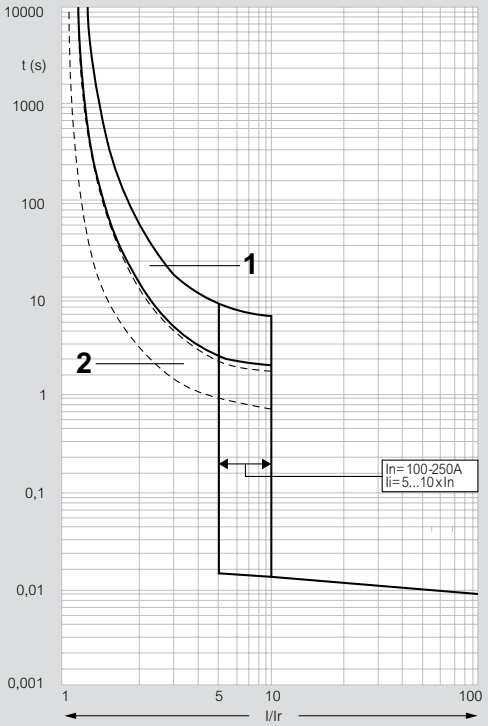
Altitude (m)		2000	3000	4000
Rated current (A)		1 x In	0,96 x In	0,93 x In
Rated voltage (V)	DPX³ no e.l.c.bs	690	690	550
	DPX³ with e.l.c.bs	500	500	400

DPX³ 160 thermal-magnetic Tripping curve



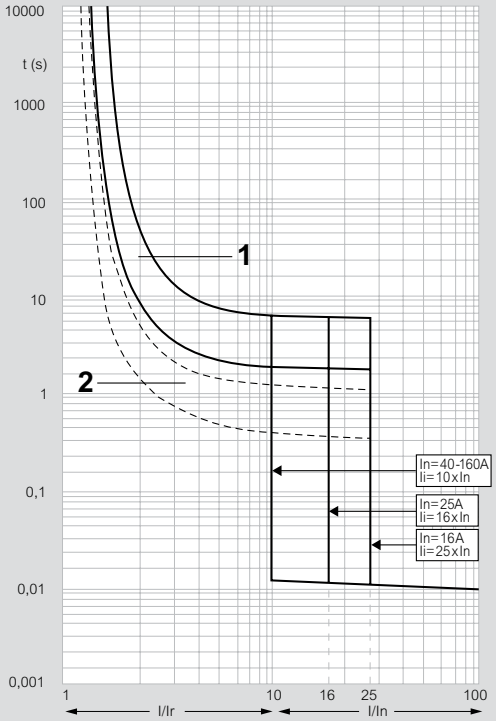
t: time
I: rated current
Ir: setting current
Curve n°1: charateristic with cold start
Curve n°2: charateristic with hot start

DPX³ 250 thermal-magnetic Tripping curves



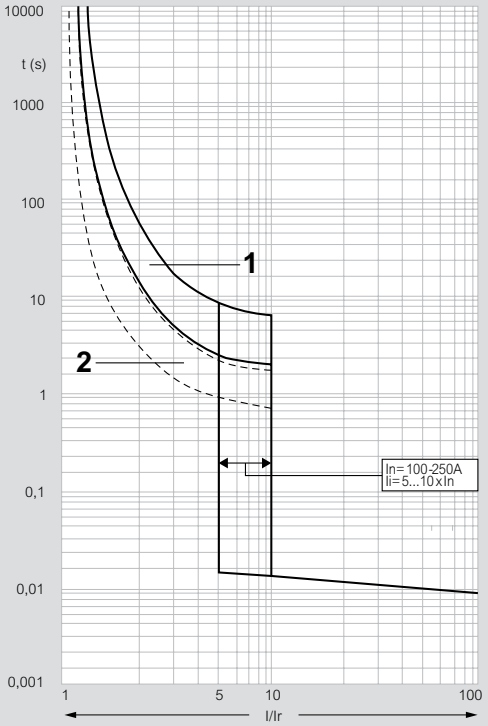
t: time
I: rated current
Ir: setting current
Curve n°1: charateristic with cold start
Curve n°2: charateristic with hot start

DPX³ 160 thermal-magnetic with integrated e.l.c.bs Tripping curves



t: time
I: rated current
Ir: setting current
Curve n°1: charateristic with cold start
Curve n°2: charateristic with hot start

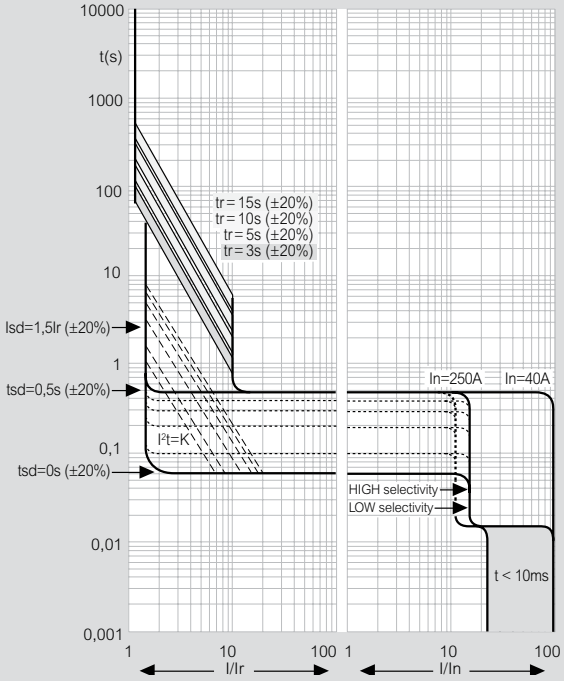
DPX³ 250 thermal-magnetic with integrated e.l.c.bs



t: time
I: rated current
Ir: setting current

DPX³ 160/250 (continued)

DPX³ 250 electronic release Tripping curves



Adjustment for thermal-magnetic DPX³

Setting	DPX³ thermal magnetiac	DPX³ with integrated e.l.c.bs
Ir overload trip threshold (thermal)	0.8 to 1 In	0.8 to 1 In
Im short-circuit trip threshold (magnetic)	fixed: 10 In(1)	fixed: 10 In(1)
$I_{\Delta n}$ (A)	-	0.03 - 0.03 - 1 - 3
Δt (s)	-	0 - 0.3 - 1 - 3

1: 400 A for DPX³ 160 In 16 A and 25 A

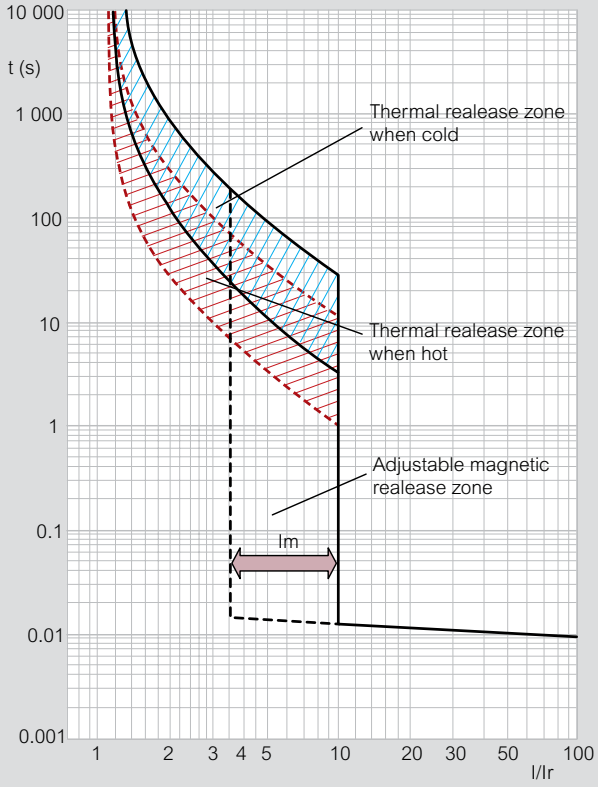
Adjustment for DPX³ electronic release

Setting	DPX³	DPX³ with integrated e.l.c.bs
Ir overload trip threshold (long delay)	0.4 to 1 In	
tr long delay trip time	3 - 5 - 10 - 15s	
Isd short-circuit trip threshold (short delay)	1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 x Ir	
tsd short delay trip time	0.01 - 0.1 - 0.2 - 0.3 - 0.4 - 0.5s	
Ig	(0.2 - 0.3 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 1 - OFF) x In	
tg	0.1 - 0.2 - 0.5 - 1s	

DPX³ 630/1600

reading DPX³ characteristic curves and adjustment ranges

Tripping curve for a DPX³ thermal-magnetic trip

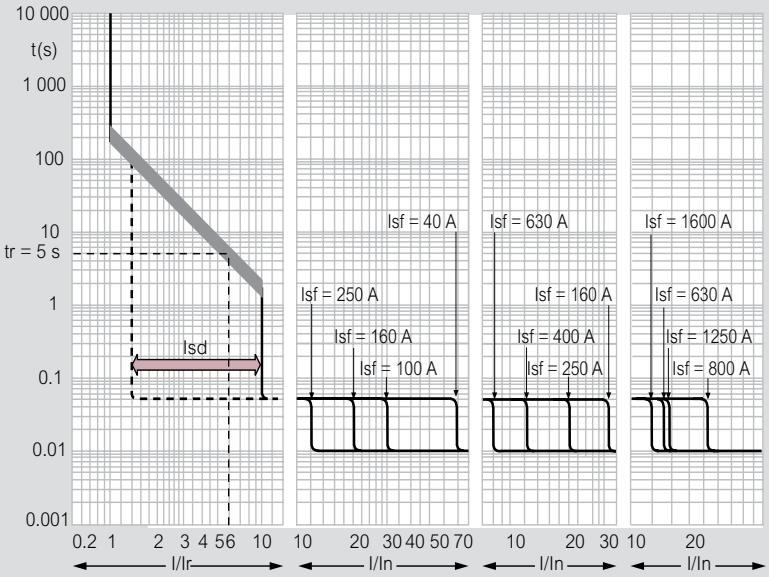


I: actual current
Ir: thermal protection against overloads (setting: Ir = x In)
Im: magnetic protection against short-circuits (setting: Im = x In or Im = x Ir)
As the abscissa of the curves represents the ratio I/Ir, modifying the setting of Ir will not change the graphical representation of the thermal trip. However, the magnetic setting can be read directly (between 3.5 and 10 in the example).

DPX³ 630/1600

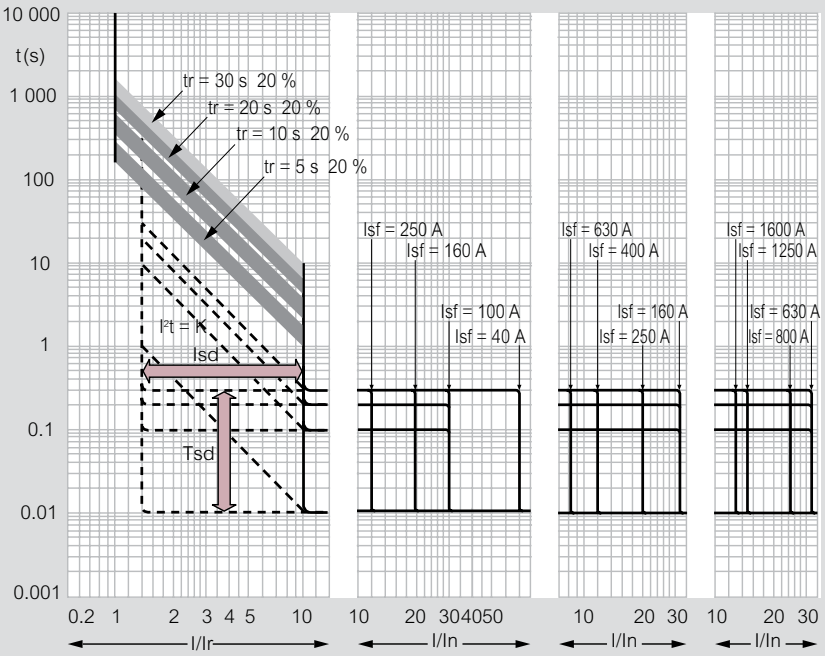
reading DPX³ characteristic curves and adjustment ranges

Tripping curve for a DPX³ electronic release S1, adjustable Ir and Isd



I: actual current
Ir: long delay protection against overloads (setting: Ir = x In)
Isd: long delay protection operation time (fixed value: 5 s at 6 Ir)
Isd: short delay protection against short-circuits (setting: Im = x Ir, between 1.5 and 10 Ir
in the example)
tsd: short delay protection operation time (fixed value: 0.05 s)
If: fixed threshold instantaneous protection (4 to 20 kA depending on model)

Tripping curve for a DPX³ electronic release S2, adjustable Ir, Isd, tr and tsd



I: actual current
Ir: long delay protection against overloads (setting: Ir = x In)
tr: long delay protection operation time (fixed value: 5 to 30 s)
Isd: short delay protection against short-circuits (setting: Im = x Ir, between 1.5 and 10 Ir in
the example)
tsd: short delay protection operation time (setting: 0 to 0.3 s)
I^2t constant (adjustable via tsd)
If: fixed threshold instantaneous protection (4 to 20 kA depending on model)

Adjustment for thermal-magnetic DPX³

Setting	DPX³ 630	DPX³ 1600
Ir overload trip threshold (thermal)	0.8 to 1 In	0.8 to 1 In
Im short-circuit trip threshold (magnetic)	5 to 10 In	5 to 10 In

Adjustment for DPX³ electronic release

Setting	DPX³ 630 / 1600 S1	DPX³ 630 / 1600 S2
Ir overload trip threshold (long delay)	(0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 0.95 - 1) x In	
tr long delay trip time	fixed: 5 s (to 6 Ir)	5 - 10 - 20 - 30 s (to 6 Ir)
Isd short-circuit trip threshold (short delay)	(1.5 - 2 - 3 - 4 - 5 - 6 - 8 - 10) x Ir(1)	
tsd Short delay trip time	fixed: 0.05 s	0 - 0.1 - 0.2 - 0.3 s

1: 7.9 Ir for DPX³ 630 In 630 A

DPX³ MCCBs

with integrated ELM

DPX³ : MCCBs with integrated ELM

Current (A)	Breaking Capacity Icu (kA)	Frame	4P
16	16 kA	DPX³ 160	4200 30
	25 kA	DPX³ 160	4200 70
	36 kA	DPX³ 160	4201 10
	50 kA	DPX³ 160	4201 50
25	16 kA	DPX³ 160	4200 31
	25 kA	DPX³ 160	4200 71
	36 kA	DPX³ 160	4201 11
	50 kA	DPX³ 160	4201 51
40	16 kA	DPX³ 160	4200 32
	25 kA	DPX³ 160	4200 72
	36 kA	DPX³ 160	4201 12
	50 kA	DPX³ 160	4201 52
	25 kA	DPX³ 250	4203 22
	36 kA	DPX³ 250	4203 52
	50 kA	DPX³ 250	4203 82
	70 kA	DPX³ 250	4206 55
	25 kA	DPX³ 250	4204 22
	36 kA	DPX³ 250	4204 52
	50 kA	DPX³ 250	4204 82
	70 kA	DPX³ 250	4206 85
63	16 kA	DPX³ 160	4200 33
	25 kA	DPX³ 160	4200 73
	36 kA	DPX³ 160	4201 13
	50 kA	DPX³ 160	4201 53
80	16 kA	DPX³ 160	4200 34
	25 kA	DPX³ 160	4200 74
	36 kA	DPX³ 160	4201 14
	50 kA	DPX³ 160	4201 54
100	16 kA	DPX³ 160	4200 35
	25 kA	DPX³ 160	4200 75
	36 kA	DPX³ 160	4201 15
	50 kA	DPX³ 160	4201 55
	25 kA	DPX³ 250	4202 25
	36 kA	DPX³ 250	4202 55
	50 kA	DPX³ 250	4202 85
	70 kA	DPX³ 250	4206 25
	25 kA	DPX³ 250	4203 25
	36 kA	DPX³ 250	4203 55
	50 kA	DPX³ 250	4203 85
	70 kA	DPX³ 250	4206 57
	25 kA	DPX³ 250	4204 25
	36 kA	DPX³ 250	4204 55
	50 kA	DPX³ 250	4204 85
	70 kA	DPX³ 250	4206 87

Current (A)	Breaking Capacity Icu (kA)	Frame	4P
125	16 kA	DPX³ 160	4200 36
	25 kA	DPX³ 160	4200 76
	36 kA	DPX³ 160	4201 16
	50 kA	DPX³ 160	4201 56
160	16 kA	DPX³ 160	4200 37
	25 kA	DPX³ 160	4200 77
	36 kA	DPX³ 160	4201 17
	50 kA	DPX³ 160	4201 57
	25 kA	DPX³ 250	4202 27
	36 kA	DPX³ 250	4202 57
	50 kA	DPX³ 250	4202 87
	70 kA	DPX³ 250	4206 27
	25 kA	DPX³ 250	4203 27
	36 kA	DPX³ 250	4203 57
	50 kA	DPX³ 250	4203 87
	70 kA	DPX³ 250	4206 58
	25 kA	DPX³ 250	4204 27
	36 kA	DPX³ 250	4204 57
	50 kA	DPX³ 250	4204 87
	70 kA	DPX³ 250	4206 88
200	25 kA	DPX³ 250	4202 28
	36 kA	DPX³ 250	4202 58
	50 kA	DPX³ 250	4202 88
	70 kA	DPX³ 250	4206 28
250	25 kA	DPX³ 250	4202 29
	36 kA	DPX³ 250	4202 59
	50 kA	DPX³ 250	4202 89
	70 kA	DPX³ 250	4206 29
	25 kA	DPX³ 250	4203 29
	36 kA	DPX³ 250	4203 59
	50 kA	DPX³ 250	4203 89
	70 kA	DPX³ 250	4206 59
	25 kA	DPX³ 250	4204 29
	36 kA	DPX³ 250	4204 59
	50 kA	DPX³ 250	4204 89
	70 kA	DPX³ 250	4206 89

Data Required

Selectivity table DMX³ / DPX³

Limits of selectivity (average values kA at 400 V~)

Downstream MCCB	In	Upstream ACB																			
		DMX³ - N 2500 (50 kA) DMX³ - H 2500 (65 kA)						DMX³ - L 2500 (100 kA)						DMX³-N 4000 (50 kA)		DMX³-H 4000 (65 kA)		DMX³-L 4000 (100 kA)		DMX³-L 6300 (100 kA)	
		800	1000	1250	1600	2000	2500	800	1000	1250	1600	2000	2500	3200	4000	3200	4000	3200	4000	5000	6300
DPX³ 160 (16, 25, 36, 50 kA) with or without e.l.c.bs	16 - 160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 250 thermal-magnetic (25, 36, 50 kA) with or without e.l.c.bs	100-250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 250 thermal-magnetic (70 kA) with or without e.l.c.bs	100 - 250	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 250 electronic release selector switch on "HIGH" (25, 36, 50 kA) with or without e.l.c.bs	40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	200	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 250 electronic release selector switch on "HIGH" (70 kA) with or without e.l.c.bs	40	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	200	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 250 electronic release selector switch on "LOW" (25, 36, 50 kA) with or without e.l.c.bs	40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	200	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 250 electronic release selector switch on "LOW" (70 kA) with or without e.l.c.bs	40	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	200	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 630 thermal magnetic (36 , 50 kA)	250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	-	T	T	T	T	T	-	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 630 thermal magnetic (70 , 100 kA)	250	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	-	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 630 electronic release selector switch on "HIGH" S2 and Sg (36 , 50 kA)	250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	-	T	T	T	T	T	-	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 630 electronic release selector switch on "LOW" S2 and Sg (36 , 50 kA)	250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	-	T	T	T	T	T	-	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 630 electronic release selector switch on "HIGH" S2 and Sg (70 , 100 kA)	250	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	-	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 630 electronic release selector switch on "LOW" S2 and Sg (70 , 100 kA)	250	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	-	-	-	-	-	-														
	400	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	-	-	-	-	-	-	T-	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	-	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 1600 thermal magnetic (36 , 50 kA)	630	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	800	-	-	T	T	T	T	-	-	T	T	T	T	T	T	T	T	T	T	T	T
	1000	-	-	-	T	T	T	-	-	-	T	T	T	T	T	T	T	T	T	T	T
	1250	-	-	-	-	T	T	-	-	-	-	T	T	T	T	T	T	T	T	T	T
DPX³ 1600 thermal magnetic (70 , 100 kA)	630	-	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T
	800	-	-	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T	T
	1000	-	-	-	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T	T
	1250	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T	T	T	T	T	T
DPX and DPX-H 1600 electronic release selector switch on "HIGH" S2 and Sg (30, 50, 70, 100 kA)	630	-	T	T	T	T	T	-	T	T	T	T	T	T	T	T	T	T	T	T	T
	800	-	-	T	T	T	T	-	-	T	T	T	T	T	T	T	T	T	T	T	T
	1000	-	-	-	-	T	T	-	-	-	-	T	T	T	T	T	T	T	T	T	T
	1250	-	-	-	-	T	T	-	-	-	T	T	T	T	T	T	T	T	T	T	T
	1600	-	-	-	-	T(1)	T	-	-	-	-	T	T	T	T	T	T	T	T	T	T
DPX and DPX-H 1600 electronic release selector switch on LOW" S2 and Sg (36, 50, 70,100 kA)	630	-	T	T	T	T	T	-	T	T	T	T	T	T	T	T	T	T	T	T	T
	800	-	-	T	T	T	T	-	-	T	T	T	T	T	T	T	T	T	T	T	T
	1000	-	-	-	-	T	T	-	-	-	-	T	T	T	T	T	T	T	T	T	T
	1250	-	-	-	-	T	T	-	-	-	T	T	T	T	T	T	T	T	T	T	T
	1600	-	-	-	-	T(1)	T	-	-	-	-	T	T	T	T	T	T	T	T	T	T

T = total selectivity, up to downstream circuit breaker breaking capacity, according to IEC 60947-2 ; (1) Except with DMX³ - N 2500 50 kA upstream : selectivity limit = 50 kA

Selectivity table thermal-magnetic release DPX³ / DPX³

Limits of selectivity (average values kA at 400 V~)

Downstream MCCB	In (A)	Upstream MCCB																				
		DPX³ 160 16, 25, 36, 50 kA with or without e.l.c.bs								DPX³ 250 25, 36, 50, 70 kA with or without e.l.c.bs				DPX³ 630 36, 50, 70, 100 kA with or without e.l.c.bs					DPX³ 1600 36, 50, 70, 100 kA			
		16	25	40	63	80	100	125	160	100	160	200	250	250	320	400	500	630	630	800	1000	1250
DPX³ 160 16, 25 kA with or without e.l.c.bs	16	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	T(1)	T(1)	T(1)	T(1)
	25	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	T(1)	T(1)	T(1)	T(1)
	40	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	T(1)	T(1)	T(1)	T(1)
	63	-	-	-	-	0.8	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	T(1)	T(1)	T(1)	T(1)
	80	-	-	-	-	-	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	T(1)	T(1)	T(1)	T(1)
	100	-	-	-	-	-	-	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	T(1)	T(1)	T(1)	T(1)
	125	-	-	-	-	-	-	-	1.6	-	-	-	-	2.5	3.2	4	5	6.3	T(1)	T(1)	T(1)	T(1)
	160	-	-	-	-	-	-	-	-	-	-	2	2.5	2.5	3.2	4	5	6.3	T(1)	T(1)	T(1)	T(1)
DPX³ 160 36 kA with or without e.l.c.bs	16	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	25	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	40	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	63	-	-	-	-	0.8	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	80	-	-	-	-	-	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	100	-	-	-	-	-	-	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	125	-	-	-	-	-	-	-	1.6	-	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	160	-	-	-	-	-	-	-	-	-	-	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
DPX³ 160 50 kA with or without e.l.c.bs	16	-	-	-	0.63	0.8	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	25	-	-	-	0.63	0.8	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	40	-	-	-	0.63	0.8	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	63	-	-	-	-	0.8	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	80	-	-	-	-	-	1	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	100	-	-	-	-	-	-	1.25	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	125	-	-	-	-	-	-	-	1.6	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
	160	-	-	-	-	-	-	-	-	-	-	-	-	2.5	3.2	4	5	6.3	16	16	16	16
DPX³ 250 thermal-magnetic 25, 36, 50, 70 kA with or without e.l.c.bs	100	-	-	-	-	-	-	1.25	1.6	-	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	160	-	-	-	-	-	-	-	-	-	-	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	200	-	-	-	-	-	-	-	-	-	-	-	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	250	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	4	5	6.3	16	16	16	16
DPX³ 250 electronic release(1) 25, 36, 50, 70 kA with or without e.l.c.bs	40	-	-	-	-	-	-	-	-	-	-	-	-	2.5	3.2	4	5	6.3	-	-	-	-
	100	-	-	-	-	-	-	-	-	-	-	-	-	2.5	3.2	4	5	6.3	-	-	-	-
	160	-	-	-	-	-	-	-	-	-	-	-	-	2.5	3.2	4	5	6.3	-	-	-	-
	200	-	-	-	-	-	-	-	-	-	-	-	-	2.5	3.2	4	5	6.3	-	-	-	-
	250	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	4	5	6.3	-	-	-	-
DPX³ 250 electronic release(2) 25, 36, 50, 70 kA with or without e.l.c.bs	40	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	100	-	-	-	-	-	-	1.25	1.6	-	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	160	-	-	-	-	-	-	-	-	-	-	2	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	200	-	-	-	-	-	-	-	-	-	-	-	2.5	2.5	3.2	4	5	6.3	16	16	16	16
	250	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	4	5	6.3	16	16	16	16
DPX³ 630 thermal magnetic 36, 50, 70, 100 kA	250	-	-	-	-	-	-	-	-	-	-	-	-	-	3,2	4	5	6,3	16	16	16	16
	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	6,3	16	16	16	16
	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6,3	16	16	16	16
	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,3	16	16	16	16
	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16	16
DPX and DPX-H 630 electronic release selector switch on "HIGH" S2 and Sg 36, 50, 70, 100 kA	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	500	-												-	-	-	-	-	-	-	-	-
	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPX³ 630 electronic release selector switch on "LOW" S1 and S2 36, 50, 70, 100 kA	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,3	8	10	12,5
	320	-												-	-	-	-	-	6,3	8	10	12,5
	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,3	8	10	12,5
	500	-												-	-	-	-	-	6,3	8	10	12,5
	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	10	12,5
DPX³ 1600 thermal magnetic 30, 50, 70, 100 kA	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	10	12,5
	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	12,5
	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,5
	1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPX³ 1600 electronic release selector switch on "HIGH" S2 and Sg 36, 50, 70, 100 kA	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPX³ 1600 electronic release selector switch on "LOW" S2 and Sg 36, 50, 70, 100 kA	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

T = total selectivity. up to downstream circuit breaker breaking capacity. according to IEC 60947-2
(1) Except for DPX³ 160 25 kA downstream : selectivity limit = 16 kA

Selectivity table electronic release DPX³ / DPX³

Limits of selectivity (average values kA at 400 V~)

Downstream MCCB	Icu (kA)	In (A)	Upstream MCCB electronic release, selector switch on "HIGH"								
			DPX³ 250 electronic release (25, 36, 50, 70 kA) with or without e.l.c.bs				DPX³ 630 electronic release S2, Sg (36, 50, 70, 100 kA)				
			40	100	160	250	250	320	400	500	630
DPX³ 160 with or without e.l.c.bs	16, 25, 36 kA	16, 25	T	T	T	T	T	T	T	T	T
		40	-	T	T	T	T	T	T	T	T
		63, 80, 100	-	-	-	-	T	T	T	T	T
		125	-	-	-	-	T	T	T	T	T
		160	-	-	-	T	T	T	T	T	T
	50 kA	16, 25	-	-	-	-	36	36	36	36	36
		40	-	-	-	-	36	36	36	36	36
		63, 80, 100	-	-	-	-	36	36	36	36	36
		125	-	-	-	-	36	36	36	36	36
		160	-	-	-	-	36	36	36	36	36
DPX³ 250 thermal-magnetic with or without e.l.c.bs	25 kA	100	-	-	16	16	T	T	T	T	T
		160	-	-	-	16	T	T	T	T	T
		200	-	-	-	16	T	T	T	T	T
		250	-	-	-	-	-	T	T	T	T
	36 kA	100	-	-	25	25	T	T	T	T	T
		160	-	-	-	25	T	T	T	T	T
		200	-	-	-	25	T	T	T	T	T
		250	-	-	-	-	-	T	T	T	T
	50 kA	100	-	-	25	25	36	36	36	36	36
		160	-	-	-	25	36	36	36	36	36
		200	-	-	-	25	36	36	36	36	36
		250	-	-	-	-	-	36	36	36	36
	70 kA	100	-	-	36	36	36	36	36	36	36
		160	-	-	-	36	36	36	36	36	36
		200	-	-	-	36	36	36	36	36	36
		250	-	-	-	-	-	36	36	36	36
DPX³ 250 electronic release selector switch on "HIGH" with or without e.l.c.bs	25 kA	40	-	1	1.6	2.5	2,5	3,2	4	5	6,3
		100	-	-	1.6	2.5	2,5	3,2	4	5	6,3
		160	-	-	-	2.5	2,5	3,2	4	5	6,3
		250	-	-	-	-	-	3,2	4	5	6,3
	36 kA	40	-	1	1.6	2.5	2,5	3,2	4	5	6,3
		100	-	-	1.6	2.5	2,5	3,2	4	5	6,3
		160	-	-	-	2.5	2,5	3,2	4	5	6,3
		250	-	-	-	-	-	3,2	4	5	6,3
	50 kA	40	-	1	1.6	2.5	2,5	3,2	4	5	6,3
		100	-	-	1.6	2.5	2,5	3,2	4	5	6,3
		160	-	-	-	2.5	2,5	3,2	4	5	6,3
		250	-	-	-	-	-	3,2	4	5	6,3
	70 kA	40	-	1	1.6	2.5	2,5	3,2	4	5	6,3
		100	-	-	1.6	2.5	2,5	3,2	4	5	6,3
		160	-	-	-	2.5	2,5	3,2	4	5	6,3
		250	-	-	-	-	-	3,2	4	5	6,3
DPX³ 250 electronic release selector switch on "LOW" with or without e.l.c.bs	25 kA	40	-	T	T	T	T	T	T	T	T
		100	-	-	T	T	T	T	T	T	T
		160	-	-	-	T	T	T	T	T	T
		250	-	-	-	-	-	T	T	T	T
	36 kA	40	-	36	36	36	T	T	T	T	T
		100	-	-	36	36	T	T	T	T	T
		160	-	-	-	36	T	T	T	T	T
		250	-	-	-	-	-	T	T	T	T
	50 kA	40	-	36	36	36	36	36	36	36	36
		100	-	-	36	36	36	36	36	36	36
		160	-	-	-	36	36	36	36	36	36
		250	-	-	-	-	-	36	36	36	36
	70 kA	40	-	36	36	36	36	36	36	36	36
		100	-	-	36	36	36	36	36	36	36
		160	-	-	-	36	36	36	36	36	36
		250	-	-	-	-	-	36	36	36	36
DPX³ 630 thermal magnetic	36 and 50 kA	250	-	-	-	-	-	25	25	25	25
		320	-	-	-	-	-	-	25	25	25
		400	-	-	-	-	-	-	-	25	25
		500	-	-	-	-	-	-	-	-	25
		630	-	-	-	-	-	-	-	-	-
	70 kA	250	-	-	-	-	-	25	25	25	25
		320	-	-	-	-	-	-	25	25	25
		400	-	-	-	-	-	-	-	25	25
		500	-	-	-	-	-	-	-	-	25
		630	-	-	-	-	-	-	-	-	-
	100 kA	250	-	-	-	-	-	25	25	25	25
		320	-	-	-	-	-	-	25	25	25
		400	-	-	-	-	-	-	-	25	25
		500	-	-	-	-	-	-	-	-	25
		630	-	-	-	-	-	-	-	-	-
DPX³ 630 electronic release selector switch on "HIGH" S2, Sg	36, 50, 70, 100 kA	250	-	-	-	-	-	3,2	4	5	6,3
		320	-	-	-	-	-	-	4	5	6,3
		400	-	-	-	-	-	-	-	5	6,3
		500	-	-	-	-	-	-	-	-	6,3
		630	-	-	-	-	-	-	-	-	-
DPX³ 630 electronic release selector switch on "LOW" S2, Sg	36, 50, 70, 100 kA	250	-	-	-	-	-	16	16	16	16
		320	-	-	-	-	-	-	16	16	16
		400	-	-	-	-	-	-	-	16	16
		500	-	-	-	-	-	-	-	-	16
		630	-	-	-	-	-	-	-	-	-

T = total selectivity, up to downstream circuit breaker breaking capacity, according to IEC 60947-2

Downstream MCCB	Icu (kA)	In (A)	Upstream MCCB electronic release, selector switch on "HIGH"																					
			DPX³ 1600 electronic release S1, S2, Sg (36 kA)					DPX³ 1600 electronic release S1, S2, Sg (50 kA)					DPX³ 1600 electronic release S1, S2, Sg (70 kA)					DPX³ 1600 electronic release S1, S2, Sg (100 kA)				
			630	800	1000	1250	1600	630	800	1000	1250	1600	630	800	1000	1250	1600	630	800	1000	1250	1600
DPX³ 160 with or without e.l.c.bs	16, 25, 36 kA	16 to 160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50 kA	16, 25	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		40	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		63, 80, 100	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		125	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		160	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 250 thermal-magnetic with or without e.l.c.bs	25, 36 kA	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		200	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50 kA	100	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		160	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		200	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		250	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	70 kA	100	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		160	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		200	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		250	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
DPX³ 250 electronic release selector switch on "HIGH" with or without e.l.c.bs	25, 36, 50, 70 kA	40	5	6,3	8	10	12,5	5	6,3	8	10	12,5	5	6,3	8	10	12,5	5	6,3	8	10	12,5
		100	5	6,3	8	10	12,5	5	6,3	8	10	12,5	5	6,3	8	10	12,5	5	6,3	8	10	12,5
		160	5	6,3	8	10	12,5	5	6,3	8	10	12,5	5	6,3	8	10	12,5	5	6,3	8	10	12,5
		250	5	6,3	8	10	12,5	5	6,3	8	10	12,5	5	6,3	8	10	12,5	5	6,3	8	10	12,5
DPX³ 250 selector switch on "LOW" with or without e.l.c.bs	25, 36 kA	40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50, 70 kA	40	36	36	36	36	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
		100	36	36	36	36	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
		160	36	36	36	36	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
		250	36	36	36	36	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
DPX³ 630 thermal magnetic	36 and 50 kA	250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		320	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		400	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		630	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T
	70 kA	250	36	36	36	36	36	50	50	50	50	50	T	T	T	T	T	T	T	T	T	T
		320	36	36	36	36	36	50	50	50	50	50	T	T	T	T	T	T	T	T	T	T
		400	36	36	36	36	36	50	50	50	50	50	T	T	T	T	T	T	T	T	T	T
		500	36	36	36	36	36	50	50	50	50	50	T	T	T	T	T	T	T	T	T	T
		630	-	36	36	36	36	-	50	50	50	50	-	T	T	T	T	-	T	T	T	T
	100 kA	250	36	36	36	36	36	50	50	50	50	50	70	70	70	70	70	70	70	70	70	70
		320	36	36	36	36	36	50	50	50	50	50	70	70	70	70	70	70	70	70	70	70
		400	36	36	36	36	36	50	50	50	50	50	70	70	70	70	70	70	70	70	70	70
		500	36	36	36	36	36	50	50	50	50	50	70	70	70	70	70	70	70	70	70	70
		630	-	36	36	36	36	-	50	50	50	50	-	70	70	70	70	-	70	70	70	70
DPX³ 630 electronic release selector switch on "HIGH" S2, Sg	36, 50, 70, 100 kA	250	6,3	8	10	12,5	16	6,3	8	10	12,5	16	6,3	8	10	12,5	16	6,3	8	10	12,5	16
		320	6,3	8	10	12,5	16	6,3	8	10	12,5	16	6,3	8	10	12,5	16	6,3	8	10	12,5	16
		400	6,3	8	10	12,5	16	6,3	8	10	12,5	16	6,3	8	10	12,5	16	6,3	8	10	12,5	16
		500	6,3	8	10	12,5	16	6,3	8	10	12,5	16	6,3	8	10	12,5	16	6,3	8	10	12,5	16
		630	-	8	10	12,5	16	-	8	10	12,5	16	-	8	10	12,5	16	-	8	10	12,5	16
DPX³ 630 electronic release selector switch on "LOW" S2, Sg	36 kA	250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		320	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		400	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		630	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T
DPX³ 630 electronic release selector switch on "LOW" S2, Sg	50, 70, 100 kA	250	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		320	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		400	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		500	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		630	-	36	36	36	36	-	36	36	36	36	-	36	36	36	36	-	36	36	36	36
DPX³ 1600 thermal magnetic	36 kA	630	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T
		800	-	-	T	T	T	-	-	T	T	T	-	-	T	T	T	-	-	T	T	T
		1000	-	-	-	T	T	-	-	-	T	T	-	-	-	T	T	-	-	-	T	T
		1250	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T
	50 kA	630	-	36	36	36	36	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T
		800	-	-	36	36	36	-	-	T	T	T	-	-	T	T	T	-	-	T	T	T
		1000	-	-	-	36	36	-	-	-	T	T	-	-	-	T	T	-	-	-	T	T
		1250	-	-	-	-	36	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T
	70 kA	630	-	36	36	36	36	-	50	50	50	50	-	T	T	T	T	-	T	T	T	T
		800	-	-	36	36	36	-	-	50	50	50	-	-	T	T	T	-	-	T	T	T
		1000	-	-	-	36	36	-	-	-	50	50	-	-	-	T	T	-	-	-	T	T
		1250	-	-	-	-	36	-	-	-	-	50	-	-	-	-	T	-	-	-	-	T
	100 kA	630	-	36	36	36	36	-	50	50	50	50	-	70	70	70	70	-	70	70	70	T
		800	-	-	36	36	36	-	-	50	50	50	-	-	70	70	70	-	-	70	70	T
		1000	-	-	-	36	36	-	-	-	50	50	-	-	-	70	70	-	-	-	70	T
		1250	-	-	-	-	36	-	-	-	-	50	-	-	-	-	70	-	-	-	-	T
DPX³ 1600 electronic release selector switch on "HIGH" S1, S2, Sg	36, 50, 70, 100 kA	630	-	8	10	12,5	16	-	8	10	12,5	16	-	8	10	12,5	16	-	8	10	12,5	16
		800	-	-	10	12,5	16	-	-	10	12,5	16	-	-	10	12,5	16	-	-	10	12,5	16
		1000	-	-	-	12,5	16	-	-	-	12,5	16	-	-	-	12,5	16	-	-	-	12,5	16
		1250	-	-	-	-	16	-	-	-	-	16	-	-	-	-	16	-	-	-	-	16
		1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPX³ 1600 electronic release selector switch on "LOW" S1, S2, Sg	36 kA	630	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T	-	T	T	T	T
		800	-	-	T	T	T	-	-	T	T	T	-	-	T	T	T	-	-	T	T	T
		1000	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T
		1250	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T
		1600	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T	-	-	-	-	T
	50, 70, 100 kA	630	-	36	36	36	36	-	36	36	36	36	-	36	36	36	36	-	36	36	36	36
		800	-	-	36	36	36	-	-	36	36	36	-	-	36	36	36	-	-	36	36	36
		1000	-	-	-	-	36	-	-	-	-	36	-	-	-	-	36	-	-	-	-	36
		1250	-	-	-	-	36	-	-	-	-	36	-	-	-	-	36	-	-	-	-	36
		1600	-	-	-	-	36	-	-	-	-	36	-	-	-	-	36	-	-	-	-	36

T = total selectivity, up to downstream circuit breaker breaking capacity, according to IEC 60947-2

Selectivity table electronic release DPX³ / DPX³ (continued)

Limits of selectivity (average values kA at 400 V~)

Downstream MCCB	Icu (kA)	In (A)	Upstream MCCB electronic release, selector switch on "LOW"								
			DPX³ 250 electronic release (25, 36, 50, 70 kA) with or without e.l.c.bs				DPX³ 630 electronic release S2, Sg (36, 50, 70, 100 kA)				
			40	100	160	250	250	320	400	500	630
DPX³ 160 with or without e.l.c.bs	16 kA	16, 25	-	1	1.6	2.5	6	6	6	6	6,3
		40	-	1	1.6	2.5	6	6	6	6	6,3
		63, 80, 100	-	-	-	-	6	6	6	6	6,3
		125	-	-	-	-	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
	25 kA	16, 25	-	1	1.6	2.5	6	6	6	6	6,3
		40	-	1	1.6	2.5	6	6	6	6	6,3
		63, 80, 100	-	-	-	-	6	6	6	6	6,3
		125	-	-	-	-	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
	36 kA	16, 25	-	1	1.6	2.5	6	6	6	6	6,3
		40	-	1	1.6	2.5	6	6	6	6	6,3
		63, 80, 100	-	-	-	-	6	6	6	6	6,3
		125	-	-	-	-	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
	50 kA	16, 25	-	-	-	-	6	6	6	6	6,3
		40	-	-	-	-	6	6	6	6	6,3
		63, 80, 100	-	-	-	-	6	6	6	6	6,3
		125	-	-	-	-	6	6	6	6	6,3
		160	-	-	-	-	6	6	6	6	6,3
DPX³ 250 thermal-magnetic with or without e.l.c.bs	25 kA	100	-	-	1.6	2.5	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
		200	-	-	-	2.5	6	6	6	6	6,3
		250	-	-	-	-	-	6	6	6	6,3
	36 kA	100	-	-	1.6	2.5	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
		200	-	-	-	2.5	6	6	6	6	6,3
		250	-	-	-	-	-	6	6	6	6,3
	50 kA	100	-	-	1.6	2.5	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
		200	-	-	-	2.5	6	6	6	6	6,3
		250	-	-	-	-	-	6	6	6	6,3
	70 kA	100	-	-	1.6	2.5	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
		200	-	-	-	2.5	6	6	6	6	6,3
		250	-	-	-	-	-	6	6	6	6,3
DPX³ 250 electronic release selector switch on "HIGH" with or without e.l.c.bs	25 kA	40	-	-	-	-	-	-	-	-	-
		100	-	-	-	-	-	-	-	-	-
		160	-	-	-	-	-	-	-	-	-
		250	-	-	-	-	-	-	-	-	-
	36 kA	40	-	-	-	-	-	-	-	-	-
		100	-	-	-	-	-	-	-	-	-
		160	-	-	-	-	-	-	-	-	-
		250	-	-	-	-	-	-	-	-	-
	50 kA	40	-	-	-	-	-	-	-	-	-
		100	-	-	-	-	-	-	-	-	-
		160	-	-	-	-	-	-	-	-	-
		250	-	-	-	-	-	-	-	-	-
	70 kA	40	-	-	-	-	-	-	-	-	-
		100	-	-	-	-	-	-	-	-	-
		160	-	-	-	-	-	-	-	-	-
		250	-	-	-	-	-	-	-	-	-
DPX³ 250 electronic release selector switch on "LOW" with or without e.l.c.bs	25 kA	40	-	1	1.6	2.5	8	8	8	8	8
		100	-	-	1.6	2.5	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
		250	-	-	-	-	-	6	6	6	6,3
	36 kA	40	-	1	1.6	2.5	8	8	8	8	8
		100	-	-	1.6	2.5	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
		250	-	-	-	-	-	6	6	6	6,3
	50 kA	40	-	1	1.6	2.5	8	8	8	8	8
		100	-	-	1.6	2.5	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
		250	-	-	-	-	-	6	6	6	6,3
	70 kA	40	-	1	1.6	2.5	8	8	8	8	8
		100	-	-	1.6	2.5	6	6	6	6	6,3
		160	-	-	-	2.5	6	6	6	6	6,3
		250	-	-	-	-	-	6	6	6	6,3
DPX³ 630 thermal magnetic	25, 36, 50, 70 kA	250	-	-	-	-	-	6	6	6	6,3
		320	-	-	-	-	-	-	6	6	6,3
		400	-	-	-	-	-	-	-	6	6,3
		500	-	-	-	-	-	-	-	-	6,3
		630	-	-	-	-	-	-	-	-	-
DPX³ 630 electronic release selector switch on "HIGH" S2, Sg	25, 36, 50, 70 kA	250	-	-	-	-	-	-	-	-	-
		320	-	-	-	-	-	-	-	-	-
		400	-	-	-	-	-	-	-	-	-
		500	-	-	-	-	-	-	-	-	-
		630	-	-	-	-	-	-	-	-	-
DPX³ 630 electronic release selector switch on "LOW" S2, Sg	25, 36, 50, 70 kA	250	-	-	-	-	-	3,2	4	5	6,3
		320	-	-	-	-	-	-	4	5	6,3
		400	-	-	-	-	-	-	-	5	6,3
		500	-	-	-	-	-	-	-	-	6,3
		630	-	-	-	-	-	-	-	-	-

T = total selectivity, up to downstream circuit breaker breaking capacity, according to IEC 60947-2

Downstream MCCB	Icu (kA)	In (A)	Upstream MCCB electronic release, selector switch on "LOW"																					
			DPX³ 1600 electronic release S1, S2, Sg (36 kA)					DPX³ 1600 electronic release S1, S2, Sg (50 kA)					DPX³ 1600 electronic release S1, S2, Sg (70 kA)					DPX³ 1600 electronic release S1, S2, Sg (100 kA)				
			630	800	1000	1250	1600	630	800	1000	1250	1600	630	800	1000	1250	1600	630	800	1000	1250	1600
DPX³ 160 with or without e.l.c.bs	16, 25, 36, 50 kA	16-40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		63	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		80	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		125	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
DPX³ 250 thermal-magnetic with or without e.l.c.bs	25, 36 kA	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		200	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50 kA	100	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		160	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		200	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		250	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	70 kA	100	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		160	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		200	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		250	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
DPX³ 250 electronic release selector switch on "HIGH" with or without e.l.c.bs	25, 36, 50, 70 kA	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPX³ 250 selector switch on "LOW" with or without e.l.c.bs	25, 36 kA	40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		160	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		250	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50, 70 kA	40	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		100	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		160	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
		250	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
DPX³ 630 thermal magnetic	36 and 50 kA	250	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		320	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		400	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		500	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		630	-	20	20	20		-	20	20	20		-	20	20	20		-	20	20	20	
	70 kA	250	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		320	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		400	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		500	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		630	-	20	20	20		-	20	20	20		-	20	20	20		-	20	20	20	
	100 kA	250	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		320	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		400	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		500	20	20	20	20		20	20	20	20		20	20	20	20		20	20	20	20	
		630	-	20	20	20		-	20	20	20		-	20	20	20		-	20	20	20	
DPX³ 630 electronic release selector switch on "HIGH" S2, Sg	36, 50, 70, 100 kA	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPX³ 630 electronic release selector switch on "LOW" S2, Sg	36 kA	250	20	20	20	20	T	20	20	20	20	T	20	20	20	20	T	20	20	20	20	T
		320	20	20	20	20	T	20	20	20	20	T	20	20	20	20	T	20	20	20	20	T
		400	20	20	20	20	T	20	20	20	20	T	20	20	20	20	T	20	20	20	20	T
		500	20	20	20	20	T	20	20	20	20	T	20	20	20	20	T	20	20	20	20	T
		630	-	20	20	20	T	-	20	20	20	T	-	20	20	20	T	-	20	20	20	T
DPX³ 630 electronic release selector switch on "LOW" S2, Sg	50, 70, 100 kA	250	20	20	20	20	36	20	20	20	20	36	20	20	20	20	36	20	20	20	20	36
		320	20	20	20	20	36	20	20	20	20	36	20	20	20	20	36	20	20	20	20	36
		400	20	20	20	20	36	20	20	20	20	36	20	20	20	20	36	20	20	20	20	36
		500	20	20	20	20	36	20	20	20	20	36	20	20	20	20	36	20	20	20	20	36
		630	-	20	20	20	36	-	20	20	20	36	-	20	20	20	36	-	20	20	20	36
DPX³ 1600 thermal magnetic	36 kA	630	-	15	20	20	20	-	15	20	20	20	-	15	20	20	20	-	15	20	20	20
		800	-	-	20	20	20	-	-	20	20	20	-	-	20	20	20	-	-	20	20	20
		1000	-	-	-	20	20	-	-	-	20	20	-	-	-	20	20	-	-	-	20	20
		1250	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20
	50 kA	630	-	15	20	20	20	-	15	20	20	20	-	15	20	20	20	-	15	20	20	20
		800	-	-	20	20	20	-	-	20	20	20	-	-	20	20	20	-	-	20	20	20
		1000	-	-	-	20	20	-	-	-	20	20	-	-	-	20	20	-	-	-	20	20
		1250	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20
	70 kA	630	-	15	20	20	20	-	15	20	20	20	-	15	20	20	20	-	15	20	20	20
		800	-	-	20	20	20	-	-	20	20	20	-	-	20	20	20	-	-	20	20	20
		1000	-	-	-	20	20	-	-	-	20	20	-	-	-	20	20	-	-	-	20	20
		1250	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20
	100 kA	630	-	15	20	20	20	-	15	20	20	20	-	15	20	20	20	-	15	20	20	20
		800	-	-	20	20	20	-	-	20	20	20	-	-	20	20	20	-	-	20	20	20
		1000	-	-	-	20	20	-	-	-	20	20	-	-	-	20	20	-	-	-	20	20
		1250	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20
DPX³ 1600 electronic release selector switch on "HIGH" S1, S2, Sg	36, 50, 70, 100 kA	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPX³ 1600 electronic release selector switch on "LOW" S1, S2, Sg	36 kA	630	-	15	15	15	20	-	15	15	15	20	-	15	15	15	20	-	15	15	15	20
		800	-	-	15	15	20	-	-	15	15	20	-	-	15	15	20	-	-	15	15	20
		1000	-	-	-	15	20	-	-	-	15	20	-	-	-	15	20	-	-	-	15	20
		1250	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20
		1600	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20
	50, 70, 100 kA	630	-	15	15	15	20	-	15	15	15	20	-	15	15	15	20	-	15	15	15	20
		800	-	-	15	15	20	-	-	15	15	20	-	-	15	15	20	-	-	15	15	20
		1000	-	-	-	15	20	-	-	-	15	20	-	-	-	15	20	-	-	-	15	20
		1250	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20
		1600	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20	-	-	-	-	20

T = total selectivity, up to downstream circuit breaker breaking capacity, according to IEC 60947-2

Selectivity tables MCCBs/MCBs

Downstream MCB	In (A)	Upstream MCCB																								
		DPX³ 160 (16, 25, 36, 50 kA) with or without e.l.c.bs								DPX³ 250 (25, 36, 50, 70 kA) with or without e.l.c.bs				DPX³ 250 electronic release(1) (25, 36, 50, 70 kA) with or without e.l.c.bs				DPX³ 250 electronic release(2) (25, 36, 50, 70 kA) with or without e.l.c.bs				DPX³ 630 (36, 50, 70, 100 kA)				
		16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250	40	100	160	250	250	320	400	500	630
DX³ 10 kA C curves	≤ 6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	10	5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	13	-	T	T	T	T	T	T	T	T	T	T	T	8	T	T	T	8	T	T	T	T	T	T	T	T
	16	-	T	T	T	T	T	T	T	T	T	T	T	6	T	T	T	6	T	T	T	T	T	T	T	T
	20	-	5	5	5	5	6	T	T	8	T	T	T	5	8	T	T	5	8	T	T	T	T	T	T	T
	25	-	-	4.5	4.5	4.5	4.5	T	T	6	T	T	T	4	6	T	T	4	6	T	T	T	T	T	T	T
	32	-	-	-	3	4	4	T	T	5	T	T	T	-	5	T	T	-	5	T	T	T	T	T	T	T
	40	-	-	-	3	3	3	T	T	5	T	T	T	-	5	T	T	-	5	T	T	T	T	T	T	T
	50	-	-	-	-	3	3	5.5	7	4	8	T	T	-	4	8	T	-	4	8	T	T	T	T	T	T
	63	-	-	-	-	3	3	5	6	4	8	T	T	-	4	8	T	-	4	8	T	T	T	T	T	T
DX³ 10 kA D curve	≤ 6	6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	10	5	7.5	7.5	7.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	16	-	-	5	5	5	T	T	T	T	T	T	T	6	T	T	T	6	T	T	T	T	T	T	T	T
	20	-	-	4.5	4.5	4.5	6	T	T	8	T	T	T	5	8	T	T	5	8	T	T	T	T	T	T	T
	25	-	-	-	4.5	4	4.5	T	T	6	T	T	T	-	6	T	T	-	6	T	T	T	T	T	T	T
	32	-	-	-	3	3	4	T	T	5	T	T	T	-	5	T	T	-	5	T	T	T	T	T	T	T
	40	-	-	-	3	3	3	T	T	5	T	T	T	-	5	T	T	-	5	T	T	T	T	T	T	T
	50	-	-	-	-	3	3	5.5	7	4	8	T	T	-	4	8	T	-	4	8	T	T	T	T	T	T
	63	-	-	-	-	-	3	5	6	-	8	T	T	-	-	8	T	-	-	8	T	T	T	T	T	T
DX³ 16 kA	≤ 6	6	12	12	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	10	5	7	7	7	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	16	-	6	6	6	6	T	T	T	T	T	T	T	7	T	T	T	7	T	T	T	T	T	T	T	T
	20	-	5	5	5	5	6	T	T	T	T	T	T	5	T	T	T	5	T	T	T	T	T	T	T	T
	25	-	-	4.5	4.5	4.5	4.5	8.5	T	T	T	T	T	4	T	T	T	4	T	T	T	T	T	T	T	T
	32	-	-	-	3	4	4	7	10	5	T	T	T	-	5	T	T	-	5	T	T	T	T	T	T	T
	40	-	-	-	3	3	3	6	8	5	T	T	T	-	5	T	T	-	5	T	T	T	T	T	T	T
	50	-	-	-	-	3	3	5.5	7	4	T	T	T	-	4	T	T	-	4	T	T	T	T	T	T	T
	63	-	-	-	-	3	3	5	6	4	T	T	T	-	4	T	T	-	4	T	T	T	T	T	T	T
	80	-	-	-	-	-	-	5	6	4	T	T	T	-	4	T	T	-	4	T	T	T	T	T	T	T
	100	-	-	-	-	-	-	-	5	-	T	T	T	-	-	T	T	-	-	T	T	T	T	T	T	T
	125	-	-	-	-	-	-	-	3	-	T	T	T	-	-	T	T	-	-	T	T	T	T	T	T	T

T = total selectivity, up to downstream circuit breaker breaking capacity, according to IEC 60947-2
1: Electronic release, selector switch on "HIGH" - 2: Electronic release, selector switch on "LOW"

	DPX³ 630 electronic release(1) S2, Sg (36, 50, 70, 100 kA)					DPX³ 630 electronic release(2) S2, Sg (36, 50, 70, 100 kA)					DPX³ 1600 (36, 50, 70, 100 kA)				DPX³ 1600 electronic release(1) S1, S2, Sg (36, 50, 70, 100 kA)					DPX³ 1600 electronic release(2) S1, S2, Sg (36, 50, 70, 100 kA)				
	250	320	400	500	630	250	320	400	500	630	630	800	1000	1250	630	800	1000	1250	1600	630	800	1000	1250	1600
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T

Selectivity tables MCCBs/MCBs (continued)

Downstream MCB	In (A)	Upstream MCCB																								
		DPX³ 160 (16, 25, 36, 50 kA) with or without e.l.c.bs								DPX³ 250 (25, 36, 50, 70 kA) with or without e.l.c.bs				DPX³ 250 electronic release(1) (25, 36, 50, 70 kA) with or without e.l.c.bs				DPX³ 250 electronic release(2) (25, 36, 50, 70 kA) with or without e.l.c.bs				DPX³ 630 (36, 50, 70, 100 kA)				
		16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250	40	100	160	250	250	320	400	500	630
DX³ 16 kA direct current	≤ 6	6	12	12	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	8	6	12	12	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	10	5	7	7	7	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	16	-	6	6	6	6	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	20	-	5	5	5	5	6	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	25	-	-	3.5	3.5	4.5	4.5	8.5	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	32	-	-	-	3	4	4	7	10	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	40	-	-	-	3	3	3	6	8	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	50	-	-	-	-	3	3	5.5	7	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	63	-	-	-	-	3	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
DX³ 25 kA	≤ 6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	16	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	20	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	-	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	-	-	-	T	T	T	T	T	T	T	T	T	-	T	T	T	-	T	T	T	T	T	T	T	T
	40	-	-	-	T	T	T	T	T	T	T	T	T	-	T	T	T	-	T	T	T	T	T	T	T	T
	50	-	-	-	4	4	5	10	10	20	T	T	T	-	20	T	T	-	20	T	T	T	T	T	T	T
	63	-	-	-	-	3	5	10	10	15	T	T	T	-	15	T	T	-	15	T	T	T	T	T	T	T
	80	-	-	-	-	-	-	5	6	4	T	T	T	-	4	T	T	-	4	T	T	T	T	T	T	T
	100	-	-	-	-	-	-	-	5	-	T	T	T	-	-	T	T	-	-	T	T	T	T	T	T	T
	125	-	-	-	-	-	-	-	3	-	T	T	T	-	-	T	T	-	-	T	T	T	T	T	T	T
DX³ 50 kA	10	T	T	T	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	16	-	T	T	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	20	-	-	T	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	25	-	-	36	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	32	-	-	-	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	40	-	-	-	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	50	-	-	-	-	4	5	10	10	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T
	63	-	-	-	-	-	5	10	10	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	T	T

T = total selectivity, up to downstream circuit breaker breaking capacity, according to IEC 60947-2
1: Electronic release, selector switch on "HIGH" - 2: Electronic release, selector switch on "LOW" - 3: 36 kA for DPX³ 630 & 1600 36 kA upstream / T for DPX³ 630 & 1600 50, 70, 100 kA upstream

	DPX³ 630 electronic release(1) S2, Sg (36, 50, 70, 100 kA)					DPX³ 630 electronic release(2) S2, Sg (36, 50, 70, 100 kA)					DPX³ 1600 (36, 50, 70, 100 kA)				DPX³ 1600 electronic release(1) S1, S2, Sg (36, 50, 70, 100 kA)					DPX³ 1600 electronic release(2) S1, S2, Sg (36, 50, 70, 100 kA)				
	250	320	400	500	630	250	320	400	500	630	630	800	1000	1250	630	800	1000	1250	1600	630	800	1000	1250	1600
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	-	T	-	T	-	-	T	-	T	-	T	T	T	T	T	-	T	-	-	T	-	T	-	-
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)
	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)
	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)
	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)
	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)
	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)
	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)
	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)	36/T(3)

Automatic transfer switch DPX^3

Maintaining continuity of supply becomes crucial especially at places where even a small delay in supply could result huge losses. The DPX^3 range of MCCBs can be efficiently used as an Automatic Transfer Switch at places that require instant power switching. When connected with the microprocessor control box (line changeover unit) it gives you the flexibility to manage that automatic changeover between two supply lines effectively with remote controls.

NON-AUTOMATIC

Manual -
When an operator manually performs the changeover

AUTOMATIC

When the changeover is made automatically using motorised MCCB & Microprocessor Control Box.
When an operator organises the changeover from a remote location using motorised MCCBs and push button.

DPX³

automatic transfer switch

6253 93

Pack	Cat.Nos	DPX³ ready-to-install ATS kit without MCCBs
1	6253 80AA	Ready to use assembly for DPX³ 160
1	6253 80AB	Ready to use assembly for DPX³ 160 & DPX³ 250
1	6253 80BB	Ready to use assembly for DPX³ 250
1	6253 87	Ready to use assembly for DPX³ 630
1	6253 93	Kit assembly for ATS for DPX³ 160
1	6253 94	Kit assembly for ATS for DPX³ 250
1	6253 95	Kit assembly for ATS for DPX³ 630

DPX³

automatic transfer switch

Technical data

Handling continuity problems efficiently

Maintaining continuity of supply becomes crucial especially at places where even a small delay in supply could result in huge losses. The DPX range of MCCBs can be efficiently used as an Automatic Transfer Switch at places that require instant power switching. When connected with the microprocessor control box (line changeover unit) it gives you the flexibility to manage the automatic changeover between two supply lines effectively with remote controls.

Line changeover systems

Manual line changeover

The standard installation may be carried out by using manually operated DPX circuit breakers in fixed version, combined with mechanical interlocks. The mechanical interlock between DPX circuit breakers consists of a support plate on which two circuit breakers are arranged side-by-side. For particular versions (plug-in or draw-out version between two or more circuit breakers), special interlocks with factory pre-setting are available against order.

Motorised controlled line changeover

The electrically controlled line changeover may be carried out by using interlocked DPX circuit breakers equipped with remote controls.

Automatic line changeover

Automatic line changeover is the most advanced and flexible solution. This system is carried out by combining the components used for the electrically controlled line changeover with the microprocessor control box. This device allows to manage the automatic changeover between two supply sources with simple programming while safety requirements are never compromised.

Microprocessor control box

General characteristics

Microprocessor Control Box allows to manage the automatic changeover between two supply lines with maximum flexibility.
The microprocessor device with microprocessor is very compact
(144 x 144 mm).

Yet, it is able to perform a large number of functions such as :
- Quick acquisition of voltage levels
- Effective value of line voltage check
- Selection of operating mode (auto/man/test/off)
- Selection of voltage thresholds
- Selection of changeover time
- Display of selected parameters (voltage and time)
- Alarm display
- Starting signal to DG, can be given, in case of primary source failure
- Manual changeover line 1/ line 2
- Lockout of simultaneous switching over between lines
- Diagnostic test

Technical characteristics

- Setting of voltage thresholds on main and secondary line to check between 0.7 and 1Ue (280 - 400 V AC)
- Two models, depending on the supply voltages -230 V AC, 24 V DC
- Changeover time from main line to secondary line 0.5 to 30 s
- Main line resetting time 4 s
- 3-digit data display
- LED - signalling the operating state
- Outgoing relay changeover contacts rating (line circuit breakers control) 16 A 230 V in AC
- Alarm contact rating - 5 A 230 V in AC
- External connections with flexible cable max. 2.5 mm²
- Operating temperature : 0 to 60 ⁰ C
- Self-extinguishing polycarbonate casing with sealable transparent shield
- Front degree of protection IP 41 without shield, IP 54 with shield
- Flush-mounting version (144 x 144 mm)

Standard manual changeover switches

General characteristics

The manual changeover switches consist of separate parts that have to be assembled by the user or that may be factory assembled.

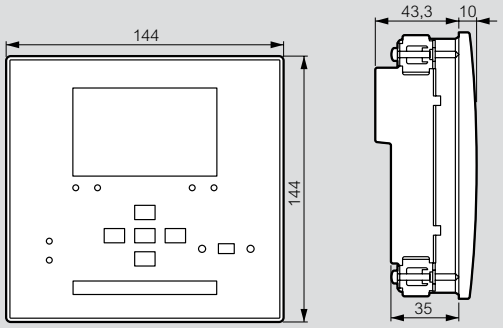
The changeover set for DPX³ circuit breakers consists of support plates equipped with a rocking mechanical interlock on which the circuit breakers in their different versions are fixed.

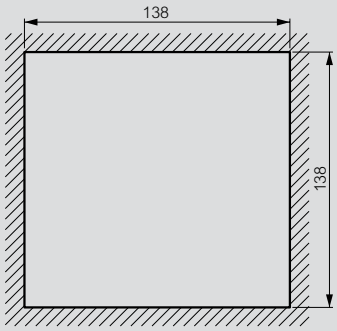
Standard mechanical interlocks

All fixed version DPX³ circuit breakers with front or rear terminals, except DPX³ 125 circuit breakers, may be equipped with standard mechanical interlock. They may be equipped with remote controls or with rotary handles.

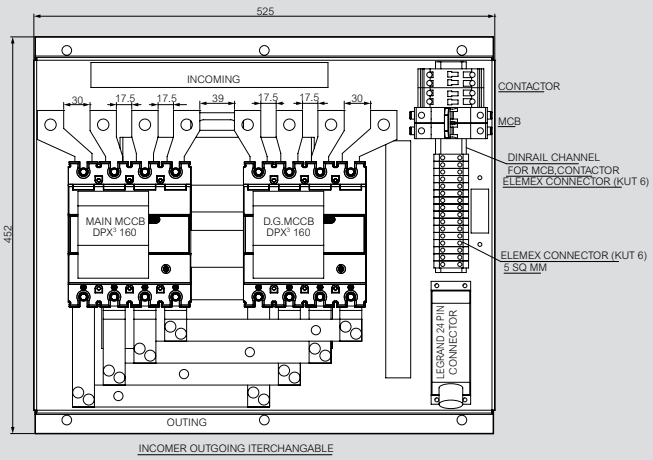
Dimensions

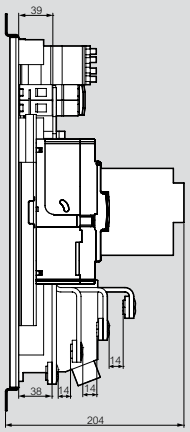
Microprocessor control box





Ready to install ATS DPX³ 160 & DPX³ 250 frame sizes





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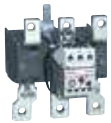
A COMPLETE RANGE OF DEVICES FOR THE PROTECTION AND CONTROL OF MOTORS

CTX³ CONTACTORS AND RTX³ THERMAL RELAYS UP TO 800 A

- Compact size
- High mechanical and electrical endurance for maximum reliability
- 3-pole and 4-pole contactors
- Screw terminals
- Complete range of auxiliaries and accessories

3-POLE CTX³ CONTACTORS									4-POLE CTX³ CONTACTORS
CTX³ mini 6/9/12/16 A	CTX³ 22 9/12/18/22 A	CTX³ 40 32/40 A	CTX³ 65 50/65 A	CTX³ 100 75/85/100 A	CTX³ 150 130/150 A	CTX³ 225 185/225 A	CTX³ 400 265/330/400 A	CTX³ 800 500/630/800 A	CTX³ 20 to 900 A

RTX³ thermal relays								
								–
RTX³ mini	RTX³ 40	RTX³ 65	RTX³ 100	RTX³ 150	RTX³ 225	RTX³ 400	RTX³ 800	

MPX³ MOTOR PROTECTION CIRCUIT BREAKERS
UP TO 100 A

- High breaking capacity and type 2 coordination for an optimum service level
- Trip class 10
- Sensitive to phase loss
- Compact size
- Can be fixed on 35 mm DIN rail or using screws
- Easy combination with CTX³ 3-pole contactors
- Complete range of control and signalling auxiliaries and accessories

STANDARD BREAKING CAPACITY	HIGH BREAKING CAPACITY			MAGNETIC ONLY
MPX³ 32S 0.16 A - 100 kA to 32 A - 15 kA	MPX³ 32H 0.16 A - 100 kA to 32 A - 50 kA	MPX³ 63H 10 A - 100 kA to 63 A - 50 kA	MPX³ 100H 17 A - 100 kA to 100 A - 75 kA	MPX³ 32MA 0.16 A - 100 kA to 32 A - 50 kA

CTX³: CONTROL OF CIRCUITS UP TO 800[1] A

With a comprehensive selection of ratings, control voltages, auxiliaries and accessories, and total complementarity with CTX³ power contactors, RTX³ thermal relays and MPX³ circuit breakers provide an ideal solution for motor switching and controlling circuits for the most demanding applications.

[1] 900 A for 4P contactors

CTX³ 225/400/800: MOUNTING ON PLATE UP TO 800 A

1. Connection plates for bars or lugs
2. Pre-mounted auxiliary contact blocks (2 per contactor). Additional auxiliary contact blocks can be mounted on the right or left of the contactors.

The 4-pole version of CTX³ contactors is available from 20 to 900 A (AC-1).

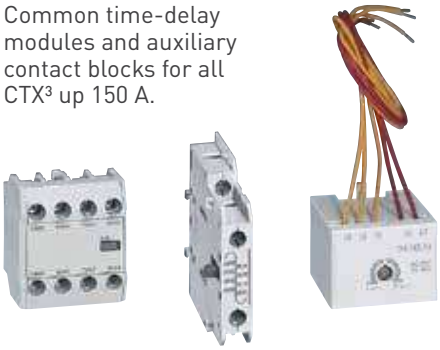
CTX³ 22/40/65/100/150: MOUNTING ON DIN RAIL OR ON PLATE UP TO 150 A

3 IP 2X terminals: screw terminals up to 40 A, screw or cage terminals from 50 to 100 A

4 Integrated auxiliary contacts

5 A1 and A2 supply terminal block (top and bottom)

Common time-delay modules and auxiliary contact blocks for all CTX³ up 150 A.



CTX³ contactors can be fitted with a safety cover.

CTX³ MINI: AN ULTRA-COMPACT SOLUTION UP TO 16 A

With their compact size, CTX³ MINI are easy to integrate in control panels or distribution boards for switching motors, lighting and heating circuits up to 16 A.

CTX³ MINI: MOUNTING ON DIN RAIL OR ON PLATE

1. IP 2X screw terminals
2. Integrated auxiliary contact (3P only)
3. A1 and A2 supply terminal block

The flexible wire kits allow to associate freely two CTX³ mini 3-pole contactors and make very compact assemblies for motor reversing. For motors up to 7.5 kW 415 V.

AUXILIARIES AND ACCESSORIES
FOR EVEN MORE APPLICATIONS

CTX³ mini contactors can take front and side-mounting additional auxiliary contact blocks and a mechanical interlock module.

CTX³ control relays take the same auxiliaries as the CTX³ mini.

Plate and connector for joining a CTX³ mini and an MPX³ 32 motor circuit breaker together directly to create a compact motor starter.

RTX³: THERMAL PROTECTION OF MOTORS

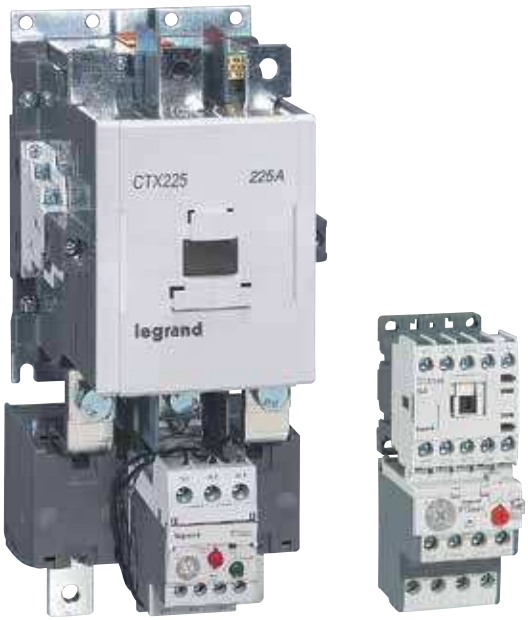
RTX³ thermal relays provide protection against overloads, long starting times and prolonged stalling of the motor. They are very easy to install, connecting directly beneath CTX³ contactors.

1. Trip indicator
2. Off/test button
3. Adjustment of the trip threshold of the thermal protection
4. Reset button and mode selector switch: automatic (A)/manual (H)
5. Sealable protective cover
6. Integrated auxiliary contacts (1 NO + 1 NC)
7. IP20 terminals

COMPACT **MOTOR STARTERS**

Mounting directly beneath contactors or separately (up 150 A) with the dedicated accessory.

A COMPLETE **RANGE**



RTX³ thermal relays can be used to create 0.1 A to 800 A motor starters when combined with contactors, from the CTX³ mini to the CTX³ 800.

ACCESSORIES FOR ALL APPLICATIONS

With the wide range of accessories, CTX³ contactors can be used in a wide variety of applications:
- Switching capacitor banks
- Supply inverter
- Reversing contactor
- Time-delay motor starter
- Control unit on machine, etc.

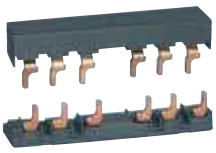
FRONT-MOUNTING BLOCK FOR SWITCHING CAPACITORS

Auxiliary blocks for switching capacitors are installed directly on CTX³ 3-pole, 9 to 100 A contactors. With their discharge resistors, they reduce current peaks during switching of capacitor banks.

Time-delay modules, tansient voltage suppression module, motor starter units, etc., a complete range of accessories for all requirements.

MECHANICAL AND ELECTRICAL INTERLOCKING
FOR 3 AND 4-POLE CONTACTORS

The mechanical interlock devices, with or without electrical interlocking, can be used to create 9 to 800 A inverters for 3P contactors, and 20 to 900 A inverters for 4P contactors.



The connection kits make it very easy to create 3P reversing contactors up to 100 A.

MPX³: MAXIMUM EFFICIENCY IN A COMPACT UNIT

With just 4 sizes of unit, the MPX³ range of circuit breakers offers uncompromising performance levels and functions for the protection of motors up to 45 kW.

1. IP 2X terminals

MPX³ 32 screw

MPX³ 63/100 cage

2. Front and side mounting of auxiliary contacts
3. Mount on ⊔ rail
4. Wide current adjustment range
5. Settings protected by a sealable transparent cover (optional)

6. Test function
7. Handle can be padlocked in OFF position

8. Label-holder

Certification

- EC declaration of conformity
- UL listed

IEC 60947, UL 508
UL 508 Type E

A COMPLETE RANGE
UP TO 100 A IN 4 SIZES

> 45 mm <
MPX³ 32S

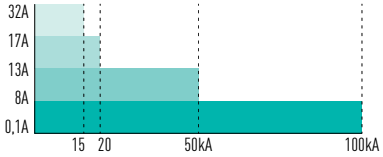
> 45 mm <
MPX³ 32H/MA

> 55 mm <
MPX³ 63H

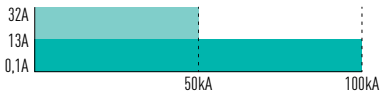
> 70 mm <
MPX³ 100H

BREAKING CAPACITIES ICU
AT 415 V~

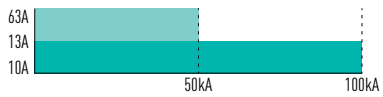
MPX³ 32S



MPX³ 32H/MA



MPX³ 63H



MPX³ 100H

PERFECT COMPLEMENTARITY
WITH CTX³ CONTACTORS

Using the dedicated accessories, MPX³ motor circuit breakers and CTX³ contactors can be joined together directly to create compact motor starters.

AUXILIARIES AND ACCESSORIES PROVIDING FLEXIBILITY

Whatever the specifications of your installation, you will always find a solution from the wide range of dedicated auxiliaries and accessories for MPX³ circuit breakers.

ELECTRICAL AUXILIARIES
COMMON TO ALL SIZES OF MPX³

1. Front-mounting auxiliary contacts

2. Side-mounting auxiliary contacts and fault signal contacts

3. Side-mounting shunt trips and undervoltage releases

Possible combinations of auxiliaries

AUXILIARIES			MPX³ 32S		MPX³ 32H/MA		MPX³ 63H			MPX³ 100H	
AUXILIARY CONTACTS	FRONT-MOUNTING	MAX. NO.	0	1 or	0	1 or	0	1 or	1	0	1 or
	SIDE-MOUNTING	MAX. NO.	2	1	2	1	2	1	0	2	1
FAULT SIGNAL CONTACT		MAX. NO.	0	1	0	1	0	1[1]	1[2]	0	1[2]
SHUNT TRIP OR UNDERVOLTAGE RELEASE		MAX. NO.	1	1	1	1	1	1	1	1	1

[1]: Cat.No 4174 07 - [2]: Cat.No 4174 08

A COMPLETE RANGE OF DEDICATED ACCESSORIES
FOR EASIER INSTALLATION

Supply busbars and terminals for connecting the circuit breakers in parallel.

Remote rotary control for mounting on door and IP65 unit with black or red rotary handle.

Plates and connectors for creating motor starters.

Mini contactors CTX³
6 to 16 A industrial contactors

4170 00

4170 01

Dimensions **p. 182**

Conform to IEC 60947-1, 60947-4-1 and 60947-5-1

3-pole mini contactors

With integrated auxiliary contact
Power terminals: screw terminals

Pack	Cat.Nos			
	Integrated auxiliary contact			
	1 NO	1 NC	Max. operating current AC 3	Control Voltage
6 A				
1	4170 00	4170 10	6 A	24 V∿
1	4170 01	4170 11	6 A	24 V⎓
1	4170 04	4170 14	6 A	110 V∿
1	4170 06	4170 16	6 A	230 V∿
1	4170 09	4170 19	6 A	415 V∿
9 A				
1	4170 20	4170 30	9 A	24 V∿
1	4170 21	4170 31	9 A	24 V⎓
1	4170 24	4170 34	9 A	110 V∿
1	4170 26	4170 36	9 A	230 V∿
1	4170 29	4170 39	9 A	415 V∿
12 A				
1	4170 40	4170 50	12 A	24 V∿
1	4170 41	4170 51	12 A	24 V⎓
1	4170 44	4170 54	12 A	110 V∿
1	4170 46	4170 56	12 A	230 V∿
1	4170 49	4170 59	12 A	415 V∿
16 A				
1	4170 60	4170 70	16 A	24 V∿
1	4170 61	4170 71	16 A	24 V⎓
1	4170 64	4170 74	16 A	110 V∿
1	4170 66	4170 76	16 A	230 V∿
1	4170 69	4170 79	16 A	415 V∿

4-pole mini contactors

Without integrated auxiliary contact
Power terminals: screw terminals

Pack	Cat.Nos			
		Max. operating current AC 1	Max. operating current AC 3	Control Voltage
20 A				
1	4171 40	20 A	16 A	24 V∿
1	4171 41	20 A	16 A	24 V⎓
1	4171 44	20 A	16 A	110 V∿
1	4171 46	20 A	16 A	230 V∿
1	4171 49	20 A	16 A	415 V∿

Thermal relays and accessories
for mini contactors

4170 88

4171 55

Dimensions **p. 182**
Tripping curves **p. 179**

Thermal overload relays for 3-pole mini contactors

Class 10A
Integrated auxiliary contacts 1 NO + 1 NC

Pack	Cat.Nos	
1	4170 80	0.16 A
1	4170 81	0.25 A
1	4170 82	0.40 A
1	4170 83	0.63 A
1	4170 84	1 A
1	4170 85	1.6 A
1	4170 86	2.5 A
1	4170 87	4 A
1	4170 88	6 A
1	4170 89	8 A
1	4170 90	9 A
1	4170 91	10 A
1	4170 92	13 A
1	4170 93	16 A

Add on auxiliary blocks for mini contactors

Ith : 10 A

Pack	Cat.Nos	
Front mounting		
15	4171 50	1 NO + 1 NC
15	4171 51	2 NO
15	4171 52	2 NC
15	4171 53	4 NO
15	4171 54	3 NO + 1 NC
15	4171 55	2 NO + 2 NC
15	4171 56	1 NO + 3 NC
15	4171 57	4 NC
Side mounting		
20	4171 58	1 NO
20	4171 59	1 NC

Interlock unit

Pack	Cat.Nos	
5	4171 60	Mechanical interlock for mini contactors

Spare coils

Pack	Cat.Nos	
10	4171 70	24 V∿
10	4171 71	24 V⎓
10	4171 74	110 V∿
10	4171 76	230 V∿
10	4171 79	415 V∿

3-pole contactors CTX³

9 A to 100 A industrial contactors

4160 96

4161 26

4161 46

4161 56

4161 86

4161 96

Technical characteristics and coordination with circuit breakers **p. 160-161**
Dimensions **p. 183-184**

Conform to IEC 60947-1, IEC 60947-4-1
Can be equipped with RTX³ thermal relays add-on auxiliary contact blocks, time delay blocks, capacitor switching units and CTX³ interlocking

CTX³ 22

With integrated auxiliary contacts
Power terminals: screw terminals

Pack	Cat.Nos Screw terminals	Max. operating current AC 3	Control Voltage	Integrated auxiliary contacts
		9 A		
1	4160 80	9 A	24 V~	1 NO + 1 NC
1	4160 81	9 A	24 V⎓	1 NO + 1 NC
1	4160 82	9 A	48 V~	1 NO + 1 NC
1	4160 83	9 A	48 V⎓	1 NO + 1 NC
1	4160 84	9 A	110 V~	1 NO + 1 NC
1	4160 86	9 A	230 V~	1 NO + 1 NC
1	4160 88	9 A	380 V~	1 NO + 1 NC
1	4160 89	9 A	415 V~	1 NO + 1 NC
		12 A		
1	4160 90	12 A	24 V~	1 NO + 1 NC
1	4160 91	12 A	24 V⎓	1 NO + 1 NC
1	4160 92	12 A	48 V~	1 NO + 1 NC
1	4160 93	12 A	48 V⎓	1 NO + 1 NC
1	4160 94	12 A	110 V~	1 NO + 1 NC
1	4160 96	12 A	230 V~	1 NO + 1 NC
1	4160 98	12 A	380 V~	1 NO + 1 NC
1	4160 99	12 A	415 V~	1 NO + 1 NC
		18 A		
1	4161 00	18 A	24 V~	1 NO + 1 NC
1	4161 01	18 A	24 V⎓	1 NO + 1 NC
1	4161 02	18 A	48 V~	1 NO + 1 NC
1	4161 03	18 A	48 V⎓	1 NO + 1 NC
1	4161 04	18 A	110 V~	1 NO + 1 NC
1	4161 06	18 A	230 V~	1 NO + 1 NC
1	4161 08	18 A	380 V~	1 NO + 1 NC
1	4161 09	18 A	415 V~	1 NO + 1 NC
		22 A		
1	4161 10	22 A	24 V~	1 NO + 1 NC
1	4161 11	22 A	24 V⎓	1 NO + 1 NC
1	4161 12	22 A	48 V~	1 NO + 1 NC
1	4161 13	22 A	48 V⎓	1 NO + 1 NC
1	4161 14	22 A	110 V~	1 NO + 1 NC
1	4161 16	22 A	230 V~	1 NO + 1 NC
1	4161 18	22 A	380 V~	1 NO + 1 NC
1	4161 19	22 A	415 V~	1 NO + 1 NC

CTX³ 40

With integrated auxiliary contacts
Power terminals: screw terminals

Pack	Cat.Nos Screw terminals	Max. operating current AC 3	Control Voltage	Integrated auxiliary contacts
		32 A		
1	4161 20	32 A	24 V~	2 NO + 2 NC
1	4161 21	32 A	24 V⎓	2 NO + 2 NC
1	4161 22	32 A	48 V~	2 NO + 2 NC
1	4161 23	32 A	48 V⎓	2 NO + 2 NC
1	4161 24	32 A	110 V~	2 NO + 2 NC
1	4161 26	32 A	230 V~	2 NO + 2 NC
1	4161 28	32 A	380 V~	2 NO + 2 NC
1	4161 29	32 A	415 V~	2 NO + 2 NC
		40 A		
1	4161 30	40 A	24 V~	2 NO + 2 NC
1	4161 31	40 A	24 V⎓	2 NO + 2 NC
1	4161 32	40 A	48 V~	2 NO + 2 NC
1	4161 33	40 A	48 V⎓	2 NO + 2 NC
1	4161 34	40 A	110 V~	2 NO + 2 NC
1	4161 36	40 A	230 V~	2 NO + 2 NC
1	4161 38	40 A	380 V~	2 NO + 2 NC
1	4161 39	40 A	415 V~	2 NO + 2 NC

CTX³ 65

With integrated auxiliary contacts

Pack	Cat.Nos Screw terminals	Cage terminals	Max. operating current AC 3	Control Voltage	Integrated auxiliary contacts
			50 A		
1	4161 40	4161 50	50 A	24 V~	2 NO + 2 NC
1	4161 41	4161 51	50 A	24 V⎓	2 NO + 2 NC
1	4161 42	4161 52	50 A	48 V~	2 NO + 2 NC
1	4161 43	4161 53	50 A	48 V⎓	2 NO + 2 NC
1	4161 44	4161 54	50 A	110 V~	2 NO + 2 NC
1	4161 46	4161 56	50 A	230 V~	2 NO + 2 NC
1	4161 48	4161 58	50 A	380 V~	2 NO + 2 NC
1	4161 49	4161 59	50 A	415 V~	2 NO + 2 NC
			65 A		
1	4161 60	4161 70	65 A	24 V~	2 NO + 2 NC
1	4161 61	4161 71	65 A	24 V⎓	2 NO + 2 NC
1	4161 62	4161 72	65 A	48 V~	2 NO + 2 NC
1	4161 63	4161 73	65 A	48 V⎓	2 NO + 2 NC
1	4161 64	4161 74	65 A	110 V~	2 NO + 2 NC
1	4161 66	4161 76	65 A	230 V~	2 NO + 2 NC
1	4161 68	4161 78	65 A	380 V~	2 NO + 2 NC
1	4161 69	4161 79	65 A	415 V~	2 NO + 2 NC

3-pole contactors CTX³

130 A to 800 A industrial contactors

4162 46

4162 56

4162 96

4163 56

Technical characteristics and coordination with circuit breakers **p. 161-162**
Dimensions **p. 183-184**

Conform to IEC 60 947-1, IEC 60 947-4-1
Can be equipped with RTX³ thermal relays add-on auxiliary contact blocks, time delay blocks (except CTX³ 225/400/800) and CTX³ interlocking

CTX³ 100

With integrated auxiliary contacts

Pack	Cat.Nos		Max. operating current AC 3	Control Voltage	Integrated auxiliary contacts
	Screw terminals	Cage terminals			
75 A					
1	4161 80	4161 90	75 A	24 V~	2 NO + 2 NC
1	4161 81	4161 91	75 A	24 V⎓	2 NO + 2 NC
1	4161 82	4161 92	75 A	48 V~	2 NO + 2 NC
1	4161 83	4161 93	75 A	48 V⎓	2 NO + 2 NC
1	4161 84	4161 94	75 A	110 V~	2 NO + 2 NC
1	4161 86	4161 96	75 A	230 V~	2 NO + 2 NC
1	4161 88	4161 98	75 A	380 V~	2 NO + 2 NC
1	4161 89	4161 99	75 A	415 V~	2 NO + 2 NC
85 A					
1	4162 00	4162 10	85 A	24 V~	2 NO + 2 NC
1	4162 01	4162 11	85 A	24 V⎓	2 NO + 2 NC
1	4162 02	4162 12	85 A	48 V~	2 NO + 2 NC
1	4162 03	4162 13	85 A	48 V⎓	2 NO + 2 NC
1	4162 04	4162 14	85 A	110 V~	2 NO + 2 NC
1	4162 06	4162 16	85 A	230 V~	2 NO + 2 NC
1	4162 08	4162 18	85 A	380 V~	2 NO + 2 NC
1	4162 09	4162 19	85 A	415 V~	2 NO + 2 NC
100 A					
1	4162 20	4162 30	100 A	24 V~	2 NO + 2 NC
1	4162 21	4162 31	100 A	24 V⎓	2 NO + 2 NC
1	4162 22	4162 32	100 A	48 V~	2 NO + 2 NC
1	4162 23	4162 33	100 A	48 V⎓	2 NO + 2 NC
1	4162 24	4162 34	100 A	110 V~	2 NO + 2 NC
1	4162 26	4162 36	100 A	230 V~	2 NO + 2 NC
1	4162 28	4162 38	100 A	380 V~	2 NO + 2 NC
1	4162 29	4162 39	100 A	415 V~	2 NO + 2 NC

CTX³ 150

With integrated auxiliary contacts

Pack	Cat.Nos		Max. operating current AC 3	Control Voltage	Integrated auxiliary contacts
	Screw terminals	Cage terminals			
130 A					
1	4162 40	4162 50	130 A	24 V~	2 NO + 2 NC
1	4162 41	4162 51	130 A	24 V⎓	2 NO + 2 NC
1	4162 42	4162 52	130 A	48 V~	2 NO + 2 NC
1	4162 43	4162 53	130 A	48 V⎓	2 NO + 2 NC
1	4162 46	4162 56	130 A	100-240 V~/⎓	2 NO + 2 NC
1	4162 49	4162 59	130 A	400-440 V~	2 NO + 2 NC
150 A					
1	4162 60	4162 70	150 A	24 V~	2 NO + 2 NC
1	4162 61	4162 71	150 A	24 V⎓	2 NO + 2 NC
1	4162 62	4162 72	150 A	48 V~	2 NO + 2 NC
1	4162 63	4162 73	150 A	48 V⎓	2 NO + 2 NC
1	4162 66	4162 76	150 A	100-240 V~/⎓	2 NO + 2 NC
1	4162 69	4162 79	150 A	400-440 V~	2 NO + 2 NC

CTX³ 225

With integrated auxiliary contacts

Pack	Cat.Nos	Max. operating current AC 3	Control Voltage	Integrated auxiliary contacts
	Screw terminals			
185 A				
1	4162 80	185 A	24 V~/⎓	2 NO + 2 NC
1	4162 82	185 A	48 V~/⎓	2 NO + 2 NC
1	4162 86	185 A	100-240 V~/⎓	2 NO + 2 NC
1	4162 89	185 A	380-450 V~	2 NO + 2 NC
225 A				
1	4162 90	225 A	24 V~/⎓	2 NO + 2 NC
1	4162 92	225 A	48 V~/⎓	2 NO + 2 NC
1	4162 96	225 A	100-240 V~/⎓	2 NO + 2 NC
1	4162 99	225 A	380-450 V~	2 NO + 2 NC

CTX³ 400

With integrated auxiliary contacts

Pack	Cat.Nos	Max. operating current AC 3	Control Voltage	Integrated auxiliary contacts
	Screw terminals			
265 A				
1	4163 06	265 A	100-240 V~/⎓	2 NO + 2 NC
1	4163 09	265 A	380-450 V~	2 NO + 2 NC
330 A				
1	4163 16	330 A	100-240 V~/⎓	2 NO + 2 NC
1	4163 19	330 A	380-450 V~	2 NO + 2 NC
400 A				
1	4163 26	400 A	100-240 V~/⎓	2 NO + 2 NC
1	4163 29	400 A	380-450 V~	2 NO + 2 NC

CTX³ 800

With integrated auxiliary contacts

Pack	Cat.Nos	Max. operating current AC 3	Control Voltage	Integrated auxiliary contacts
	Screw terminals			
500 A				
1	4163 36	500 A	200-240 V~/⎓	2 NO + 2 NC
1	4163 39	500 A	380-450 V~	2 NO + 2 NC
630 A				
1	4163 46	630 A	200-240 V~/⎓	2 NO + 2 NC
1	4163 49	630 A	380-450 V~	2 NO + 2 NC
800 A				
1	4163 56	800 A	200-240 V~/⎓	2 NO + 2 NC
1	4163 59	800 A	380-450 V~	2 NO + 2 NC

Thermal relays RTX³

for CTX³ 3-pole industrial contactors

4166 70

4166 90

4167 31

4167 65

Dimensions **p. 188-189**
Tripping curves **p. 176-179**

Thermal protection against overloads, long starting times and lasting stalling of the motor
Differential type ensures a better protection in case of one phase failure thanks to faster tripping
Conform to IEC 60 947-1, IEC 60 947-4-1

Thermal overload relays

Class 10A
Integrated auxiliary contacts 1 NO + 1 NC

RTX³ 40

For CTX³ 22 and 40
With screw terminals

Pack	Cat.Nos Type standard	Cat.Nos Type diff.	Adjustment range I min. (A)	Adjustment range I max. (A)
1	4166 40	4166 60	0.1	0.16
1	4166 41	4166 61	0.16	0.25
1	4166 42	4166 62	0.25	0.4
1	4166 43	4166 63	0.4	0.63
1	4166 44	4166 64	0.63	1
1	4166 45	4166 65	1	1.6
1	4166 46	4166 66	1.6	2.5
1	4166 47	4166 67	2.5	4
1	4166 48	4166 68	4	6
1	4166 49	4166 69	5	8
1	4166 50	4166 70	6	9
1	4166 51	4166 71	7	10
1	4166 52	4166 72	9	13
1	4166 53	4166 73	12	18
1	4166 54	4166 74	16	22
1	4166 55	4166 75	18	25
1	4166 56	4166 76	22	32
1	4166 57	4166 77	28	40

RTX³ 65

For CTX³ 65
Standard type with screw terminals
Differential type with cage terminals

Pack	Cat.Nos Type standard	Cat.Nos Type diff.	Adjustment range I min. (A)	Adjustment range I max. (A)
1	4166 83	4167 03	9	13
1	4166 84	4167 04	12	18
1	4166 85	4167 05	16	22
1	4166 86	4167 06	18	25
1	4166 87	4167 07	24	36
1	4166 88	4167 08	28	40
1	4166 89	4167 09	34	50
1	4166 90	4167 10	45	65

Thermal overload relays (continued)

Class 10A
Integrated auxiliary contacts 1 NO + 1 NC

RTX³ 100

For CTX³ 100
Standard type with screw terminals
Differential type with cage terminals

Pack	Cat.Nos Type standard	Cat.Nos Type diff.	Adjustment range I min. (A)	Adjustment range I max. (A)
1	4167 23	4167 43	18	25
1	4167 24	4167 44	24	36
1	4167 25	4167 45	28	40
1	4167 26	4167 46	34	50
1	4167 27	4167 47	45	65
1	4167 28	4167 48	54	75
1	4167 29	4167 49	63	85
1	4167 30	4167 50	70	95
1	4167 31	4167 51	80	100

RTX³ 150

For CTX³ 150
Standard type with screw terminals
Differential type with cage terminals

Pack	Cat.Nos Type standard	Cat.Nos Type diff.	Adjustment range I min. (A)	Adjustment range I max. (A)
1	4167 60	4167 70	45	65
1	4167 61	4167 71	54	75
1	4167 62	4167 72	63	85
1	4167 63	4167 73	80	105
1	4167 64	4167 74	95	130
1	4167 65	4167 75	110	150

Separate mounting units

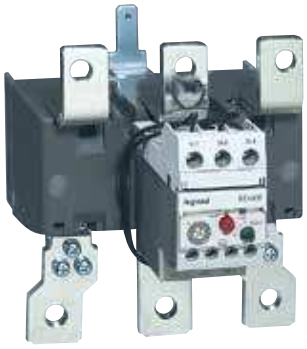
To mount the relays separately from contactors, on DIN rail or panel by fixing screws

Pack	Cat.Nos	
1	4165 91	For RTX³ 40 up to 32 A
1	4165 92	For RTX³ 40 40 A
1	4165 93	For RTX³ 65 with screw terminals
1	4165 94	For RTX³ 65 with cage terminals
1	4165 95	For RTX³ 100 with screw terminals
1	4165 96	For RTX³ 100 with cage terminals
1	4165 97	For RTX³ 150 with screw terminals
1	4165 98	For RTX³ 150 with cage terminals

Thermal relays RTX³

for CTX³ 3-pole industrial contactors

4167 84



4167 91

Dimensions **p. 188-189**
Tripping curves **p. 176-179**

Conform to IEC 60 947-1, IEC 60 947-4-1

Pack	Cat.Nos	Thermal overload relays		
		Class 10 A Integrated auxiliary contacts 1 NO + 1 NC		
		RTX³ 225		
		For CTX³ 225 With screw terminals		
			Adjustment range	
Type diff			I min. (A)	I max. (A)
1	4167 80		65	100
1	4167 81		85	125
1	4167 82		100	160
1	4167 83		120	185
1	4167 84		160	240
		RTX³ 400		
		For CTX³ 400 With screw terminals		
1	4167 86		85	125
1	4167 87		100	160
1	4167 88		120	185
1	4167 89		160	240
1	4167 90		200	330
1	4167 91		260	400
		RTX³ 800		
		For CTX³ 800 With screw terminals		
1	4167 92		200	300
1	4167 93		260	400
1	4167 94		400	630
1	4167 95		520	800

4-pole contactors CTX³

40 A to 900 A industrial contactors and spare coils

4164 36

4164 56

4164 86

Dimensions **p. 185-186**

Conform to IEC 60 947-1, IEC 60 947-4-1
Can be equipped with add-on auxiliary contact blocks, time delay blocks (except CTX³ 4P from 165 A to 900 A), and CTX³ interlocking

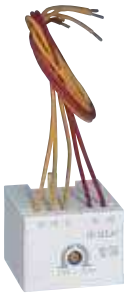
Pack	Cat.Nos	Contactors CTX³		
		Power terminals: screw terminals		
		Without integrated auxiliary contact		
		Max. operating current AC-1	Max. operating current AC-3	Control Voltage
1	4164 26	40 A	22 A	230 V∿
1	4164 36	60 A	40 A	230 V∿
1	4164 46	100 A	65 A	230 V∿
1	4164 56	135 A	85 A	230 V∿
		With integrated auxiliary contacts		
		Auxiliary contacts: 2 NO + 2 NC		
1	4164 66	165 A	130 A	100-240 V∿/⎓
1	4164 76	250 A	150 A	100-240 V∿/⎓
1	4164 86	330 A	225 A	100-240 V∿/⎓
1	4164 96	420 A	330 A	100-240 V∿/⎓
1	4165 06	500 A	400 A	100-240 V∿/⎓
1	4165 16	750 A	630 A	200-240 V∿/⎓
1	4165 26	900 A	800 A	200-240 V∿/⎓

		Spare coils for CTX³ 4P contactors
		Control voltage 230 V∿
3	4165 46	For CTX³ 40 A to 60 A (AC-1)
4	4165 56	For CTX³ 100 A to 135 A (AC-1)
1	4165 66	For CTX³ 165 A to 330 A (AC-1)
3	4165 76	For CTX³ 420 A to 500 A (AC-1)
3	4165 86	For CTX³ 750 A to 900 A (AC-1)

CTX³ accessories

4168 50

4168 55


4168 70

4168 79

4168 91

4168 97

4168 40

Technical characteristics
Dimensions **p. 182**

CTX³ add-on auxiliary contact blocks

Pack	Cat.Nos	
		Front mounting
		For CTX³ 3P form 9 A to 150 A (AC-3) and CTX³ 4P from 40 A to 135 A (AC-1)
		2 and 4 pole
		Ith: 16 A
20	4168 50	1 NO + 1 NC
20	4168 51	2 NO
20	4168 52	2 NC
10	4168 53	4 NO
10	4168 54	3 NO + 1 NC
10	4168 55	2 NO + 2 NC
10	4168 56	1 NO + 3 NC
10	4168 57	4 NC
		Side mounting
		2-pole
		Mounting on both sides
20	4168 58	For CTX³ 3P from 9 A to 150 A (AC-3) 1 NO + 1 NC - Ith: 16 A
50	4168 59	For CTX³ 3P from 185 A to 800 A (AC-3) and CTX³ 4P from 165 A to 900 A (AC-1) 1 NO + 1 NC - Ith: 16 A
60	4168 49	For CTX³ 4P from 40 A to 135 A (AC-1) 1 NO + 1 NC - Ith: 16 A

CTX³ time delay blocks

		For CTX³ 3P from 9 A to 150 A (AC-3)
		Time delay: 1 to 30 s
		Front mounting
		On delay
1	4168 70	24-48 V~/⎓
1	4168 71	110-230 V~
		Off delay
1	4168 72	24-48 V~/⎓
1	4168 73	110-230 V~

CTX³ capacitor switching units

		AC-6b
		Operating power from 9.7 kVAR to 62 kVAR (400/440 V)
1	4168 74	For contactors CTX³ 3P from 9 to 40 A
1	4168 75	For contactors CTX³ 3P 50 and 65 A with screw terminals
1	4168 76	For contactors CTX³ 3P 50 and 65 A with cage terminals
1	4168 77	For contactors CTX³ 3P 75 to 100 A with screw terminals

CTX³ interlocking

Pack	Cat.Nos	
		Component parts for assembling by customer
		Horizontal mounting
		Interlock units
50	4168 79	Mechanical interlocks for CTX³ 4P from 40 to 135 A (AC-1)
1	4168 80	Mechanical interlocks for CTX³ 3P from 9 to 150 A Provides 2 NC contacts for use in electrical interlocking
12	4168 87	Mechanical interlocks for CTX³ 3P from 185 to 400 A and CTX³ 4P from 165 to 500 A
1	4168 88	Mechanical interlocks for CTX³ 3P from 500 to 800 A
1	4168 89	Mechanical interlocks for CTX³ 4P from 750 to 900 A
		Wire kits
		Used for making reversing between two 3P contactors
4	4168 82	For CTX³ 22
6	4168 83	For CTX³ 40
2	4168 84	For CTX³ 65
1	4168 85	For CTX³ 100

Boxes for motor starter

		For CTX³ 22 equipped with RTX³ 40 (0.1 - 22 A)
1	4168 90	Without pushbuttons
1	4168 91	With pushbuttons

CTX³ transient voltage suppressor blocks

		Absorbs the surge arisen out of the coil of the contactor
10	4168 95	24-48 V V~/⎓
10	4168 96	100-125 V~/⎓
10	4168 97	200-240 V~/⎓
10	4168 98	380-400 V~

CTX³ terminals covers

10	4168 42	For CTX³ 3P from 185 to 225 A (AC-3)
25	4168 43	For CTX³ 3P from 265 to 400 A (AC-3)
5	4168 44	For CTX³ 3P from 500 to 900 A (AC-3)
10	4168 45	For CTX³ 4P from 165 to 330 A (AC-1)
10	4168 46	For CTX³ 4P from 420 to 500 A (AC-1)
5	4168 47	For CTX³ 4P from 750 to 900 A (AC-1)

CTX³ safety front cover

150	4168 40	For CTX³ 3P from 9 to 150 A (AC-3) and CTX³ 4P from 40 to 135 A (AC-1)
150	4168 41	For CTX³ 3P from 85 to 800 A (AC-3) and CTX 4P from 165 to 900 A (AC-1)

Distant reset flexible cables for thermal relays

1	4168 92	400 mm
1	4168 93	500 mm
1	4168 94	600 mm

CTX³ spare coils

4169 66

Pack	Cat.Nos	Spare coils for CTX³ 3P contactors
		For CTX³ 22
4	4169 00	24 V~
4	4169 02	48 V~
4	4169 04	110 V~
4	4169 06	230 V~
4	4169 08	380 V~
4	4169 09	415 V~
		For CTX³ 40
6	4169 20	24 V~
6	4169 21	24 V⎓
6	4169 22	48 V~
6	4169 23	48 V⎓
6	4169 24	110 V~
6	4169 26	230 V~
6	4169 28	380 V~
6	4169 29	415 V~
		For CTX³ 65
4	4169 30	24 V~
2	4169 31	24 V⎓
4	4169 32	48 V~
2	4169 33	48 V⎓
4	4169 34	110 V~
4	4169 36	230 V~
4	4169 38	380 V~
4	4169 39	415 V~
		For CTX³ 100
3	4169 40	24 V~
2	4169 41	24 V⎓
3	4169 42	48 V~
2	4169 43	48 V⎓
3	4169 44	110 V~
3	4169 46	230 V~
3	4169 48	380 V~
3	4169 49	415 V~
		For CTX³ 150
2	4169 50	24 V~
2	4169 51	24 V⎓
2	4169 52	48 V~
2	4169 53	48 V⎓
2	4169 56	100-240 V~/⎓
2	4169 59	400-440 V~
		For CTX³ 225
1	4169 60	24 V~/⎓
1	4169 62	48 V~/⎓
1	4169 66	100-240 V~/⎓
1	4169 69	400-440 V~
		For CTX³ 400
3	4169 76	100-240 V~/⎓
3	4169 79	380-450 V~
		For CTX³ 400
3	4169 86	200-240 V~/⎓
3	4169 89	380-450 V~

Control relays CTX³

4168 10

Dimensions **p. 54**

Pack	Cat.Nos	CTX³ control relays
		4-pole Conform to IEC 60 947-1, IEC 60 947-4-1 and IEC 60 947-5-1 for the auxiliary contacts Can be equipped with CTX³ mini Ith = 10 A Low consumption coil
		4 NO
1	4168 00	24 V~
1	4168 01	24 V⎓
1	4168 02	48 V~
1	4168 03	48 V⎓
1	4168 04	110 V~
1	4168 06	230 V~
1	4168 09	400 V~
		3 NO + 1 NC
1	4168 10	24 V~
1	4168 11	24 V⎓
1	4168 12	48 V~
1	4168 13	48 V⎓
1	4168 14	110 V~
1	4168 16	230 V~
1	4168 19	400 V~
		2 NO + 2 NC
1	4168 20	24 V~
1	4168 21	24 V⎓
1	4168 22	48 V~
1	4168 23	48 V⎓
1	4168 24	110 V~
1	4168 26	230 V~
1	4168 29	400 V~

MPCBs MPX³

motor protection circuit breakers from 0.16 A to 100 A

4173 08

4173 68

4173 79

4173 48

Technical characteristics and tripping curves **p. 162-163, 180-181**
Dimensions and wiring capacity chart **p. 193**

Conform to IEC 60 947-1, IEC 60 947-2, IEC 60 947-4

Thermal magnetic MPCBs

Adjustable thermal release
Magnetic release 13 Ie max.

MPX³ 32S

Standard breaking capacity
With toggle handle
Fixing on rail ⊔

Pack	Cat.Nos 3P	Rated 3 Ph Motor	Thermal release adjustment range (A)	Magnetic release operating current (A)	415 V breaking capacity Icu (kA)
1	4173 00	0.02	0.1 to 0.16	2.1	100
1	4173 01	0.06	0.16 to 0.25	3.3	100
1	4173 02	0.09	0.25 to 0.4	5.2	100
1	4173 03	0.12	0.4 to 0.63	8.2	100
1	4173 04	0.18 / 0.25	0.63 to 1	13	100
1	4173 05	0.37 / 0.55	1 to 1.6	20.8	100
1	4173 06	0.75	1.6 to 2.5	32.5	100
1	4173 07	1.5	2.5 to 4	52	100
1	4173 08	2.2	4 to 6	78	100
1	4173 09	3	5 to 8	104	100
1	4173 10	4	6 to 10	130	50
1	4173 11	5.5	9 to 13	169	50
1	4173 12	7.5	11 to 17	221	20
1	4173 13	7.5	14 to 22	286	15
1	4173 14	11	18 to 26	338	15
1	4173 15	15	22 to 32	416	15

MPX³ 32H

High breaking capacity
With rotary handle
Fixing on rail ⊔

Pack	Cat.Nos 3P	Rated 3 Ph Motor	Thermal release adjustment range (A)	Magnetic release operating current (A)	415 V breaking capacity Icu (kA)
1	4173 20	0.02	0.1 to 0.16	2.1	100
1	4173 21	0.06	0.16 to 0.25	3.3	100
1	4173 22	0.09	0.25 to 0.4	5.2	100
1	4173 23	0.12	0.4 to 0.63	8.2	100
1	4173 24	0.18 / 0.25	0.63 to 1	13	100
1	4173 25	0.37 / 0.55	1 to 1.6	20.8	100
1	4173 26	0.75	1.6 to 2.5	32.5	100
1	4173 27	1.5	2.5 to 4	52	100
1	4173 28	2.2	4 to 6	78	100
1	4173 29	3	5 to 8	104	100
1	4173 30	4	6 to 10	130	100
1	4173 31	5.5	9 to 13	169	100
1	4173 32	7.5	11 to 17	221	50
1	4173 33	7.5	14 to 22	286	50
1	4173 34	11	18 to 26	338	50
1	4173 35	15	22 to 32	416	50

MPX³ 63H

High breaking capacity
With rotary handle
Fixing on rail ⊔ or by screw

Pack	Cat.Nos 3P	Rated 3 Ph Motor	Thermal release adjustment range (A)	Magnetic release operating current (A)	415 V breaking capacity Icu (kA)
1	4173 60	4	6 to 10	130	100
1	4173 61	5.5	9 to 13	169	100
1	4173 62	7.5	11 to 17	221	50
1	4173 63	7.5	14 to 22	286	50
1	4173 64	11	18 to 26	338	50
1	4173 65	15	22 to 32	416	50
1	4173 66	18.5	28 to 40	520	50
1	4173 67	22	34 to 50	650	50
1	4173 68	30	45 to 63	819	50

Thermal magnetic MPCBs (continued)

MPX³ 100H

High breaking capacity
With rotary handle
Fixing on rail ⊔ or by screw

Pack	Cat.Nos 3P	Rated 3 Ph Motor	Thermal release adjustment range (A)	Magnetic release operating current (A)	415 V breaking capacity Icu (kA)
1	4173 70	7.5	11 to 17	221	100
1	4173 71	7.5	14 to 22	286	100
1	4173 72	11	18 to 26	338	100
1	4173 73	15	22 to 32	416	100
1	4173 74	18.5	28 to 40	520	100
1	4173 75	22	34 to 50	650	100
1	4173 76	30	45 to 63	819	100
1	4173 77	37	55 to 75	975	75
1	4173 78	45	70 to 90	1170	75
1	4173 79	45	80 to 100	1300	75

Magnetic only MPCBs

Without thermal release
Magnetic release 13 x Ie max.

MPX³ 32MA

High breaking capacity
With rotary handle
Fixing on rail ⊔

Pack	Cat.Nos 3P	Rated 3 Ph Motor	Magnetic release operating current (A)	415 V breaking capacity Icu (kA)
1	4173 40	0.02	2.1	100
1	4173 41	0.06	3.3	100
1	4173 42	0.09	5.2	100
1	4173 43	0.12	8.2	100
1	4173 44	0.18 / 0.25	13	100
1	4173 45	0.37 / 0.55	20.8	100
1	4173 46	0.75	32.5	100
1	4173 47	1.5	52	100
1	4173 48	2.2	78	100
1	4173 49	3	104	100
1	4173 50	4	130	100
1	4173 51	5.5	169	100
1	4173 52	7.5	221	50
1	4173 53	7.5	286	50
1	4173 54	11	338	50
1	4173 55	15	416	50

MPCBs MPX³

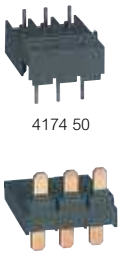
accessories

4174 00

4174 03

4174 12

4174 22


4174 50 4174 56

4174 61

4174 63

4174 73

4174 81

Pack	Cat.Nos	Auxiliary contacts
		2-pole
		Side mounting
		Mounting on the left side of MPCBs
		Two auxiliary contacts per MPCB
2	4174 00	1 NO + 1 NC
2	4174 01	2 NO
2	4174 02	2 NC
		Front mounting
		One auxiliary contact per MPCB
10	4174 03	1 NO + 1 NC
10	4174 04	2 NO
10	4174 05	2 NC

Pack	Cat.Nos	Alarm contacts
		1 NO + 1 NC
		Any trip alarm contact
		Operate in case of trip
		Mounting on the left side of MPCBs
		Set alarm contact first in case of using auxiliary contact together (MPX³ 63H can not accept auxiliary contact and alarm contact together)
1	4174 06	For MPX³ 32
1	4174 08	For MPX³ 63 and 100
		Magnetic trip alarm contact
		Operate in case of instantaneous trip
		Mounting on the left side of MPCBs
		Set alarm contact first in case of using auxiliary contact together
2	4174 07	1 NO + 1 NC

Pack	Cat.Nos	Shunt release
		Mounting on the right side of MPCBs
		One release per MPCB
1	4174 10	24 V - 50 Hz / 28 V - 60 Hz
1	4174 11	110 V - 50 Hz / 120 V - 60 Hz
1	4174 12	220-230 V - 50 Hz / 240-260 V - 60 Hz
1	4174 13	380-400 V - 50 Hz / 440-460 V - 60 Hz

Pack	Cat.Nos	Undervoltage release
		Mounting on the right side of MPCBs
		One release per MPCB
		Without auxiliary contact
1	4174 20	24 V - 50 Hz / 28 V - 60 Hz
1	4174 21	110 V - 50 Hz / 120 V - 60 Hz
1	4174 22	220-230 V - 50 Hz / 240-260 V - 60 Hz
1	4174 23	380-400 V - 50 Hz / 440-460 V - 60 Hz
		With 2 NO auxiliary contacts
		Can not attach to MPX³ 32S
1	4174 30	24 V - 50 Hz / 28 V - 60 Hz
1	4174 31	110 V - 50 Hz / 120 V - 60 Hz
1	4174 32	220-230 V - 50 Hz / 240-260 V - 60 Hz
1	4174 33	380-400 V - 50 Hz / 440-460 V - 60 Hz

Pack	Cat.Nos	Dial cover
		Sealable cover to protect the set value from the operation that is not intended
100	4174 79	For all types of MPX³

Pack	Cat.Nos	Direct adaptator and mounting unit
		For mounting CTX³ contactors under MPX³ MPCBs
		Direct adaptators
		Used to connect MPX³ directly with the contactor
2	4174 40	For MPX³ 32S with CTX³ mini AC
2	4174 41	For MPX³ 32S with CTX³ mini DC
2	4174 42	For MPX³ 32H/32MA with CTX³ mini AC
2	4174 43	For MPX³ 32H/32MA with CTX³ mini DC
2	4174 48	For MPX³ 32S with CTX³ 22 AC
2	4174 49	For MPX³ 32S with CTX³ 22 DC
2	4174 50	For MPX³ 32H/32MA with CTX³ 22 AC
2	4174 51	For MPX³ 32H/32MA with CTX³ 22 DC
2	4174 52	For MPX³ 32S with CTX³ 40 AC
2	4174 53	For MPX³ 32S with CTX³ 40 DC
2	4174 54	For MPX³ 32H/32MA with CTX³ 40 AC
2	4174 55	For MPX³ 32H/32MA with CTX³ 40 DC
2	4174 56	For MPX³ 63H with CTX³ 65 AC with cage type terminals
2	4174 57	For MPX³ 63H with CTX³ 65 DC with cage type terminals
1	4174 58	For MPX³ 100H with CTX³ 100 AC with cage type terminals
1	4174 59	For MPX³ 100H with CTX³ 100 DC with cage type terminals
		Mounting unit
		This device is used for joining together MPX³ MCPBs and CTX³ contactors
		Screws not supplied
1	4174 60	For MPX³ 32S/32H/32MA
1	4174 61	For MPX³ 63H
1	4174 62	For MPX³ 100H

Pack	Cat.Nos	Rotary handle
		Mounting on panel's door to control the MPX³
1	4174 63	For MPX³ 32H and 32 MA
1	4174 64	For MPX³ 63H
1	4174 65	For MPX³ 100H

Pack	Cat.Nos	Phase busbar
		For parallel connection of MPX³
		For MPX³ 32S, 32H and 32MA
		Rated current 63 A
10	4174 71	2 devices
10	4174 73	3 devices
10	4174 75	4 devices
10	4174 76	5 devices
4	4174 77	Feeder for phase busbar 32 A
		For MPX³ 63H
		Rated current 108 A
4	4174 72	2 devices
4	4174 74	3 devices

Pack	Cat.Nos	Enclosures for MPX³ 32H and 32MA
		IP 65 enclosure to use in dusty areas as well as in presence of corrosive gas or liquid
1	4174 80	Yellow/red with rotary handle
1	4174 81	With black rotary handle

Optimized performance
up to 6300 A

DMX³ air circuit breakers are available in three frame sizes for three breaking capacities: 50 kA for the DMX³ N designation, 65 kA for DMX³ H and 100 kA for DMX³ L.

The range covers 11 rated currents, between 630 A and 6300 A.

All range of DMX³ air circuit breakers is available in fixed and draw-out version.

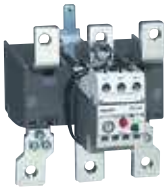
3-pole contactors CTX³ and thermal overload relays RTX³

technical characteristics

Contactor			CTX³ mini				CTX³ 22				CTX³ 40	
Size			-				2				3	
Terminals type			screw				screw				screw	
Rated operational voltage, Ue			690 V				690 V				690 V	
Rated insulation voltage, Ui			690 V				690 V				1000 V	
Rated frequency			50/60 Hz				50/60 Hz				50/60 Hz	
Rated impulse withstand voltage, Uimp			6 kV				6 kV				8 kV	
Max. operating rate in operation cycle per hour (AC-3)			1800				1200				1800	
Durability in millions of operations		Mechanical	12				15				12	
		Electrical	1				2.5				2	
		Type	6 A	9 A	12 A	16 A	9 A	12 A	18 A	22 A	32 A	40 A
Current and power	AC-1	Thermal current (A)	20	20	20	20	25	25	40	40	50	60
	AC-3	200/240 V (kW)	1.5	2.2	3	4	2.5	3.5	4.5	5.5	7.5	11
		(A)	7	9	12	15	11	13	18	22	32	40
		380/440 V (kW)	2.2	4	5.5	7.5	4	5.5	7.5	11	15	18.5
		(A)	6	9	12	16	9	12	18	22	32	40
		500/550 V (kW)	3	3.7	4	5.5	4	7.5	7.5	15	18.5	22
		(A)	5	6	7	9	7	12	13	20	28	32
		690 V (kW)	3	4	4	4	4	7.5	7.5	15	18.5	22
		(A)	4	5	5	5	5	9	9	18	20	23
UL rating 50/60 Hz		Continuous current (A)	20	20	20	20	25	25	40	40	50	60
	Single phase	110/220 V (HP)	1/2	1/2	1	-	0.5	0.75	1	2	2	3
		220/240 V (HP)	1	1.5	2	-	1.5	2	3	3	5	7.5
	Three phase	200/208 V (HP)	-	-	-	-	2	3	5	7.5	7.5	15
		220/240 V (HP)	1.5	3	3	-	3	5	7.5	10	10	15
		440/480 V (HP)	3	5	7.5	-	5	7.5	10	15	20	30
		550/600 V (HP)	3	5	7.5	-	7.5	10	15	20	25	30
		NEMA size	00	00	00	0	00	00	0	1	1	1
Weight and size	AC control	Weight (kg)	0.17				0.34				0.4	
		Size (W x H x D) (mm)	45 × 58 × 57				45 × 73.5 × 87.4				45 × 83 × 90	
	DC control	Weight (kg)	0.23				0.41				0.6	
		Size (W x H x D) (mm)	45 × 58 × 69				45 × 73.5 × 103.6				45 × 83 × 117.1	
Integrated auxiliary contacts			1 NO or 1 NC				1 NO + 1 NC				2 NO + 2 NC	
Add on auxiliary block		Side mounting	Yes				Yes				Yes	
		Front mounting	Yes				Yes				Yes	

Thermal overload relay		RTX³ mini	RTX³ 40	RTX³ 40
Terminals type	Standard RTX³	screw	screw	screw
	Differential RTX³	screw	screw	screw
Rated operational voltage, Ue		690 V	690 V	690 V
Rated insulation voltage, Ui		690 V	690 V	690 V
Rated impulse withstand voltage, Uimp		6 kV	6 kV	6 kV
Trip class		10 A	10 A	10 A
Setting		0.1 to 16 A	0.1 to 40 A	0.1 to 40 A
Weight and size	Weight (kg)	0.1	0.17	0.17
	Size (W x H x D) (mm)	45 × 73 × 63	45 × 75 × 90	45 × 75 × 90

	CTX³ 65		CTX³ 100			CTX³ 150		CTX³ 225		CTX³ 400			CTX³ 800		
	4		5			6		7		8			9		
	screw or cage		screw or cage			screw or cage		screw		screw			screw		
	690 V		690 V			690 V		690 V		690 V			690 V		
	1000 V		1000 V			1000 V		1000 V		1000 V			1000 V		
	50/60 Hz		50/60 Hz			50/60 Hz		50/60 Hz		50/60 Hz			50/60 Hz		
	8 kV		8 kV			8 kV		8 kV		8 kV			8 kV		
	1800		1800			1200		1200		1200			1200		
	12		12			5		5		5		2.5	2.5		
	2		2			1		1		1		0.5	0.5		
	50 A	65 A	75 A	85 A	100 A	130 A	150 A	185 A	225 A	265 A	330 A	400 A	500 A	630 A	800 A
	70	100	110	135	160	160	210	230	275	300	350	450	580	660	900
	15	18.5	22	25	30	37	45	55	75	80	90	125	147	190	220
	55	65	75	85	105	130	150	185	225	265	330	400	500	630	800
	22	30	37	45	55	60	75	90	132	147	160	200	265	330	440
	50	65	75	85	105	130	150	185	225	265	330	400	500	630	800
	30	33	37	45	55	60	70	110	132	147	160	225	265	330	500
	43	60	64	75	85	90	100	180	200	225	280	350	400	500	720
	30	33	37	45	55	55	55	110	140	160	200	250	300	400	500
	28	35	42	45	65	60	60	120	150	185	225	300	380	420	630
	70	100	110	135	160	160	210	230	275	300	350	450	580	660	900
	3	5	5	7.5	10	10	15	15	15	-	-	-	-	-	-
	10	15	15	15	20	20	25	30	40	-	-	-	-	-	-
	20	25	25	30	30	40	40	60	60	75	100	125	150	200	200
	25	30	30	40	40	40	50	60	75	100	125	150	200	250	300
	40	50	50	60	75	75	100	125	150	200	250	300	400	500	600
	50	60	60	75	75	75	75	125	150	200	250	300	400	500	600
	2	2	2	3	3	3	4	4	4	5	5	5	6	6	7
	0.9		1.6			2.4		5.4		9.2			22.4		
	55 × 106 × 119		70 × 140 × 135.8			95 × 158 × 130.3		138 × 203 × 185.1		163 × 243 × 204.4			285 × 312 × 245.3		
	1.2		2.6			2.4		5.4		9.2			22.4		
	55 × 106 × 146.4		70 × 140 × 172.3			95 × 158 × 130.3		138 × 203 × 185.1		163 × 243 × 204.4			285 × 312 × 245.3		
	2 NO + 2 NC		2 NO + 2 NC			2 NO + 2 NC		2 NO + 2 NC		2 NO + 2 NC			2 NO + 2 NC		
	Yes		Yes			Yes		Yes		Yes			Yes		
	Yes		Yes			Yes		No		No			No		

	RTX³ 65	RTX³ 100	RTX³ 150	RTX³ 225	RTX³ 400	RTX³ 800
						
	screw	screw	screw	screw	screw	screw
	cage	cage	cage	screw	screw	screw
	690 V	690 V	690 V	690 V	690 V	690 V
	690 V	690 V	690 V	690 V	690 V	690 V
	6 kV	6 kV	6 kV	6 kV	6 kV	6 kV
	10 A	10 A	10 A	10 A	10 A	10 A
	9 to 65 A	18 to 100 A	45 to 150 A	65 to 240 A	85 to 400 A	200 to 800 A
	0.31/0.33	0.48/0.5	0.67	2.5	2.6	11.5
	55 x 81 x 100	70 × 97 × 110	95 × 109 × 113	147 × 141 × 184	151 × 171 × 198	360 × 530 × 212

MPCBs MPX³

technical characteristics

MPCB			MPX³ 32S										MPX³ 32H									
Size			1										2									
Type			Thermal magnetic										Thermal magnetic									
Breaking capacity			Standard										High									
Handle type			Toggle										Rotary									
Number of poles			3										3									
Characteristics of use																						
Rated operational voltage (Ue)			Up to 690 V										Up to 690 V									
Rated frequency			50/60 Hz										50/60 Hz									
Rated insulation voltage (Ui)			690 V										690 V									
Rated impulse voltage (Uimp)			6 kV										6 kV									
Utilisation category	IEC 60947-2 (breaker)		Cat. A										Cat. A									
	IEC 60947-4 (Motor starter)		AC3										AC3									
Mechanical endurance (Operating)			100000										100000									
Electric endurance (Cycles)			100000										100000									
Max operating frequency per hour (Ope./h)			25										25									
Temperature compensation			-20 to + 60 °C										-20 to + 60 °C									
Instantaneous short circuit release			13 x Ie max.										13 x Ie max.									
Trip class			•										10									
Overload protection			•										•									
Phase failure protection			•										•									
Trip indicating function			with alarm contact 4174 06/07										with alarm contact 4174 06/07									
Test function			•										•									
Weight (g)			320										360									
Rated breaking capacity (kA)	Rated operational current Ie (A)	Thermal release adjustment range (A)	240 V 230 V 220 V		415 V 400 V		460 V 440 V		525 V 500 V		690 V 600 V		240 V 230 V 220 V		415 V 400 V		460 V 440 V		525 V 500 V		690 V 600 V	
			Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics
	0.16	0.1 to 0.16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.25	0.16 to 0.25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.4	0.25 to 0.4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.63	0.4 to 0.63	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	1	0.63 to 1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	1.6	1 to 1.6	100	100	100	100	100	100	100	100	3	3	100	100	100	100	100	100	100	100	100	100
	2.5	1.6 to 2.5	100	100	100	100	100	100	50	38	3	3	100	100	100	100	100	100	100	100	8	8
	4	2.5 to 4	100	100	100	100	50	38	15	11	3	3	100	100	100	100	100	100	100	100	8	8
	6	4 to 6	100	100	100	100	15	11	10	8	3	3	100	100	100	100	100	100	100	100	6	6
	8	5 to 8	100	100	100	100	15	11	10	8	3	3	100	100	100	100	50	38	50	38	6	6
	10	6 to 10	100	100	50	38	15	11	6	5	3	3	100	100	100	100	50	38	50	38	6	6
	13	9 to 13	100	100	50	38	10	8	6	5	3	3	100	100	100	100	50	38	42	32	6	6
	17	11 to 17	50	38	20	15	10	8	6	5	3	3	100	100	50	38	20	15	10	8	4	4
	22	14 to 22	40	30	15	11	8	6	6	5	3	3	100	100	50	38	20	15	10	8	4	4
	26	18 to 26	40	30	15	11	8	6	5	4	3	3	100	100	50	38	20	15	10	8	4	4
	32	22 to 32	30	22	15	11	6	4	5	4	3	3	100	100	50	38	20	15	10	8	4	4
	40	28 to 40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	50	34 to 50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	63	45 to 63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	75	55 to 75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	90	70 to 90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	100	80 to 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	MPX³ 32MA	**MPX³ 63H**	**MPX³ 100H**
	2	3	4
	Magnetic only	Thermal magnetic	Thermal magnetic
	High	High	High
	Rotary	Rotary	Rotary
	3	3	3
	Up to 690 V	Up to 690 V	Up to 690 V
	50/60 Hz	50/60 Hz	50/60 Hz
	690 V	1000 V	1000 V
	6 kV	8 kV	8 kV
	Cat. A	Cat. A	Cat. A
	AC3	AC3	AC3
	100000	50000	50000
	100000	25000	25000
	25	25	25
	-20 to + 60 °C	-20 to + 60 °C	-20 to + 60 °C
	13 x Ie max.	13 x Ie max.	13 x Ie max.
	0	10	10
	-	•	•
	-	•	•
	with alarm contact 4174 06/07	with alarm contact 4174 07/08	with alarm contact 4174 07/08
	•	•	•
	360	1000	2200

240 V 230 V 220 V		415 V 400 V		460 V 440 V		525 V 500 V		690 V 600 V		240 V 230 V 220 V		415 V 400 V		460 V 440 V		525 V 500 V		690 V 600 V		240 V 230 V 220 V		415 V 400 V		460 V 440 V		525 V 500 V		690 V 600 V	
Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	50	38	50	38	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	50	38	50	38	6	6	100	100	100	100	50	38	50	38	6	5	-	-	-	-	-	-	-	-	-	-
100	100	100	100	50	38	42	32	6	6	100	100	100	100	50	38	42	32	6	5	-	-	-	-	-	-	-	-	-	-
100	100	50	38	20	15	10	8	4	4	100	100	50	50	50	38	12	9	5	5	100	100	100	100	50	38	35	27	12	9
100	100	50	38	20	15	10	8	4	4	100	100	50	50	50	38	12	9	5	5	100	100	100	50	50	38	35	27	12	9
100	100	50	38	20	15	10	8	4	4	100	100	50	50	35	27	12	9	5	5	100	100	100	50	50	38	35	27	12	9
100	100	50	38	20	15	10	8	4	4	100	100	50	50	35	27	10	8	5	5	100	100	100	50	50	38	25	19	12	9
-	-	-	-	-	-	-	-	-	-	100	100	50	50	35	27	10	8	5	5	100	100	100	50	50	38	20	15	12	9
-	-	-	-	-	-	-	-	-	-	100	100	50	50	35	27	10	8	5	5	100	100	100	50	50	38	15	11	10	8
-	-	-	-	-	-	-	-	-	-	100	100	50	50	35	27	10	8	5	5	100	100	100	50	50	38	15	11	8	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	75	50	50	38	12	9	6	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	75	50	50	38	12	9	6	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	75	50	50	38	12	9	6	6

Contactors CTX³

technical characteristics

Environmental conditions

- Storage temperature: -50 °C to + 80 °C
- Operating temperature: -5 °C to + 50 °C
- Operating altitude: 3000 m
- Protection degree: IP 20
- Shock resistance: open 8 G / closed 10 G
- Vibration resistance (5-300 Hz): open 2 G / closed 4 G

Type 2 coordination with MPCBs MPX³

According to IEC 60 947-4-1
Short circuit current Iq = 50 kA Voltage 400/415 V~ 50/60 Hz

Standard motors AC-3 at 400/415 V 1500 rpm		Manual motor starter: MPCB type		Thermal ovreload release setting range	Magnetic release response current	Contactor	
Rated Power (kW)	Current (A)	Type	Rating (A)	(A)	(A)	Type	Rating (A)
-	-	MPX³ 32S	0.16	0.1 - 0.16	2.08	CTX³ 22	9
0.06	0.20	MPX³ 32S	0.25	0.16 - 0.25	3.25	CTX³ 22	9
0.09	0.30	MPX³ 32S	0.40	0.25 - 0.4	5.2	CTX³ 22	9
0.12	0.40	MPX³ 32S	0.63	0.4 - 0.63	8.19	CTX³ 22	9
0.18	0.60	MPX³ 32S	0.63	0.4 - 0.63	8.19	CTX³ 22	9
0.25	0.80	MPX³ 32S	1	0.63 - 1	13	CTX³ 22	9
0.37	1.1	MPX³ 32S	1.6	1 - 1.6	20.8	CTX³ 22	9
0.55	1.5	MPX³ 32S	1.6	1 - 1.6	20.8	CTX³ 22	9
0.75	1.9	MPX³ 32S	2.5	1.6 - 2.5	32.5	CTX³ 22	12
1.1	2.7	MPX³ 32S	4	2.5 - 4	52	CTX³ 22	18
1.5	3.6	MPX³ 32S	4	2.5 - 4	52	CTX³ 22	18
2.2	5.2	MPX³ 32S	6	4 - 6	78	CTX³ 22	18
3	6.8	MPX³ 32S	8	5 - 8	104	CTX³ 22	18
4	9	MPX³ 32S	10	6 - 10	130	CTX³ 22	18
5.5	11.5	MPX³ 32H	13	9 - 13	169	CTX³ 22	22
7.5	15.5	MPX³ 32H	17	11 - 17	221	CTX³ 22	22
10	20	MPX³ 32H	22	14 - 22	286	CTX³ 40	32
11	22	MPX³ 32H	25	18 - 26	338	CTX³ 40	32
15	29	MPX³ 32H	32	22 - 32	416	CTX³ 40	32
18.5	35	MPX³ 63H	40	28 - 40	520	CTX³ 65	50
22	41	MPX³ 63H	50	34 - 50	650	CTX³ 65	50
30	55	MPX³ 63H	63	45 - 63	819	CTX³ 65	65
37	67	MPX³ 100H	75	55 - 75	975	CTX³ 100	75
-	-	MPX³ 100H	90	70 - 90	1170	CTX³ 100	85
45	80	MPX³ 100H	100	80 - 100	1300	CTX³ 100	85

Definition type 2 coordination according to IEC 947-4-1:

- The contactor or the starter must not endanger persons or systems in the event of a short-circuit.
- The contactor or the starter must be suitable for further use.
- No damage to the overload relay or other parts may occur with the exception of welding of the contactor or starter contacts provided that these can be easily separated without significant deformation (such as with a screwdriver).

Accessory

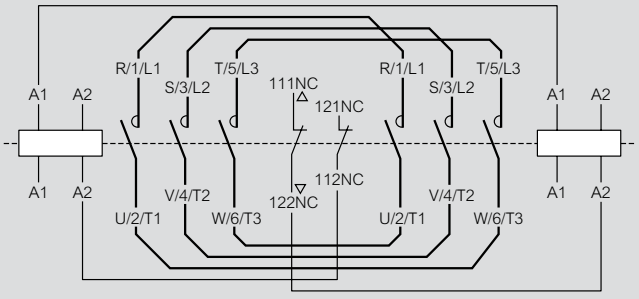
Interlock unit, Cat.No 4168 80

The mechanical interlock unit provides 2NC contacts for use in electrical interlocking of two contactors

Wire kits

Used for making reversing circuit between two contactors

Contactor	Wire kit		Interlock unit	
	Cat.Nos	Weight	Cat.No	Weight
CTX³ 22	4168 82	0.04 kg	4168 80	0.06 kg
CTX³ 40	4168 83	0.05 kg		
CTX³ 65	4168 84	0.12 kg		
CTX³ 100	4168 85	0.33 kg		
CTX³ 150	-	-		



CTX³ 9 A - 150 A typical circuit diagram for reversing contactor

Rating of the contacts in the interlocks

Rated operation voltage (V)	600
Rated insulation voltage (V)	600
Rated frequency (Hz)	50/60
Rated thermal current (A)	10
Rated operation current (A) 240 V AC-15	3

Time delay blocks Cat.Nos 4168 70/71/72/73

Applying contactors		Cat.Nos	Rated voltage	Performance
CTX³ 22 to CTX³ 150	On delay	4168 70	AC/DC 24 to 48 V	• Mounting: Head on • Contact: 1 NC • Time delay: 1s to 30s On delay, Off delay • Frequency: AC 50/60 hz • Operation: Min. voltage 85% Max. voltage 110% • Accuracy of setting time: ± 20 %
		4168 71	AC 110 to 230 V	
	Off delay	4168 72	AC/DC 24 to 48 V	
		4168 73	AC 110 to 230 V	

Features of capacitor unit (Pre-loading resistor)

- Damping resister that can limit the inrush current up to 60 x In by closing earlier than the main contacts of the contactor
- No heat loss by the serial resistor
- Eliminates the switching surge
- Improves the performance of the capacitor system

Operation sequence

Capacitor unit: OFF
Contactor: OFF

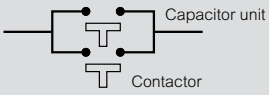


Fig.1

Capacitor unit: ON
Contactor: OFF

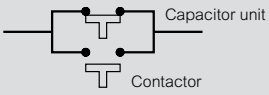


Fig.2

Capacitor unit: OFF
Contactor: ON

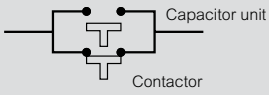
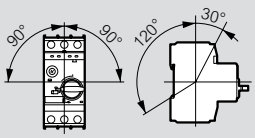


Fig.3

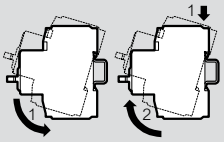
Note - Closing sequence: Fig.1 => Fig.2 => Fig.3
Opening sequence: Fig.3 => Fig.1

Mounting

MPX³ 32: 35 mm ⊔ rail (depth 15 mm)
MPX³ 63: 35 mm ⊔ rail (depth 15 mm) or screws
MPX³ 100: 35 mm (depth 15 mm) or 75 mm ⊔ rail or screws



Operating positions



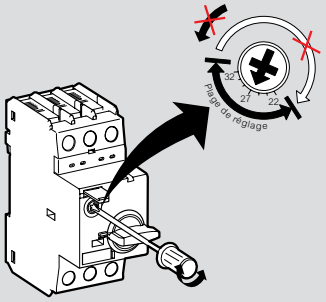
DIN rail mounting

Environment

Ambient air temperature:
- storage: -50…+ 80 °C
- operation: -20…+ 60 °C
Ambient temperature compensation: - 20…+ 60 °C
Maximum operating altitude: 2000 m
Protection degree: IP20
Shock resistance: 25 g
Vibration resistance: 5~150 Hz

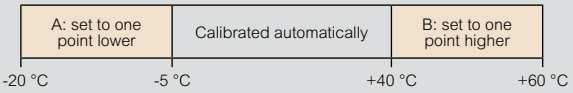
Caution for thermal adjustments

1. Keep the setting range as shown below
2. Moving counterclockwise out of the setting range may cause the damage of the device



Dial setting method

3. Calibration by ambient air temperature



In case of using out of the standard air temperature range (-5 °C to +40 °C) it needs to be calibrated by one point

Power consumption

	MPX³ 32S	MPX³ 32H/MA	MPX³ 63H	MPX³ 100H
Total power loss Pv	In = 0.16 to 1.6 A: 4.4	In = 0.16 to 1.6 A: 4.4	In = 10 to 22 A: 10.2	In = 17 to 32 A : 15
Circuit breaker at rated load operating temperature (W)	In = 2.5 to 26 A : 7.4	In = 2.5 to 26 A : 7.4	In = 26 to 63 A: 9.7	In = 40 to 63 A : 21.8
	In = 32 A : 4.0	In = 32 A : 4.0		In = 75 to 100 A: 17.8

MPX³ 32S

Rated operational current Ie (A)	**0.16**	**0.25**	**0.4**	**0.63**	**1**	**1.6**	**2.5**	**4**	**6**	**8**	**10**	**13**	**17**	**22**	**26**	**32**
Switching of standard three-phase motors AC-2, AC-3																
230/240 V (kW)	-	0.03	0.06	0.09	0.12	0.18/0.25	0.37	0.55/0.75	1.1/1.5	1.5	2.2/3	3	3.7/4	4	5.5	7.5
400/415 V (kW)	0.02	0.06	0.09	0.12	0.18/0.25	0.37/0.55	0.75	1.1/1.5	2.2	3	3.7/4	5.5	7.5	7.5	11	15
500 V (kW)	-	-	-	0.25	0.37	0.55/0.75	1.1	1.5/2.2	3	3.7	4/5.5	7.5	11	11	15	18.5
690 V (kW)	-	-	-	0.25	0.37/0.55	0.75/1.1	1.5	2.2/3	3.7/4	5.5	7.5	11	11	15	18.5	22

MPX³ 32H

Rated operational current Ie (A)	**0.16**	**0.25**	**0.4**	**0.63**	**1**	**1.6**	**2.5**	**4**	**6**	**8**	**10**	**13**	**17**	**22**	**26**	**32**
Switching of standard three-phase motors AC-2, AC-3																
230/240 V (kW)	-	0.03	0.06	0.09	0.12	0.18/0.25	0.37	0.55/0.75	1.1/1.5	1.5	2.2/3	3	3.7/4	4	5.5	7.5
400/415 V (kW)	0.02	0.06	0.09	0.12	0.18/0.25	0.37/0.55	0.75	1.1/1.5	2.2	3	3.7/4	5.5	7.5	7.5	11	15
500 V (kW)	-	-	-	0.25	0.37	0.55/0.75	1.1	1.5/2.2	3	3.7	4/5.5	7.5	11	11	15	18.5
690 V (kW)	-	-	-	0.25	0.37/0.55	0.75/1.1	1.5	2.2/3	3.7/4	5.5	7.5	11	11	15	18.5	22

Industrial contactors CTX³

technical characteristics

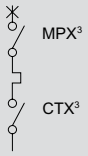
Selection chart

- The Full Load Current (FLC) indicated for 3-phase motors are of 'squirrel-cage Induction motors' at full load.
- Contactors are of the minimum ratings. Higher rating of contactors can be used.
- Selection chart is for standard 3-phase, squirrel cage motor with average power factor and efficiency.
- Selection is valid only for complete Legrand products.
- Compliance to Type '2' co-ordination is not assured in case these groupings are changed to use another product.
- Normal motor starting time (<=5 Sec) is assumed.

Compact motor starter (MPCB + Contactors)

Coordination: Compact motor starters (MPCB + Contactors) Type 2
According to IEC 60947-4-1

Performance: Ue = 415 [V]		
MPX³	S	H
MPX³ 32	50 [kA]	50 [kA]
MPX³ 63	-	50 [kA]
MPX³ 100	-	50 [kA]

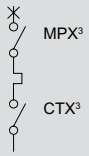


Motor		MPX³		CTX³
[kW]	**[A]**	**Type**	**Rating In [A]**	**Type**
0.37	1.1	MPX³ 32S	1.6	CTX³ 22 - 9 [A]
0.55	1.5	MPX³ 32S	1.6	
0.75	1.9	MPX³ 32S	2.5	CTX³ 22 - 12 [A]
1.1	2.7	MPX³ 32S	4	CTX³ 22 - 18 [A]
1.5	3.6	MPX³ 32S	4	
2.2	5.2	MPX³ 32S	6	
3	6.8	MPX³ 32S	8	
4	9	MPX³ 32S	10	
5.5	11.5	MPX³ 32H	13	CTX³ 22 - 22 [A]
7.5	15.5	MPX³ 32H	17	
10	20	MPX³ 32H	22	CTX³ 40 - 32 [A]
11	22	MPX³ 32H	26	
15	29	MPX³ 32H	32	
18.5	35	MPX³ 63H	40	CTX³ 40 - 40 [A]
22	41	MPX³ 63H	50	CTX³ 65 - 50 [A]
30	55	MPX³ 63H	63	CTX³ 65 - 65 [A]
37	67	MPX³ 100H	75	CTX³ 100 - 75 [A]
45	80	MPX³ 100H	100	CTX³ 100 - 85 [A]

3P 9 A - 100 A with MPCB

Coordination: Type 2 (continued)
According to IEC 60947-4-1

Performance: Ue = 440 [V]		
MPX³	S	H
MPX³ 32	38 [kA]	50 [kA]
MPX³ 63	-	35 [kA]
MPX³ 100	-	50 [kA]



Motor		MPX³		CTX³
[kW]	**[A]**	**Type**	**Rating In [A]**	**Type**
0.37	0.99	MPX³ 32S	1	CTX³ 22 - 9 [A]
0.55	1.36	MPX³ 32S	1.6	
0.75	1.68	MPX³ 32S	2.5	
1.1	2.37	MPX³ 32S	2.5	
1.5	3.06	MPX³ 32S	4	CTX³ 22 - 18 [A]
2.2	4.42	MPX³ 32H	6	CTX³ 22 - 22 [A]
3	5.57	MPX³ 32H	6	
3.7	7.1	MPX³ 32H	8	CTX³ 40 - 32 [A]
4	7.9	MPX³ 32H	8	
5.5	10.4	MPX³ 32H	13	
9	16.9	MPX³ 63H	17	CTX³ 40 - 40 [A]
11	20.1	MPX³ 63H	22	
15	26.5	MPX³ 63H	32	
18.5	32.8	MPX³ 63H	40	CTX³ 65 - 50 [A]
22	39	MPX³ 63H	40	
25	45.3	MPX³ 63H	50	
30	51.5	MPX³ 100H	63	CTX³ 65 - 65 [A]
33	58	MPX³ 100H	63	
37	64	MPX³ 100H	63	
40	67	MPX³ 100H	75	CTX³ 100 - 85 [A]
45	76	MPX³ 100H	75	

Industrial contactors CTX³

technical characteristics

Motor starters
Magnetic protection + Contactor + Thermal overload relay

Table-1: DX³ MCB Ue = 400 [V]

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Rated conditional short-circuit current Iq (kA)
0.37	1.10	DX³ MA	1.6	20	4098 76	CTX³ 22 9 A	RTX³ 40	1 - 1.6	4166 45/65	15
0.55	1.5	DX³ MA	1.6	20	4098 76	CTX³ 22 9 A	RTX³ 40	1 - 1.6	4166 45/65	15
0.75	1.9	DX³ MA	2.5	32	4098 77	CTX³ 22 9 A	RTX³ 40	1.6 - 2.5	4166 46/66	15
1.1	2.7	DX³ MA	4	50	4098 78	CTX³ 22 9 A	RTX³ 40	2.5 - 4	4166 47/67	15
1.5	3.5	DX³ MA	4	50	4098 78	CTX³ 22 9 A	RTX³ 40	2.5 - 4	4166 47/67	15
2.2	5	DX³ MA	6.3	80	4098 79	CTX³ 22 9 A	RTX³ 40	4 - 6	4166 48/68	15
2.5	5.7	DX³ MA	6.3	80	4098 79	CTX³ 22 9 A	RTX³ 40	4 - 6	4166 48/68	15
3	6.7	DX³ MA	10	125	4098 80	CTX³ 22 12 A	RTX³ 40	5 - 8	4166 49/69	15
3.7	8	DX³ MA	10	125	4098 80	CTX³ 22 12 A	RTX³ 40	6 - 9	4166 50/70	15
4	8.5	DX³ MA	10	125	4098 80	CTX³ 22 12 A	RTX³ 40	7 - 10	4166 51/71	15
5.5	11	DX³ MA	12.5	160	4098 81	CTX³ 22 22 A	RTX³ 40	9 - 13	4166 52/72	15
6.3	13	DX³ MA	16	200	4098 82	CTX³ 22 22 A	RTX³ 40	12 - 18	4166 53/73	15
7.5	15	DX³ MA	16	200	4098 82	CTX³ 22 22 A	RTX³ 40	12 - 18	4166 53/73	15
10	20	DX³ MA	25	320	4098 83	CTX³ 22 22 A	RTX³ 40	16 - 22	4166 54/74	15
11	22	DX³ MA	25	320	4098 83	CTX³ 22 22 A	RTX³ 40	18 - 25	4166 55/75	15
12.5	25	DX³ MA	25	320	4098 83	CTX³ 40 32 A	RTX³ 40	22 - 32	4166 56/76	15
15	29	DX³ MA	40	500	4098 84	CTX³ 40 32 A	RTX³ 40	22 - 32	4166 56/76	10
16	31	DX³ MA	40	500	4098 84	CTX³ 40 32 A	RTX³ 40	22 - 32	4166 56/76	10
18.5	35	DX³ MA	40	500	4098 84	CTX³ 40 40 A	RTX³ 40	28 - 40	4166 57/77	10
20	38	DX³ MA	40	500	4098 84	CTX³ 40 40 A	RTX³ 40	28 - 40	4166 57/77	10
22	41	DX³ MA	63	880	4098 85	CTX³ 65 50 A	RTX³ 65	34 - 50	4166 89 4167 09	10
25	47	DX³ MA	63	880	4098 85	CTX³ 65 50 A	RTX³ 65	34 - 50	4166 89 4167 09	10
30	57	DX³ MA	63	880	4098 85	CTX³ 65 65 A	RTX³ 65	45 - 65	4166 90 4167 10	10
31.5	59	DX³ MA	63	880	4098 85	CTX³ 65 65 A	RTX³ 65	45 - 65	4166 90 4167 10	10

Table-2: DPX³ MCCB : Ue = 400 [V]

Coordination: Type 2 (continued)
According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current Iq (kA)
15	29	DPX³ 160	40	140 - 400	4201 22	CTX³ 65 50 A	RTX³ 65	24 - 36	4166 87 4167 07	50
16	31	DPX³ 160	40	140 - 400	4201 22	CTX³ 65 50 A	RTX³ 65	24 - 36	4166 87 4167 07	50
18.5	35	DPX³ 160	40	140 - 400	4201 22	CTX³ 65 50 A	RTX³ 65	28 - 40	4166 88 4167 08	50
20	38	DPX³ 160	40	140 - 400	4201 22	CTX³ 65 50 A	RTX³ 65	34 - 50	4166 89 4167 09	50
22	41	DPX³ 160	63	220 - 630	4201 23	CTX³ 65 65 A	RTX³ 65	34 - 50	4166 89 4167 09	50
25	47	DPX³ 160	63	220 - 630	4201 23	CTX³ 100 85 A	RTX³ 100	34 - 50	4167 26/46	50
30	57	DPX³ 160	63	220 - 630	4201 23	CTX³ 100 100 A	RTX³ 100	45 - 65	4167 27/47	50
31.5	59	DPX³ 160	63	220 - 630	4201 23	CTX³ 100 100 A	RTX³ 100	54 - 75	4167 28/48	50
37	68	DPX³ 250	100	350 - 1000	4206 05	CTX³ 100 100 A	RTX³ 100	63 - 85	4167 29/49	50
40	74	DPX³ 250	100	350 - 1000	4206 05	CTX³ 150 130 A	RTX³ 150	63 - 85	4167 62/72	50
45	82	DPX³ 250	100	350 - 1000	4206 05	CTX³ 150 130 A	RTX³ 150	63 - 85	4167 62/72	50
50	92	DPX³ 250	100	350 - 1000	4206 05	CTX³ 150 130 A	RTX³ 150	80 - 105	4167 63/73	50
55	102	DPX³ 250	100	350 - 1000	4206 05	CTX³ 150 150 A	RTX³ 150	95 - 130	4167 64/74	50
63	115	DPX³ 250	160	560 - 1000	4206 07	CTX³ 150 150 A	RTX³ 150	95 - 130	4167 64/74	50

Table-3: DPX³ MCCB : Ue = 440 [V]

Coordination: Type 2 (continued)
According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current Iq (kA)
15	27	DPX³ 160	40	140 - 400	4201 22	CTX³ 65 50 A	RTX³ 65	24 - 36	4166 87 4167 07	30
16	29	DPX³ 160	40	140 - 400	4201 22	CTX³ 65 50 A	RTX³ 65	24 - 36	4166 87 4167 07	30
18.5	34	DPX³ 160	40	140 - 400	4201 22	CTX³ 65 65 A	RTX³ 65	28 - 40	4166 88 4167 08	30
20	37	DPX³ 160	40	140 - 400	4201 22	CTX³ 65 65 A	RTX³ 65	28 - 40	4166 88 4167 08	30
22	40	DPX³ 160	40	140 - 400	4201 23	CTX³ 100 75 A	RTX³ 100	34 - 50	4167 26/46	30
25	45	DPX³ 160	63	220 - 630	4201 23	CTX³ 100 85 A	RTX³ 100	34 - 50	4167 26/46	30
30	53	DPX³ 160	63	220 - 630	4201 23	CTX³ 100 100 A	RTX³ 100	45 - 65	4167 27/47	30
31.5	56	DPX³ 160	63	220 - 630	4201 23	CTX³ 100 100 A	RTX³ 100	45 - 65	4167 27/47	30
37	65	DPX³ 250	100	350 - 1000	4206 05	CTX³ 100 100 A	RTX³ 100	54 - 75	4167 28/48	50
40	71	DPX³ 250	100	350 - 1000	4206 05	CTX³ 150 130 A	RTX³ 150	63 - 85	4167 62/72	50
45	78	DPX³ 250	100	350 - 1000	4206 05	CTX³ 150 130 A	RTX³ 150	63 - 85	4167 62/72	50
50	88	DPX³ 250	100	350 - 1000	4206 05	CTX³ 150 130 A	RTX³ 150	80 - 105	4167 63/73	50
55	98	DPX³ 250	100	350 - 1000	4206 05	CTX³ 150 150 A	RTX³ 150	80 - 105	4167 63/73	50
63	110	DPX³ 250	160	560 - 1000	4206 07	CTX³ 150 150 A	RTX³ 150	95 - 130	4167 64/74	50

Table-4: DPX³ MCCBs : Ue = 400 [V]

Coordination: Type 2 (continued)
According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current Iq (kA)
75	137	DPX³ 250	160	560 - 1600	4206 07	CTX³ 225 185 A	RTX³ 225	100 - 160	4167 82	50
90	164	DPX³ 250	250	900 - 2500	4206 09	CTX³ 225 185 A	RTX³ 225	120 - 185	4167 83	50
110	204	DPX³ 250	250	900 - 2500	4206 09	CTX³ 225 225 A	RTX³ 225	160 - 240	4167 84	50
132	238	DPX³ 250	250	900 - 2500	4206 09	CTX³ 400 265 A	RTX³ 400	200 - 330	4167 90	50
150	262	DPX³ 630	320	1600 - 3200	4220 29	CTX³ 400 330 A	RTX³ 400	200 - 330	4167 90	50
160	282	DPX³ 630	320	1600 - 3200	4220 29	CTX³ 400 330 A	RTX³ 400	260 - 400	4167 91	50
200	350	DPX³ 630	400	2000 - 3200	4220 30	CTX³ 400 400 A	RTX³ 400	260 - 400	4167 91	50
220	387	DPX³ 630	400	1600 - 3200	4220 30	CTX³ 400 400 A	RTX³ 400	260 - 400	4167 91	50
250	440	DPX³ 630	500	1600 - 3200	4220 31	CTX³ 800 630 A	RTX³ 800	400 - 630	4167 94	50

Table-5: DPX³ MCCB : Ue = 440 [V]

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current Iq (kA)
75	129	DPX³ 250	160	560 - 1600	4206 07	CTX³ 225 185 A	RTX³ 225	100 - 160	4167 82	50
90	157	DPX³ 250	160	560 - 1600	4206 07	CTX³ 225 225 A	RTX³ 225	120 - 185	4167 83	50
110	188	DPX³ 250	250	900 - 2500	4206 09	CTX³ 400 265 A	RTX³ 400	160 - 240	4167 89	50
132	218	DPX³ 250	250	900 - 2500	4206 09	CTX³ 400 265 A	RTX³ 400	160 - 240	4167 89	50
150	244	DPX³ 630	320	1600 - 3200	4220 29	CTX³ 400 400 A	RTX³ 400	200 - 330	4167 90	50
160	260	DPX³ 630	320	1600 - 3200	4220 29	CTX³ 400 400 A	RTX³ 400	200 - 330	4167 90	50
200	330	DPX³ 630	400	1600 - 3200	4220 30	CTX³ 800 630 A	RTX³ 800	260 - 400	4167 93	50
220	355	DPX³ 630	400	1600 - 3200	4220 30	CTX³ 800 630 A	RTX³ 800	260 - 400	4167 93	50
250	405	DPX³ 630	500	1600 - 3200	4220 31	CTX³ 800 800 A	RTX³ 800	400 - 600	4167 94	50

Industrial contactors CTX³

technical characteristics

Table-6: DX³ MCB : Ue = 400 [V]

Coordination: Type 2 (continued)
According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Rated conditional short-circuit current Iq (kA)
5.5	11	DX³ MA	12.5	160	4098 91	4164 26	15
6.3	13	DX³ MA	16	200	4098 92	4164 26	15
7.5	15	DX³ MA	16	200	4098 92	4164 26	15
10	20	DX³ MA	25	320	4098 93	4164 26	15
11	22	DX³ MA	25	320	4098 93	4164 26	15
18.5	35	DX³ MA	40	500	4098 94	4164 36	10
20	38	DX³ MA	40	500	4098 94	4164 36	10
30	57	DX³ MA	63	880	4098 95	4164 46	10
31.5	59	DX³ MA	63	880	4098 95	4164 46	10

Table-7: DPX³ MCCB : Ue = 400 [V]

Motor		Circuit-breaker				Contactor	Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	conditional short-circuit current Iq (kA)
5.5	11.5	DPX³ 160	16	160	4200 90	4164 36	36
7.5	15.5	DPX³ 160	16	160	4200 90	4164 36	36
15	29	DPX³ 160	40	400	4200 92	4164 56	36
16	31	DPX³ 160	40	400	4200 92	4164 56	36
18.5	35	DPX³ 160	40	400	4200 92	4164 56	36
20	38	DPX³ 160	40	400	4200 92	4164 56	36
37	68	DPX³ 160	100	1000	4200 95	4164 66	36
40	74	DPX³ 160	100	1000	4200 95	4164 66	36
45	82	DPX³ 160	100	1000	4200 95	4164 66	36
50	92	DPX³ 160	100	1000	4200 95	4164 66	36
55	102	DPX³ 160	125	1250	4200 96	4164 76	36
63	115	DPX³ 160	125	1250	4200 96	4164 76	36

Table-8: DPX³ MCCB : Ue = 400 [V]

Coordination: Type 2 (continued)
According to IEC 60947-4-1

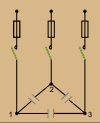
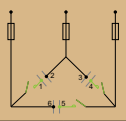
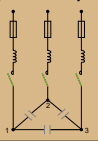
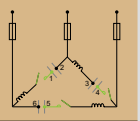
Motor		Circuit-breaker				Contactor	Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Conditional short-circuit current Iq (kA)
22	41	DPX³ 160	63	220 - 630	4201 33	4164 46	50
25	47	DPX³ 160	63	220 - 630	4201 33	4164 56	50
40	74	DPX³ 250	100	350 - 1000	4206 15	4164 66	50
45	82	DPX³ 250	100	350 - 1000	4206 15	4164 66	50
50	92	DPX³ 250	100	350 - 1000	4206 15	4164 66	50
55	102	DPX³ 250	100	350 - 1000	4206 15	4164 76	50
63	115	DPX³ 250	160	560 - 1600	4206 17	4164 76	50
110	204	DPX³ 250	250	900 - 2500	4206 19	4164 86	50
150	262	DPX³ 630	320	1600 - 3200	4220 34	4164 96	50
160	282	DPX³ 630	320	1600 - 3200	4220 34	4164 96	50
200	350	DPX³ 630	400	2000 - 3200	4220 35	4165 06	50
220	387	DPX³ 630	400	1600 - 3200	4220 35	4165 06	50
250	440	DPX³ 630	500	1600 - 3200	4220 36	4165 16	50

Table-9: DPX³ MCCB : Ue = 440 [V]

Coordination: Type 2 (continued)
According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Conditional short-circuit current Iq (kA)
18.5	34	DPX³ 160	40	140 - 400	4201 32	4164 46	30
20	37	DPX³ 160	40	140 - 400	4201 32	4164 46	30
25	45	DPX³ 160	63	220 - 630	4201 33	4164 56	30
40	71	DPX³ 250	100	350 - 1000	4206 15	4164 66	50
45	78	DPX³ 250	100	350 - 1000	4206 15	4164 66	50
50	88	DPX³ 250	100	350 - 1000	4206 15	4164 66	50
55	98	DPX³ 250	100	350 - 1000	4206 15	4164 76	50
63	110	DPX³ 250	160	560 - 1600	4206 17	4164 76	50
90	157	DPX³ 250	160	560 - 1600	4206 17	4164 86	50
150	244	DPX³ 630	320	1600 - 3200	4220 34	4165 06	50
160	260	DPX³ 630	320	1600 - 3200	4220 34	4165 06	50
200	330	DPX³ 630	400	1600 - 3200	4220 35	4165 16	50
220	355	DPX³ 630	400	1600 - 3200	4220 35	4165 16	50
250	405	DPX³ 630	500	1600 - 3200	4220 36	4165 26	50

Selection table for CTX³ contactors for capacitor banks

Step power at 400 V up to	Terminals	Steps without detuned reactors				Steps with detuned reactors	
		With 3 terminals capacitors Alpivar³ & Alpican 		With 6 terminals Alpivar³ (wiring inside) 		With 3 terminals capacitors Alpivar³ & Alpican 	With 6 terminals Alpivar³ (wiring inside) 
		Contactors	+ capacitor switching units CTX-C	Contactors	+ capacitor switching units CTX-C	Contactors	Contactors
7.5 kVAr	Screw terminals	4160 8X	4168 74	4160 8X	4168 74	4160 9X	4160 8X
12.5 kVAr	Screw terminals	4160 9X	4168 74	4160 9X	4168 74	4161 0X	4160 9X
20 kVAr	Screw terminals	4161 2X	4168 74	4161 1X	4168 74	4161 2X	4161 0X
25 kVAr	Screw terminals	4161 2X	4168 74	4161 1X	4168 74	4161 3X	4161 0X
30 kVAr	Screw terminals	4161 3X	4168 74	4161 2X	4168 74	4161 4X	4161 1X
40 kVAr	Screw terminals	4161 4X	4168 75	4161 3X	4168 74	4161 6X	4161 3X
	Cage terminals	4161 5X	4168 76	4161 5X	4168 76	4161 7X	4161 5X
50 kVAr	Screw terminals	4161 8X	4168 77	4161 4X	4168 75	4161 8X	4161 3X
	Cage terminals	4161 9X	4168 76	4161 5X	4168 76	4161 9X	4161 5X
60 kVAr	Screw terminals	4162 2X	4168 77	4161 8X	4168 77	4162 0X	4161 6X
	Cage terminals	4162 3X	4168 76	4161 9X	4168 76	4162 1X	4161 7X
75 kVAr	Screw terminals	NA		4161 8X	4168 77	4162 4Y	4161 6X
	Cage terminals	NA		4161 9X	4168 76	4162 5Y	4161 7X
80 kVAr	Screw terminals	NA		4162 2X	4168 77	4162 6Y	4162 4Y
	Cage terminals	NA		4162 3X	4168 76	4162 7Y	4162 5Y

Coil voltage	X	Coil voltage	Y
24 V AC	0	24 V AC	0
24 V DC	1	24 V DC	1
48 V AC	2	48 V AC	2
48 V DC	3	48 V DC	3
110 V AC	4	100-240 V AC / 100-220 V DC	6
230 V AC	6		
380 V AC	8	400-440 V AC	9
415 V AC	9		

Industrial contactors CTX³

technical characteristics

Size of wire and tightening torque:

3P 9 A - 150 A

Frame \ Wire type		Main Terminal Size	(AWG / mm²)						mm(max)	Torque {lb-in}	Torque {Nm}	Torque {kgf. Cm}
CTX³ 22 - 9 A			18-10 / 1-6		18-10 / 1-6		18-10 / 1-6					
CTX³ 22 - 12 A			18-10 / 1-6		16-10 / 1-6		16-10 / 1-6					
CTX³ 22 - 18 A		M4	18-10 / 1-6		16-8 / 1.5-10		16-8 / 1.5-10		9.6	20	2.25	23
CTX³ 22 - 22 A			18-10 / 1-6		14-8 / 2.5-10		14-8 / 2.5-10					
CTX³ 40 - 32 A			18-10 / 1-6		12-8 / 2.5-10		12-8 / 2.5-10		12.8	20	2.25	23
CTX³ 40 - 40 A		M5	18-10 / 1-6		8-6 / 10-16		8-6 / 10-16			35	4	41
CTX³ 65 - 50 A		M6	_		10-4 / 6-25		10-4 / 6-25		14	35	4	41
CTX³ 65 - 65 A			_		8-3 / 10-35		8-3 / 10-35					
CTX³ 100 - 75 A			_		8-2 / 10-35		8-2 / 10-35					
CTX³ 100 - 85 A		M8	_		8-1/0 / 10-50		8-1/0 / 10-50		17	45	5.1	52
CTX³ 100 - 100 A			_		8-2/0 / 10-70		8-2/0 / 10-70					
CTX³ 150 - 130 A		M8	_		3-2/0 / 35-70		3-2/0 / 35-70		24.5	80	9.1	93
CTX³ 150 - 150 A			_		3-4/0 / 35-95		3-4/0 / 35-95					
CTX³ 22 - 150 Aux/Coil		M4	20-14 / 0.5-2.5		18-12 / 0.75-2.5		18-12 / 0.75-2.5		7.6	15	1.75	18

Frame \ Wire type		(AWG / mm²)						mm(max)	Torque {lb-in}	Torque {Nm}
CTX³ 65		0.75-35 / 18-2	0.75-25 / 18-4	0.75-35 / 18-2	0.75-25 / 18-4	0.75-25 / 18-4	0.75-16 / 18-6	___	35	4
CTX³ 100		2.5-70 / 12-2	2.5-50 / 12-1	2.5-70 / 12-2	2.5-50 / 12-1	2.5-50 / 12-2	2.5-35 / 10-2	___	45	5.1
CTX³ 150		2.5-70 / 12-2	2.5-50 / 12-1	35-95 / 3-4	35-95 / 3-4	35-95 / 3-4	35-95 / 3-4	___	80	9.1

3P 185 A - 800 A

Frame \ Wire type		Main Terminal Size	(AWG / mm²)			mm(max)	Torque {lb-in}	Torque {Nm}	Torque {kgf. Cm}
CTX³ 225 - 185 A		M10	-	1-4/0 / 50-95	1-4/0 / 50-95	25	130	14.7	150
CTX³ 225 - 225 A			-	1/0-300 / 50-150	1/0-300 / 50-150				
CTX³ 400 - 265 A		M12	-	3/0-500 / 95-240	3/0-500 / 95-240	30	200	22.6	230
CTX³ 400 - 330 A			-	4/0-500 / 95-240	4/0-500 / 95-240				
CTX³ 400 - 400 A			-	350-700 / 185-185 x 2	350-700 / 185-185 x 2				
CTX³ 800 - 500 A		M16	-	350-800 / 185-240 x 2	350-800 / 185-240 x 2	40	500	26.5	270
CTX³ 800 - 630 A			-	600-2000	-				
CTX³ 800 - 800 A			-	1700-Busbar	-				
CTX³ 225 - 800 Aux/Coil		M4	16-10 / 1.25-5.5	16-10 / 1.25-5.5	16-10 / 1.25-5.5	7.6	15	1.75	18

4P 40 A to 900 A

Frame size	Terminal screw Contactor	[mm/Max]	Size of wire [mm²]	Connecting torque [kgf cm] Contactor
4164 26	M4	9.6	2.5~10	15~22.5
4164 36	M5	12.8	10~16	26~39
4164 46	M6	14	16~35	45~67.5
4164 56	M8	17	25~50	100~150
4164 66	M8	17	35~70	100~150
4164 76	M8	17	35~95	100~150
4164 86	M10	25	50~150	150~225
4164 96, 4165 06	M12	30	95~240	250~375
4165 16, 4165 26	M16	40	185~480	600~1200

MPCBs MPX³

wiring capacity and accessories (continued)

MPX³ 32MA

Rated operational current Ie	(A)	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
AC-2, AC-3																	
230/240 V	(kW)	-	0.03	0.06	0.09	0.12	0.18/0.25	0.37	0.55/0.75	1.1/1.5	1.5	2.2/3	3	3.7/4	4	5.5	7.5
400/415 V	(kW)	0.02	0.06	0.09	0.12	0.18/0.25	0.37/0.55	0.75	1.1/1.5	2.2	3	3.7/4	5.5	7.5	7.5	11	15
500 V	(kW)	-	-	-	0.25	0.37	0.55/0.75	1.1	1.5/2.2	3	3.7	4/5.5	7.5	11	11	15	18.5
690 V	(kW)	-	-	-	0.25	0.37/0.55	0.75/1.1	1.5	2.2/3	3.7/4	5.5	7.5	11	11	15	18.5	22

MPX³ 63H

Rated operational current Ie	(A)	10	13	17	22	26	32	40	50	63
Switching of standard three-phase motors AC-2, AC-3										
230/240 V	(kW)	2.2/3	3	3.7/4	4	5.5	7.5	7.5	11	15
400/415 V	(kW)	3.7/4	5.5	7.5	7.5	11	15	18.5	22	30
500 V	(kW)	4/5.5	7.5	11	11	15	18.5	22	30	37
690 V	(kW)	7.5	11	11	15	18.5	22	30	45	55

MPX³ 100H

Rated operational current Ie	(A)	17	22	26	32	40	50	63	75	90	100
Switching of standard three-phase motors AC-2, AC-3											
230/240 V	(kW)	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
400/415 V	(kW)	7.5	7.5	11	15	18.5	22	30	37	45	45
500 V	(kW)	11	11	15	18.5	22	30	37	45	55	63
690 V	(kW)	11	15	18.5	22	30	45	55	63	75	90

MPCBs MPX³

technical characteristics

Terminals

			MPX³ 32S	MPX³ 32H / 32 MA	MPX³ 63H	MPX³ 100H
Conformity to standards			IEC60947 UL508, UL508 Type E			
Approvals			CE, UL			
Terminal type						
Single-core	1 conductor	(mm²) / (AWG)	1...10 / 18...8	1...10 / 18...8	0.75...35 / 18...2	2.5...70 / 12...2/0
	2 conductor	(mm²) / (AWG)	1...6 / 18...10	1...6 / 18...10	0.75...25 / 18...4	2.5...50 / 12...1/0
Stranded	1 conductor	(mm²) / (AWG)	1...6 / 18...10	1...6 / 18...10	0.75...35 / 18...2	2.5...70 / 12...2/0
	2 conductor	(mm²) / (AWG)	1...6 / 18...10	1...6 / 18...10	0.75...25 / 18...4	2.5...50 / 12...1/0
Flexible	1 conductor	(mm²) / (AWG)	1...6 / 18...10	1...6 / 18...10	0.75...25 / 18...4	2.5...50 / 12...1/0
	2 conductor	(mm²) / (AWG)	0.75...4 / 18...10	0.75...4 / 18...10	0.75...16 / 18...6	2.5...35 / 10...2
Tightening torque		(Nm) / (lb-in)	0.8...2.5 / 7...22	0.8...2.5 / 7...22	3...4.5 / 26...39	4...6 / 35...53

Auxiliaries

			Auxiliary contacts for front mounting		Auxiliary contacts for left side mounting		Alarm switch for left side mounting	
Rated thermal current / th								
at 40 °C ambient temperature		(A)	5		10		10	
at 60 °C ambient temperature		(A)	3		6		6	
Contact class coordination according to NEMA								
(UL/CSA-Standards)		AC	A600		A600		A600	
		DC	Q300		Q300		Q300	
Back-up fuses gG, gL		(A)	16		16		16	
Rated supply current								
	AC-15	(V)	-	240	24	240	24	240
		(A)	-	3	6	4	6	4
	DC-13	(V)	24	220	24	220	24	220
		(A)	1	0.1	2	0.25	2	0.25
Weight (g)			18		30		40	
Terminal type								
Screwdriver					Pozidriv size 2			
Single-core	1 conductor	(mm²) / (AWG)	0.5...2.5 / 20...14		0.5...2.5 / 20...14			
	2 conductor	(mm²) / (AWG)	-		0.5...2.5 / 20...14			
Stranded	1 conductor	(mm²) / (AWG)	0.5...4 / 20...10		0.5...4 / 20...10			
	2 conductor	(mm²) / (AWG)	0.75...2.5 / 18...14		0.75...2.5 / 18...14			
Tightening torque		(Nm) / (lb-in)	0.8...1.2 / 7...10		0.8...1.2 / 7...10			

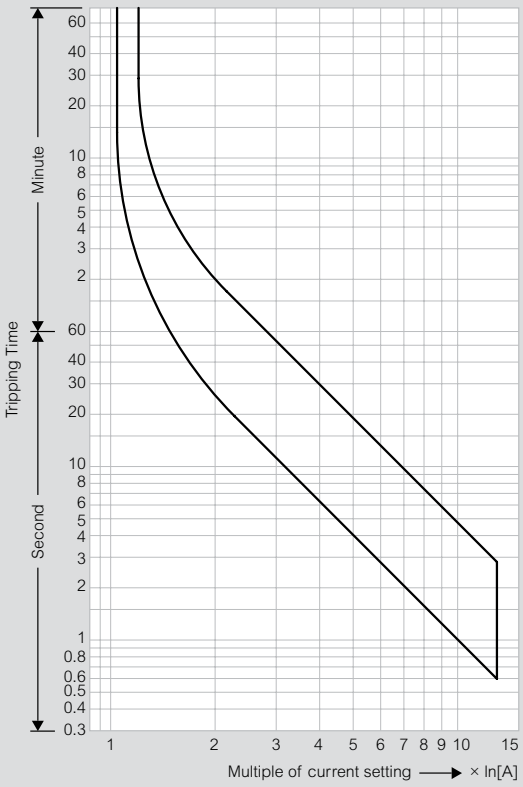
			Undervoltage release for right side mounting	Undervoltage release with 2 auxiliary contacts for right side mounting	Shunt release for right side mounting
Actuating voltage					
		Pull-in	0.7...1.1 x Us	0.85...1.1 x Us	0.85...1.1 x Us
		Drop-out		0.7...0.35 x Us	0.7...0.35 x Us
Rated control voltage					
		min:	24 V 50 Hz / 28 V 60 Hz	24 V 50 Hz / 28 V 60 Hz	24 V 50 Hz / 28 V 60 Hz
		max:	415-440 V 50 Hz / 460-480 V 60 Hz	415-440 V 50 Hz / 460-480 V 60 Hz	415-440 V 50 Hz / 460-480 V 60 Hz
Coil rating					
		Pull-in	8.5 VA, 6 W	8.5 VA, 6 W	8.5 VA, 6 W
		Hold	3 VA, 12 W	3 VA, 12 W	3 VA, 12 W
Opening time (ms)			-	20	20
Weight (g)			18	30	40
Terminal type					
Screwdriver			Pozidriv size 2		
Single-core	1 conductor	(mm²) / (AWG)	0.5...2.5 / 20...14		
	2 conductor	(mm²) / (AWG)	0.5...2.5 / 20...14		
Standard	1 conductor	(mm²) / (AWG)	0.5...4 / 20...10		
	2 conductor	(mm²) / (AWG)	0.75...2.5 / 18...14		
Tightening torque		(Nm) / (lb-in)	0.8...1.2 / 7...10		

Thermal relays RTX³

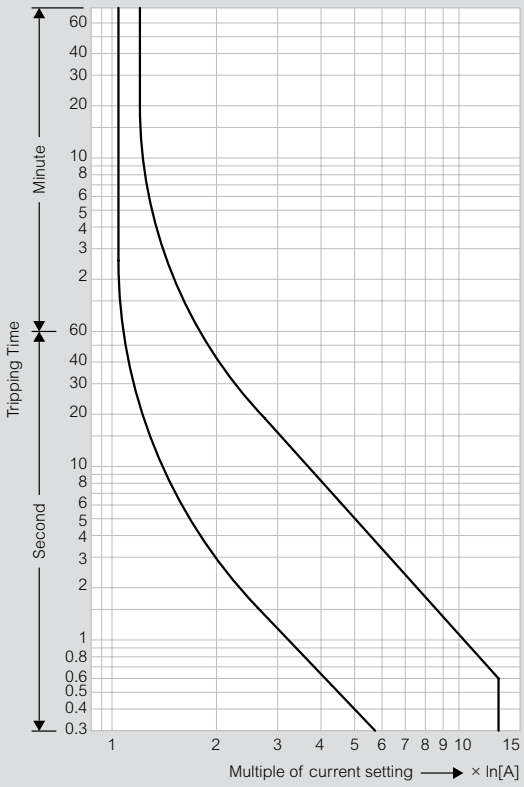
tripping curves

RTX³ 40 - class 10 A

Cold starting

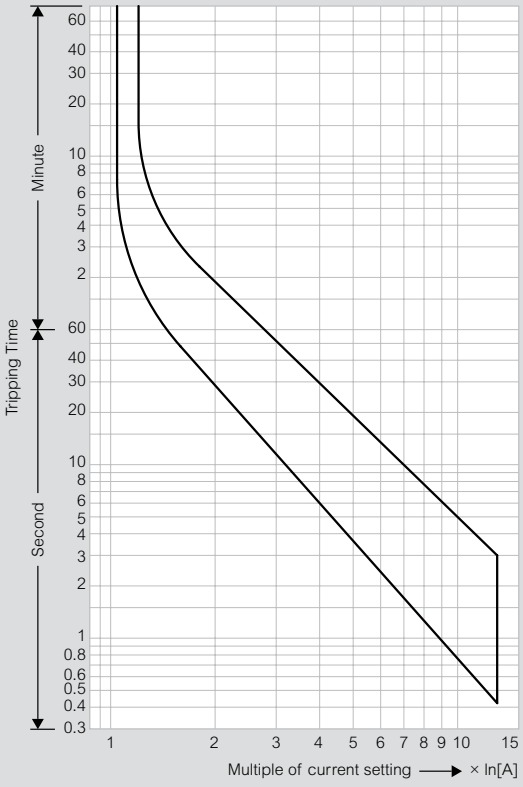


Hot starting

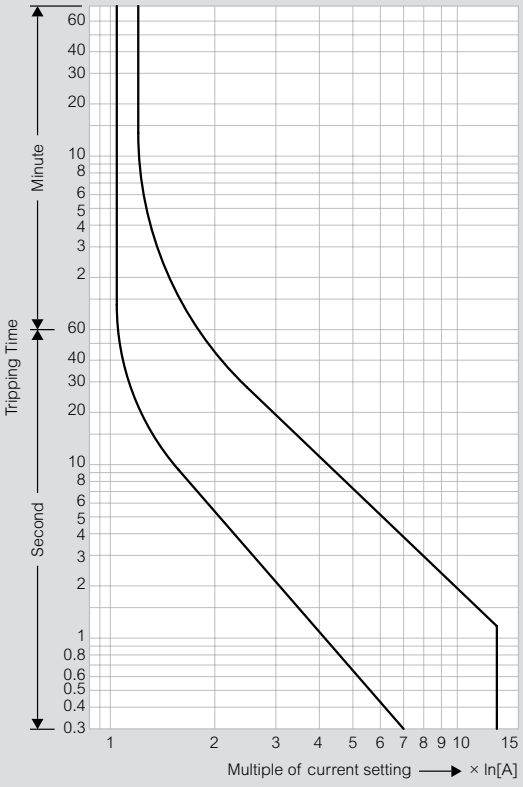


RTX³ 65 - class 10 A

Cold starting



Hot starting

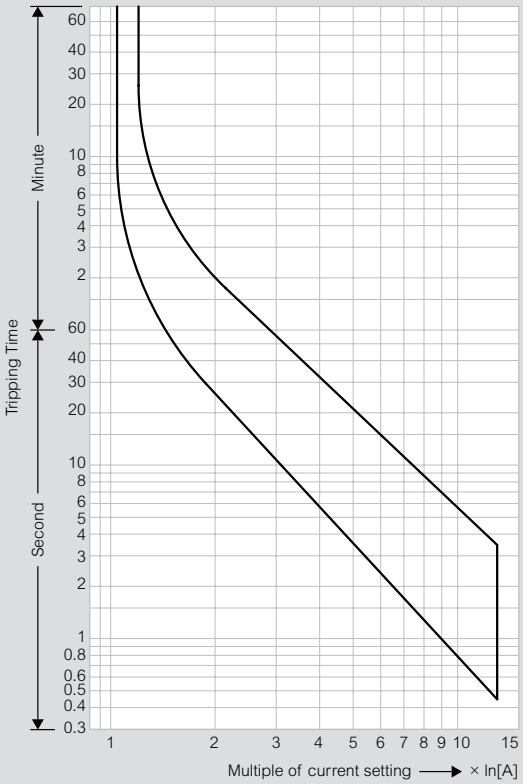


Thermal relays RTX³

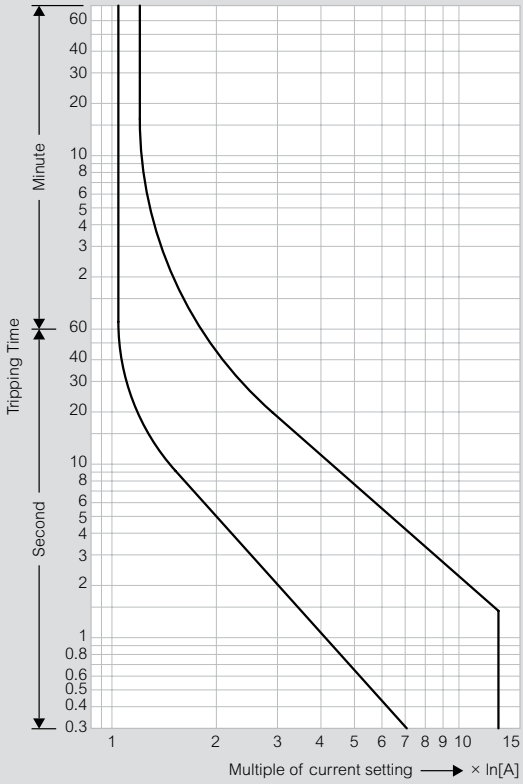
tripping curves (continued)

RTX³ 100 - class 10 A

Cold starting

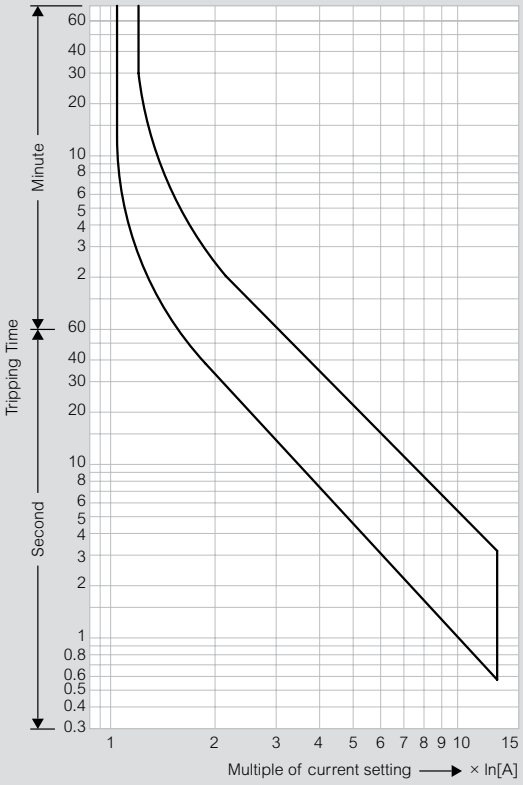


Hot starting

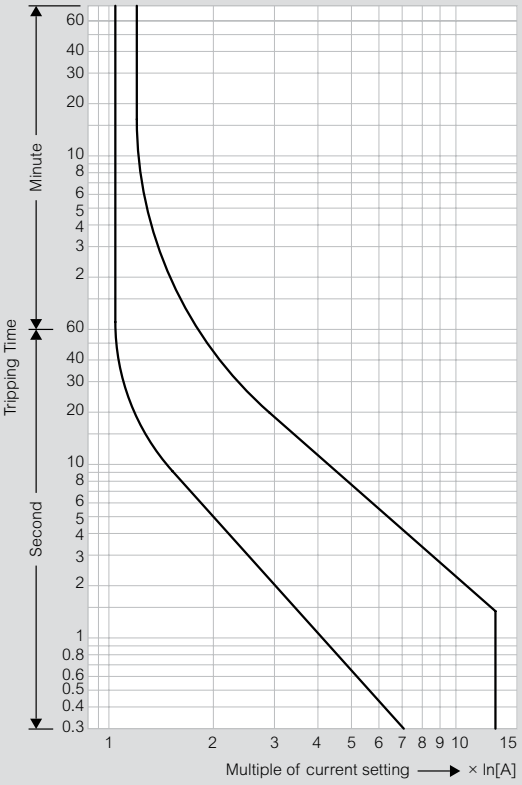


RTX³ 150 - class 10 A

Cold starting



Hot starting

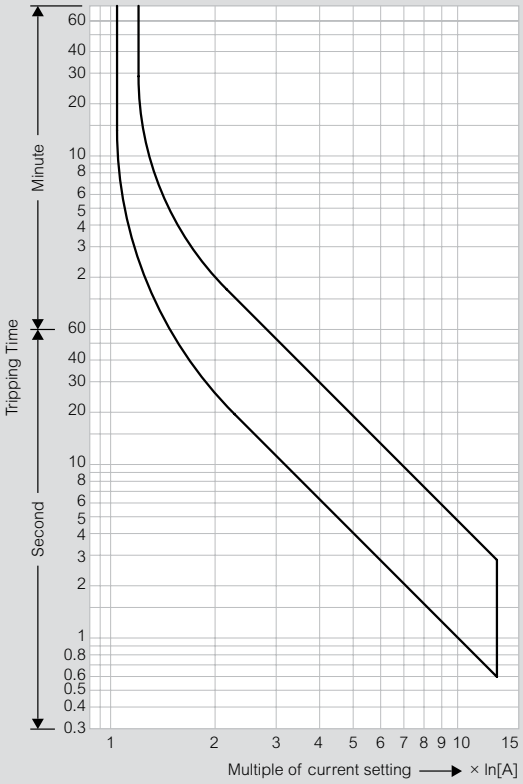


Thermal relays RTX³

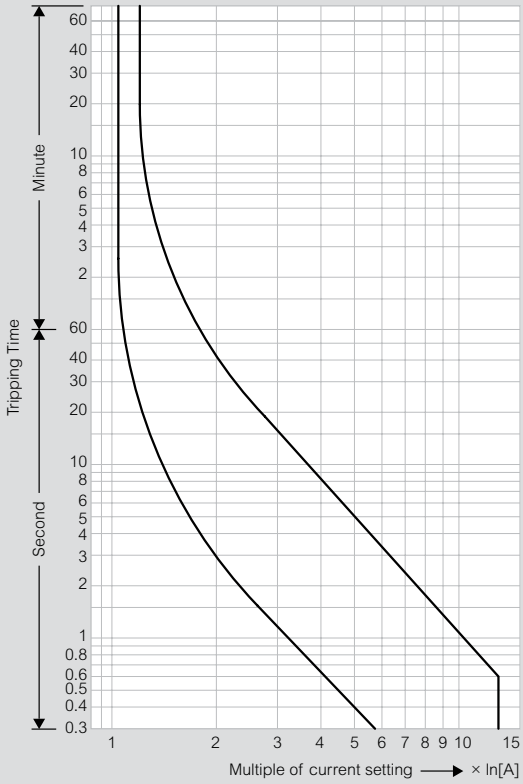
tripping curves (continued)

RTX³ 225 - class 10 A

Cold starting

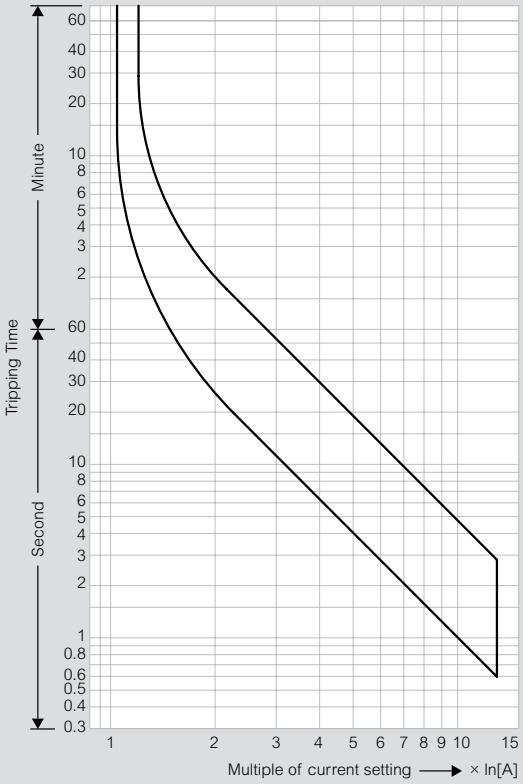


Hot starting

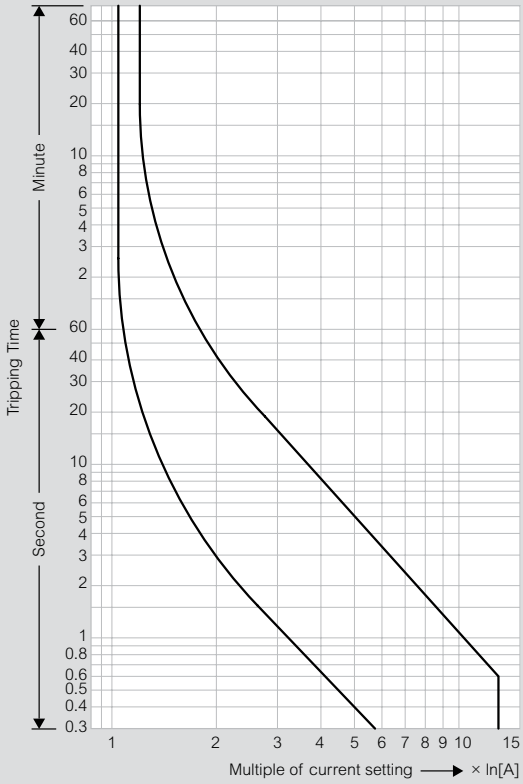


RTX³ 400 - class 10 A

Cold starting



Hot starting

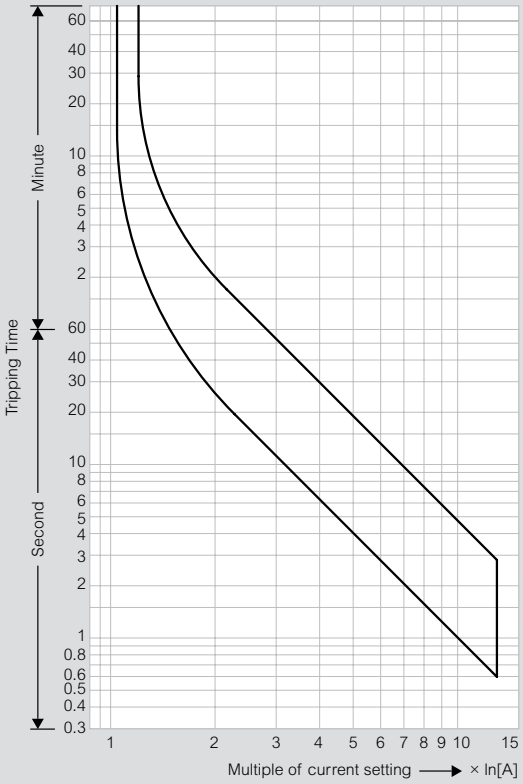


Thermal relays RTX³

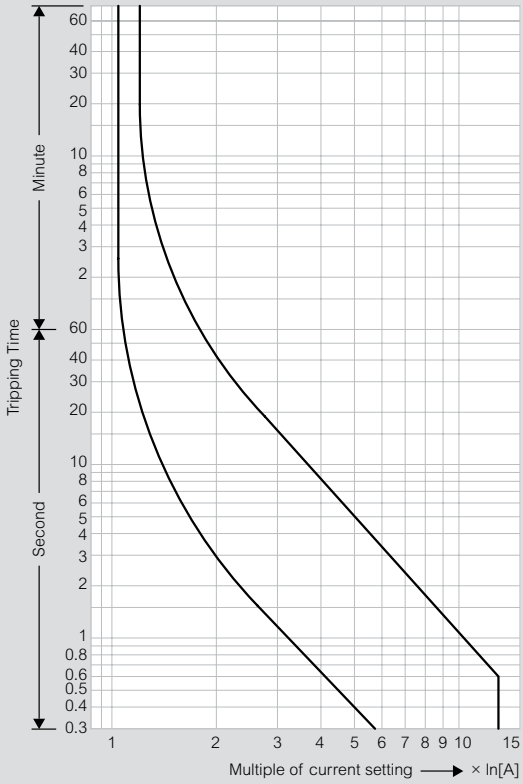
tripping curves (continued)

RTX³ 800 - class 10 A

Cold starting

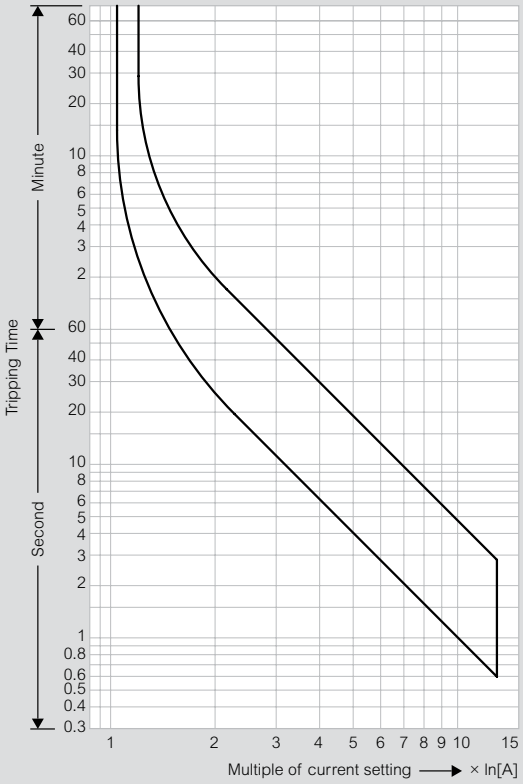


Hot starting

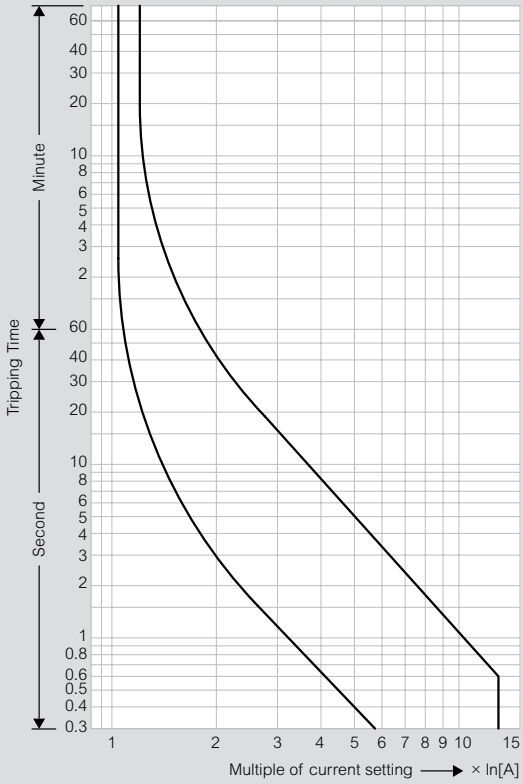


RTX³ mini - class 10 A (thermal relays for CTX³ mini contactors)

Cold starting

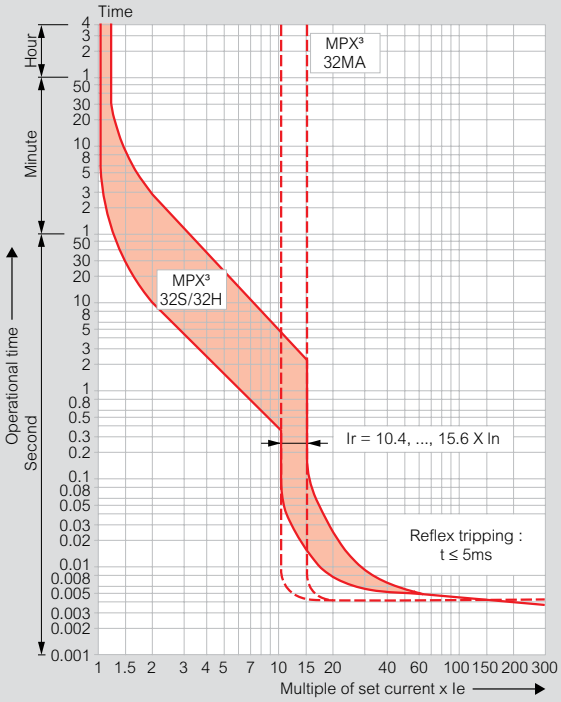


Hot starting

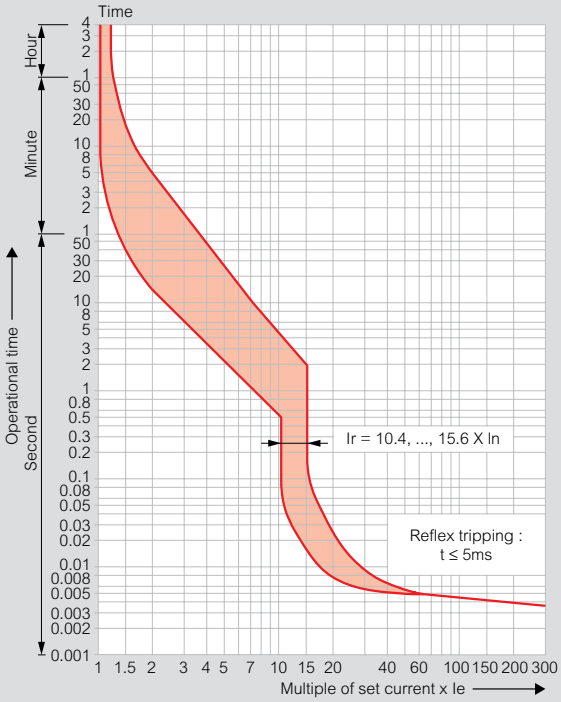


Tripping curves

MPX³ 32S / 32H / 32MA



MPX³ 63H / 100H



1) Thermal release trip current :

The adjustable inverse bimetal trip reliability protects motors against overloads.
The curve shows the mean operating current at an ambient temperature of 20 °C starting from cold.
Careful testing and setting ensures effective motor protection even in the case of single-phasing.

2) Magnetic release trip current :

The instantaneous magnetic trip has a fixed operating current setting.
This corresponds to 13 times the maximum value of setting range, at a lower setting it is correspondingly higher.

3) Current setting Ie :

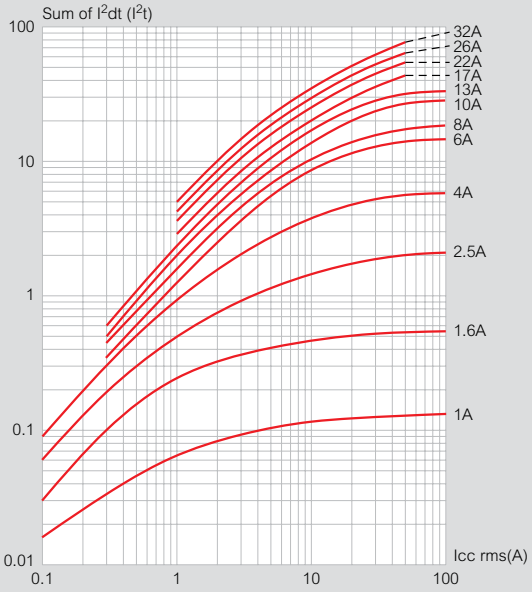
The overload trip corresponds to a thermal overload relay in a motor starter conforming to IEC 947-4-1.
If a different value is prescribed (e.g. reduced Ie for cooling medium having a temperature higher
than 40 °C or a place of installation higher than 2000m above sea level), the setting current is equal to the reduced rated current Ie of the motor.

MPCBs MPX³

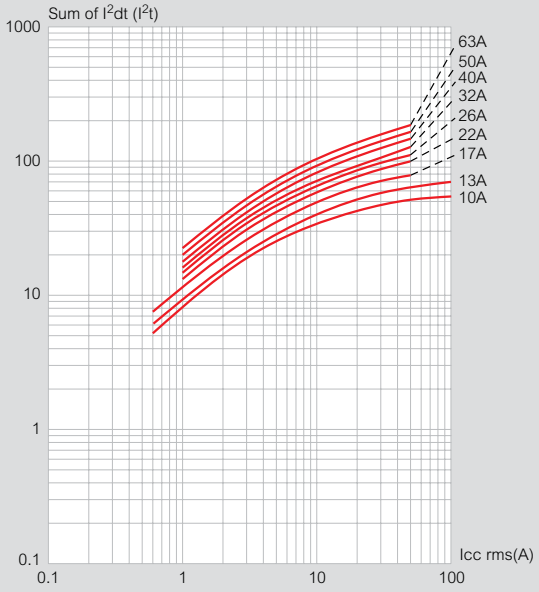
curves (continued)

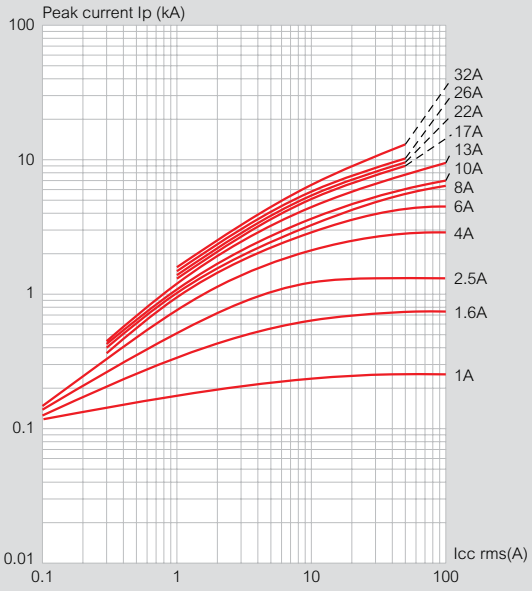
Thermal limit in kA²s in the magnetic operating zone (Ue = 415 V)

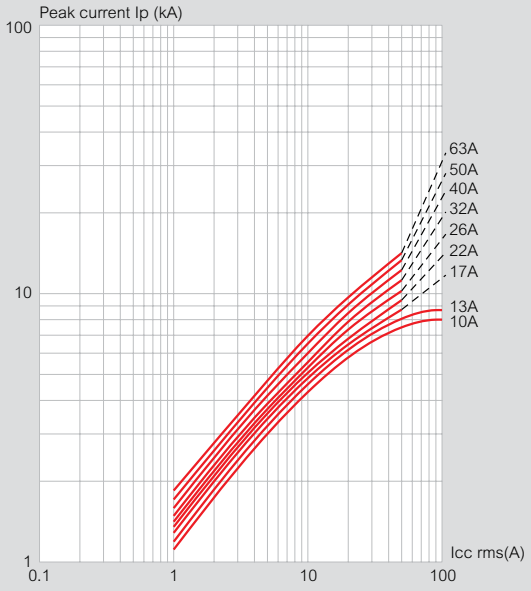
MPX³ 32S / 32H / 32MA



MPX³ 63H / 100H





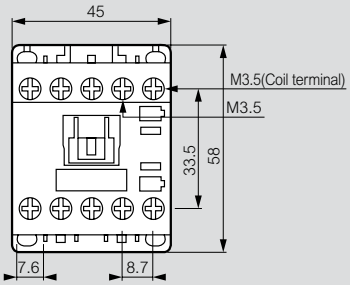


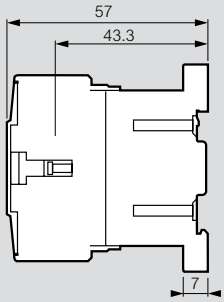
Mini contactors CTX³

technical characteristics and dimensions

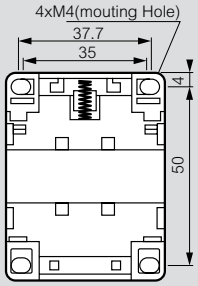
Mini contactors 3P and 4P and control relays

AC control



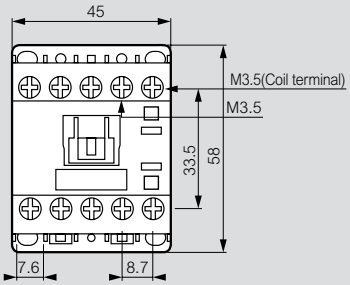


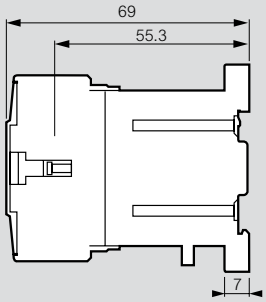
[mm]



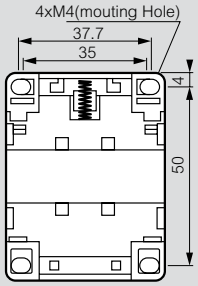
0.17kg

DC control



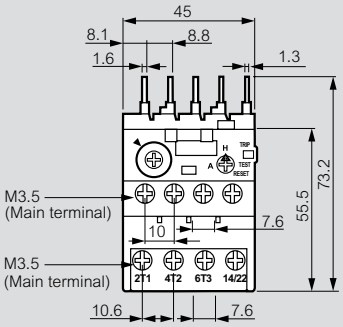


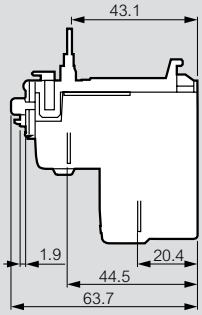
[mm]



0.23kg

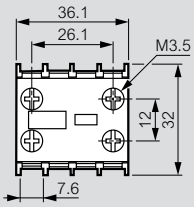
Thermal overload relays for mini contactors

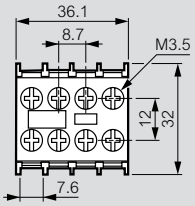


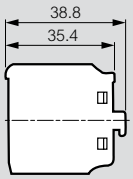


Auxiliary contacts

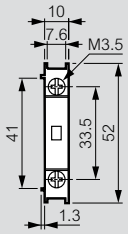
Front mounting

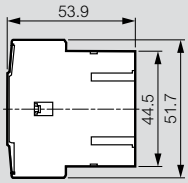






Side mounting

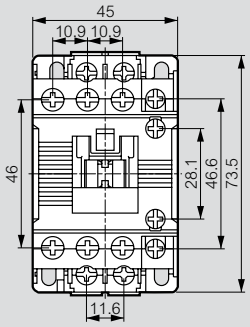


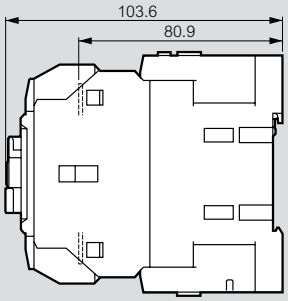


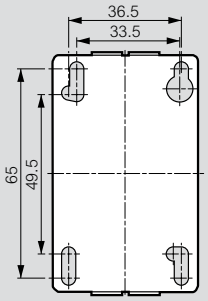
3-pole contactors CTX³

dimensions

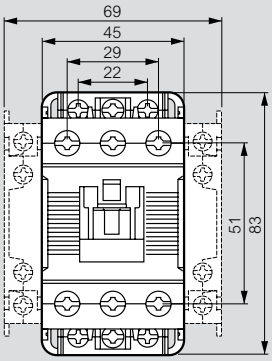
CTX³ 22

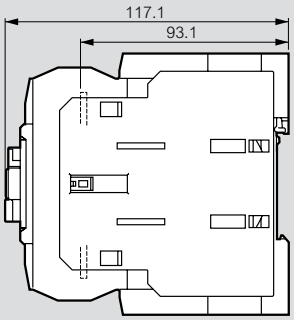


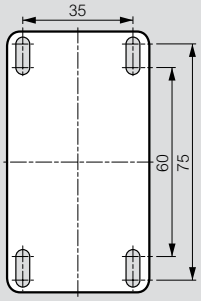




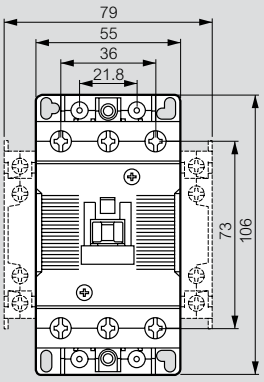
CTX³ 40

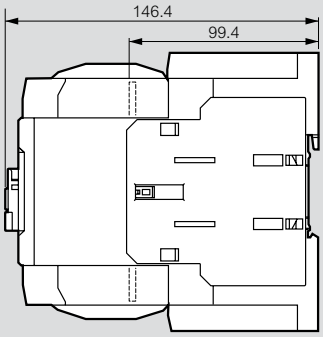


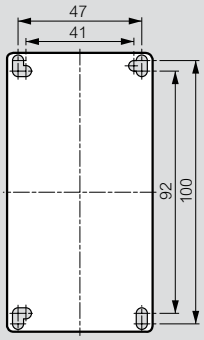




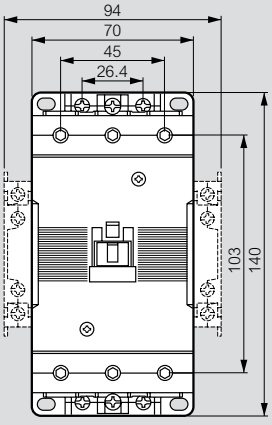
CTX³ 65

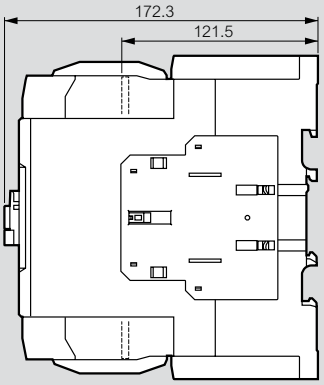


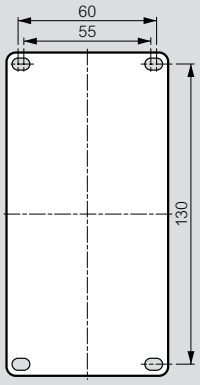




CTX³ 100



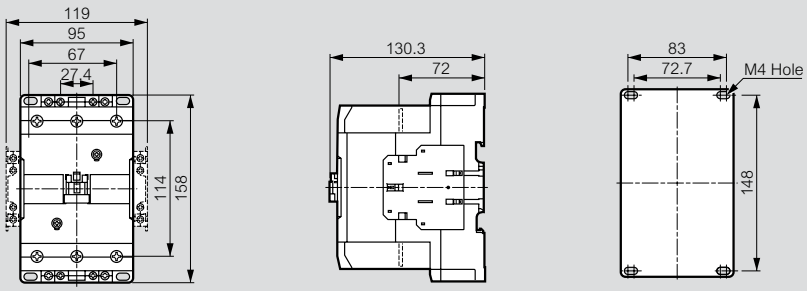




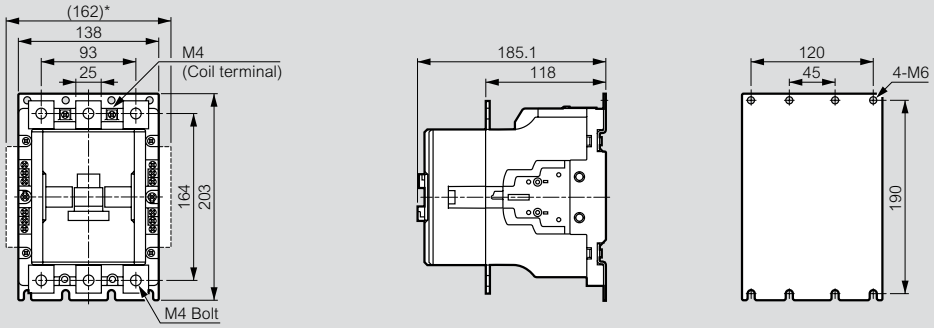
3-pole contactors CTX³

dimensions (continued)

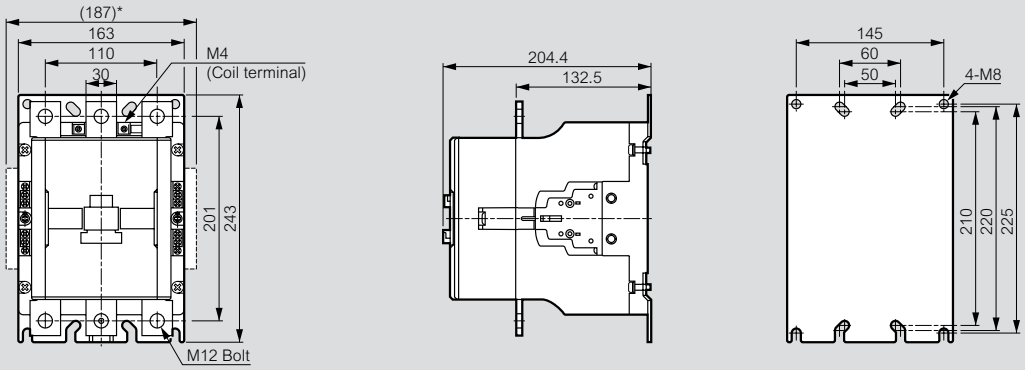
CTX³ 150



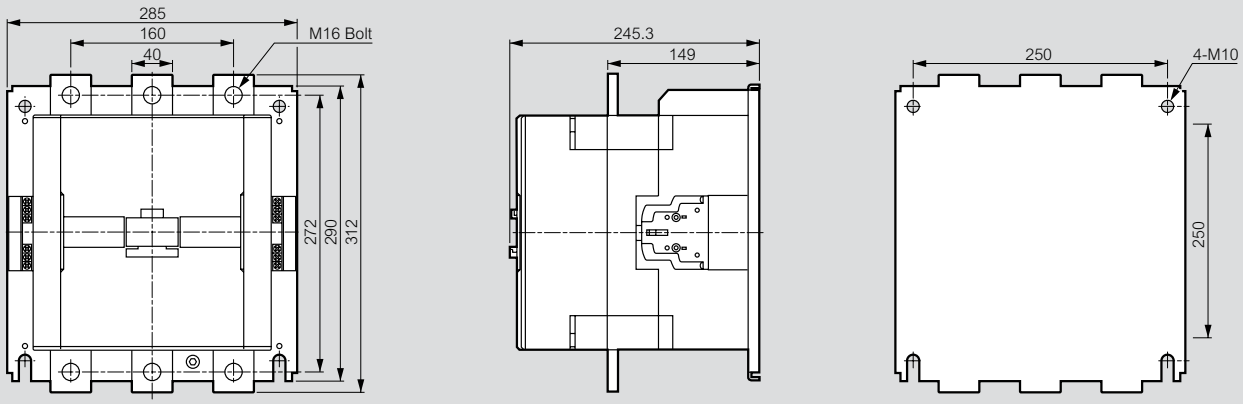
CTX³ 225



CTX³ 400



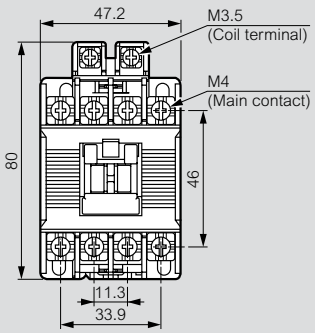
CTX³ 800

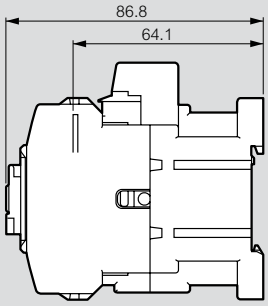


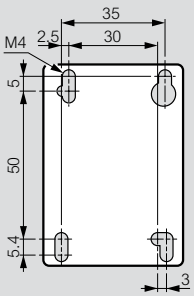
4-pole contactors CTX³

dimensions

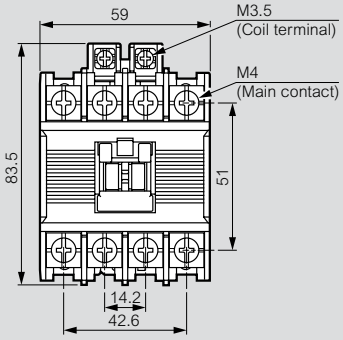
CTX³ 4P 40 A

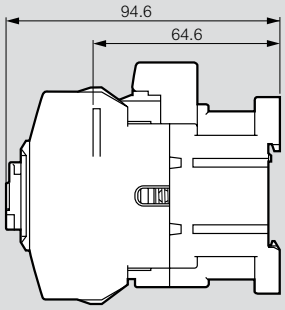


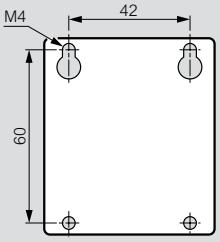




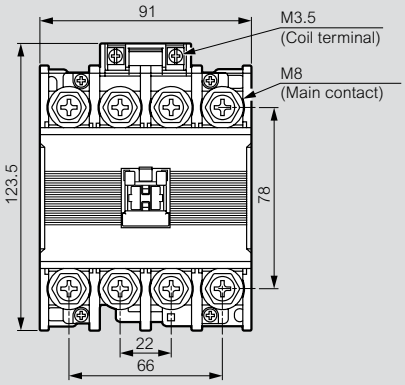
CTX³ 4P 60 A

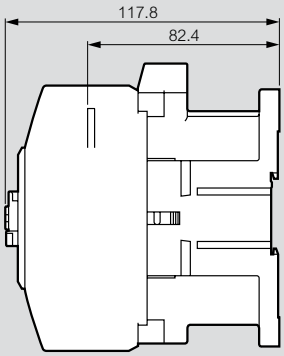


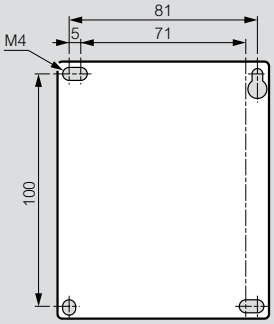




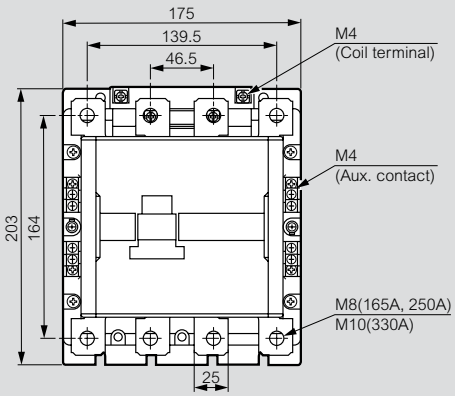
CTX³ 4P 100 A and 135 A

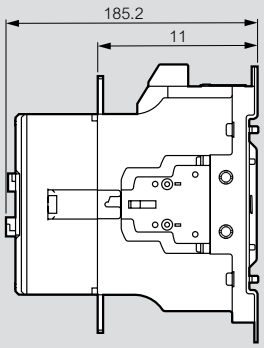


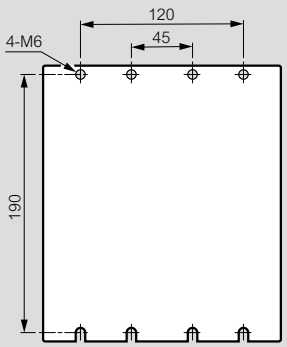




CTX³ 4P 165 A, 250 A and 330 A



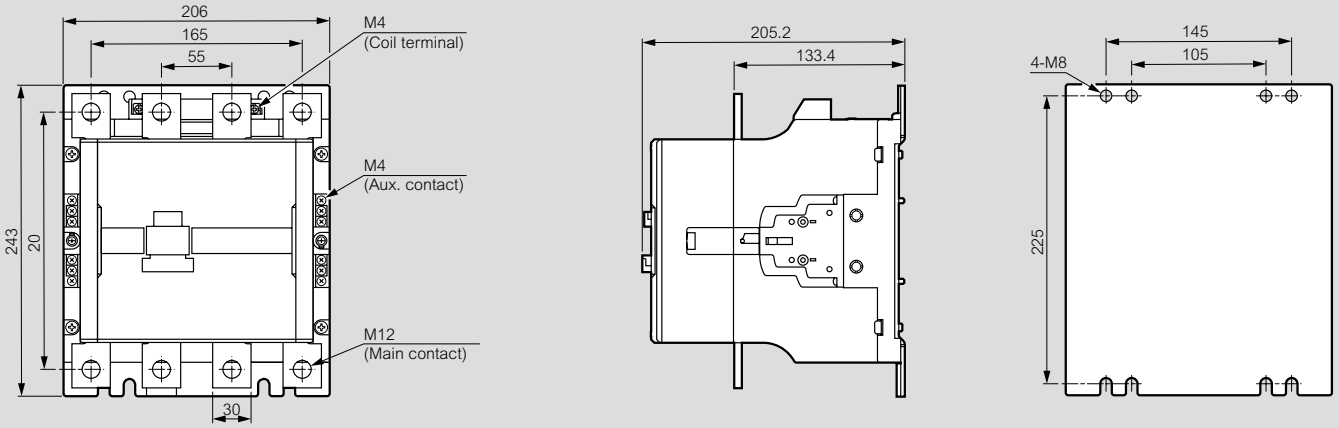




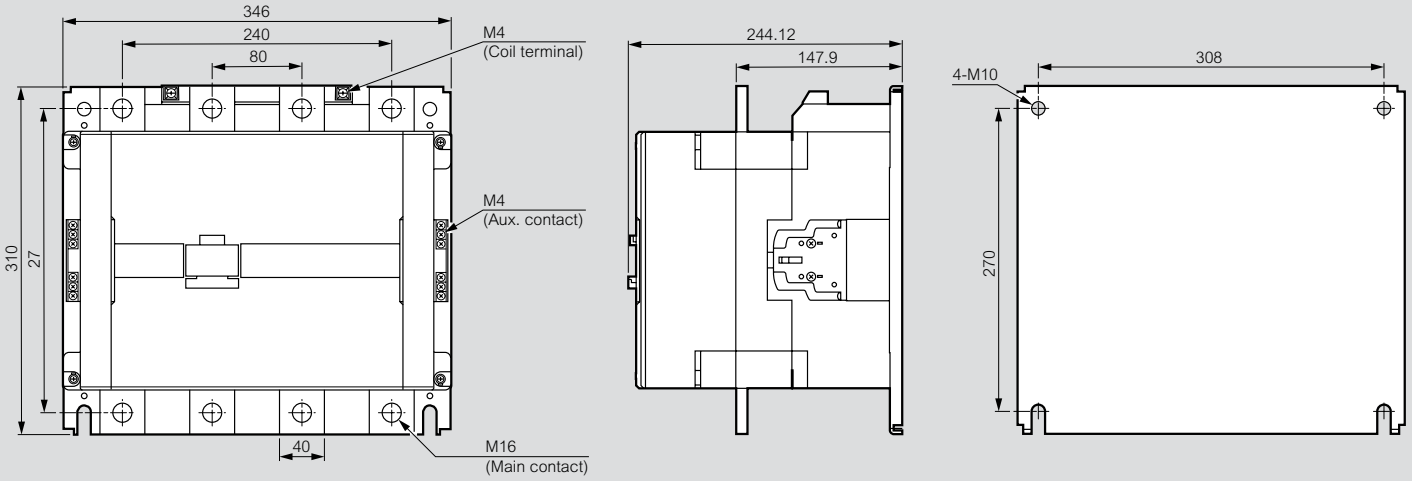
4-pole contactors CTX³

dimensions (continued)

CTX³ 4P 420 A and 500 A



CTX³ 4P 750 A and 900 A

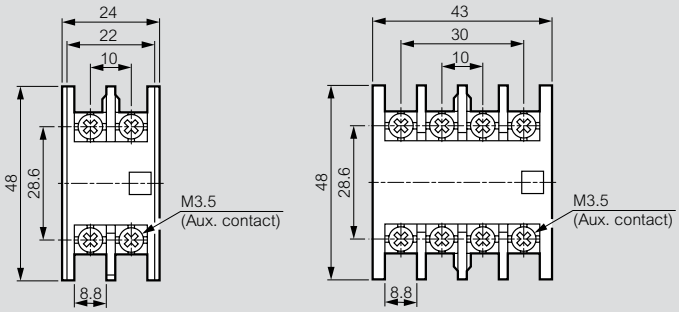


CTX³ accessories

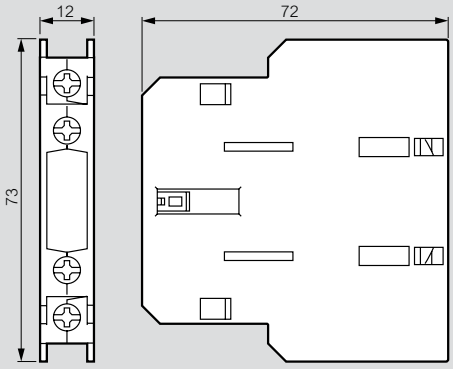
dimensions and wiring diagrams

Auxiliary contacts for CTX³

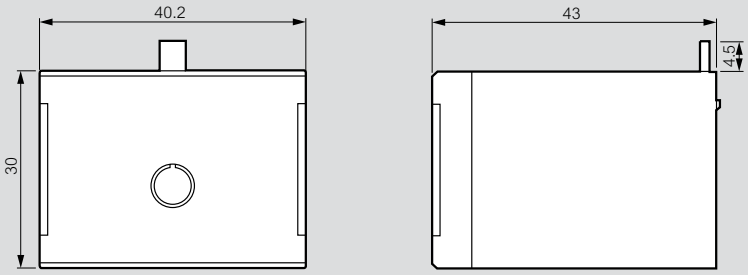
Front mounting



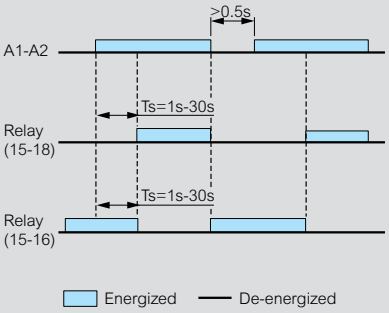
Side mounting



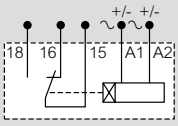
CTX³ time-delay blocks



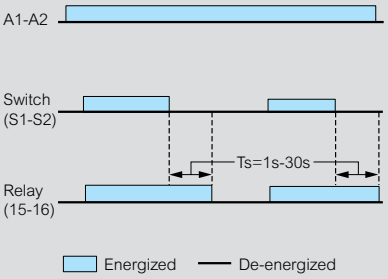
ON delay - Cat.Nos 4168 70/71



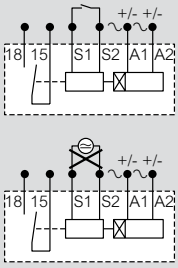
Circuit diagram



OFF delay - Cat.Nos 4168 72/73



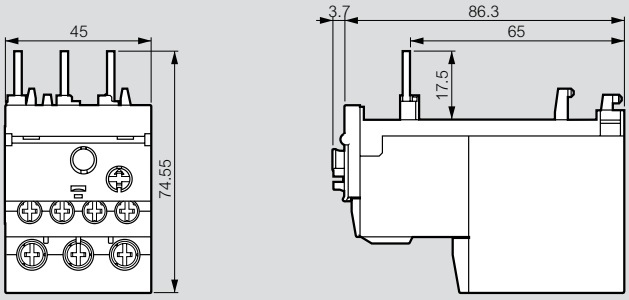
Circuit diagram



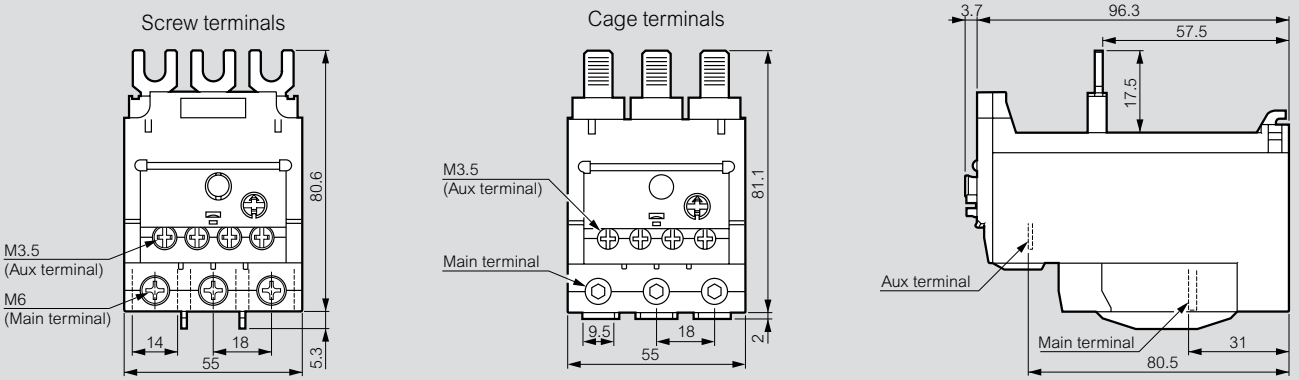
Thermal relays RTX³ - screw type terminals and cage terminals

dimensions

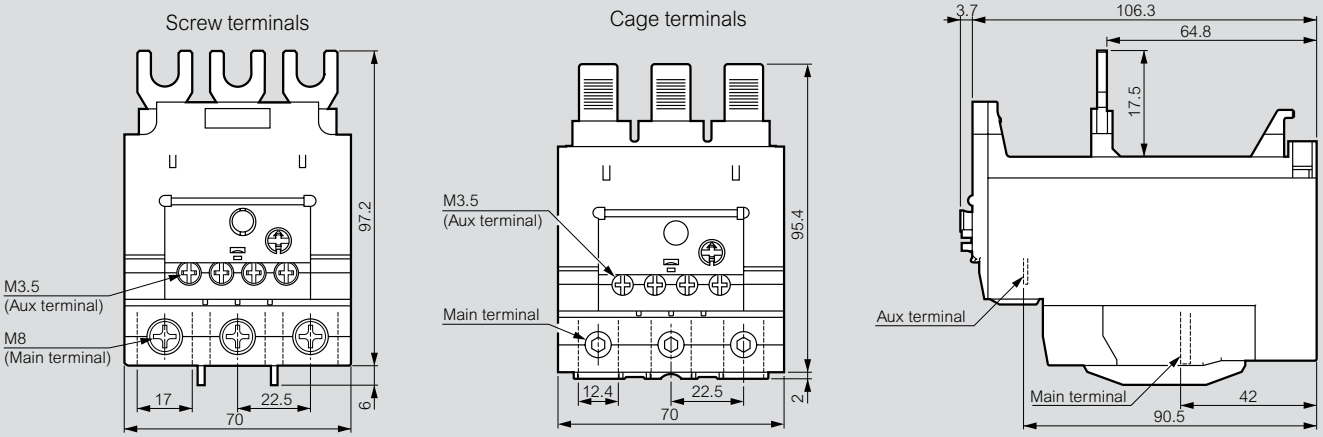
RTX³ 40



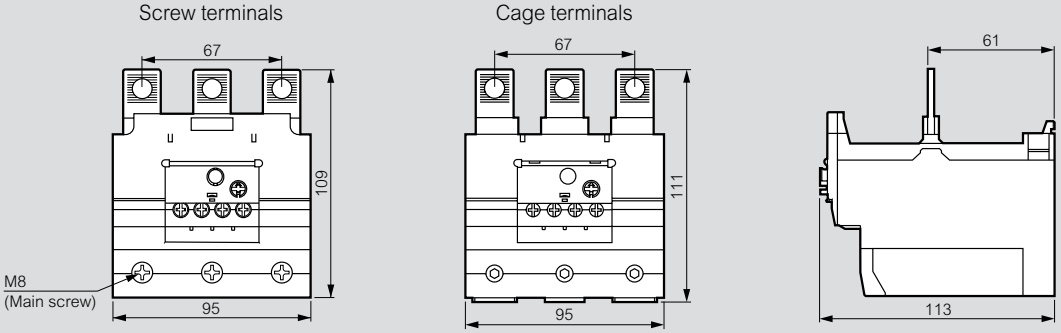
RTX³ 65



RTX³ 100



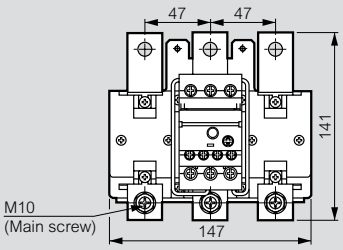
RTX³ 150

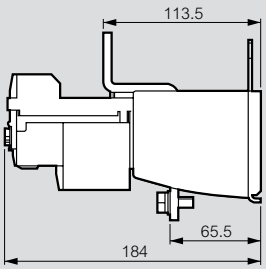


Thermal relays RTX³ - screw type terminals and cage terminals

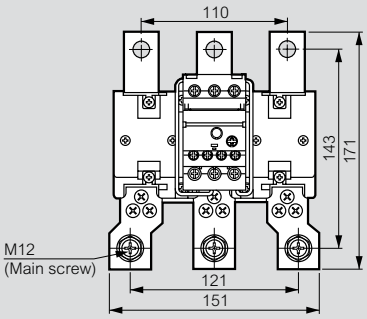
dimensions (continued)

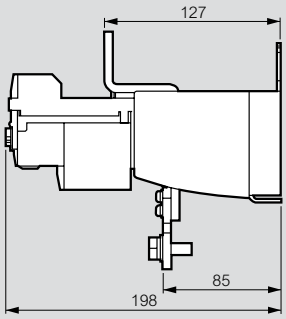
RTX³ 225



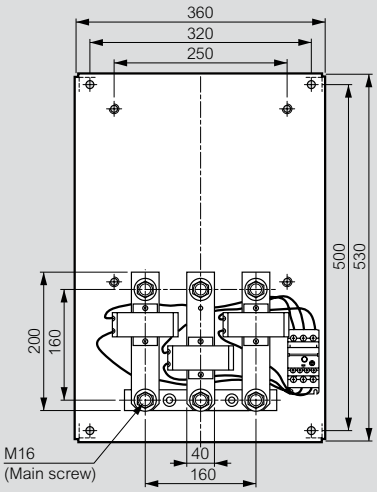


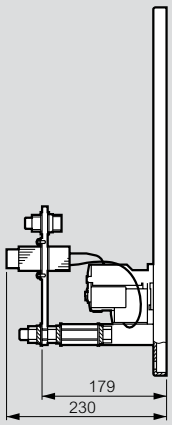
RTX³ 400



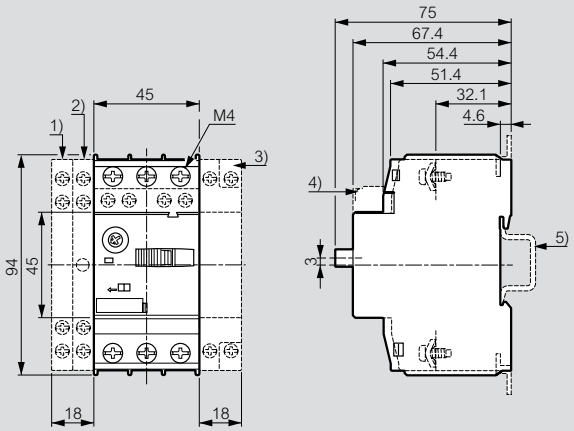


RTX³ 800



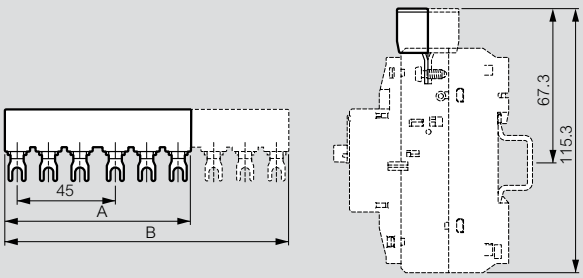


MPX³ 32S



Weight: 0.320 kg

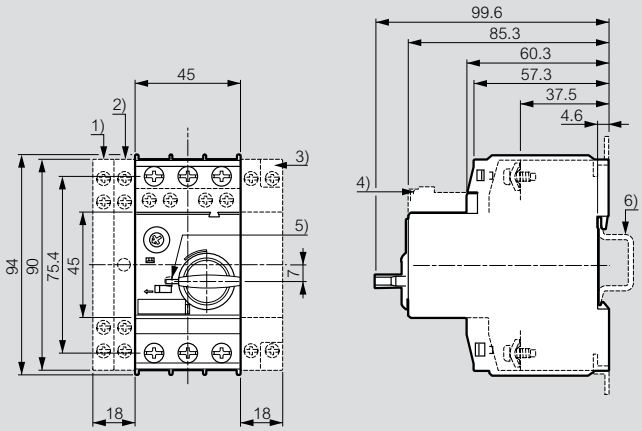
1) Side auxiliary contact
2) Side magnetic trip alarm contact
3) Side shunt release or
Side undervoltage release
4) Front auxiliary contact
5) 35 mm standard mounting rail acc. to EN 50 022



Cat.Nos	Numbers of MPX³	A(1) (mm)	B (mm)
4174 71	2	85	-
4174 73	3	-	130
4174 75	4	-	175
4174 76	5	-	220

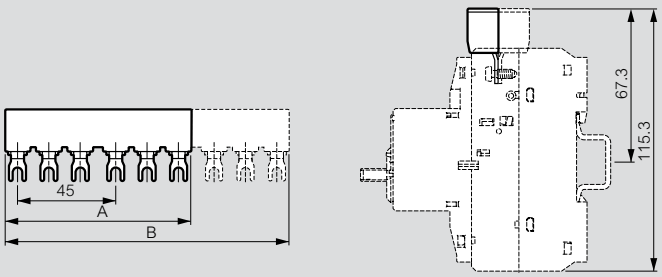
(1) Only for Cat.No 4174 71

MPX³ 32H / 32MA



Weight: 0.360 kg

1) Side auxiliary contact
2) Side magnetic trip alarm contact
3) Side shunt release or
Side undervoltage release
4) Front auxiliary contact
5) Handle lock in OFF position (Ø 5 mm)
6) 35 mm standard mounting rail acc. to EN 50 022



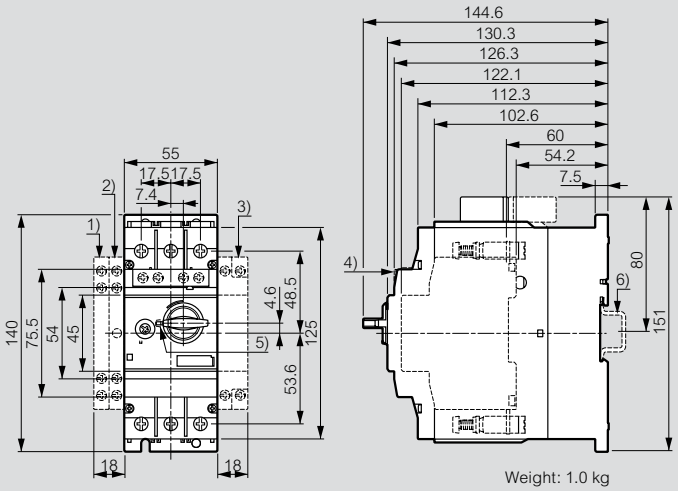
Cat.Nos	Numbers of MPX³	A(1) (mm)	B (mm)
4174 71	2	85	-
4174 73	3	-	130
4174 75	4	-	175
4174 76	5	-	220

(1) Only for Cat.No 4174 71

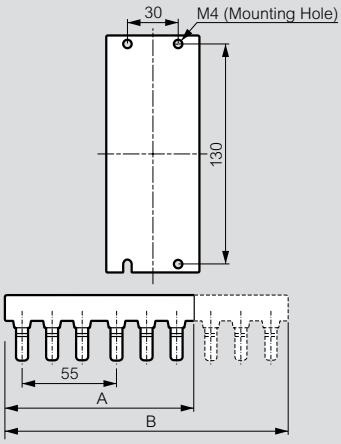
MPCBs MPX³

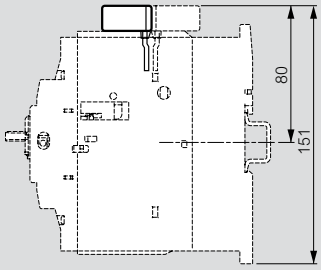
dimensions (continued)

MPX³ 63H



Weight: 1.0 kg



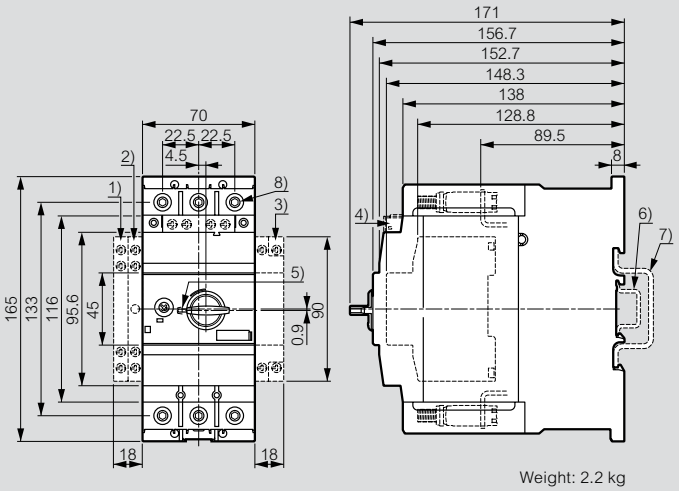


1) Side auxiliary contact
2) Side magnetic trip alarm contact
3) Side shunt release or Side undervoltage release
4) Front auxiliary contact
5) Handle lock in OFF position (Ø 5 mm)
6) 35 mm standard mounting rail acc. to EN 50 022

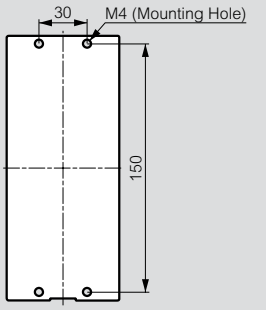
Cat.Nos	Numbers of MPX³	A(1) (mm)	B (mm)
4174 72	2	110	-
4174 74	3	-	165

(1) Only for Cat.No 4174 72

MPX³ 100H



Weight: 2.2 kg



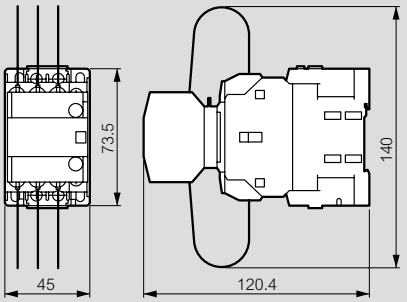
1) Side auxiliary contact
2) Side magnetic trip alarm contact
3) Side shunt release or Side undervoltage release
4) Front auxiliary contact
5) Handle lock in OFF position (Ø 5 mm)
6) 35 mm standard mounting rail acc. to EN 50 022
7) 75 mm standard mounting rail acc. to EN 50 023
6) 4 mm hexagon socket screw

Contactors CTX³

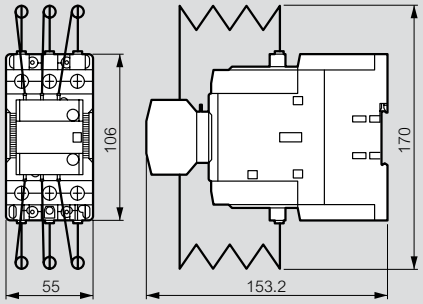
dimensions

Overall dimensions of contactors equipped with CTX³ switching units

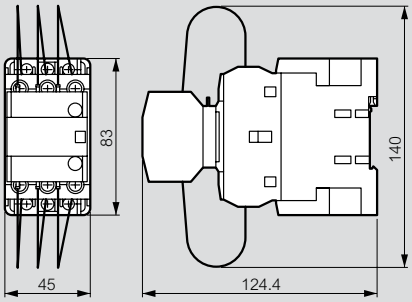
Cat.No 4168 74 on CTX³ 22



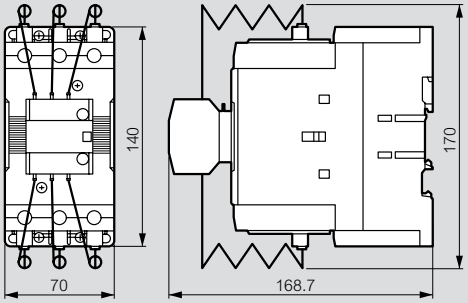
Cat.No 4168 75 on CTX³ 65



Cat.No 4168 74 on CTX³ 40



Cat.No 4168 77 on CTX³ 100

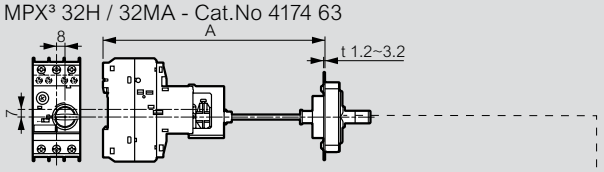


MPCBs MPX³

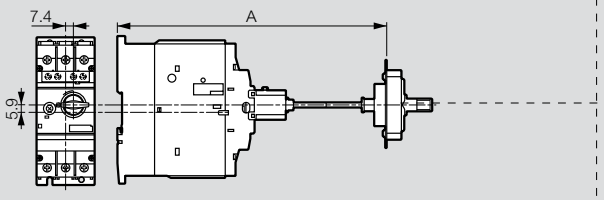
dimensions (continued)

External Handle

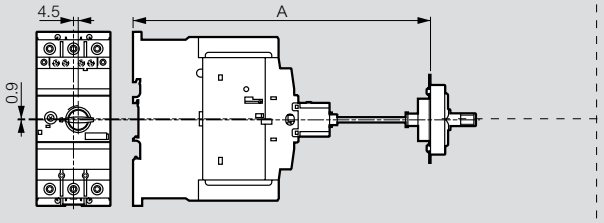
MPX³ 32H / 32MA - Cat.No 4174 63



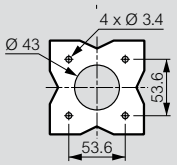
MPX³ 63H - Cat.No 4174 64



MPX³ 100H - Cat.No 4174 65

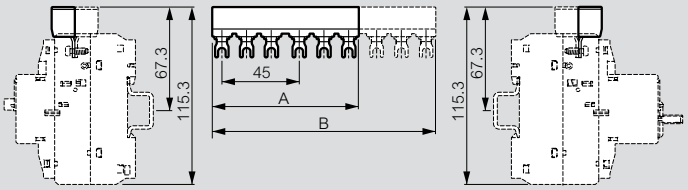


Cat.Nos	A (mm)	MMS Type
4174 63	min: 148.6 max: 410.6 (Shaft 315mm)	MPX³ 32H / 32MA
4174 64	min: 193.6 max: 455.6 (Shaft 315mm)	MPX³ 63H
4174 65	min: 220 max: 482 (Shaft 315mm)	MPX³ 100H

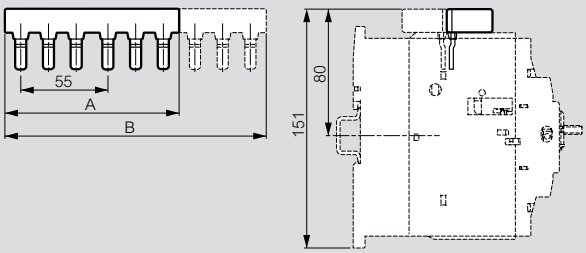


Phase Bus

Cat.Nos 4174 71/73/75/76



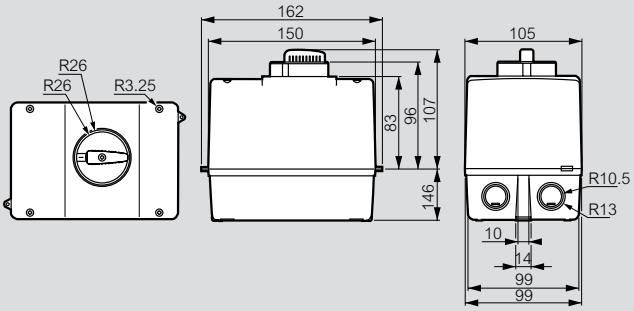
Cat.Nos 4174 72/74



Cat.Nos	Number of MPX³	A (mm)	B (mm)
4174 71	2	85	-
4174 72	3	-	130
4174 73	2	110	-
4174 74	3	-	165
4174 75	4	-	175
4174 76	5	-	220

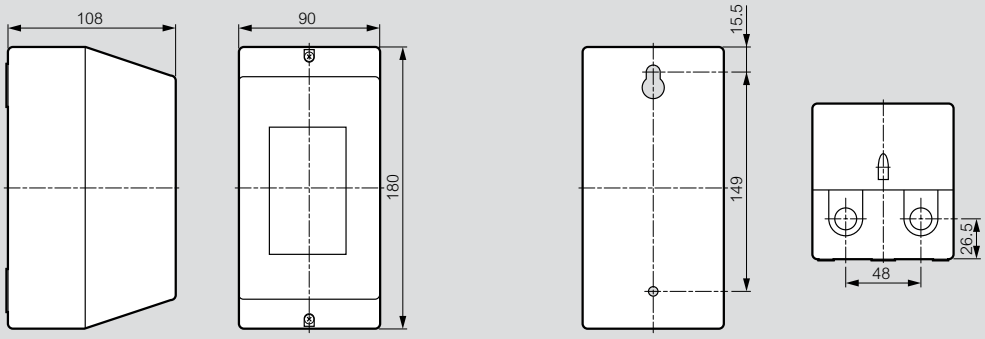
Enclosure

Cat.Nos 4174 80/81

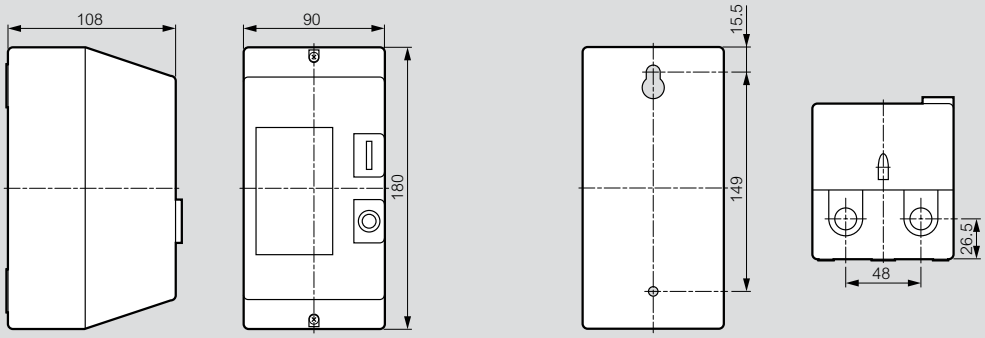


Boxes for motor starters

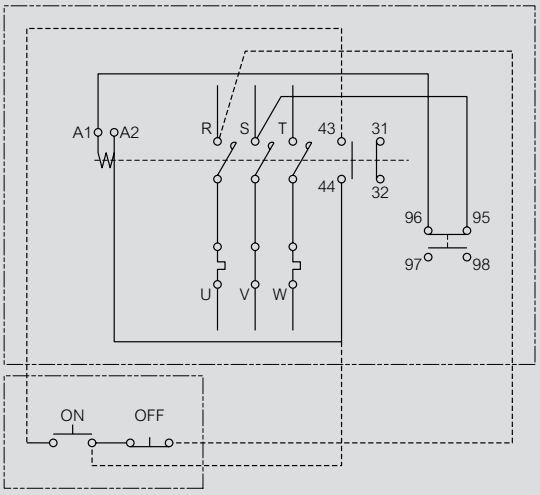
Without pushbuttons - Cat.No 4168 90



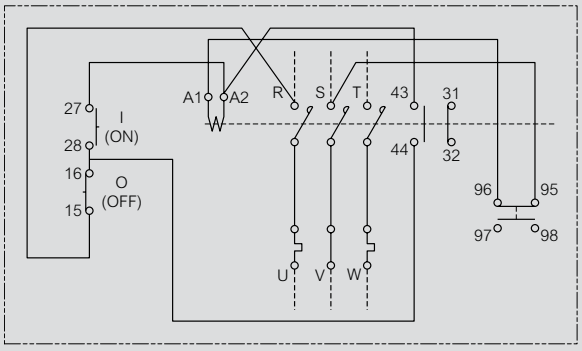
With pushbuttons - Cat.No 4168 91



Wiring diagram - Cat.No 4168 90



Wiring diagram - Cat.No 4168 91



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THE LEGRAND EDGE

The Legrand group is a global specialist in electrical & digital building infrastructure with a comprehensive range of solutions in four fields : energy distribution, voice data and image distribution , cable management and control & monitoring of installations that cater to the residential, commercial, hospitality and industrial segments.

Legrand (India) has been a leader in the protection business for the last four decades. Legrand combines the latest technology with aesthetics and flexibility to design electrical power distribution systems to guarantee efficient protection and effective service quality.

Today, the ever rising demand of electrical power and therefore the need for identifying ways and means of conserving this energy are the two topics that get debated the most. The effective utilization of the available power and power losses are increasingly becomingly a concern for users as well as utilities. Strengthening the brand philosophy of "Listen, Design, Make, Support" further and responding to these requirements of the market, Legrand now offers a range of capacitors with detuned reactors & automatic power factor controllers as a part of reactive energy compensation.

CONTRIBUTE TO ENERGY SAVING AND REDUCE ENVIRONMENTAL IMPACT

The available power in an electrical supply system comprises of active power and reactive power. While active power results in the form of actual work, the reactive power is used to maintain the magnetic field.

The power factor is an indicator of reactive power which is always an inherent part of the electrical system. Lower the power factor higher is the reactive power usage. Hence, the challenge is to improve the power factor and the most cost effective way to improve it is by the use of power capacitors.

Improved power factor helps in reducing I^2R losses,

improves voltage stability and increase utilization of an electrical distribution system. As a result, it further helps customer to save energy and reduce their environmental impact.

With Legrand's range of solutions for reactive energy compensation that include capacitors, detuned reactors, automatic power factor controller and capacitor banks, you will have the power to contribute to energy savings. Be it commercial, or industrial segment, Legrand capacitors increase the service life of installation while improving its power factor.

By installing Legrand Capacitors, now you can

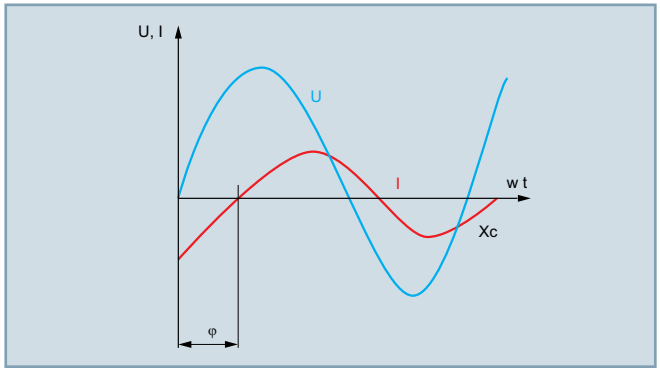
- Improve power quality
- Reduce the active energy losses
- Improve the voltage regulation
- Improve utilization of electrical system
- Eliminate penalties
- In turn, save money, by not paying for the reactive energy that you otherwise would have consumed

Power factor

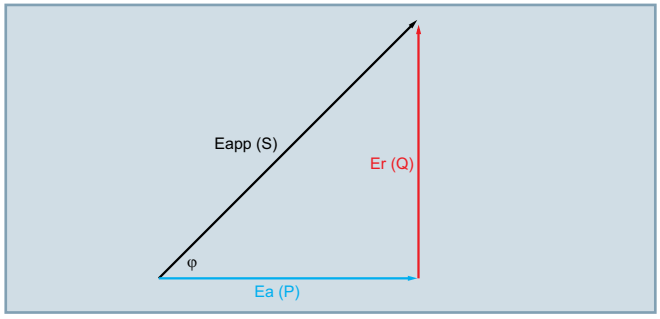
PHASE SHIFT - ENERGIES - POWERS

Definition

An AC electrical installation comprising receivers such as transformers, motors, welding machines, power electronics, etc., and in particular any receivers for which the current is out of phase with the voltage, consumes a total energy which is called the apparent energy (Eapp).



This energy, which is generally expressed in kilovolt-ampere-hours (kVAh), corresponds to the apparent power S (kVA) and can be broken down as follows:



• Active energy (Ea): expressed in kilowatt hours (kWh). This can be used, after being transformed by the receiver, in the form of work or heat. The active power P (kW) corresponds to this energy.

• Reactive energy (Er): expressed in kilovar hours (kVArh). This is used in particular in the windings of motors and transformers to create the magnetic field without which they would not be able to operate.
The reactive power Q (kVAr) corresponds to this energy. Unlike active energy, reactive energy is said to be "unproductive" for the user.

Energies

$$\vec{Eapp} = \vec{Ea} + \vec{Er}$$

$$Eapp = \sqrt{(Ea)^2 + (Er)^2}$$

Powers

$$\vec{S} = \vec{P} + \vec{Q}$$

$$S = \sqrt{(P)^2 + (Q)^2}$$

• Three-phase supply:

$$S = \sqrt{3}\,UI$$

$$P = \sqrt{3}\,UI\,\cos\varphi$$

$$Q = \sqrt{3}\,UI\,\sin\varphi$$

For a single phase supply the term $\sqrt{3}$ disappears.

• U : Voltage (V)
• I : Current (I)
• φ : Phase angle between current & voltage

POWER FACTOR

By definition, the power factor, or the Cos φ, of an electrical device is equal to the active power P (kW) over the apparent power S (kVA), and can vary from 0 to 1.

$$\cos \varphi = \frac{P\ (kW)}{S\ (kVA)}$$

It thus enables the reactive energy consumption level of devices to be easily identified.

- A power factor of 1 will result in no reactive energy consumption (resistance)

- A power factor of less than 1 will lead to reactive energy consumption which increases the closer it is to 0 (inductance)

In an electrical installation, the power factor could vary from one workshop to another depending on the equipment installed and the way it is used (off-load, full load operation, etc.).

Energy metering devices record active and reactive energy consumption. Electricity suppliers generally show the term tg φ on their bills.

Calculation of the tg φ

$$\text{tg } \varphi = \frac{Er\ (kVArh)}{Ea\ (kWh)}$$

The tg φ is the ratio between the reactive energy Er (kVArh) and the active energy Ea (kWh) consumed during the same period.

Unlike the cos φ, it is easy to see that the tg φ must be as small as possible in order to have the minimum reactive energy consumption.

Cos φ and tg φ are linked by the following equation:

$$\cos \varphi = \frac{1}{\sqrt{1 + (\text{tg } \varphi)^2}}$$

But it is simpler to refer to a conversion table as on page 16.

Power factor (continued)

POWER FACTOR OF THE MAIN RECEIVERS

The following receivers consume the most reactive energy:

- Motors at low load
- Welding machines
- Arc and induction furnaces
- Power rectifiers

RECEIVER		COS φ	TG φ
Ordinary asynchronous motors loaded at	0%	0.17	5.80
	25%	0.55	1.52
	50%	0.73	0.94
	75%	0.80	0.75
	100%	0.85	0.62
Incandescent lamps		approx. 1	approx. 0
Fluorescent lamps		approx. 0.5	approx. 1.73
Discharge lamps		0.4 to 0.6	approx. 2.29 to 1.33
Resistance furnaces		approx. 1	approx. 0
Compensated induction furnaces		approx. 0.85	approx. 0.62
Dielectric heating furnaces		approx. 0.85	approx. 0.62
Resistance welding machines		0.8 to 0.9	0.75 to 0.48
Single phase static arc welding stations		approx. 0.5	approx. 1.73
Arc welding transformers/rectifiers		0.7 to 0.9	1.02 to 0.48
		0.7 to 0.8	1.02 to 0.75
Arc furnaces		0.8	0.75
Thyristor power rectifiers		0.4 to 0.8	2.25 to 0.75

ADVANTAGES OF A GOOD POWER FACTOR

A good power factor is:
- A high cos φ (close to 1)
- Or a low tg φ (close to 0)

A good power factor makes it possible to optimise an electrical installation and provides the following advantages:
- No billing of reactive energy
- Reduction of the subscribed demand in kVA
- Limitation of active energy losses in the cables given the decrease in the current carried in the installation
- Improvement of the voltage level at the end of the line
- Additional power available at the power transformers if the compensation is performed at the secondary

HOW TO IMPROVE THE POWER FACTOR

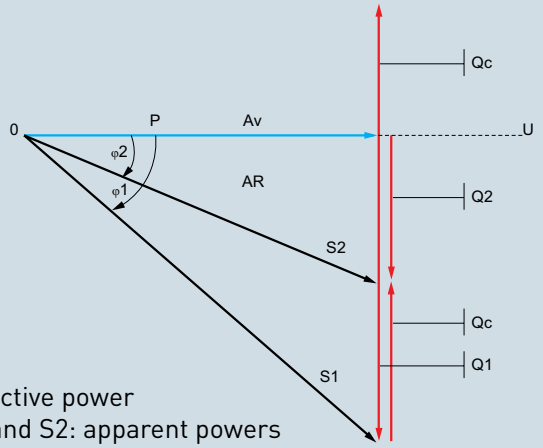
By installing capacitors or capacitor banks.

Improving the power factor of an electrical installation consists of giving it the means to "produce" a certain proportion of the reactive energy it consumes itself.

There are various different systems for producing reactive energy, including in particular asynchronous compensators and shunt capacitors (or serial capacitors for large transmission systems).

The capacitor is most frequently used, given it's :
- Non-consumption of active energy
- Purchase cost
- Ease of use
- Service life
- Low maintenance (static device)

Power diagram



P: Active power
S1 and S2: apparent powers (before and after compensation)
Qc: capacitor reactive power
Q1: reactive power without capacitor
Q2: reactive power with capacitor

Equations

$Q2 = Q1 - Qc$

$Qc = Q1 - Q2$

$Qc = P.tg\ \varphi\ 1 - P.tg\ \varphi\ 2$

$$Qc = P(tg\ \varphi\ 1 - tg\ \varphi\ 2)$$

φ 1 phase shift without capacitor

φ 2 phase shift with capacitor

The capacitor is a receiver composed of two conductive parts (electrodes) separated by an insulator.
When this receiver is subjected to a sinusoidal voltage, the current and therefore its power (capacitive reactive) is leading the voltage by 90°.

Conversely, for all other receivers (motors, transformers etc.) the current and therefore its power (reactive inductive) is lagging the voltage by 90°.

The vectorial composition of these currents or reactive powers (inductive and capacitive) gives a resulting current or power below the value, which existed before the capacitors were installed.

In simple terms, it is said that inductive receivers (motors, transformers etc.) consume reactive energy whereas capacitors (capacitive receivers) produce reactive energy.

Operation, protection and connection of capacitors

PROTECTION AND CONNECTION OF CAPACITORS

Operating device

In the case of loads with ultra-fast cycles (welding machines, etc.), the conventional system for operating capacitors (electromechanical contactors) is no longer suitable. High-speed switching compensation systems using solid state contactors are necessary.

The switching current of a capacitor depends on:
- The power of the capacitor
- The short-circuit power of the mains supply to which it is connected
- Whether or not any capacitor banks that have already been activated are present

Given these parameters, it is essential to use quick make and break operating devices (switch, contactor etc.).
When selecting operating devices, the user must be made aware of the choice of equipment available (for operating capacitors).
Contactors are specially designed by contactor manufacturers for operating capacitors and in particular for assembling automatically controlled capacitor banks. These contactors have auxiliary poles combined in series with preload resistors that will limit the inrush current during activation.

Protection

In addition to the internal protection devices incorporated in the capacitor:
- Self-healing metallised film
- Internal fuses
- Overpressure disconnection devices

it is essential to provide a protection device external to the capacitor.

This protection will be provided by:

- Either a circuit breaker:
  - Thermal relay, setting between 1.3 and 1.5 In
  - Magnetic relay, setting between 5 and 10 In
- Or GI type HRC fuses, rating 1.4 to 2 In

In = capacitor nominal current
$In = Qc/\sqrt{3}U$
Example: 50 kVAr - 400 V three-phase
In = 50/1.732 x 0.4 = 72 A

Connection (sizing the cables)

Current standards for capacitors are defined so that capacitors can withstand a permanent overcurrent of 30%.
These standards also permit a maximum tolerance of 10% on the nominal capacitance.
Cables must therefore be sized at least for:
I cable = 1.3 x 1.1 (I nominal capacitor)

i.e. Icable = 1.43 In

Harmonics

INTRODUCTION

In recent years, the modernisation of industrial processes and the sophistication of electrical machines and equipment have led to major developments in power electronics:

Semi-conductor-based systems (transistors, thyristors etc.) designed for:
- Static power converters: AC/DC
- Rectifiers
- Inverters
- Frequency converters
- And many other multicycle or phase controlled devices.

These systems represent "non-linear" loads for electrical supplies. A "non-linear" load is a load for which the current consumption does not reflect the supply voltage (although the voltage of the source imposed on the load is sinusoidal, the current consumption is not sinusoidal).

Other "non-linear" loads are also present in electrical installations, in particular:
- Variable impedance loads, using electric arcs: arc furnaces, welding units, fluorescent tubes, discharge lamps etc.
- Loads using strong magnetising currents: saturated transformers, inductors etc.

The FOURIER decomposition (harmonic analysis) of the current consumption of a non-linear receiver shows:
- The fundamental, a sinusoidal term at the 50 Hz mains supply frequency
- The harmonics, sinusoidal terms whose frequencies are multiples of the fundamental frequency

According to the equation:

$$I_{rms} = \sqrt{I_1^2 + \sum_{h=2}^{n} I_h^2}$$

$\sum$: Sum of all the harmonic currents from harmonic 2 (50 Hz x 2) to the last harmonic n (50 Hz x n)

These harmonic currents circulate in the source. The harmonic impedances of the source then give rise to harmonic voltages, according to the equation:

$$Uh = Zh \times Ih$$

The harmonic currents give rise to most of the harmonic voltages causing the overall harmonic distortion of the supply voltage.

$$V_{rms} = \sqrt{U_1^2 + \sum_{h=2}^{n} U_h^2}$$

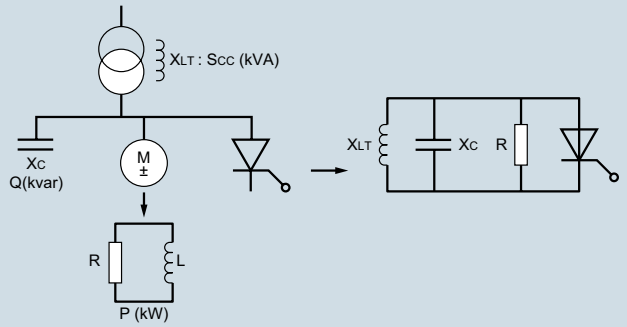
Note: The harmonic distortion of the voltage generated by construction defects in the windings of the alternators and transformers is generally negligible

- Uh : Harmonic voltage
- Ih : Harmonic current
- Zh : Harmonic impedances

Harmonics (continued)

EFFECT OF HARMONICS ON CAPACITORS

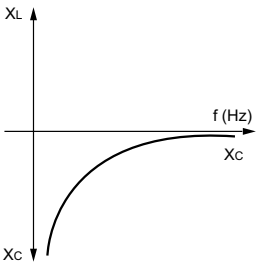
Schematic diagram **Equivalent diagram**



Note: As the inductance of the motor is much higher than that of the source, it becomes negligible in parallel configuration.

- Ssc (kVA) : Source short-circuit power
- Q (kVAr) : Capacitor bank power
- P (kW) : Non-interfering load power
- XLT : Transformer reactance
- XC : Capacitor reactance

Reduction of the reactance of the capacitors



- The capacitor reactance

$$Xc = \frac{1}{C.} = \frac{1}{C.2.\varpi.f}$$

is inversely proportional to the frequency, its ability to cancel out harmonic currents decreases significantly when the frequency increases.

- C : Capacitor
- XL : Inductive reactance

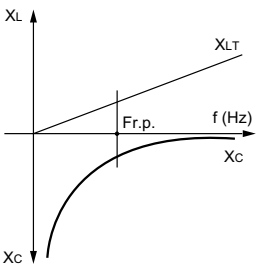
- The higher the source short-circuit power (Ssc), the further the resonance frequency is from dangerous harmonic frequencies.
- The higher the power (P) of the non-polluting loads, the lower the harmonic current amplification factor.

Main harmonic currents

The main harmonic currents present in electrical installations come from semi-conductor based systems. The theoretical rates of such systems are as follows:
- Harmonic 5 (250 Hz) - I5 - 20% I1*
- Harmonic 7 (350 Hz) - I7 - 14% I1*
- Harmonic 11 (550 Hz) - I11 - 9% I1*
- Harmonic 13 (650 Hz) - I13 - 8% I1 *

(* I1: Semi-conductor system current at 50 Hz)

Parallel resonance or anti-resonance between capacitors and source



- The reactance of the source X_{LT} is proportional to the frequency
- The reactance of the capacitors Xc is inversely proportional to the frequency

At frequency Fr.p., there is parallel resonance or anti-resonance (as the two reactances are equal but opposite) and amplification (F.A.) of the harmonic currents in the capacitors and in the source (transformers) where:

$$Fr.p. = F\ supply \sqrt{\frac{Ssc}{Q}} \qquad F.A. = \sqrt{\frac{Ssc.\ Q}{P}}$$

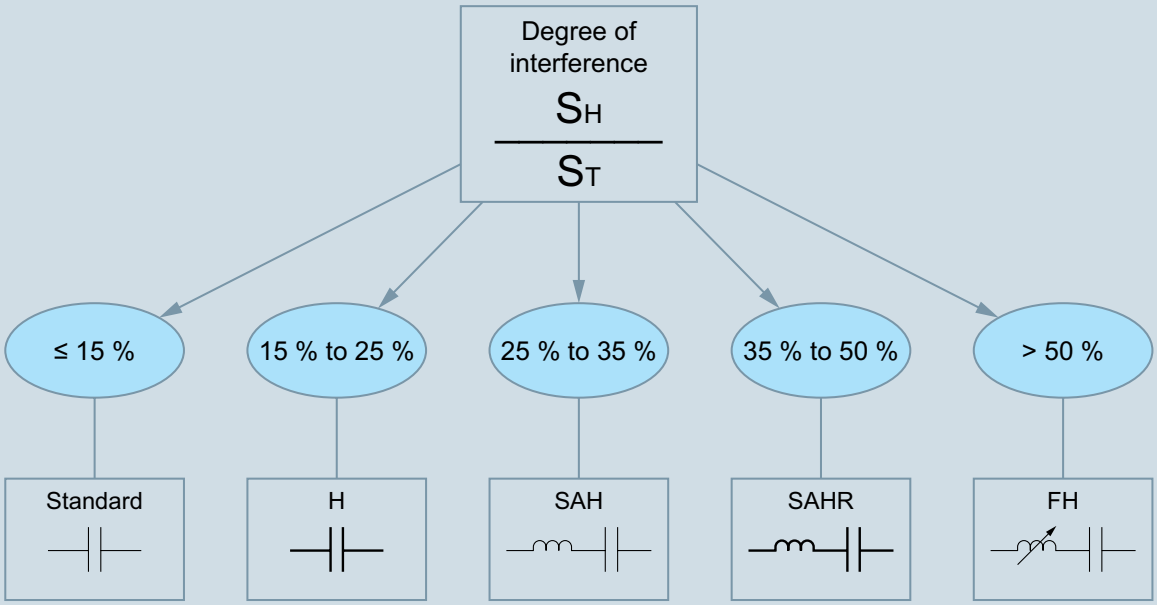
PROTECTING CAPACITORS FROM HARMONICS

By design and in accordance with current standards, capacitors are capable of continuously withstanding an rms current equal to **1.3 times the nominal current** defined at the nominal voltage and frequency values.

This overcurrent coefficient has been determined to take account of the combined effects of the presence of harmonics and overvoltages (the capacitance variation parameter being negligible).

It can be seen that depending on the degree of harmonic pollution SH (power of the harmonic generators), this coefficient is generally insufficient and that the parameter Ssc (short-circuit power), directly related to the power of the source ST, is preponderant in the value of the parallel resonance frequency (Fr.p).

By combining these two parameters, SH and ST, three types of mains supply can be defined, with a corresponding "type" of capacitor to be installed:



SH (kVA) is the weighted total power of the harmonic generators present at the transformer secondary.
ST (kVA) is the power rating of the HV/LV transformer.
Standard - Standred duty capacitor.
H - Heavy duty capacitor.
SAH - Heavy duty capacitor with series recactor.
SAHR - Heavy duty capacitor with series recactor with resonance.
FH - Heavy duty capacitor with detuned recactor.

Harmonics (continued)

PROTECTING CAPACITORS USING DETUNED REACTORS

For supplies with a high level of harmonic pollution, installing a detuned reactor, tuned in series with the capacitor, is the only effective protection.

The detuned reactor performs a dual role:
- Increasing the impedance of the capacitor in relation to the harmonic currents
- Shifting the parallel resonance frequency (Fr.p) of the source and the capacitor to below the main frequencies of the harmonic currents that are causing interference

- Fr.p.: Detuned reactor/capacitor/MV/LV transformer parallel resonance frequency

- Fr.s.: Detuned reactor/capacitor serial resonance frequency

- The most commonly used F.r.s values are:

- 50 Hz fundamental: 215 Hz (n=4.3)
  190 Hz (n=3.8)
  135 Hz (n=2.7)

- 60 Hz fundamental: 258 Hz (n=4.3)
  228 Hz (n=3.8)
  162 Hz (n=2.7)

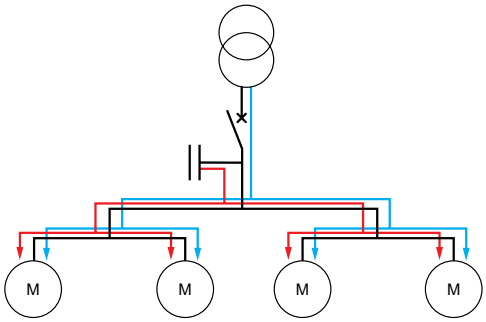
- For frequencies below Fr.s., the reactor/capacitor system behaves like a capacitance and compensates the reactive energy.
- For frequencies above Fr.s., the reactor/capacitor system behaves like an inductance which, in parallel with the inductance X_{LT}, prevents any risk of parallel resonance at frequencies above Fr.s. and in particular at the main harmonic frequencies.

Installing capacitor banks

INSTALLATION OPTIONS

In an LV electrical installation, capacitor banks can be installed at 3 different levels:

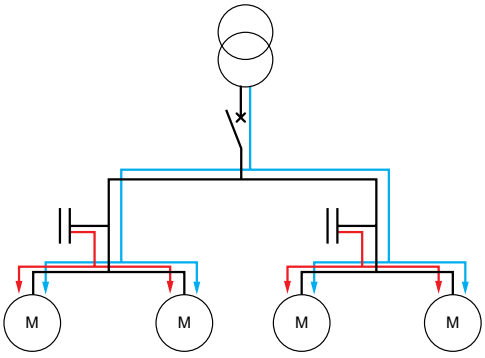
Global compensation



Advantages:
- No billing of reactive energy
- This is the most economical solution, as all the power is concentrated at one point and the expansion coefficient makes it possible to optimise the capacitor banks
- Makes less demands on the transformer

Note:
- The losses in the cables (I^2R) are not reduced.

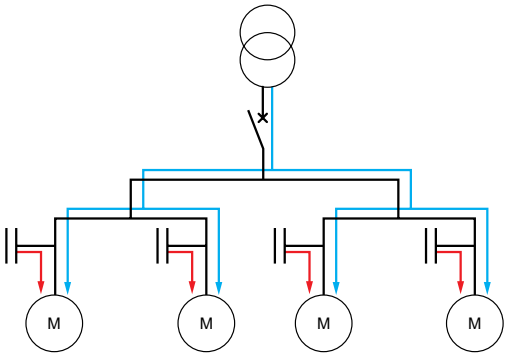
Sector compensation



Advantages:
- No billing of reactive energy
- Makes less demands on the supply FEEDERS and reduces the heat losses in these FEEDERS (I^2R)
- Incorporates the expansion of each sector
- Makes less demands on the transformer
- Remains economical

Note:
- Solution generally used for very widespread factory supplies

Individual compensation



Advantages:
- No billing of reactive energy
- From a technical point of view this is the ideal solution, as the reactive energy is produced at the point where it is consumed. Heat losses (I^2R) are therefore reduced in all the lines.
- Makes less demands on the transformer.

Note:
- Most costly solution, given:

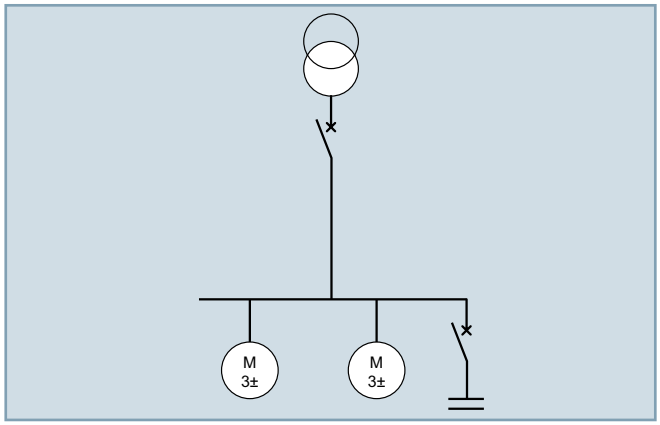
- The high number of installations
- The fact that the expansion coefficient is not incorporated

Compensation systems

SYSTEMS AND TYPES OF COMPENSATION

When selecting a capacitor bank, there are two compensation systems.

Fixed type capacitor banks



• The reactive power supplied by the capacitor bank is constant irrespective of any variations in the power factor and the load thus the reactive energy consumption of the installation is also constant.

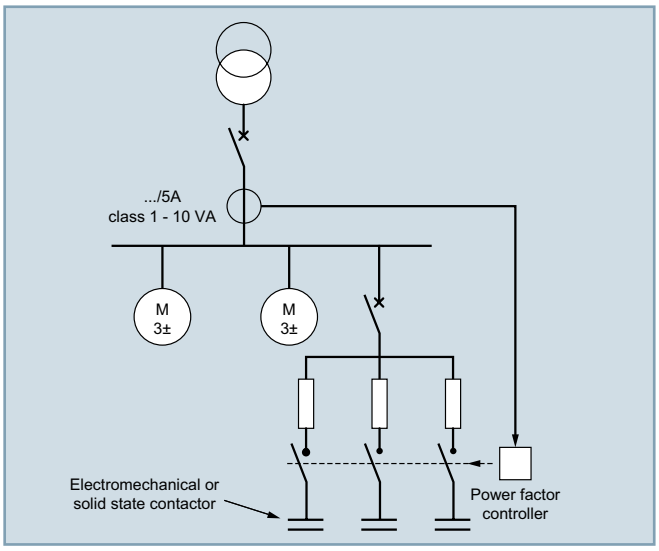
• These capacitor banks are switched on:
- Either manually by a circuit breaker or switch
- Or semi-automatically by a remote-controlled contactor

• This type of capacitor bank is generally used in the following situations:
- Electrical installations with constant load operating 24 hours a day
- Reactive compensation of transformers
- Individual compensation of motors
- Installation of a capacitor bank whose power is less than or equal to 15% of the power of the transformer

Capacitor bank Qc ≤ 15% P_{kVA} transformer

• P_{kVA} : Power of transformer
• Qc : Power of capacitor bank

Automatic type capacitor banks



• The reactive power supplied by the capacitor bank **can be adjusted** according to variations in the power factor and the load of the receivers, thus of the reactive energy consumption of the installation.

• These capacitor banks are made up of a combination of capacitor steps (step = capacitor + contactor) connected in parallel. Switching on and off of all or part of the capacitor bank is controlled by an integrated power factor controller.

• These capacitor banks are also used in the following situations:
- Variable load electrical installations
- Compensation of main LV distribution boards or major outgoing lines
- Installation of a capacitor bank whose power is more than 15% greater than the power of the transformer

Capacitor bank Qc > 15% P_{kVA} transformer

How to calculate the power of capacitors

BASED ON ELECTRICITY BILLS

Calculation

To calculate the capacitor banks to be installed, use the following method:
- Select the month in which the bill is highest (kVArh to be billed)
- Assess the number of hours the installation operates each month
- Calculate the capacitor power Qc to be installed

$$Qc = \frac{\text{kVArh to be billed (monthly)}}{\text{No. of hours' operation (monthly)}}$$

Example

For the subscriber:
- Highest reactive energy bill: December
- Number of kVArh to be billed: 70,000
- Monthly operating times:

high-load + peak times = 350 hours

$$Qc \text{ (bank to be installed)} = \frac{70{,}000}{350} = 200 \text{ kVAr}$$

How to calculate the power of capacitors (continued)

CAPACITOR POWER CALCULATION TABLE

Conversion table

Based on the power of a receiver in kW, this table can be used to calculate the power of the capacitors to change from an initial power factor to a required power factor. It also gives the equivalence between cos φ and tg φ.

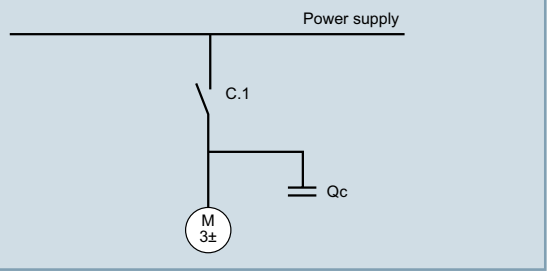
Final power factor		Capacitor power in kVAr to be installed per kW of load to increase the power factor to:										
cosφ		0.90	0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1
	tg φ	0.48	0.46	0.43	0.40	0.36	0.33	0.29	0.25	0.20	0.14	0.0
0.40	2.29	1.805	1.832	1.861	1.895	1.924	1.959	1.998	2.037	2.085	2.146	2.288
0.41	2.22	1.742	1.769	1.798	1.831	1.840	1.896	1.935	1.973	2.021	2.082	2.225
0.42	2.16	1.681	1.709	1.738	1.771	1.800	1.836	1.874	1.913	1.961	2.002	2.164
0.43	2.10	1.624	1.651	1.680	1.713	1.742	1.778	1.816	1.855	1.903	1.964	2.107
0.44	2.04	1.558	1.585	1.614	1.647	1.677	1.712	1.751	1.790	1.837	1.899	2.041
0.45	1.98	1.501	1.532	1.561	1.592	1.626	1.659	1.695	1.737	1.784	1.846	1.988
0.46	1.93	1.446	1.473	1.502	1.533	1.567	1.600	1.636	1.677	1.725	1.786	1.929
0.47	1.88	1.397	1.425	1.454	1.485	1.519	1.532	1.588	1.629	1.677	1.758	1.881
0.48	1.83	1.343	1.730	1.400	1.430	1.464	1.467	1.534	1.575	1.623	1.684	1.826
0.49	1.78	1.297	1.326	1.355	1.386	1.420	1.453	1.489	1.530	1.578	1.639	1.782
0.50	1.73	1.248	1.276	1.303	1.337	1.369	1.403	1.441	1.481	1.529	1.590	1.732
0.51	1.69	1.202	1.230	1.257	1.291	1.323	1.357	1.395	1.435	1.483	1.544	1.686
0.52	1.64	1.160	1.188	1.215	1.249	1.281	1.315	1.353	1.393	1.441	1.502	1.644
0.53	1.60	1.116	1.144	1.171	1.205	1.237	1.271	1.309	1.349	1.397	1.458	1.600
0.54	1.56	1.075	1.103	1.130	1.164	1.196	1.230	1.268	1.308	1.356	1.417	1.559
0.55	1.52	1.035	1.063	1.090	1.124	1.156	1.190	1.228	1.268	1.316	1.377	1.519
0.56	1.48	0.996	1.024	1.051	1.085	1.117	1.151	1.189	1.229	1.277	1.338	1.480
0.57	1.44	0.958	0.986	1.013	1.047	1.079	1.113	1.151	1.191	1.239	1.300	1.442
0.58	1.40	0.921	0.949	0.976	1.010	1.042	1.073	1.114	1.154	1.202	1.263	1.405
0.59	1.37	0.884	0.912	0.939	0.973	1.005	1.039	1.077	1.117	1.165	1.226	1.368
0.60	1.33	0.849	0.878	0.905	0.939	0.971	1.005	1.043	1.083	1.131	1.192	1.334
0.61	1.30	0.815	0.843	0.870	0.904	0.936	0.970	1.008	1.048	1.096	1.157	1.299
0.62	1.27	0.781	0.809	0.836	0.870	0.902	0.936	0.974	1.014	1.062	1.123	1.265
0.63	1.23	0.749	0.777	0.804	0.838	0.870	0.904	0.942	0.982	1.030	1.091	1.233
0.64	1.20	0.716	0.744	0.771	0.805	0.837	0.871	0.909	0.949	0.997	1.058	1.200
0.65	1.17	0.685	0.713	0.740	0.774	0.806	0.840	0.878	0.918	0.966	1.007	1.169
0.66	1.14	0.654	0.682	0.709	0.743	0.775	0.809	0.847	0.887	0.935	0.996	1.138
0.67	1.11	0.624	0.652	0.679	0.713	0.745	0.779	0.817	0.857	0.905	0.966	1.108
0.68	1.08	0.595	0.623	0.650	0.684	0.716	0.750	0.788	0.828	0.876	0.937	1.079
0.69	1.05	0.565	0.593	0.620	0.654	0.686	0.720	0.758	0.798	0.840	0.907	1.049
0.70	1.02	0.536	0.564	0.591	0.625	0.657	0.691	0.729	0.796	0.811	0.878	1.020
0.71	0.99	0.508	0.536	0.563	0.597	0.629	0.663	0.701	0.741	0.783	0.850	0.992
0.72	0.96	0.479	0.507	0.534	0.568	0.600	0.634	0.672	0.721	0.754	0.821	0.963
0.73	0.94	0.452	0.480	0.507	0.541	0.573	0.607	0.645	0.685	0.727	0.794	0.936
0.74	0.91	0.425	0.453	0.480	0.514	0.546	0.580	0.618	0.658	0.700	0.767	0.909
0.75	0.88	0.398	0.426	0.453	0.487	0.519	0.553	0.591	0.631	0.673	0.740	0.882
0.76	0.86	0.371	0.399	0.426	0.460	0.492	0.526	0.564	0.604	0.652	0.713	0.855
0.77	0.83	0.345	0.373	0.400	0.434	0.466	0.500	0.538	0.578	0.620	0.687	0.829
0.78	0.80	0.319	0.347	0.374	0.408	0.440	0.474	0.512	0.552	0.594	0.661	0.803
0.79	0.78	0.292	0.320	0.347	0.381	0.413	0.447	0.485	0.525	0.567	0.634	0.776
0.80	0.75	0.266	0.294	0.321	0.355	0.387	0.421	0.459	0.499	0.541	0.608	0.750
0.81	0.72	0.240	0.268	0.295	0.329	0.361	0.395	0.433	0.473	0.515	0.582	0.724
0.82	0.70	0.214	0.242	0.269	0.303	0.335	0.369	0.407	0.447	0.489	0.556	0.698
0.83	0.67	0.188	0.216	0.243	0.277	0.309	0.343	0.381	0.421	0.463	0.530	0.672
0.84	0.65	0.162	0.190	0.217	0.251	0.283	0.317	0.355	0.395	0.437	0.504	0.645
0.85	0.62	0.136	0.164	0.191	0.225	0.257	0.291	0.329	0.369	0.417	0.478	0.602
0.86	0.59	0.109	0.140	0.167	0.198	0.230	0.264	0.301	0.343	0.390	0.450	0.593
0.87	0.57	0.083	0.114	0.141	0.172	0.204	0.238	0.275	0.317	0.364	0.424	0.567
0.88	0.54	0.054	0.085	0.112	0.143	0.175	0.209	0.246	0.288	0.335	0.395	0.538
0.89	0.51	0.028	0.059	0.086	0.117	0.149	0.183	0.230	0.262	0.309	0.369	0.512
0.90	0.48		0.031	0.058	0.089	0.121	0.155	0.192	0.234	0.281	0.341	0.484

Examples: 200 kW motor - cos φ = 0.75, required cos φ = 0.93, Qc = 200 x 0.487 = 98 kVAr
200 kW motor - cos φ = 0.80, required cos φ = 0.95, Qc = 200 x 0.421 = 84 kVAr

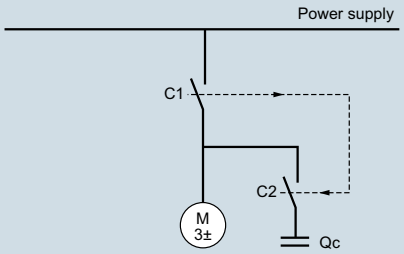
Reactive compensation of asynchronous motors

COMPENSATION AT MOTOR TERMINALS

If Qc ≤ 90% Io $\sqrt{3}$ U



If Qc > 90% Io $\sqrt{3}$ U



Io: motor off-load current
U: supply voltage

The table below gives, for information purposes only, the maximum power of the capacitor that can be connected **directly to the terminals of an asynchronous motor with no risk of self-excitation.** It will be necessary to check in all cases that the maximum current of the capacitor does not exceed 90% of the magnetising current (off-load) of the motor.

Maximum power of the motor		Maximum speed rpm		
		3000	1500	1000
HP	kW	Max. power in kVAr		
11	8	2	2	3
15	11	3	4	5
20	15	4	5	6
25	18	5	7	7.5
30	22	6	8	9
40	30	7.5	10	11
50	37	9	11	12.5
60	45	11	13	14
100	75	17	22	25
150	110	24	29	33
180	132	31	36	38
218	160	35	41	44
274	200	43	47	53
340	250	52	57	63
380	280	57	63	70
482	355	67	76	86

If the capacitor power required to compensate the motor is greater than the values given in the above table or if, more generally: Qc > 90% Io$\sqrt{3}$ U, compensation at the motor terminals will however remain possible by inserting a contactor (C.2), controlled by an auxiliary contact of the motor contactor (C.1), in series with the capacitor.

The Range

The Legrand range of reactive energy compensations includes:

- Alpivar² & Alpican™ capacitors
- Reactors
- Power factor controllers
- Alpimatic racks
- Alpimatic & Alpistatic automatic capacitor banks

Alpivar²

- Conforms to IEC 60831-1&2
- Self healing rnetalized polypropylene film
- Double, class II insulation
- Self extinguishing polypropylene resin casing
- Very low loss factor
- Range: 1 to 125 KVAr

Alpican™

- Conforms to IS 13340-1993, IEC 60831-1&2
- ISI marked
- Metalized polypropylene film
- Explosion proof design
- Better heat dissipation
- Low losses
- Range: Resin filled -1 to 30 KVAr
  Gas filled- 5 to 25 KVAr

Reactor

- High harmonics loading capability
- Very low losses
- Low noise
- Long expected life
- High linearity
- Range: 10 to 100 KVAr

Automatic Power Factor Controller

- Conforms to IEC 61010-1
- Intelligent control
- High accuracy
- Range: 3, 5, 7 & 12 steps

Alpimatic racks

- Conforms to IEC 60439-1
- Very low losses
- Long expected life
- Range: 12.5 to 75 KVAr

Alpimatic & Alpistatic automatic capacitor banks

- Conforms to IEC 60439-1&2
- Fully modular design
- IP 31, IK05 Cabinet
- Range: 10 to 900 KVAr

Alpivar² capacitors

The Alpivar² range of capacitors includes:

- Alpivar² capacitors
- Alpimatic racks
- Alpimatic & Alpistatic automatic capacitor banks

MAIN ADVANTAGES OF THE RANGE

> **Alpivar² capacitors** are totally dry units that have been coated under vacuum, with triple electrical protection, for excellent resistance to overvoltages and partial discharges and a much longer service life than conventional units.

> **The universal mounting ranges of Alpivar² automati racks** are factory-wired and can be fitted in any type of cabinet to create automatic reactive energy compensation systems. Reactive power available up to 75 kVAr/step.

> **Alpimatic & Alpistatic automatic capacitor banks** are compact solutions, offering a fully modular design, for easy extension and maintenance and to meet all requirements: standard, H and SAH (standard class, reinforced and extra-reinforced class with detuned reactors). The power factor controller ensures easy commissioning. The Alpistatic range of automatic capacitor banks also provides real-time compensation.

Alpivar² capacitors

Alpimatic racks

Alpimatic & Alpistatic automatic capacitor banks

Alpivar² capacitors

Alpivar²: VACUUM TECHNOLOGY CAPACITOR

Features of the range

Alpivar² patented capacitors are totally dry units with no impregnation, insulation liquid or gas.

They are designed by combining individual single phase windings, connected in a delta configuration, to produce a three-phase unit.

These windings are created using two polypropylene films with zinc coating on one side:

- The metal coating forms the electrode
- The polypropylene film forms the insulation

They are then **vacuum** coated with a self-extinguishing thermosetting polyurethane resin which forms the casing, providing mechanical and electrical protection.

This **vacuum** coating technique for the windings, which is unique to **Legrand,** gives **Alpivar²** capacitors excellent resistance over time and a much longer service life than conventional units.

Vacuum sealing ensures that there is no air or moisture near the windings. This design provides excellent resistance to overvoltages and partial discharges. This unit complies fully with environmental protection requirements (PCB-free).

Type of capacitor

Monobloc or modular, the **Alpivar²** capacitor meets all user requirements.

The modular solution in particular, with its quick, easy assembly, can be used to create units with different power ratings, resulting in a significant reduction in storage costs for integrators and local distributors.

Installation

Its compact form makes it easy to install and significantly reduces the costs of cabinets and racks. The casing is particularly resistant to all solvents and atmospheric agents (rain, sun, salty air, etc.).

The **Alpivar²** capacitor is ideal for installations in corrosive atmospheres

Alpivar²: CONNECTION AND PROTECTION DEVICES

Connection

• The easy accessibility of the terminals on the top of the unit make the **Alpivar²** capacitor very easy to connect.

• The use of a system of "socket" terminals enables direct connection of the unit via cables and lugs.

• The **Alpivar²** double-insulated or class 2 capacitor does not need earthing.

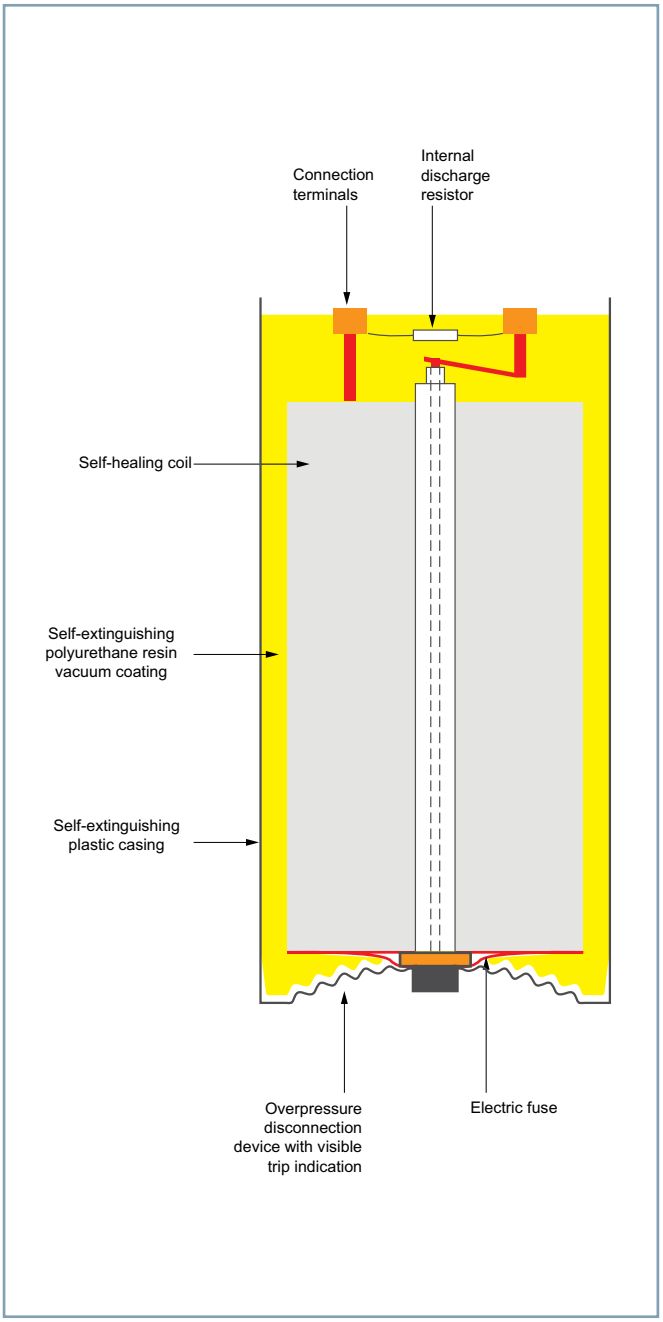
Electrical protection devices

• **Self-healing dielectric**: This self-healing property is connected with the characteristics of the metal deposit which forms the electrode and the nature of the insulating support (polypropylene film).
This special manufacturing technique prevents breakdown of the capacitor due to electrical overvoltages. In fact overvoltages perforate the dielectric and cause discharges which vaporise the metal near the short circuit, thus instantaneously restoring the electrical insulation.

• **Internal fuses**: One per winding.

• **Pressure monitoring devices**: If an electrical fault cannot be overcome by the film self-healing or by means of the electric fuse, gas is emitted, causing a membrane to deform and disconnecting the faulty winding. The triggering of the pressure monitoring devices is visible from outside the capacitor. This feature makes it easy to carry out a quick check on the status of the unit.

These three protection devices, together with the vacuum coating of the windings (technique patented by a group company of LEGRAND), result in a very high-tech unit.



Alpivar² capacitors

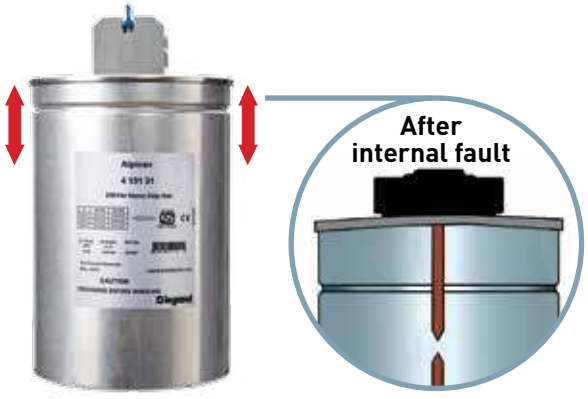
The Alpican™ range of capacitors includes:

- **Resin filled -**
  Standard duty & Heavy duty capacitors
- **Gas filled -**
  Heavy duty capacitors

FEATURES

Explosion proof design

In the event of thermal or electrical overload, the electrical breakdown occurs. During such event the gases released from di-electric film accumulate in the can. This forms a high pressure inside the can. The specially designed can with expansion bead moves upwards. This expansion above certain limit breaks the internal fuse and capacitor is disconnected from the circuit and the flow of current is interrupted. Thus the overpressure dis-connector protects the capacitor from explosion.



Alpican™ capacitors

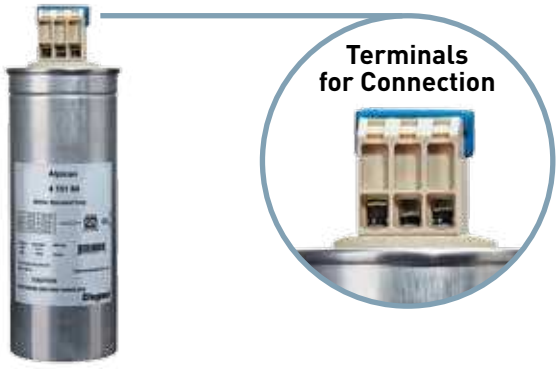
FEATURES

Self-healing technology for a longer life

In case of voltage breakdown the metal layer around the breakdown evaporates. This process happens in microseconds. This results in perfect isolation of the faulty area within microseconds. An insulation area is formed which is resistive and voltage proof, keeping the capacitor operational with a negligible loss of capacitance. The capacitor remains operational during the entire process.

Unique terminal design

Unique terminal design with discharge resistor ensures proper termination of the cables. The cable connection is so firm that it doesn't allow the cable to losen.



Compact design

Alpican is constructed with three single elements stacked and assembled to form a delta connection. The compact design offers high mechanical strength and stability. This makes installation sturdy and ensures longer life to the system. Also, the compact shape of the product makes handling easy.

FEATURES

Ease of installation

Compact cylindrical design of Alpican™ makes installation easy & faster. The reduced installation time and cost makes a perfect combination for the installer. Mounting is done with a stud at the bottom of the capacitor. The stud forms a solid permanent earthing.

Zero Maintenance

Design and manufacturing process makes Alpican™ maintenance free. This also ensures capacitance stability and long life. It adds value to the product and makes installation error free

Better heat dissipation

The Aluminium can design make heat dissipation uniform.

Low energy loss (energy saving)

Alpican is designed and made for long life and low losses during the operation. Thus making it one of the most energy efficient capacitors.

V7540CB

Technical characteristics (p. 287)

Double or class II insulation.
Totally dry self-extinguishing polyurethane resin casing.
Internal protection for each winding using:
- A self-healing metallised polypropylene film
- An electric fuse
- A disconnection device in case of overpressure

Colour: Casing RAL 7035
Cover RAL 7001
Conforming to IEC 60831-1 and 2

Pack	Cat.Nos	**Standard duty, 3 phase, 440 V - 50 Hz**
		520 V max.
		Harmonic pollution SH/ST ≤ 15%
		Nominal power (kVAr)
1	V544CB	5
1	V1044CB	10
1	V12.544CB	12.5
1	V1544CB	15
1	V2044CB	20
1	V2544CB	25
1	V3044CB	30
1	V4044CB	40
1	V5044CB	50
1	V6044CB	60
1	V7544CB	75
1	V8044CB	80
1	V9044CB	90
1	V10044CB	100
1	V12544CB	125

Pack	Cat.Nos	**Heavy duty, 3 phase, 440 V - 50 Hz**
		520 V max.
		Harmonic pollution 15% < SH/ST ≤ 25%
		Can be associated with 7% detuned reactors
		Nominal power (kVAr)
1	VH2.544CB	2.5
1	VH544CB	5
1	VH7.544CB	7.5
1	VH1044CB	10
1	VH12.544CB	12.5
1	VH1544CB	15
1	VH2044CB	20
1	VH2544CB	25
1	VH3044CB	30
1	VH3544CB	35
1	VH4044CB	40
1	VH5044CB	50
1	VH6044CB	60
1	VH7544CB	75
1	VH8044CB	80
1	VH9044CB	90
1	VH10044CB	100
1	VH12544CB	125

Pack	Cat.Nos	**Heavy duty capacitor with series reactor, 3 phase, 400 V - 50 Hz**
		Capacitor combined with an detuned reactor Assembly fitted and wired in IP 31 - IK 05 cabinet Conforming to standards EN and IEC 60831-1 and 2
		Standard class - Max. 470 V
		Harmonic pollution 25% < SH/ST ≤ 35%
		Nominal power (kVAr)
1	VS5040.189	50
1	VS7540.189	75
1	VS10040.189	100
1	VS15040.189	150
1	VS20040.189	200
1	VS25040.189	250
1	VS30040.189	300
		Reinforced class - Max. 520 V
		Harmonic pollution 35% < SH/ST ≤ 50%
		Nominal power (kVAr)
1	VS.R4040.189	40
1	VS.R8040.189	80
1	VS.R12040.189	120
1	VS.R16040.189	160
1	VS.R20040.189	200
1	VS.R24040.189	240
1	VS.R28040.189	280
		Extra-reinforced class - Max. 620 V
		Harmonic pollution SH/ST > 50%
		Nominal power (kVAr)
1	VS.RS7240.189	72
1	VS.RS14440.189	144
1	VS.RS21640.189	216
1	VS.RS28840.189	288

Bold catalogue numbers are products normally available with Legrand (India) stockists. **Cat.Nos that are not bold** - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.
Red catalogue numbers : new products.

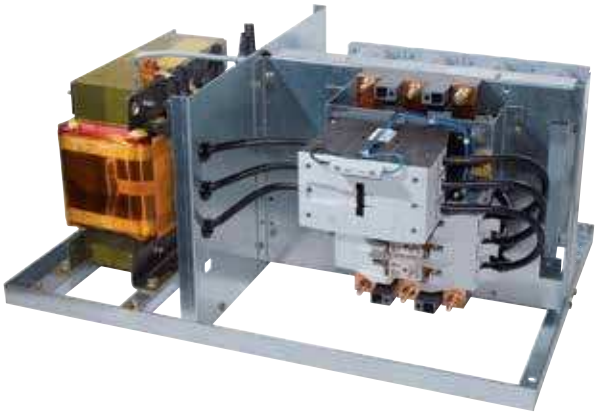
Alpimatic racks

P7540

Factory connected units for integration in universal cabinets for automatic compensation systems
Standard and Heavy duty versions:
- 1 Alpivar² capacitor
- 1 contactor suitable for the capacitive currents
- 1 set of 3 HRC fuses
- 1 set of modular copper busbars with junction bars for connecting several racks
- 1 steel frame on which the components are assembled and wired

Pack	Cat.Nos	**Standard duty, 3 phase, 400 V - 50 Hz**
		470 V max.
		Harmonic pollution SH/ST ≤ 15%
		Nominal power (kVAr)
1	P12.540	12.5
1	P12.512.540	12.5+12.5
1	P2540	25
1	P252540	25+25
1	P255040	25+50
1	P5040	50
1	P7540	75
		Heavy duty, 3 phase, 400 V - 50 Hz
		520 V max.
		Harmonic pollution 15% < SH/ST ≤ 25%
		Nominal power (kVAr)
1	PH12.540	12.5
1	PH12.512.540	12.5+12.5
1	PH2540	25
1	PH252540	25+25
1	PH255040	25+50
1	PH5040	50
1	PH7540	75

Alpimatic racks with detuned reactors



R7.R8040.189

Factory connected units for integration in universal cabinets for automatic compensation systems
Heavy duty capacitor with series reactor versions (detuned reactors):
- 1 Alpivar² capacitor
- 1 contactor suitable for the capacitive currents
- 1 detuned reactor with thermal protection
- 1 set of 3 HRC fuses
- 1 set of modular copper busbars with junction bars for connecting several racks
- 1 steel frame on which the components are assembled and wired

Pack	Cat.Nos	**Heavy duty capacitor with series reactor, 3 phase, 400 V - 50 Hz**
		Standard class - Max. 470 V
		Harmonic pollution 25% < SH/ST ≤ 35%
		Nominal power (kVAr)
1	R5.2540.189	25
1	R5.5040.189	50
1	R7.5040.189	50
1	R7.7540.189	75
		Reinforced class - Max. 520 V
		Harmonic pollution 35% < SH/ST ≤ 50%
		Nominal power (kVAr)
1	R5.R4040.189	40
1	R7.R4040.189	40
1	R7.R404040.189	40+40
1	R7.R8040.189	80
		Extra-reinforced class - Max. 620 V
		Harmonic pollution SH/ST > 50%
		Nominal power (kVAr)
1	R9.RS7240.189	72

Alpimatic & Alpistatic automatic capacitor banks

M6040

M20040

IP 31 - IK 05 cabinet
Fully modular design for easy extension and maintenance
Alpimatic is made up of one or several cabinets according to the capacitor bank model and the nominal current
The electromechanical contactors are controlled by the Alptec power controller with a simple commissioning procedure
Cable entry at the bottom (at the top on request)
Electrical parts protected against direct contact: IP 20 (door open)
Grey cabinet (RAL 7035) with black base Conforming to standards IEC 60439-1 and 2

Standard duty, 3 phase, 400 V - 50 Hz

470 V max.

Harmonic pollution SH/ST ≤ 15%

Pack	Cat.Nos	Nominal power (kVAr)	Steps (kVAr)
1	M1040	10	2x5
1	M1540	15	5+10
1	M2040	20	2x10
1	M2540	25	10+15
1	M3040	30	3x10
1	M3540	35	5+10+20
1	M4040	40	2x10+20
1	M5040	50	10+15+25
1	M6040	60	3x20
1	M7540	75	3x25
1	M87.540	87.5	12.5+25+50
1	M10040	100	2x25+50
1	M12540	125	25+2x50
1	M15040	150	25+50+75
1	M17540	175	2x25+50+75
1	M20040	200	50+2x75
1	M22540	225	25+50+2x75
1	M25040	250	2x50+2x75
1	M27540	275	25+2x50+2x75
1	M30040	300	25+50+3x75
1	M35040	350	50+4x75
1	M40040	400	2x50+4x75
1	M45040	450	6x75
1	M50040	500	50+6x75
1	M55040	550	2x50+6x75
1	M60040	600	8x75
1	M67540	675	9x75
1	M75040	750	10x75
1	M82540	825	11x75
1	M90040	900	12x75

Heavy duty, 3 phase, 400 V - 50 Hz

520 V max.

Harmonic pollution 15% < SH/ST ≤ 25%

Pack	Cat.Nos	Nominal power (kVAr)	Steps (kVAr)
1	MH1040	10	2x5
1	MH1540	15	5+10
1	MH2040	20	2x10
1	MH2540	25	10+15
1	MH3040	30	3x10
1	MH3540	35	5+10+20
1	MH4040	40	2x10+20
1	MH5040	50	10+15+25
1	MH6040	60	3x20
1	MH7540	75	3x25
1	MH87.540	87.5	12.5+25+50
1	MH10040	100	2x25+50
1	MH12540	125	25+2x50
1	MH15040	150	25+50+75
1	MH17540	175	2x25+50+75
1	MH20040	200	50+2x75
1	MH22540	225	25+50+2x75
1	MH25040	250	2x50+2x75
1	MH27540	275	25+2x50+2x75
1	MH30040	300	25+50+3x75
1	MH35040	350	50+4x75
1	MH40040	400	2x50+4x75
1	MH45040	450	6x75
1	MH50040	500	50+6x75
1	MH55040	550	2x50+6x75
1	MH60040	600	8x75
1	MH67540	675	9x75
1	MH75040	750	10x75
1	MH82540	825	11x75
1	MH90040	900	12x75

Alpimatic & Alpistatic automatic capacitor banks (continued)

MS30040.189

MS.R40040.189

Heavy duty capacitor with series reactor, 3 phase, 400 V - 50 Hz

Standard class - Max. 470 V

Harmonic pollution 25% < SH/ST ≤ 35%

Pack	Cat.Nos	Nominal power (kVAr)	Steps (kVAr)
1	MS7540.189	75	25+50
1	MS10040.189	100	2x25+50
1	MS12540.189	125	25+2x50
1	MS15040.189	150	3x50
1	MS20040.189	200	50+2x75
1	MS22540.189	225	3x75
1	MS25040.189	250	2x50+2x75
1	MS27540.189	275	50+3x75
1	MS30040.189	300	4x75
1	MS35040.189	350	50+4x75
1	MS37540.189	375	5x75
1	MS45040.189	450	6x75
1	MS52540.189	525	7x75
1	MS60040.189	600	8x75
1	MS67540.189	675	9x75
1	MS75040.189	750	10x75

Reinforced class - Max. 520 V

Harmonic pollution 35% < SH/ST ≤ 50%

Pack	Cat.Nos	Nominal power (kVAr)	Steps (kVAr)
1	MS.R12040.189	120	3x40
1	MS.R16040.189	160	2x40+80
1	MS.R20040.189	200	40+2x80
1	MS.R24040.189	240	2x40+2x80
1	MS.R28040.189	280	40+3x80
1	MS.R32040.189	320	4x80
1	MS.R36040.189	360	40+4x80
1	MS.R40040.189	400	5x80
1	MS.R44040.189	440	40+5x80
1	MS.R48040.189	480	6x80
1	MS.R52040.189	520	40+6x80
1	MS.R56040.189	560	7x80
1	MS.R60040.189	600	40+7x80
1	MS.R64040.189	640	8x80
1	MS.R72040.189	720	9x80
1	MS.R80040.189	800	10x80

Heavy duty capacitor with series reactor, 3 phase, 400 V - 50 Hz (continued)

Extra-reinforced class - Max. 620 V

Harmonic pollution SH/ST > 50%

Pack	Cat.Nos	Nominal power (kVAr)	Steps (kVAr)
1	MS.RS14440.189	144	2x72
1	MS.RS21640.189	216	3x72
1	MS.RS28840.189	288	4x72
1	MS.RS36040.189	360	5x72
1	MS.RS43240.189	432	6x72
1	MS.RS50440.189	504	7x72
1	MS.RS57640.189	576	8x72
1	MS.RS64840.189	648	9x72
1	MS.RS72040.189	720	10x72
1	MS.RS79240.189	792	11x72
1	MS.RS86440.189	864	12x72

Alpivar²

Guarantee

- The Company at its discretion will replace products if they have any manufacturing defect within 1 year for capacitor, Reactor & APFC controller.
- The above guarantee is applicable when the products are selected taken into consideration all the technical characteristics of the product published in our catalogue.
- The guarantee is only applicable when the products are installed as per the Company's instructions and not tampered in any manner.
- The guarantee states the Company's entire liability. It does not extend to cover consequential loss or damage or installation costs arising from defective products.

Bold catalogue numbers are products normally available with Legrand (India) stockists. **Cat.Nos that are not bold** - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.
Red catalogue numbers : new products.

Alpivar² capacitors

Technical specifications

Discharge resistors
Fitted inside, these discharge the unit in accordance with current standards (discharge time, 3 minutes)

Loss factor
Alpivar² capacitors have a loss factor of less than 0.1×10^{-3}
This value leads to a power consumption of less than 0.3 W per kVAr, including the discharge resistors.

Capacitance
Tolerance on the capacitance value: + 5%
Our manufacturing process, which avoids any inclusion of air in the coils, ensures excellent stability of the capacitance throughout the service life of the Alpivar² capacitor.

Maximum permissible voltage: 1.18 Un

Maximum permissible current:
- Standard type: 1.3 In
- H type: 1.5 In

Insulation class
- Withstand at 50 Hz for 1 min: 6 kV
- 1.2/50 µs impulse withstand: 25 kV

Standards
Alpivar² capacitors comply with:
- French standard: NF C 54 108 and 109
- European standard: EN 60831-1 and 2
- International standard: IEC 60831-1 and 2
- Canadian standard: CSA 22-2 No. 190

Temperature class
Alpivar² capacitors are designed for a standard temperature class -25/+55 °C
- Maximum temperature: 55 °C
- Average over 24 hours: 45 °C
- Annual average: 35 °C

- Peak inrush current : 400 A
- Mean life expectancy : 10 years
- Switching Operations : 10000 per year
- Impregnation : Dry Resin

Alpivar² racks

Technical specifications

Loss factor
Standard and Heavy duty type Alpimatic racks have a loss factor of 2 W/kVAr,
while that of Heavy duty capacitor with series reactor type racks is 6 W/kVAr

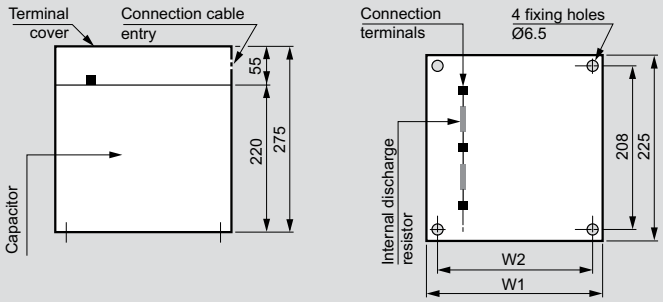
Standards
- International standard: IEC 60439-1
- European standard: EN 60439-2

Temperature class
- Operation: -10 to +45 °C (average over 24 hours: 40 °C)
- Storage: -30 to +60 °C

Alpivar² capacitors

Dimensions

Standard duty / Heavy duty - 3 phase



Standard duty	Heavy duty	Dimensions (mm)			Weight (kg)
		W1	W2	H	
	VH2.540CB	90	70	275	3.5
V544CB	VH540CB	90	70	275	3.5
V1044CB	VH7.540CB	90	70	275	3.5
V12.544CB	VH1040CB	90	70	275	3.5
V1544CB	VH12.540CB	90	70	275	3.5
V2044CB	VH1540CB	90	70	275	3.5
V2544CB	VH2040CB	90	70	275	3.5
V3044CB	VH2540CB	90	70	275	3.5
V4044CB	VH3040CB	180	156	275	7
V5044CB	VH3540CB	180	156	275	7
V6044CB	VH4040CB	180	156	275	7
V7044CB	VH5040CB	180	156	275	7
V8044CB	VH6040CB	270	244	275	10.5
V9044CB	VH7540CB	270	244	275	10.5
V10044CB	VH8040CB	360	332	275	14
V12544CB	VH9040CB	360	332	275	14
	VH10040CB	360	332	275	14
	VH12540CB	450	419	275	17.5

Heavy duty capacitor with series reactor, standard class - 3 phase

Cat.Nos	Dimensions (mm)			Weight (kg)
	Height	Width	Depth	
VS5040.189	1400	600	500	120
VS7540.189	1400	600	500	140
VS10040.189	1400	600	500	160
VS15040.189	1400	600	500	180
VS20040.189	1900	800	500	250
VS25040.189	1900	800	500	275
VS30040.189	1900	800	500	300

Heavy duty capacitor with series reactor, reinforced class - 3 phase

Cat.Nos	Dimensions (mm)			Weight (kg)
	Height	Width	Depth	
VS.R4040.189	1400	600	500	120
VS.R8040.189	1400	600	500	150
VS.R12040.189	1400	600	500	180
VS.R16040.189	1900	800	500	220
VS.R20040.189	1900	800	500	260
VS.R24040.189	1900	800	500	280
VS.R28040.189	1900	800	500	300

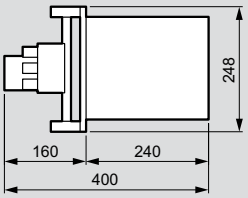
Heavy duty capacitor with series reactor, extra-reinforced class - 3 phase

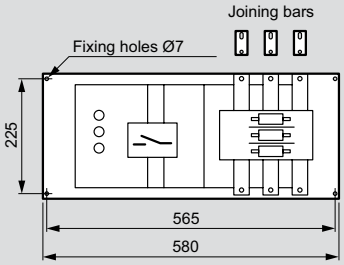
Cat.Nos	Dimensions (mm)			Weight (kg)
	Height	Width	Depth	
VS.RS7240.189	2100	1000	600	180
VS.RS14440.189	2100	1000	600	250
VS.RS21640.189	2100	1000	600	320
VS.RS28840.189	2100	1000	600	380

All dimensions are in mm,
1 Inch = 25.4 mm,
accuracy of dimensions = ± 2 mm

Alpivar² racks

Dimensions





Standard duty

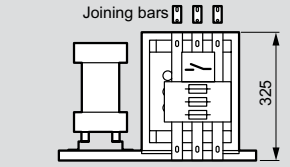
	Weight (kg)
P12.540	6
P12.512.540	11
P2540	9
P252540	16
P255040	22
P5040	16
P7540	22

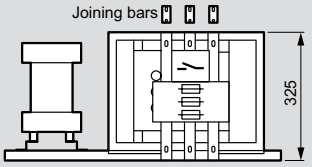
Heavy duty

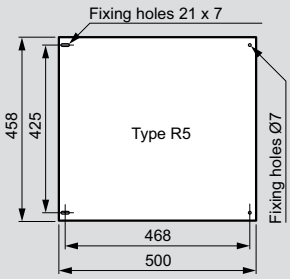
	Weight (kg)
PH12.540	7
PH12.512.540	14
PH2540	10
PH252540	17
PH255040	23
PH5040	17
PH7540	23

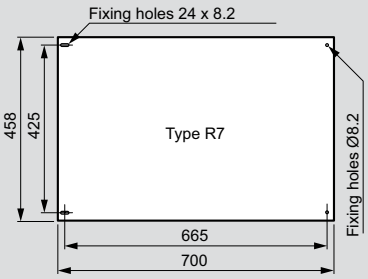
Alpivar² racks with detuned reactors

Dimensions







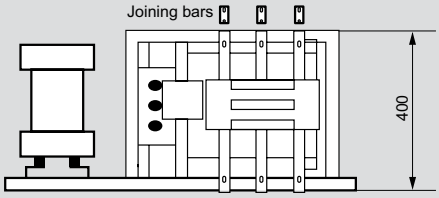


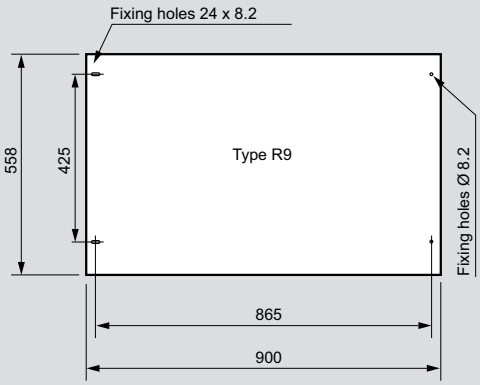
Standard class

	Weight (kg)
R5.2540.189	45
R5.5040.189	50
R7.5040.189	55
R7.7540.189	60

Reinforced class

	Weight (kg)
R5.R4040.189	50
R7.R4040.189	52
R7.R404040.189	65
R7.R8040.189	65





Extra-reinforced class

	Weight (kg)
R9.RS7240.189	80

All dimensions are in mm,
1 Inch = 25.4 mm,
accuracy of dimensions = ± 2 mm

Alpimatic & Alpistatic automatic capacitor banks

400 V network

Dimensions

Standard duty- 3 phase

Cat.Nos	Dimensions (mm)			Weight (kg)
	Height	Width	Depth	
M1040	650	260	320	40
M1540	650	260	320	40
M2040	650	260	320	40
M2540	650	260	320	40
M3040	650	260	320	45
M3540	650	260	320	45
M4040	650	260	320	45
M5040	650	260	320	45
M6040	770	260	320	50
M7540	770	260	320	75
M87.540	1000	350	500	80
M10040	1000	350	500	80
M12540	1000	350	500	90
M15040	1400	600	500	125
M17540	1400	600	500	140
M20040	1400	600	500	150
M22540	1400	600	500	160
M25040	1400	600	500	170
M27540	1400	600	500	190
M30040	1400	600	500	200
M35040	1900	600	500	260
M40040	1900	600	500	290
M45040	1900	600	500	300
M50040	1400	1200	500	370
M55040	1400	1200	500	400
M60040	1400	1200	500	430
M67540	1900	1200	500	490
M75040	1900	1200	500	500
M82540	1900	1200	500	540
M90040	1900	1200	500	560

Heavy duty - 3 phase

Cat.Nos	Dimensions (mm)			Weight (kg)
	Height	Width	Depth	
MH1040	650	260	320	40
MH1540	650	260	320	40
MH2040	650	260	320	40
MH2540	650	260	320	40
MH3040	650	260	320	45
MH3540	650	260	320	45
MH4040	650	260	320	45
MH5040	650	260	320	45
MH6040	770	260	320	50
MH7540	770	260	320	75
MH87.540	1000	350	500	80
MH10040	1000	350	500	80
MH12540	1000	350	500	90
MH15040	1400	600	500	125
MH17540	1400	600	500	140
MH20040	1400	600	500	150
MH22540	1400	600	500	160
MH25040	1400	600	500	170
MH27540	1400	600	500	190
MH30040	1400	600	500	200
MH35040	1900	600	500	260
MH40040	1900	600	500	290
MH45040	1900	600	500	300
MH50040	1400	1200	500	310
MH55040	1400	1200	500	370
MH60040	1400	1200	500	420
MH67540	1900	1200	500	450
MH75040	1900	1200	500	500
MH82540	1900	1200	500	550
MH 90040	1900	1200	500	600

Heavy duty capacitor with series reactor, standard class - 3 phase

Cat.Nos	Dimensions (mm)			Weight (kg)
	Height	Width	Depth	
MS7540.189	1400	600	500	180
MS10040.189	1400	600	500	230
MS12540.189	1400	600	500	250
MS15040.189	1400	600	500	300
MS20040.189	1900	800	500	340
MS22540.189	1900	800	500	360
MS25040.189	1900	800	500	380
MS27540.189	1900	800	500	400
MS30040.189	1900	800	500	420
MS35040.189	2100	800	500	460
MS37540.189	2100	800	500	470
MS45040.189	1900	1600	500	600
MS52540.189	1900	1600	500	630
MS60040.189	1900	1600	500	730
MS67540.189	2100	1600	500	800
MS75040.189	2100	1600	500	860

Heavy duty capacitor with series reactor, reinforced class - 3 phase

Cat.Nos	Dimensions (mm)			Weight (kg)
	Height	Width	Depth	
MS.R12040.189	1400	600	500	250
MS.R16040.189	1900	800	500	300
MS.R20040.189	1900	800	500	340
MS.R24040.189	1900	800	500	370
MS.R28040.189	1900	800	500	400
MS.R32040.189	1900	800	500	430
MS.R36040.189	2100	800	500	470
MS.R40040.189	2100	800	500	520
MS.R44040.189	1900	1600	500	600
MS.R48040.189	1900	1600	500	630
MS.R52040.189	1900	1600	500	670
MS.R56040.189	1900	1600	500	700
MS.R60040.189	1900	1600	500	750
MS.R64040.189	1900	1600	500	800
MS.R72040.189	2100	1600	500	860
MS.R80040.189	2100	1600	500	920

Heavy duty capacitor with series reactor, extra-reinforced class - 3 phase

Cat.Nos	Dimensions (mm)			Weight (kg)
	Height	Width	Depth	
MS.RS14440.189	2100	1000	600	300
MS.RS21640.189	2100	1000	600	380
MS.RS28840.189	2100	1000	600	460
MS.RS36040.189	2100	2000	600	600
MS.RS43240.189	2100	2000	600	680
MS.RS50440.189	2100	2000	600	760
MS.RS57640.189	2100	2000	600	820
MS.RS64840.189	2100	3000	600	950
MS.RS72040.189	2100	3000	600	1130
MS.RS79240.189	2100	3000	600	1200
MS.RS86440.189	2100	3000	600	1260

All dimensions are in mm,
1 Inch = 25.4 mm,
accuracy of dimensions = ± 2 mm

Alpican™

resin filled capacitors

4151 10

4151 23

Dimensions (p. 127)
Technical data (p. 125)

Resin filled 440 V standard duty:
- Conforms to IS 13340-1, IEC 60831-1&2
- ISI marked
- Compact design
- Self healing metallized polypropylene film
- Over pressure device for disconnection
- Low energy losses
- Resistance to high temperatures
- Bio-degradable soft resin, semi-dry

Resin filled 440 V heavy duty:
- Conforms to IS 13340-1, IEC 60831-1&2
- ISI marked
- Compact design
- Self healing metallized polypropylene film
- Over pressure device for disconnection
- Low energy losses
- Resistance to high temperatures
- Bio-degradable soft resin, semi-dry

Pack	Cat.Nos	**Standard duty Resin filled capacitor 440 V, 3 phase, 50 Hz**
1/12	4151 00	1 kVAr
1/12	4151 01	2.1 kVAr
1/12	4151 02	3 kVAr
1/12	4151 03	4.2 kVAr
1/12	**4151 04**	5 kVAr
1/6	4151 05	7.5 kVAr
1/4	**4151 06**	10 kVAr
1/4	4151 07	12.5 kVAr
1/4	**4151 08**	15 kVAr
1/4	**4151 09**	20 kVAr
1/4	4151 10	25 kVAr
1/4	4151 11	30 kVAr

		Heavy duty Resin filled capacitor 440 V 3 phase
1/12	4151 12	1 kVAr
1/12	4151 13	2.1 kVAr
1/6	4151 14	3 kVAr
1/6	4151 15	4.2 kVAr
1/6	**4151 16**	5 kVAr
1/4	4151 17	7.5 kVAr
1/4	**4151 18**	10 kVAr
1/4	4151 19	12.5 kVAr
1/2	**4151 20**	15 kVAr
1/4	**4151 21**	20 kVAr
1/2	4151 22	25 kVAr
1/2	4151 23	30 kVAr

Alpican™

gas filled capacitors

4151 29

Dimensions (p. 127)
Technical data (p. 125)

Gas filled 440 V heavy duty:
- Conforms to IS 13340-1, IEC 60831-1&2
- Compact design
- Self healing metallized polypropylene film
- Over pressure device for disconnection
- Low energy losses
- Dry inert gas filled

Pack	Cat.Nos	**Heavy duty gas filled capacitor 440 V, 3 phase, 50 Hz**
1/4	**4151 24**	5.2 kVAr
1/4	4151 25	7.3 kVAr
1/4	4151 26	8.8 kVAr
1/4	**4151 27**	10.5 kVAr
1/4	**4151 28**	12.6 kVAr
1/4	4151 29	17.5 kVAr
1/4	4151 30	21 kVAr
1/4	4151 31	25.2 kVAr

Alpican™

resin filled capacitor for reactors

4151 33

Dimensions (p. 128)
Technical data (p. 125)

Resin filled 525 V standard duty:
- Conforms to IS 13340-1, IEC 60831-1&2
- Compact design
- Self healing metallized polypropylene film
- Over pressure device for disconnection
- Low energy losses
- Resistance to high temperatures
- Bio-degradable soft resin, semi-dry

Pack	Cat.Nos	**Standard duty Resin filled capacitor 525 V, 3 phase, 50Hz**
1/6	4151 32	5 kVAr
1/4	4151 33	8.3 kVAr
1/4	4151 34	10.4 kVAr
1/4	4151 35	12.5 kVAr
1/4	4151 36	16.7 kVAr
1/4	4151 37	20.8 kVAr
1/4	4151 38	25 kVAr

reactors and power factor controllers

4151 50

4150 43

Dimensions (p. 128-129)
Technical data (p. 127)

Reactor:
- High harmonic loading capacity
- Low losses
- High linearity
- Easy mounting

Automatic power factor controller:
- Conforms to IEC 61010-1
- High accuracy
- IP 41 terminals
- Manual & Automatic mode of operation
- Free potential contact for remote alarm
- Displays alarm indication for 9 different conditions
- Internal temperature sensor
- RS 232 communication port
- In-built LED screens

Pack	Cat.Nos	**Reactors 7 % duty**
1	4151 48	Reactor 10 kVAr
1	4151 49	Reactor 12.5 kVAr
1	4151 50	Reactor 25 kVAr
1	4151 51	Reactor 50 kVAr
1	4151 52	Reactor 100 kVAr
		Reactors 14 % duty
1	4151 53	Reactor 12.5 kVAr
1	4151 54	Reactor 25 kVAr
1	4151 55	Reactor 50 kVAr
		Power factor controller
1	4150 52	3 step controller
1	4150 41	5 step controller
1	4150 42	7 step controller
1	4150 43	12 step controller

Alpican™

Guarantee

- The Company at its discretion will replace products if they have any manufacturing defect within 1 year for capacitor, Reactor & APFC controller.
- The above guarantee is applicable when the products are selected taken into consideration all the technical characteristics of the product published in our catalogue.
- The guarantee is only applicable when the products are installed as per the Company's instructions and not tampered in any manner.
- The guarantee states the Company's entire liability. It does not extend to cover consequential loss or damage or installation costs arising from defective products.

Alpican™

resin filled standard duty & heavy duty capacitors

Technical specifications

Resin filled standard duty capacitors

- Standards : IS 13340-1993, IS 13341-1992, IEC-60831-1&2
- Rated Voltage : 440 V & 525 V
- Frequency : 50/60 Hz
- Power range : 1 to 30 kVAr
- Losses(Dielectrical) : < 0.20 W/kVAr
- Losses (Total) : < 0.45 W/kVAr
- Peak inrush current : 200*In
- Over voltage : UN+10 % for 8 Hrs in 24 Hrs
- Over current : 1.3 * In
- Mean life expectancy : upto 1,00,000 h at temp level D
- Capacitance tolerance : +10 %
- Voltage test between terminals : 1.75*Un , AC, 2S as per IS
- Voltage test between earth & terminals : 3.6 KV, AC, 2S as per IS
- Discharge resistors : Fitted: standard discharge time less than at residual voltage of 50 V, 60 second as per IS
- Safety : Self healing + pressure sensitive disconnector + discharge device
- Protection : IP20
- Casing : Aluminium Can
- Dielectric : Metallized Polypropylene film
- Impregnation : NCPB Soft polyurethene Resin
- Ambient temperature : -10 °C / + 55 °C (Class D)
- Humidity : 95 %
- Altitude : 4000 m above sea level
- Mounting : Indoor,vertical position
- Fixing and earthing : Threaded M12 stud at bottom
- Switching life : Maximum 5000 per year

Resin filled heavy duty capacitors

- Standards : IS 13340-1993, IS 13341-1992, IEC 60831-1/-2, IEC-60831-1&2
- Rated Voltage : 440 V
- Frequency : 50/60 Hz
- Power range : 1 to 30 kVAr
- Losses(Dielectrical) : < 0.20 W/kVAr
- Losses (Total) : < 0.5 W/kVAr
- Peak inrush current : 250*In
- Over voltage : UN+10 % for 8 Hrs in 24 Hrs
- Over current : 1.5 to 1.8 * In
- Mean life expectancy : upto 1,15,000 h at temp level D
- Capacitance tolerance : +10 %
- Voltage test between terminals : 1.75*Un , AC, 2S as per IS
- Voltage test between earth & terminals : 3.6 KV, AC, 2S as per IS
- Discharge resistors : Fitted: standard discharge time less than at residual voltage of 50 V, 60 second as per IS
- Safety : Self healing + pressure sensitive disconnector + discharge device
- Protection : IP20
- Casing : Aluminium Can
- Dielectric : Metallized Polypropylene film
- Impregnation : NCPB Soft polyurethene Resin
- Ambient temperature : -10 °C / + 55 °C (Class D)
- Humidity : 95 %
- Altitude : 4000 m above sea level
- Mounting : Indoor,vertical position
- Fixing and earthing : Threaded M12 stud at bottom
- Switching life : Maximum 6000 per year

Alpican™

gas filled heavy duty capacitors

Technical specifications

- Standards : IS 13340-1993, IS 13341-1992, IEC 60831-1/-2, IEC-60831-1&2
- Rated Voltage : 440 V
- Frequency : 50/60 Hz
- Power range : 5 to 25 kVAr
- Losses(Dielectrical) : < 0.20 W/kVAr
- Losses (Total) : < 0.5 W/kVAr
- Peak inrush current : 300*In
- Over voltage : UN+10 % for 8 Hrs in 24 Hrs
- Over current : 1.4 * In
- Mean life expectancy : upto 1,80,000 h at temp level C
- Capacitance tolerance : -5/10 %
- Voltage test between terminals : 1.75*Un , AC, 2S as per IS
- Voltage test between earth & terminals : 3.6 KV, AC, 2S as per IS
- Discharge resistors : Fitted: standard discharge time less than at residual voltage of 50 V, 60 second as per IS
- Safety : Self healing + pressure sensitive disconnector + discharge device
- Protection : IP20
- Casing : Aluminium Can
- Dielectric : Metallized Polypropylene film
- Impregnation : Inert gas impregnated
- Ambient temperature : - 40 °C / + 55 °C (Class D)
- Humidity : 95 %
- Altitude : 4000 m above sea level
- Mounting : Indoor, vertical position
- Fixing and earthing : Threaded M12 stud at bottom
- Switching life : Maximum 7000 per year

Technical specifications

- Standard: IEC 60076-6
- Rated line voltage: 440 V
- Rated frequency: 50 Hz
- De-tuning factor p [%]: 7 %
- Tolerance on inductance: 0/+6 %
- Dielectric test: 50 Hz 3 kV, 60s
- Protection class: IP 00
- Cooling method: natural air (AN)
- Ambient temperature: +40 °C
- Insulation class: H
- Insulation level: 1.1kV
- Blocking factor p% 7 % - Tuning order 3.78
- Temperature protection (NC) : Yes

Technical specifications

- Digital power factor controller
- LED screen: 3 digits, 7 segments
- Membrane keypad
- RS 232 serial port for setting parameters and automatic testing via a PC
- Internal temperature sensor
- Advanced function for measuring capacitor overvoltages, average over a week
- 1 programmable relay for an alarm and/or controlling a fan

Versions

- 3, 5, 7 and 12 controlled steps

Temperature class

- Operation: - 10 to + 60 °C
- Storage: - 20 to + 80 °C

Current inputs

Rated current: 5 A (1 A on request)
Operating limit: 0.125 A to 6 A
Input current: 0.65 W
Not sensitive to the CT polarity
Not sensitive to the phase rotation polarity

Frequency

50 Hz/60 Hz

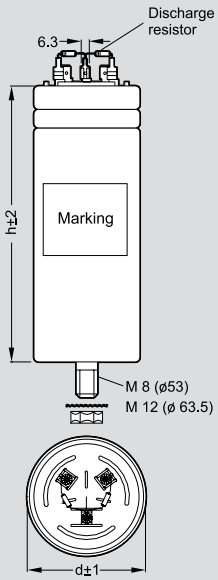
Parameters

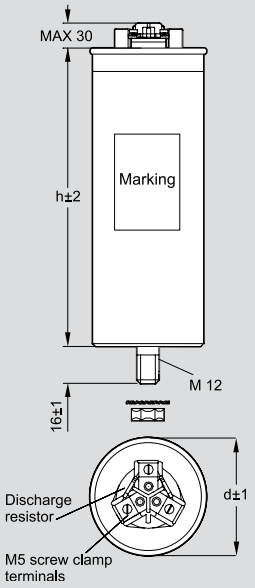
Power factor: 0.8 inductive to 0.8 capacitive
Same step reconnection time: 5 to 240 s
Manual and automatic mode
4 quadrant operation for operation on generator
Internal temperature sensor
Volt-free contact for remote alarm
Alarm display (overvoltage, over/under compensation, overload, etc.)

Alpican™

resin filled capacitors

Dimensions



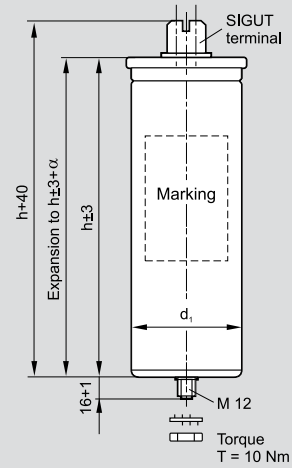


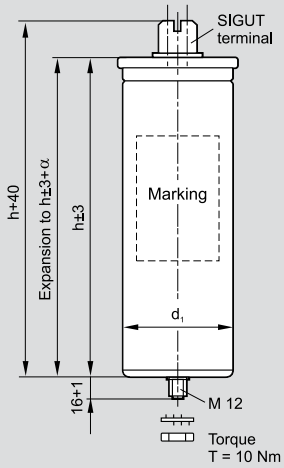
440 V Resin filled std duty

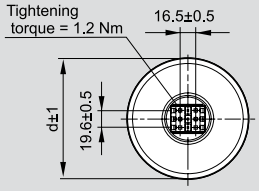
Cat.Nos	Dimensions	
	Diameter	Height
4151 00	53	117
4151 01	53	117
4151 02	63.5	129
4151 03	63.5	129
4151 04	63.5	152

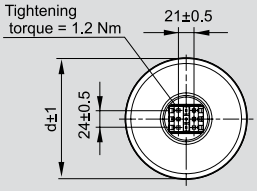
440 V Resin filled std duty

Cat.Nos	Dimensions	
	Diameter	Height
4151 05	78.4	195
4151 06	88.4	195
4151 07	88.4	270
4151 08	88.4	270
4151 09	88.4	345
4151 10	93.5	345
4151 11	93.5	345









440 V Resin filled heavy duty Can diameter up to 90 mm

Cat.Nos	Dimensions	
	Diameter	Height
4151 12	53	117
4151 13	63.5	129
4151 14	78.4	195
4151 15	78.4	195
4151 16	78.4	195
4151 17	88.4	270
4151 18	88.4	270

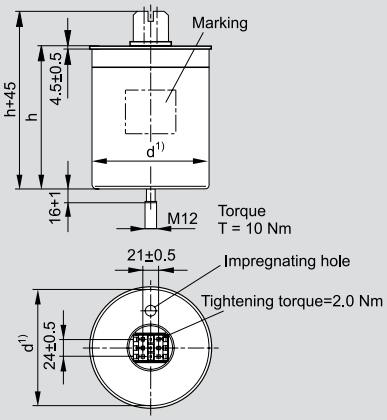
440 V Resin filled heavy duty Can diameter above 90 mm

Cat.Nos	Dimensions	
	Diameter	Height
4151 19	93.5	270
4151 20	105.5	280
4151 21	121.5	280
4151 22	121.5	325
4151 23	142	325

Alpican™

gas filled capacitors

Dimensions



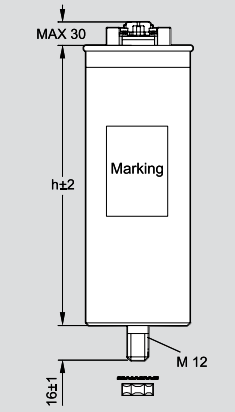
Creepage distance 12.7 mm min.
Clearance 9.6 mm min.

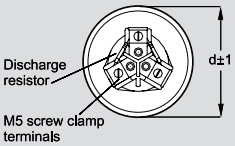
440 V Gas filled heavy duty

Cat.Nos	Dimensions	
	Diameter	Height
4151 24	116	164
4151 25	116	164
4151 26	116	164
4151 27	116	164
4151 28	116	164
4151 29	116	200
4151 30	136	200
4151 31	136	200

All dimensions are in mm,
1 Inch = 25.4 mm,
accuracy of dimensions = ± 2 mm

Dimensions





525 V Resin filled std duty

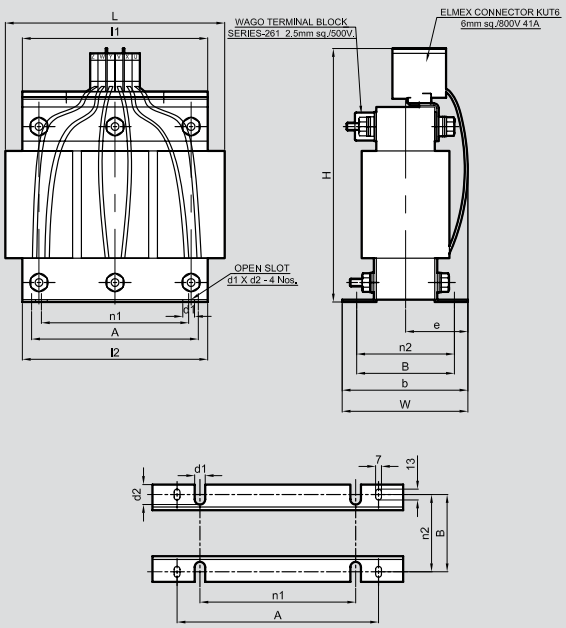
Cat.Nos	Dimensions	
	Diameter	Height
4151 32	78.4	195
4151 33	88.4	270
4151 34	88.4	270
4151 35	88.4	270
4151 36	88.4	345
4151 37	93.5	345
4151 38	93.5	345

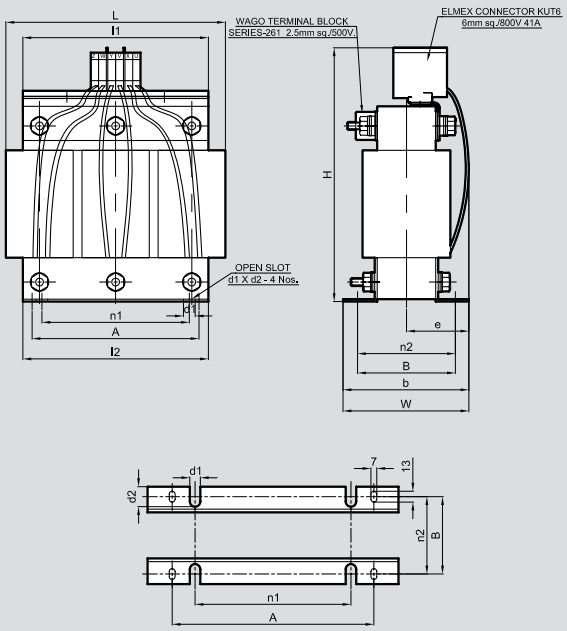
Dimensions

Cat.Nos	Height x Width x Depth (mm)	Weight (kg)
4150 52	96 x 96 x 65	0.42
4150 41	96 x 96 x 65	0.44
4150 42	96 x 96 x 65	0.46
4150 43	144 x 144 x 65	0.77

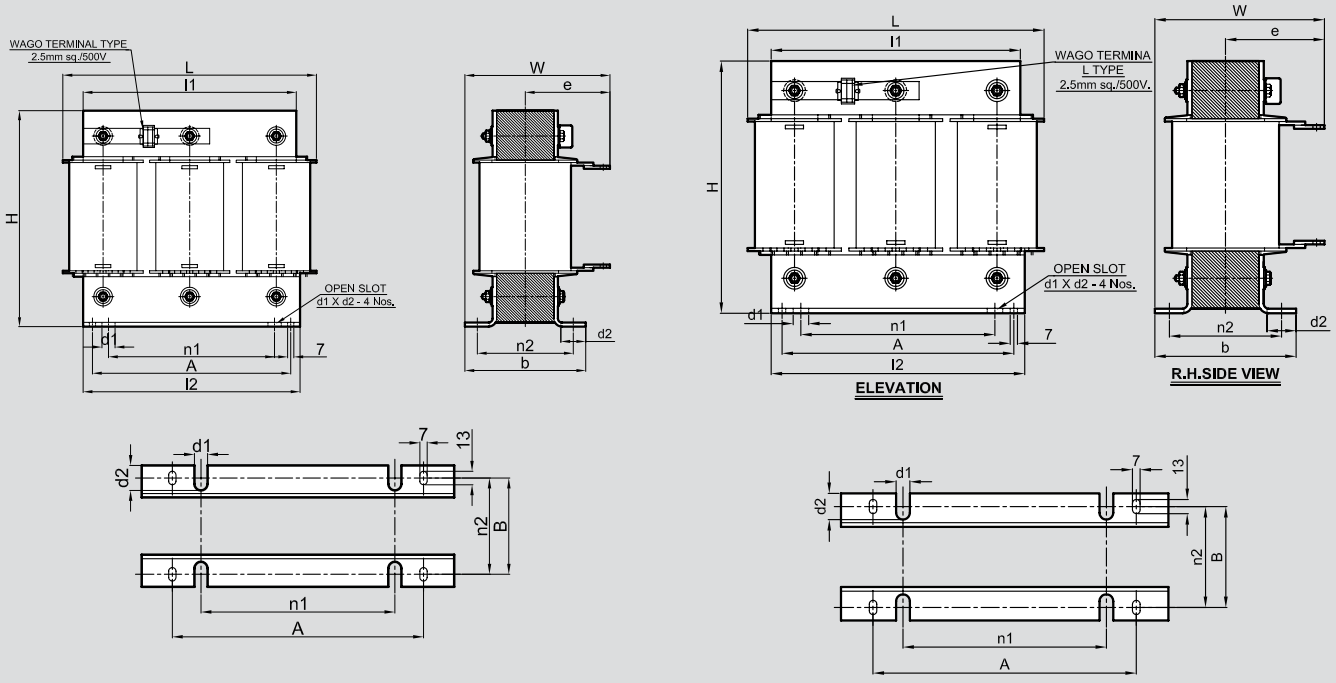
All dimensions are in mm,
1 Inch = 25.4 mm,
accuracy of dimensions = ± 2 mm

Dimensions





Cat.Nos	kVAr	Rated Current	L	W	H	l1	l2	n1	n2	b	e	d1	d2	A	B
4151 48	10	13.2 A	190	140±3 mm	225	165	165	60	78±3 mm	100	90±5 mm	10.8	15.5	85	78
4151 49	12.5	16.4 A	190	140±3 mm	225	165	165	60	78±3 mm	100	90±5 mm	10.8	15.5	85	78



Cat.Nos	kVAr	Rated Current	L	W	H	l1	l2	n1	n2	b	e	d1	d2	A	B
4151 50	25	32.8 A	240	165±5 mm	205	205	205	150	95±3 mm	114	115±5 mm	10.8	15.5	175	95
4151 51	50	65.61 A	275	225±5 mm	240	235	235	150	165±3 mm	185	127±5 mm	10.8	15.5	175	165
4151 52	100	131.22 A	330	180±5 mm	270	285	285	150	132±3 mm	155	98±5 mm	10.8	15.5	175	132

All dimensions are in mm,
1 Inch = 25.4 mm,
accuracy of dimensions = ± 2 mm

Data Required
Double Spread page ahead

A company always known for its groundbreaking innovations, Legrand's extensive R&D and technologically advanced products make us who we are today. As the global specialist in electrical and digital building infrastructures, our understanding of the market and its needs motivate us to innovate. Your recognition of our efforts, led us to the next step - DX^3.

DX³

Presenting, DX³, an international range of protection devices. Its revolutionary design supports all kinds of installations thus giving a never before experience. With 10 patents, 13 new features and a wide range, DX³ is the next step.

LEGRAND, A CLEAR, COMPREHENSIVE OFFER FOR ALL TYPES OF APPLICATION

The new DX³ circuit breakers can be integrated with a wide range of products, providing exceptional technical performance levels

The variety of functions and range of characteristics offered will enable you to equip all your distribution boards. The very high levels of coordination between the various ranges of DX³ modular circuit breakers makes it suitable for all types of application.

PROTECTION / BREAKING | MEASUREMENT | CONTROL

All functions on DIN rail

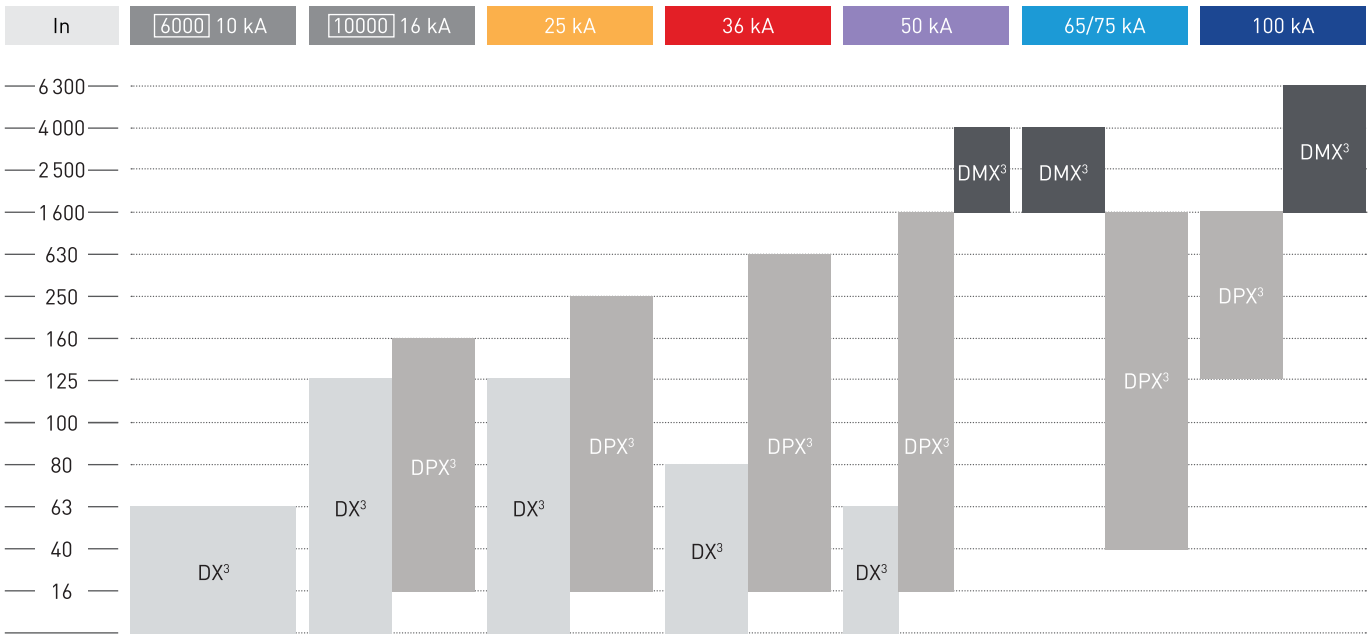
Each breaking capacity has its own power solution

Perfect complementarity for your distribution boards up to 6300 A and 100 kA breaking capacity.

DX³

DPX³

DMX³



DX^3

A COMPLETE SOLUTION

The efficient designs of the products are such that they can be easily installed. The clear identification marks, to know the state of the circuit breaker, make it easier to maintain. The high quality products also assure the safety of the user, thus making it a complete solution.

COPYTRACER, THE FIGHT AGAINST COUNTERFEITING

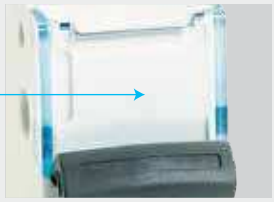
Copytracer is a unique registration number that is marked on some of our products. The number is stored in a database.

Go to the website: **www.legrand-copytracer.com**

Sliding shutters

New top clamp for all tools

Technical labelling area

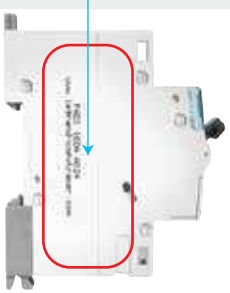


Integrated label holder

Colour coded handle with ON/OFF colour indication

Environment friendly

Improved air channels



Bottom clamp

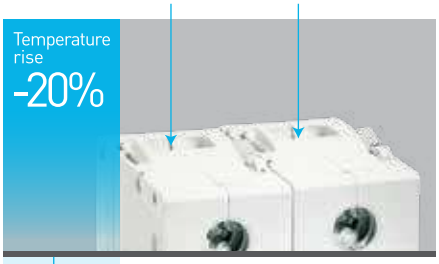
EASY, SAFE CONNECTION

Safety is prioritised with the innovative features of the DX^3 products

The quality and hold of the connections are vital for the safety of distribution boards fitted with high breaking capacity MCBs. The connection areas are designed to make installation faster without compromising on safety.

RISING CLAMP TERMINALS
Ensure a high quality, durable connection

RELIABLE CONNECTIONS
Compensation for the effect of loosening to ensure excellent hold over time and consistent contact (In ≥ 80 A)



1.5
modules/pole

Black handle:
circuit breakers
Grey handle: switches

Breaking capacity
16 kA
25 kA
36 kA
50 kA

RETRACTABLE INSULATING SHIELDS

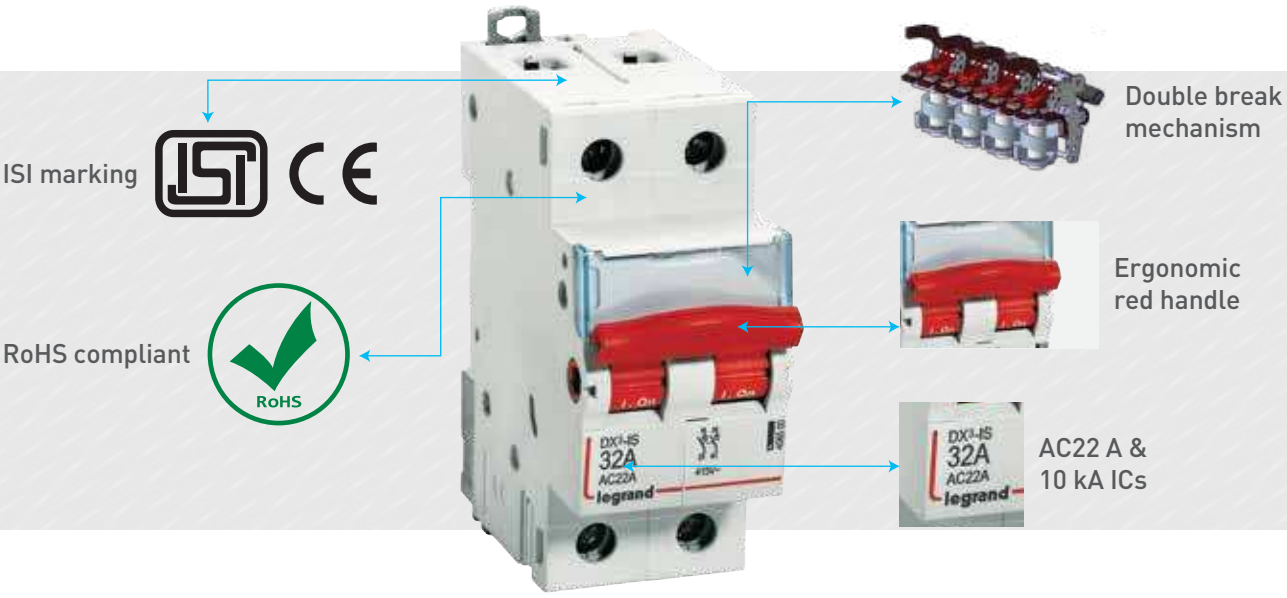
With the integrated retractable insulating shields, no additional accessories are needed to isolate the connections on any breaking capacities and high ratings of the 1.5 modules/pole (In ≤ 63 A) circuit breakers.

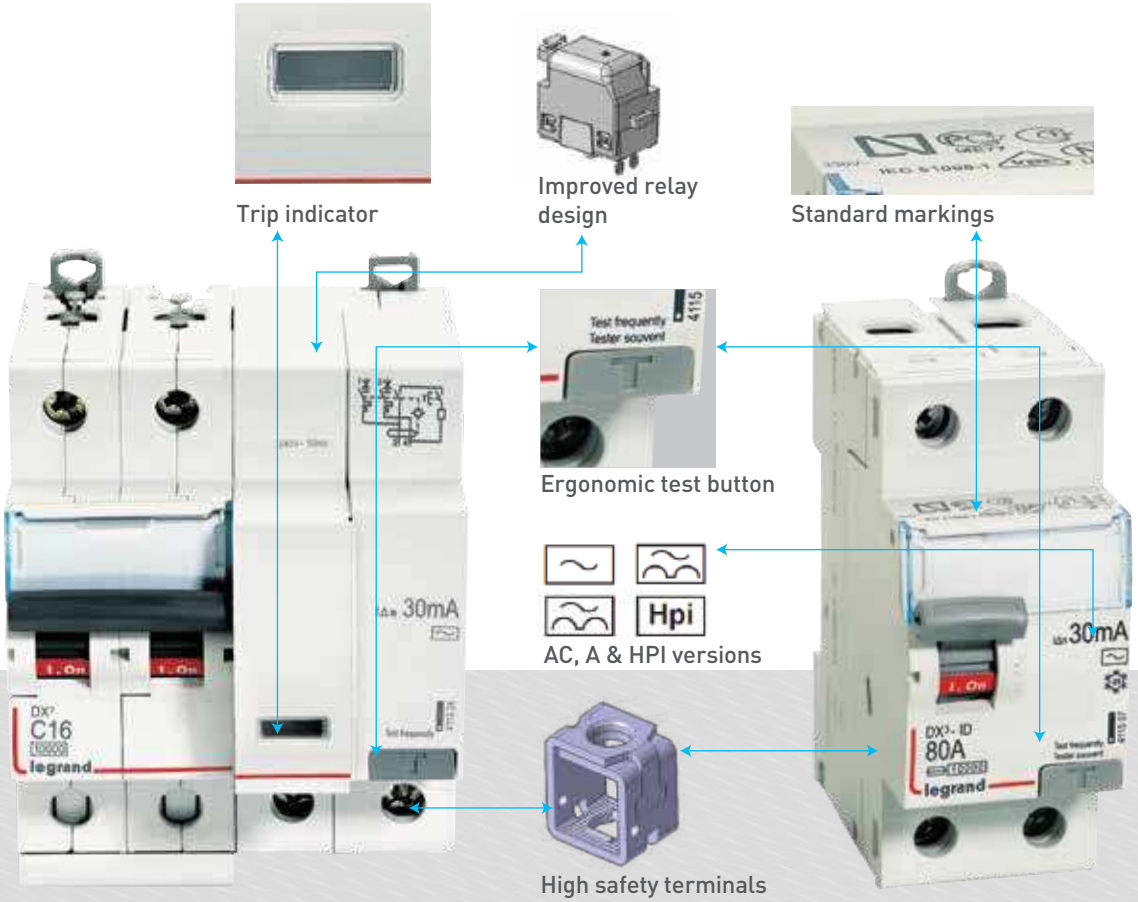
DX^3
IMPECCABLE QUALITY

Legrand pays particular attention to how these devices perform:

Each of them is set and checked individually on the production lines

The design integrated with the DX^3 range implicates its international quality. The products are crafted in a way to provide ease of installation.


ISI marking
RoHS compliant
RoHS
Double break mechanism
Ergonomic red handle
AC22 A & 10 kA ICs
32A
AC22A
legrand

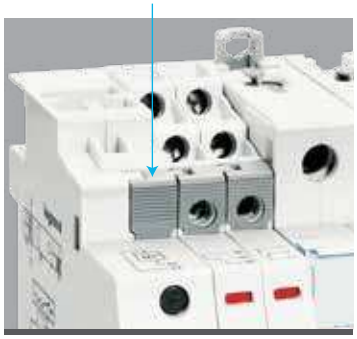

Trip indicator
Improved relay design
Standard markings
Test frequently
Tester souvent
Ergonomic test button
Hpi
AC, A & HPI versions
30mA
C16
80A
legrand
High safety terminals

PERFECT CONTROL OF YOUR INSTALLATION

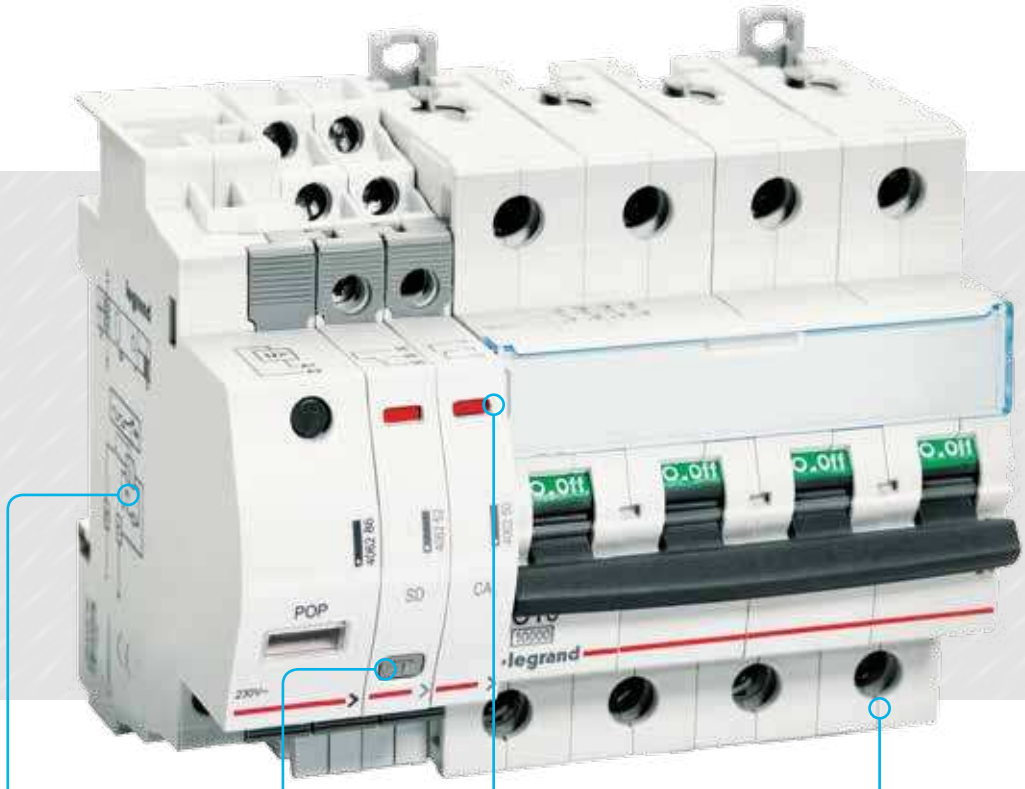
The DX³ range has a selection of electrical auxiliaries for monitoring and controlling circuits remotely

Auxiliary contacts and fault signal contacts, shunt trips, undervoltage releases, overvoltage releases and motorised controls.

THE AUXILIARIES FIT FIRMLY
without the need for any tools and
ensures that the entire assembly is robust



THE ACCESSIBILITY OF THE TERMINALS
and the visibility of the screw heads make
the installer's work easier



Marking of auxiliaries
(characteristics,
connection, mounting)

The fault signal
contacts have a
test button

The colour code of the indicators
on the signalling auxiliaries is
the same as that
of the remote indicators

DX³ circuit breakers take up
to 3 auxiliaries including one
control auxiliary

DX³ motorised controls can be used with 1 module per pole devices (circuit breakers, RCBOs and RCCBs) just as easily as auxiliaries.

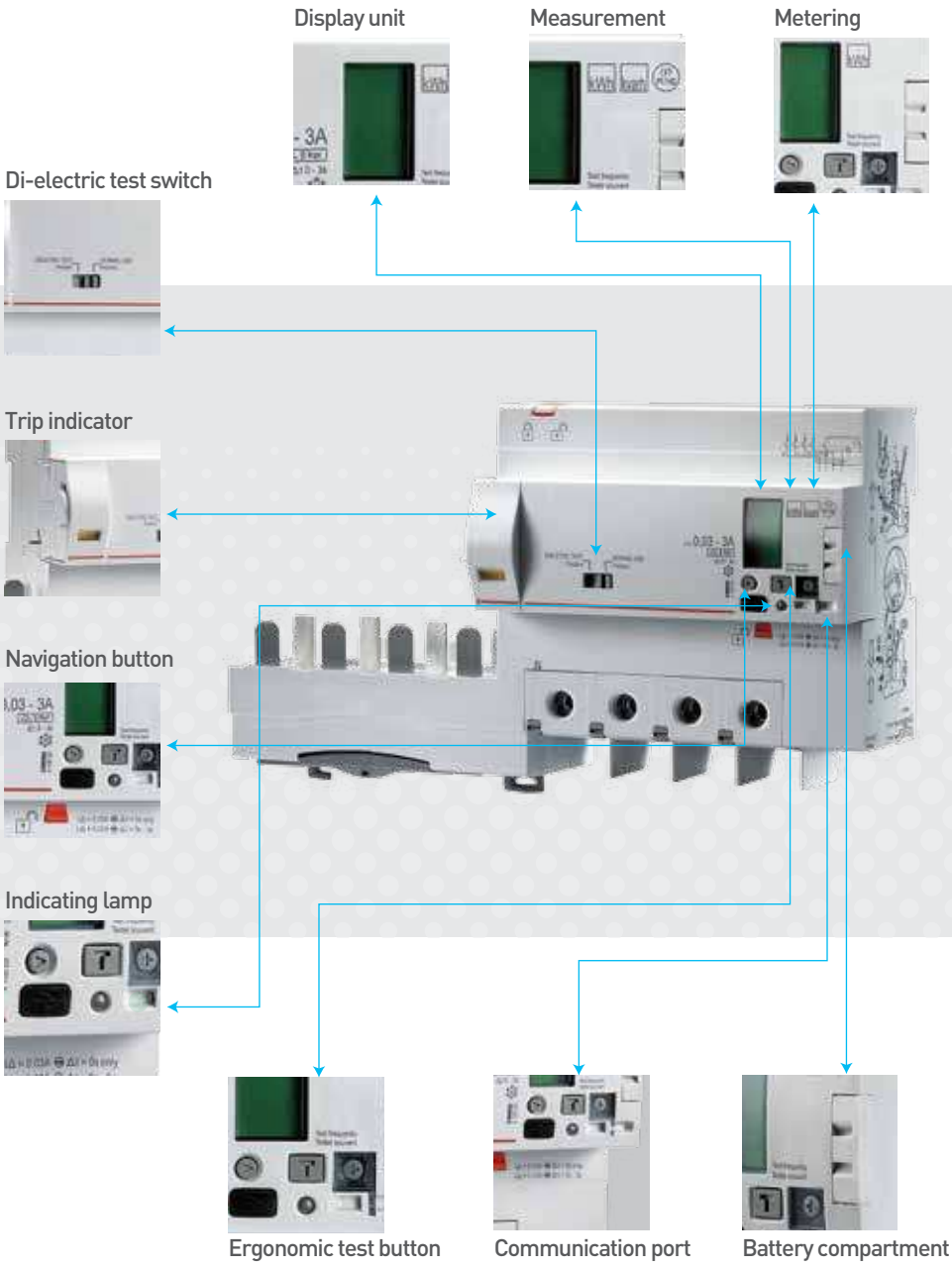
OPTIMISED SPACE IN THE DISTRIBUTION BOARD

Legrand motorised controls are the most compact in the market: 1 module wide.
They save a great deal of space inside the distribution board.

PROTECTION TAILORED TO YOUR REQUIREMENTS

A compact solution for protection and measurement

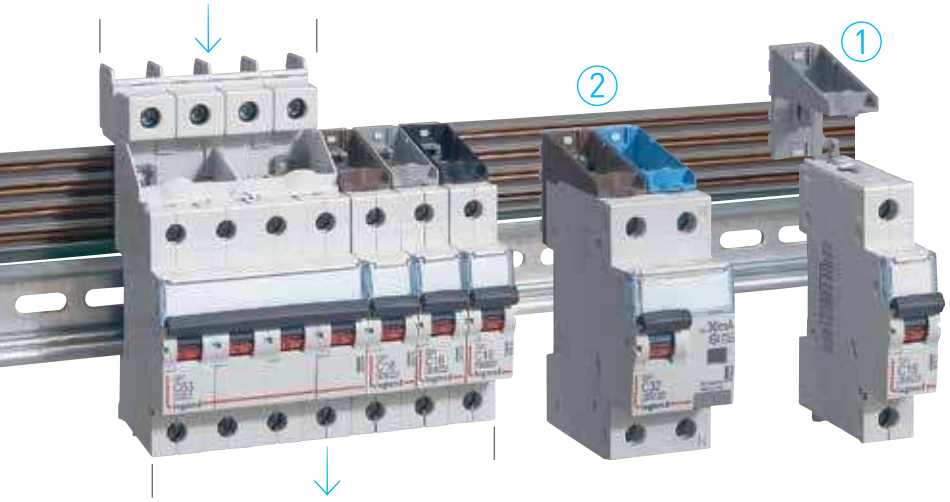
The new DX³ RCD add-on modules with metering have a wide range of features to meet the most stringent safety requirements. They come with RS485 communication port for remote data viewer.



CHOOSE YOUR DISTRIBUTION

Legrand optimised distribution has been designed for maximum safety, ease of installation and maintenance of distribution boards

Wiring and tedious tightening operations are minimised, and the risks of poor contact and short-circuits are reduced, while mounting time is optimised.



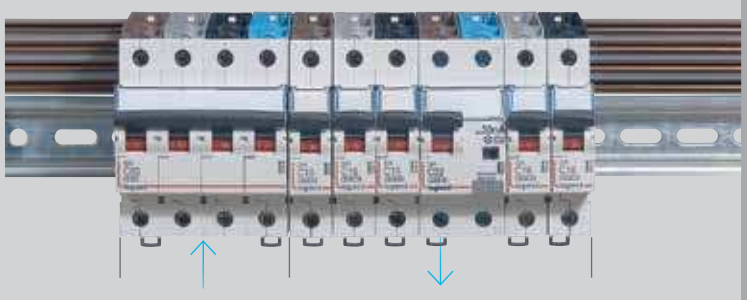
DISTRIBUTION BLOCK
SUPPLY VIA THE
POWER SUPPLY MODULE PROVIDED

CONNECTION MODULES
Set of 4 connection modules (L1, L2, L3, N)
for 1 module/pole devices

OPTIMISED DISTRIBUTION HX³ 125 A horizontal distribution blocks with plug-in connection

Horizontal 4-pole distribution for XL³ 160 to 4000 enclosures:

- Optimised design:
  Freedom to mix 1P, 1P+N, 2P, 3P and 4P devices on the same row
- Optimised installation:
  Automatic connection with no wiring or clamping
- Safe connection and disconnection of devices, even when the distribution block is powered-up (due to the IP xxB insulation of the distribution block and the integral connection modules in the devices).



DISTRIBUTION
BLOCK SUPPLY
VIA THE MAIN
DEVICE

EASY CONNECTION

Circuit breakers with plug-in terminals are fixed onto the distribution block with no need for any tool. The phase to be connected is determined by the choice of the connector. The distribution block can be supplied via the power supply module provided or via the head of row device.

MORE COMFORT
WITH ENERGY SAVINGS

The Legrand modular control and monitoring devices are a perfect addition to the range of DX^3 protection devices

With its time switches & contactors, Legrand guarantees a unique experience. With the selection of functions available, it is simple to improve the safety, efficiency and comfort of installations and meet energy requirements.

- Conform to IEC/EN 61095
- Space for power supply busbar on top (up to 25 A)
- Manual override for test and repair functions, carried out via the handle
- Permanent "ON" or "OFF" without automatic reset

- With synchronous (mains- synchronised clock precision) or quartz motor
- +/- 2.5 s/day clock precision (quartz motor)
- 100 hour running reserve (quartz motor)
- Surface-mounting possible with a wall bracket and a terminal cover (cat no : 412859)
- Unit width: 3 modules of 17.5 mm each

DX³ MCBs

MCBs for AC applications till 63 A

N

4085 90

4086 14

4086 37

4086 55

4086 77

4086 94

Technical characteristics **p. 273-274**

10 kA ISI marked as per IS/IEC 60898-1 2002
Integrated label holder
Sliding bottom clamp
Improved air channels
Color coded On/Off indication on dolly
Biconnect lower terminals
IP 20 protected terminals
Sliding shutters
DC-80 V per pole - 1 kA

Pack	Cat.Nos	DX³ MCBs - C curve	
		Single pole 240/415 V~	
		Nominal rating In (A)	Number of modules
1/10/120	4085 80	0.5	1
1/10/120	4085 81	1	1
1/10/120	4085 83	2	1
1/10/120	4085 84	3	1
1/10/120	4085 85	4	1
1/10/120	**4085 87**	6	1
1/10/120	**4085 90**	10	1
1/10/120	**4085 92**	16	1
1/10/120	**4085 93**	20	1
1/10/120	**4085 94**	25	1
1/10/120	**4085 95**	32	1
1/10/120	4085 96	40	1
1/10/120	4085 97	50	1
1/10/120	4085 98	63	1
		Single pole + Neutral 230 V~	
1/5/60	4086 02	0.5	2
1/5/60	4086 03	1	2
1/5/60	4086 05	2	2
1/5/60	4086 06	3	2
1/5/60	4086 07	4	2
1/5/60	4086 09	6	2
1/5/60	4086 12	10	2
1/5/60	**4086 14**	16	2
1/5/60	**4086 15**	20	2
1/5/60	4086 16	25	2
1/5/60	**4086 17**	32	2
1/5/60	4086 18	40	2
1/5/60	4086 19	50	2
1/5/60	4086 20	63	2
		2 pole 415 V~	
1/40	4086 21	0.5	2
1/40	4086 22	1	2
1/40	4086 24	2	2
1/40	4086 25	3	2
1/40	4086 26	4	2
1/40	**4086 28**	6	2
1/40	**4086 31**	10	2
1/40	**4086 33**	16	2
1/40	**4086 34**	20	2
1/40	**4086 35**	25	2
1/40	**4086 36**	32	2
1/40	4086 37	40	2
1/40	4086 38	50	2
1/40	4086 39	63	2

Pack	Cat.Nos	DX³ MCBs - C curve	
		3 pole 415 V~	
		Nominal rating In (A)	Number of modules
1/32	4086 43	0.5	3
1/32	4086 44	1	3
1/32	4086 46	2	3
1/32	4086 47	3	3
1/32	4086 48	4	3
1/32	**4086 50**	6	3
1/32	**4086 53**	10	3
1/32	**4086 55**	16	3
1/32	**4086 56**	20	3
1/32	**4086 57**	25	3
1/32	**4086 58**	32	3
1/32	4086 59	40	3
1/32	4086 60	50	3
1/32	4086 61	63	3
		3 pole + Neutral 415 V~	
1/32	4086 65	0.5	4
1/32	4086 66	1	4
1/32	4086 68	2	4
1/32	4086 69	3	4
1/32	4086 70	4	4
1/32	4086 72	6	4
1/32	4086 75	10	4
1/32	4086 77	16	4
1/32	4086 78	20	4
1/32	4086 79	25	4
1/32	**4086 80**	32	4
1/32	**4086 81**	40	4
1/32	4086 82	50	4
1/32	**4086 83**	63	4
		4 pole 415 V~	
1/32	4086 84	0.5	4
1/32	4086 85	1	4
1/32	4086 87	2	4
1/32	4086 88	3	4
1/32	4086 89	4	4
1/32	4086 91	6	4
1/32	4086 94	10	4
1/32	4086 96	16	4
1/32	4086 97	20	4
1/32	4086 98	25	4
1/32	**4086 99**	32	4
1/32	**4087 00**	40	4
1/32	4087 01	50	4
1/32	**4087 02**	63	4

DX³ MCBs

MCBs for AC applications till 63 A (continued)

N

4087 19

4087 46

4087 52

4087 90

Technical characteristics **p. 273-274**

10 kA ISI marked as per IS/IEC 60898-1 2002
Integrated label holder
Sliding bottom clamp
Improved air channels
Color coded On/Off indication on dolly
Biconnect lower terminals
IP 20 protected terminals
Sliding shutters
DC-80 V per pole - 1 kA

Pack	Cat.Nos	DX³ MCBs - D curve	
		Single pole 240/415 V~	
		Nominal rating In (A)	Number of modules
1/10/120	4087 06	0.5	1
1/10/120	4087 07	1	1
1/10/120	4087 09	2	1
1/10/120	4087 10	3	1
1/10/120	4087 11	4	1
1/10/120	4087 12	6	1
1/10/120	4087 14	10	1
1/10/120	4087 16	16	1
1/10/120	4087 17	20	1
1/10/120	4087 18	25	1
1/10/120	4087 19	32	1
1/10/120	4087 20	40	1
1/10/120	4087 21	50	1
1/10/120	4087 22	63	1
		Single pole + Neutral 230 V~	
1/5/60	4087 26	0.5	2
1/5/60	4087 27	1	2
1/5/60	4087 29	2	2
1/5/60	4087 30	3	2
1/5/60	4087 31	4	2
		2 pole 415 V~	
1/40	4087 32	0.5	2
1/40	4087 33	1	2
1/40	4087 35	2	2
1/40	4087 36	3	2
1/40	4087 37	4	2
1/40	4087 38	6	2
1/40	4087 40	10	2
1/40	4087 42	16	2
1/40	4087 43	20	2
1/40	4087 44	25	2
1/40	4087 45	32	2
1/40	4087 46	40	2
1/40	4087 47	50	2
1/40	4087 48	63	2

Pack	Cat.Nos	DX³ MCBs - D curve	
		3 pole 415 V~	
		Nominal rating In (A)	Number of modules
1/32	4087 52	0.5	3
1/32	4087 53	1	3
1/32	4087 55	2	3
1/32	4087 56	3	3
1/32	4087 57	4	3
1/32	4087 58	6	3
1/32	4087 60	10	3
1/32	4087 62	16	3
1/32	4087 63	20	3
1/32	4087 64	25	3
1/32	4087 65	32	3
1/32	4087 66	40	3
1/32	4087 67	50	3
1/32	4087 68	63	3
		3 pole + Neutral 415 V~	
1/32	4087 72	0.5	4
1/32	4087 73	1	4
1/32	4087 75	2	4
1/32	4087 76	3	4
1/32	4087 77	4	4
		4 pole 415 V~	
1/32	4087 78	0.5	4
1/32	4087 79	1	4
1/32	4087 81	2	4
1/32	4087 82	3	4
1/32	4087 83	4	4
1/32	4087 84	6	4
1/32	4087 86	10	4
1/32	4087 88	16	4
1/32	4087 89	20	4
1/32	4087 90	25	4
1/32	4087 91	32	4
1/32	4087 92	40	4
1/32	4087 93	50	4
1/32	4087 94	63	4

DX³ MCBs

MCBs for AC applications 80 - 125 A

N

4086 00

4086 40

4086 63

Technical characteristics **p. 273-274**

10 kA as per IEC 60947-2
Integrated label holder
Sliding insulating shield
Color coded contact indication window
IP 20 protected terminals
50 sq mm terminals

Pack	Cat.Nos	DX³ MCBs 10 kA*	
		Single pole 230 V~ / 400 V~	
		Nominal rating In (A)	Number of modules
1/5/160	4085 99	80	1.5
1/5/161	4086 00	100	1.5
1/5/162	4086 01	125	1.5
		2 pole 400 V~	
1/5/60	4086 40	80	3
1/5/60	4086 41	100	3
1/5/60	4086 42	125	3
		3 pole 400 V~	
1/9	4086 62	80	4.5
1/9	4086 63	100	4.5
1/9	4086 64	125	4.5
		4 pole 400 V~	
1/9	4087 03	80	6
1/9	4087 04	100	6
1/9	4087 05	125	6

*For industrial use only.

DX³ MCBs

MCBs for DC applications 63 A

N

4088 12

6 kA as per IEC 60947-2
Integrated label holder
Sliding bottom clamp
Improved air channels
Color coded On/Off indication on dolly
Biconnect lower terminals
IP 20 protected terminals
Sliding shutters

Pack	Cat.Nos	DX³ MCBs 6 kA*	
		Single pole 250 V⎓	
		Nominal rating In (A)	Number of modules
1/10/120	4087 98	0.5	1
1/10/120	4087 99	1	1
1/10/120	4088 01	2	1
1/10/120	4088 02	3	1
1/10/120	4088 03	4	1
1/10/120	4088 04	6	1
1/10/120	4088 06	10	1
1/10/120	4088 08	16	1
1/10/120	4088 09	20	1
1/10/120	4088 10	25	1
1/10/120	4088 11	32	1
1/10/120	4088 12	40	1
1/10/120	4088 13	50	1
1/10/120	4088 14	63	1
		2 pole 500 V⎓	
1/5/60	4088 15	0.5	2
1/5/60	4088 16	1	2
1/5/60	4088 18	2	2
1/5/60	4088 19	3	2
1/5/60	4088 20	4	2
1/5/60	4088 21	6	2
1/5/60	4088 23	10	2
1/5/60	4088 25	16	2
1/5/60	4088 26	20	2
1/5/60	4088 27	25	2
1/5/60	4088 28	32	2
1/5/60	4088 29	40	2
1/5/60	4088 30	50	2
1/5/60	4088 31	63	2

*For industrial use only.

DX³ MCBs - 16 kA

thermal magnetic MCB from 6 A to 125 A

N

4092 25

Technical characteristics **p. 273-274**

Breaking capacity
16 kA - IEC 60947-2 - 400 V~
Can be equipped with DX³ auxiliaries and accessories

Pack	Cat.Nos	DX³ MCBs 16 kA*	
		Single pole 230/400 V~	
		Nominal rating In (A)	Number of modules
1	4091 29	6	1
1	4091 31	10	1
1	4091 32	13	1
1	4091 33	16	1
1	4091 34	20	1
1	4091 35	25	1
1	4091 36	32	1.5
1	4091 37	40	1.5
1	4091 38	50	1.5
1	4091 39	63	1.5
1	4091 40	80	1.5
1	4091 41	100	1.5
1	4091 42	125	1.5
		2 pole 230/400 V~	
1	4092 17	6	2
1	4092 19	10	2
1	4092 20	13	2
1	4092 21	16	2
1	4092 22	20	2
1	4092 23	25	2
1	4092 24	32	2
1	4092 25	40	3
1	4092 26	50	3
1	4092 27	63	3
1	4092 28	80	3
1	4092 29	100	3
1	4092 30	125	3

*For industrial use only.

Pack	Cat.Nos	DX³ MCBs 16 kA*	
		3 pole 400 V~	
		Nominal rating In (A)	Number of modules
1	4092 69	6	3
1	4092 71	10	3
1	4092 72	13	3
1	4092 73	16	3
1	4092 74	20	3
1	4092 75	25	3
1	4092 76	32	4.5
1	4092 77	40	4.5
1	4092 78	50	4.5
1	4092 79	63	4.5
1	4092 80	80	4.5
1	4092 81	100	4.5
1	4092 82	125	4.5
		4 pole 400 V~	
1	4093 51	6	4
1	4093 53	10	4
1	4093 54	13	4
1	4093 55	16	4
1	4093 56	20	4
1	4093 57	25	4
1	4093 58	32	6
1	4093 59	40	6
1	4093 60	50	6
1	4093 61	63	6
1	4093 62	80	6
1	4093 63	100	6
1	4093 64	125	6

*For industrial use only.

DX³ MCBs - 25 kA

thermal magnetic MCBs from 6 A to 125 A

N

4097 72

4098 03

Breaking capacity:
25 kA - IEC 60947-2 - 400 V~
Can be equipped with DX³ auxiliaries and accessories

Pack	Cat.Nos	DX³ MCBs - 25 kA*		
		Single pole 230/400 V~		
	C curve	Nominal rating In (A)	Number of modules	
1	4097 53	6	1	
1	4097 54	10	1	
1	4097 55	16	1	
1	4097 56	20	1	
1	4097 57	25	1	
1	4097 58	32	1.5	
1	4097 59	40	1.5	
1	4097 60	50	1.5	
1	4097 61	63	1.5	
1	4097 62	80	1.5	
1	4097 63	100	1.5	
1	4097 64	125	1.5	
		2 pole - 230/400 V~		
1	4097 66	6	2	
1	4097 67	10	2	
1	4097 68	16	2	
1	4097 69	20	2	
1	4097 70	25	2	
1	4097 71	32	2	
1	4097 72	40	3	
1	4097 73	50	3	
1	4097 74	63	3	
1	4097 75	80	3	
1	4097 76	100	3	
1	4097 77	125	3	

*For industrial use only.

Pack	Cat.Nos	DX³ MCBs - 25 kA* (continued)	
		3 pole - 400 V~	
	C curve	Nominal rating In (A)	Number of modules
1	4097 79	6	3
1	4097 80	10	3
1	4097 81	16	3
1	4097 82	20	3
1	4097 83	25	3
1	4097 84	32	4.5
1	4097 85	40	4.5
1	4097 86	50	4.5
1	4097 87	63	4.5
1	4097 88	80	4.5
1	4097 89	100	4.5
1	4097 90	125	4.5
		4 pole - 400 V~	
1	4097 92	6	4
1	4097 93	10	4
1	4097 94	16	4
1	4097 95	20	4
1	4097 96	25	4
1	4097 97	32	6
1	4097 98	40	6
1	4097 99	50	6
1	4098 00	63	6
1	4098 01	80	6
1	4098 02	100	6
1	4098 03	125	6

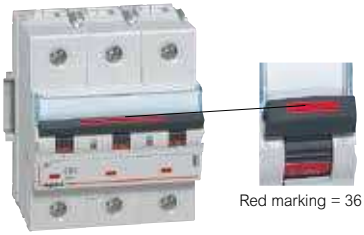
*For industrial use only.

DX³ MCBs - 36 kA

thermal magnetic MCBs from 10 A to 80 A

N

4100 12



4100 27

Breaking capacity:
36 kA - IEC 60947-2 - 400 V~
Can be equipped with DX³ auxiliaries and accessories

Pack	Cat.Nos	DX³ MCBs - 36 kA*	
		2 pole - 400 V~	
	C curve	Nominal rating In (A)	Number of modules
1	4100 07	10	1.5
1	4100 08	16	1.5
1	4100 09	20	1.5
1	4100 10	25	1.5
1	4100 11	32	1.5
1	4100 12	40	1.5
1	4100 13	50	1.5
1	4100 14	63	1.5
1	4100 15	80	1.5
		3 pole - 400 V~	
1	4100 20	10	4.5
1	4100 21	16	4.5
1	4100 22	20	4.5
1	4100 23	25	4.5
1	4100 24	32	4.5
1	4100 25	40	4.5
1	4100 26	50	4.5
1	4100 27	63	4.5
1	4100 28	80	4.5
		4 pole - 400 V~	
1	4100 33	10	6
1	4100 34	16	6
1	4100 35	20	6
1	4100 36	25	6
1	4100 37	32	6
1	4100 38	40	6
1	4100 39	50	6
1	4100 40	63	6
1	4100 41	80	6

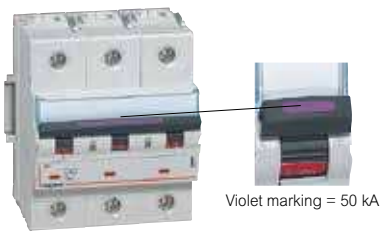
*For industrial use only.

DX³ MCBs - 50 kA

thermal magnetic MCBs from 10 A to 63 A

N

4101 51



4102 17

Breaking capacity:
50 kA - IEC 60947-2 - 400 V~
Can be equipped with DX³ auxiliaries and accessories

Pack	Cat.Nos	DX³ MCBs - 50 kA*	
		Single pole 230/400 V~	
	D curve	Nominal rating In (A)	Number of modules
1	4101 34	10	1.5
1	4101 35	16	1.5
1	4101 36	20	1.5
1	4101 37	25	1.5
1	4101 38	32	1.5
1	4101 39	40	1.5
1	4101 40	50	1.5
1	4101 41	63	1.5
		2 pole - 230/400 V~	
1	4101 47	10	3
1	4101 48	16	3
1	4101 49	20	3
1	4101 50	25	3
1	4101 51	32	3
1	4101 52	40	3
1	4101 53	50	3
1	4101 54	63	3
		3 pole - 400 V~	
1	4101 60	10	4.5
1	4101 61	16	4.5
1	4101 62	20	4.5
1	4101 63	25	4.5
1	4101 64	32	4.5
1	4101 65	40	4.5
1	4101 66	50	4.5
1	4101 67	63	4.5
		4 pole - 400 V~	
1	4101 73	10	6
1	4101 74	16	6
1	4101 75	20	6
1	4101 76	25	6
1	4101 77	32	6
1	4101 78	40	6
1	4101 79	50	6
1	4101 80	63	6

*For industrial use only.

DX³
for photovoltaic applications

N

DX³
for RDSO

N

4088 40

Pack	Cat.Nos	DC MCBs
		Breaking capacity 4.5 kA according to EN 60947-2
		800 V⎓ circuit breakers
1	4144 24	6 A
1	4144 25	8 A
1	4144 26	10 A
1	4144 27	13 A
1	4144 28	16 A
1	4144 29	20 A
		1000 V⎓ circuit breakers
1	4144 46	10 A
1	4144 47	13 A
1	4144 48	16 A
1	4144 49	20 A
1	4144 50	25 A
1	4144 51	32 A
		Type 2 voltage surge protectors
		DC side protection of photovoltaic installations connected to the low voltage network (without energy storage system) Conforming to UTE guide C 61-740-51 Protection in common mode and residual current mode (Y mode) 1 Consisting of plug-in modules with LED indicator Red: modules need to be replaced
		Voltage surge protectors
1	4141 60	600 V⎓ 25 KA Imax
1	4141 51	1000 V 40 KA Imax
		Plug-in replacement module
1	4141 90	+/- cassette for voltage surge protector 4141 60
1	4141 91	T cassette for voltage surge protector 4141 60
1	4141 81	+/- and T cassette for voltage surge protector 4141 51
		DC rotary handle isolating switches
		Category of use DC 21B according to EN 60947-3 Double break contacts
		600 V⎓ isolating switches
1	4142 61	16 A
1	4142 62	25 A
1	4142 63	32 A
		1000 V⎓ isolating switches
1	4142 81	16 A
1	4142 82	25 A
1	4142 83	32 A
		Accessories
1	4063 05	Pole separation devider
10	4063 07	Spacing unit 0.5 unit

Pack	Cat.Nos	RDSO
1	4088 32	0.5 A
1	4088 33	1 A
1	4088 34	1.5 A
1	4088 35	1.6 A
1	4088 36	2.5 A
1	4088 37	3 A
1	4088 38	4 A
1	4088 39	5 A
1	4088 40	10 A
1	4088 42	20 A
1	4088 43	25 A
1	4088 44	30 A
1	4088 45	35 A
1	4088 46	40 A
1	4088 47	50 A
1	4088 48	60 A

DX³ isolators

ISs for AC applications upto 125 A

N

4065 00

4065 10

4065 20

Isolators for AC applications upto 125 A
ISI marked as per IEC 60947-3
Integrated label holder
Ergonomic red color dolly
Sliding bottom clamp
Double break mechanism
Improved air channels
Color coded On/Off indication on dolly
Biconnect lower terminals
IP 20 protected terminals
Sliding shutters

Pack	Cat.Nos	Isolators	
		2 pole 415 V~	
		Nominal rating In (A)	Number of modules
1/5/60	4065 00	32	2
1/5/60	**4065 01**	40	2
1/5/60	**4065 02**	63	2
1/5/60	4065 04	100	2
1/5/60	4065 05	125	2
		3 pole 415 V~	
1/40	4065 09	32	3
1/40	**4065 10**	40	3
1/40	**4065 11**	63	3
1/40	4065 13	100	3
1/40	4065 14	125	3
		4 pole 415 V~	
1/32	4065 18	32	4
1/32	**4065 19**	40	4
1/32	**4065 20**	63	4
1/32	4065 22	100	4
1/32	4065 23	125	4

DX³ RCCBs

RCCBs for AC applications upto 63 A

N

4118 51

4118 77

4118 93

ISI marked as per IS 12640-1
Integrated label holder
Ergonomic Grey color dolly
Sliding bottom clamp
Color coded On/Off indication on dolly
Biconnect lower terminals
IP 20 protected terminals
35 sq mm terminals
Sliding shutters

Pack	Cat.Nos	DX³ RCCBs	
		2 pole 240 V~	
		30 mA	
		Nominal rating In (A)	Number of modules
1/5/60	**4118 51**	25	2
1/5/60	**4118 52**	40	2
1/5/60	4118 53	63	2
		100 mA	
1/5/60	**4118 56**	25	2
1/5/60	**4118 57**	40	2
1/5/60	4118 58	63	2
		300 mA	
1/5/60	4118 61	25	2
1/5/60	4118 62	40	2
1/5/60	4118 63	63	2
		4 pole 415 V~	
		30 mA	
1/32	4118 76	25	4
1/32	**4118 77**	40	4
1/32	**4118 78**	63	4
		100 mA	
1/32	4118 81	25	4
1/32	**4118 82**	40	4
1/32	**4118 83**	63	4
		300 mA	
1/32	4118 86	25	4
1/32	**4118 87**	40	4
1/32	**4118 88**	63	4
		4 pole 415 V~, A-S	
		300 mA	
1/5/60	4118 91	25	4
1/5/60	4118 92	40	4
1/5/60	4118 93	63	4
		2 pole 240 V~, HPI	
		30 mA	
1/5/60	4118 71	25	2
1/5/60	4118 72	40	2
1/5/60	4118 73	63	2
		4 pole 415 V~, HPI	
		30 mA	
1/32	4118 96	25	4
1/32	4118 97	40	4
1/32	4118 98	63	4

DX³ RCCBs

RCCBs for AC applications 80 - 100 A

N

4115 08

4117 05

4117 15

Integrated label holder
Ergonomic Grey color dolly
Color coded On/Off indication on dolly
IP 20 protected terminals
35 sq mm terminals
Sliding shutters
B type ⩙ detect sinusoidal AC, pulsating DC and smooth DC residual currents

Pack	Cat.Nos	DX³ RCCBs*	
		2 pole 240 V∿	
		30 mA	
		Nominal rating In (A)	Number of modules
1/5/60	4115 07	80	2
		100 mA	
1/5/60	4115 17	80	2
		300 mA	
1/5/60	4115 27	80	2
		4 pole 415 V∿	
		30 mA	
1/32	4117 05	80	4
1/32	4117 63	100	4
		100 mA	
1/32	4117 15	80	4
1/32	4117 73	100	4
		300 mA	
1/32	4117 25	80	4
1/32	4117 83	100	4
		2 pole 240 V∿, HPI	
		30 mA	
1/5/60	4118 74	80	2
		4 pole 415 V∿, HPI	
		30 mA	
1/32	4118 99	80	4
		4 pole 415 V∿, A-S	
		300 mA	
1/5/60	4118 94	80	4
		2 pole 230 V∿, B type ⩙	
		Do not accept auxiliaries	
		30 mA	
1	4118 42	40	2
1	4118 43	63	2
		300 mA	
1	4118 44	40	2
1	4118 45	63	2
		4 pole 400 V∿, neutral on left-hand side	
		B type ⩙	
		Do not accept auxiliaries	
		30 mA	
1	4118 46	40	4
1	4118 47	63	4
		300 mA	
1	4118 48	40	4
1	4118 49	63	4

*For industrial use only.

DX³ RCBOs

RCBOs assembled for AC applications upto 63 A

N

4113 24

4113 79

ISI marked as per IS 12640-2
Integrated label holder
Ergonomic design
Color coded On/Off indication on dolly
Front face indication for earth leakage fault
IP 20 protected terminals
35 sq mm terminals
Sliding shutters

Pack	Cat.Nos	DX³ RCBOs	
		2 pole 240 V∿, AC Type	
		30 mA	
		Nominal rating In (A)	Number of modules
1/32	4113 22	6	4
1/32	4113 23	10	4
1/32	**4113 24**	16	4
1/32	**4113 25**	25	4
1/32	**4113 26**	32	4
1/32	**4113 27**	40	4
1/32	4113 28	63	4
		100 mA	
1/32	4113 29	6	4
1/32	4113 30	10	4
1/32	4113 31	16	4
1/32	**4113 32**	25	4
1/32	**4113 33**	32	4
1/32	**4113 34**	40	4
1/32	4113 35	63	4
		300 mA	
1/32	4113 36	16	4
1/32	**4113 37**	25	4
1/32	**4113 38**	32	4
1/32	**4113 39**	40	4
1/32	4113 40	63	4
		4 pole 415 V∿, AC Type	
		30 mA	
1/16	4113 88	6	7
1/16	4113 89	10	7
1/16	4113 65	16	7
1/16	4113 66	25	7
1/16	**4113 67**	32	7
1/16	**4113 68**	40	7
1/16	**4113 69**	63	7
		100 mA	
1/16	4113 70	16	7
1/16	4113 71	25	7
1/16	**4113 72**	32	7
1/16	**4113 73**	40	7
1/16	4113 74	63	7
		300 mA	
1/16	4113 75	16	7
1/16	4113 76	25	7
1/16	**4113 77**	32	7
1/16	**4113 78**	40	7
1/16	4113 79	63	7

DX³ RCBOs

RCBOs compact for AC applications upto 32 A, 6 kA

4113 94

4111 88

4112 08

DX³ RCBOs, 2 pole 240 V~

ISI marked as per IEC 61009
Integrated label holder
Ergonomic design
Color coded On/Off indication on dolly
Front face indication for earth leakage fault
IP 20 protected terminals
35 sq mm terminals
Sliding shutters

AC Type

30 mA

Pack	Cat.Nos	Nominal rating In (A)	Number of modules
1/32	**4113 90**	6	2
1/32	4113 91	10	2
1/32	**4113 92**	16	2
1/32	4113 93	20	2
1/32	**4113 94**	25	2
1/32	**4113 95**	32	2

300 mA

1/32	4113 97	6	2
1/32	4113 98	10	2
1/32	4113 99	16	2
1/32	4114 00	20	2
1/32	4114 01	25	2
1/32	4114 02	32	2

HPI Type

30 mA

1/32	4114 15	25	2
1/32	4114 16	32	2

DX³ RCBOs, 4 pole 415 V~

Complies to per IEC 61009
Integrated label holder
Ergonomic design
Color coded On/Off indication on dolly
Front face indication for earth leakage fault
IP 20 protected terminals
35 sq mm terminals
Sliding shutters

AC Type

30 mA

Pack	Cat.Nos	Nominal rating In (A)	Number of modules
1/16	4111 85	10	4
1/16	**4111 86**	16	4
1/16	4111 87	20	4
1/16	**4111 88**	25	4
1/16	**4111 89**	32	4

300 mA

1/16	4112 04	10	4
1/16	4112 05	16	4
1/16	4112 06	20	4
1/16	4112 07	25	4
1/16	4112 08	32	4

A Type

30 mA

1/16	4112 33	10	4
1/16	4112 34	16	4
1/16	4112 35	20	4
1/16	4112 36	25	4
1/16	4112 37	32	4

300 mA

1/16	4112 38	10	4
1/16	4112 39	16	4
1/16	4112 40	20	4
1/16	4112 41	25	4
1/16	4112 42	32	4

DX³ RCD add on module

For 125 A

4105 68

4105 78

Conform to IEC 60947-2
AC type : detect AC components faults
Hpi type :detect faults with AC and DC components, increased Immunity to false tripping
For mounting on the right-hand side of 1.5 module per pole DX³ MCBs
Easy & fast association mechanism
Terminal cover for locking
70 sq mm terminals

DX³ RCD

Pack	Cat.Nos	Nominal rating In (A)	Number of modules
		2 pole 240 V~, AC Type	
		30 mA	
1	4105 68	125 A	4
		100 mA	
1	4105 69	125 A	4
		300 mA	
1	4105 71	125 A	4
		4 pole 415 V~, AC Type	
		30 mA	
1	4106 25	125 A	4
		100 mA	
1	4106 26	125 A	4
		300 mA	
1	4106 29	125 A	4
		2 pole 240 V~, HPI type	
		30 mA	
1	4105 78	125 A	6
		100 mA	
1	4105 79	125 A	6
		300 mA	
1	4105 82	125 A	6
		Four pole 415 V~, HPI type	
		30 mA	
1	4106 38	125 A	6
		100 mA	
1	4106 39	125 A	6
		300 mA	
1	4106 42	125 A	6

DX³ auxiliaries

Auxiliaries common for MCBs, Isolators, RCCBs & RCBOs

N

4062 50

4062 52

4062 78

4062 82

Easy & fast fixation on site
On site clip on mounting
Clip on fitting on left side

Pack	Cat.Nos		Number of modules
		Signalling auxiliaries	
1	**4062 50**	Auxiliary changeover switch 6 A	0.5
1	**4062 52**	Fault signalling changeover switch 6 A	0.5
1	4062 64	Changeover + fault signalling switch	1
		Control auxiliaries	
1	4062 76	Shunt release 12 /48 V AC/DC	1
1	4062 78	Shunt release 110/415 V AC	1
1	4062 80	Undervoltage release 24/48 V AC/DC	1
1	4062 82	Undervoltage release 230 V AC	1
1	4062 86	Pop over voltage release	1
1	4062 90	Motor control 24/48 V AC/DC	1
1	4062 91	Motor control 230 V AC	1
1	4062 93	Motor control auto reset 24/48 V AC/DC	2
1	4062 95	Motor control auto reset 230 V AC	2
1	4062 88	Automatic resetter	2
1	4062 89	Automatic resetter with autotest	2
		Rotary handle	
10	4063 19	Black rotary handle	-
10	4063 20	Yellow/red rotary handle	-
		Support for padlock	
10	4063 03	Support for padlock till 63 A	-
		Sealable screw cover	
10	4063 04	Devices upto 63 A	-
10	4063 06	For 80-125 A devices	-
		1/2 module spacing unit	
10	4063 07	1/2 module spacing unit	0.5
		5 mm padlock	
10	4063 13	1/2 module spacing unit	-

DX³ auxiliaries

Manual changover switch

N

Compact design
Manual switching operation
Easy to assemble
Ergonomic design

Pack	Cat.Nos		Number of modules
		For 1 mod/pole MCBs and ISs	
5	4063 14	Manual change-over switch for DP	2
5	4063 15	Manual change-over switch for TP	3
5	4063 16	Manual change-over switch for FP	3

DX³ RCD add on module with measurement & metering

4106 57

Conform to IEC 60947-2
Hpi type: detect faults with AC and DC components, increased Immunity to false tripping
Inbuilt measurement/metering option
Measurement - V, A, F, PF, KWh, KVA, KVAr, THD
Metering - V, A, F, KWh
RS 485 port for remote reading
Di-electric test button inbuilt
Ergonomic test button
Scroll button for easy readings
RLCD display on front facia
For mounting on the right-hand side of 1.5 module per pole DX³ MCBs
Easy & fast association mechanism
70 sq mm terminals

Pack	Cat.Nos	Adjustable metering, 4 pole 415 V~	
		Nominal rating In (A)	Number of modules
1	4106 57	63 A	7
1	4106 58	125 A	7
		Adjustable measurement	
1	4106 59	125 A	7

DX³ time switches

4126 41

4126 54

4126 57

4126 29

Technical characteristics **p. 291-300**

Daily and weekly time switch
Quick and easy programming due to the option to select day blocks, day blocks can be individually set or selected from the blocks Mon–Sun, Mon–Fri or Sat–Sun
Programming with precision to the second
Switch times visible in weekly overview on display

Pack	Cat.Nos	Alpharex³ digital time switches
1	4126 31	AlphaRex³ D21, 1 channel
1	4126 41	AlphaRex³ D22, 2 channels
1	4126 34	AlphaRex³ D21s, 1 channel, with control input
		Alpharex³ digital time switches - Astro
		• For switching on/off lights and other electric devices according to the rising/setting of the sun • With combination function for creating switching programs in which the devices are switched according to astronomical time and/or fixed preset times • Daily astronomical calculation of the sunrise/ sunset times based on the entered location or location coordinates
1	4126 54	AlphaRex³ D21 astro, 1 channel
1	4126 57	AlphaRex³ D22 astro, 2 channels
		Alpharex³ yearly time switch
		• Yearly and weekly time switch with additional astronomical function for all channels • 84 switching programs per channel, comprising: - 28 weekly programs - 28 yearly programs - 28 special programs (priority program)
1	4126 29	AlphaRex³ DY21, 1 channel
1	4126 30	AlphaRex³ DY22, 2 channels
		Programming accessories
1	4128 72	Data key
1	4128 73	PC adapter for USB port

DX³ time switches

N

4128 12

4128 14

Technical characteristics **p. 296-300**

With synchronous (mains-synchronised clock precision) or quartz motor
- +/-2.5 s/day clock precision (quartz motor)
- Surface-mounting possible with a wall bracket and a terminal cover (Cat.No 4128 59)
- Unit width: 3 modules of 17.5 mm each

Pack	Cat.Nos	Twilight switches
		• Including light sensor • Wire for light sensor: 2 x 1.5 mm², maximum wire length: 50 m • LED switching status indicator
1	4126 23	Luxo switch
		MicroRex analog time switches
		In accordance with IEC 60730-1 and 60730-2-7 Manual switching ON/automatic/OFF daily/weekly switching dial with captive segments Clock precision: +/– 5 min for the daily time switch –10 °C to +55 °C operating temperature
1	4128 12	MicroRex T31 – Daily time switch
1	4128 13	MicroRex QT31 – Daily time switch
1	4128 14	MicroRex W31 – Weekly time switch
1	4127 90	MicroRex QT11 – Daily time switch
1	4127 94	MicroRex QW11 – Weekly time switch
		Accessory
1	4128 59	Wall bracket

DX³ contactors

N

4125 44

Technical characteristics **p. 296-300**

Conform to IEC/EN 61095
Space for power supply busbar on top (up to 63 A)

Pack	Cat.Nos	Power contactors CX³
1	4125 44	25 A 2 NO contactor
1	4125 45	40 A 2 NO contactor
1	4125 47	63 A 2 NO contactor
1	4125 48	63 A 2 NC contactor
1	4125 49	40 A 3 NO contactor
1	4125 50	63 A 3 NO contactor
1	4125 51	25 A 4 NO contactor
1	4125 53	40 A 4 NO contactor
1	4125 56	63 A 4 NO contactor
1	4125 57	63 A 4 NC contactor
		Signalling auxiliaries for contactors
		Auxiliary changeover switch
1	4124 29	For 1 module contactors 16 A to 25 A
1	4124 30	For 2 module contactors 25 A
1	4124 31	For 40 and 63 A contactors

CX³ changeover switches, push-buttons, control switches and LED indicators

N

4129 00 | 4129 01 | 4129 04 | 4129 08 | 4129 16 | 4129 12 | 4129 21 | 4129 31 | 4129 34 | 6040 78

Changeover switches

Conform to IEC 60669-1
Nominal rating 32 A
Compatible with fluorescent lamps (20 AX)

Pack	Cat.Nos		Connection	Number of modules
		Two-way - 250 V~		
10	4129 00			1
		Double two-way - 400 V~		
5	4129 01			2
		Two way with centre point - 250 V~		
10	4129 02			1
		Double two way with centre point - 250 V~		
5	4129 03			2
		Switch NO + NC - 250 V~		
10	4129 04			1

Push-buttons and control switches

Conform to IEC 60669-1
Nominal rating 20 A - 250 V~
Compatible with florescent lamps (20 AX)
Accept prong-type supply busbars

Pack	Cat.Nos		Connection	Number of modules
		Single function push-buttons		
10	4129 08	1 NO		1
10	4129 09	1 NC		1
		Dual functions push-buttons without indicator		
10	4129 16	1 NO (green push-button) + 1 NC (red push-button)		1
		Single function control switches		
10	4129 10	2 NO		1
10	4129 11	1 NO + NC		1

Push-buttons and control switches (continued)

Pack	Cat.Nos		Connection	Number of modules
		Dual functions control switches with indicator		
10	4129 12	1 NO + green LED indicator 12/48 V~/⎓		1
10	4129 13	1 NC + red LED indicator 12/48 V~/⎓		1
10	4129 14	1 NO + green LED indicator 110/400 V~		1
10	4129 15	1 NC + red LED indicator 110/400 V~		1

LED indicators

Equipped with non replaceable LED lamps
LED life: 100 000 h
LED consumption: 0.17 W under 230 V~/ 0.11 W under 24 V~
Conform to IEC 60947-5-1
Accept prong-type supply busbars

Pack	Cat.Nos		Connection	Number of modules
		Single - 12/48 V~/⎓		
10	4129 21	Green		1
10	4129 22	Red		1
10	4129 23	Yellow		1
10	4129 24	Blue		1
10	4129 25	White		1
		Single - 110/400 V~		
10	4129 26	Green		1
10	4129 27	Red		1
10	4129 28	Yellow		1
10	4129 29	Blue		1
10	4129 30	White		1
		Double - 110/400 V~		
10	4129 31	Green/Red		1
		Triple - 230/400 V~		
2 | 10	4129 32	White		1
10	4129 33	Red		1
10	4129 34	Red/Yellow/Green	N	1
10	4129 35	Red/Yellow/Blue		1

TX³ LED indicators - 250 V~

Equipped with non replaceable LED lamps

Pack	Cat.Nos		Connection	Number of modules
		Single		
12	6040 77	Green		1
12	6040 78	Red		1
12	6040 79	Orange		1

EMDX³ electrical energy meters

rail mounting

N

0046 74

Measure the electricity consumed by a single-phase or three-phase circuit downstream of the electricity distribution metering
Display electricity consumption in kWh, as well as other values such as current, active energy, reactive energy and power (depending on the catalogue number)
Conform to standards IEC 62053-21/23, IEC 62052-11 and IEC 61010-1
MID compliance ensures accuracy of the metering with a view to recharging for the electricity used

Pack	Cat.Nos	Single-phase meters
1	0046 77	**Direct connection** 63 A - 2 modules RS 485 output
		Three-phase meters
1	0046 80	**Direct connection** 63 A - 4 modules RS 485 output
1	0046 84	**Connection with CT** 5 A - 4 modules RS 485 and pulse output

EMDX³ multi-function measuring units

rail mounting

N

0046 76

Conform to standards:
- IEC 61557-12
- IEC 62053-22 class 0.5 S
- IEC 62053-23 class 2

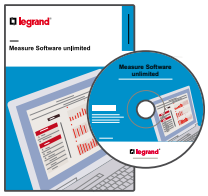
Pack	Cat.Nos	EMDX³ modular
1	0046 76	For mounting on rail Width: 4 modules • LCD display • Measurement of currents, voltages, active, reactive and apparent power and internal temperature • Dual tariff metering: - Active energy consumed - Reactive energy consumed - Operating time - Power factor • THD voltages and currents up to order 51 • Programmable alarms on all functions • Outputs for controlling wiring devices, alarm feedback and pulse feedback **EMDX³ RS 485 unit** Data transmission via RS 485 communication interface and pulses

Bold catalogue numbers are products normally available with Legrand (India) stockists. **Cat.Nos that are not bold** - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.
Red catalogue numbers: New products

EMDX³

communication and supervision

0261 78



0261 88/89

Technical characteristics p. 68-69

Pack	Cat.Nos	Communication and supervision
1	0261 78	Web servers For 32 metering points (meters or multi-function measuring units)
1	0261 79	Web servers For an unlimited number of metering points (meters or multi-function measuring units)
1	0261 88	Legrand Software For 32 metering points (supplied on CD)
1	0261 89	Legrand Software For an unlimited number of metering points (supplied on CD)
1	0046 89	RS485/IP Convertor 230 V AC

EMDX³

measurement and control of electric equipment

0261 37

Technical characteristics p. 68-69

Pack	Cat.Nos	Measurement and control of electric equipment
1/2	0261 35	Central position
1/3	0261 37	Microprocessor interface
1/2	0261 36	Interface signaling and control
1/4	0261 45	Kit configurator
1/20	0466 23	Stabilized power

Class I (T1) low voltage SPDs

4122 75

4122 57

4122 83

4123 03

4122 84

Technical characteristics **p. 304-306**

Protection against transient overvoltagess for 230/400 V~ power networks (50/60 Hz). SPDs compliant with EN/IEC 61643-11 standards
Recommended for main distribution boards
Class I+II (T1+T2) : SPDs tested and specified according to both T1 and T2 test classes

SPDs for general protection of main distribution board

SPDs with plug-in modules and status indicators:
- Green: SPD operational
- Orange: plug-in modules to be replaced
Earthing systems: TT, TNC, TNS

T1+T2 - Iimp 12,5 kA/pole

For general protection of big installations and protection of small installations with external lightning protection (LPS).
Up: 1.5 kV - Imax: 60 kA/pole - Uc: 320 V~
Recommended MCB: DX³ 63 A - C curve

Pack	Cat.Nos	Number of poles	Neutral position	Itotal (10/350)	Remote status monitoring (FS contact)	Number of modules
1	4122 70	1P	-	12.5 kA	No	1
1	4122 76[1]	1P+N	Right	25 kA	Yes	2
1	4122 71	2P	-	25 kA	No	2
1	4122 72	3P	-	37.5 kA	Yes	3
1	4122 77[1]	3P+N	Right	50 kA	Yes	4
1	4122 73	4P	-	50 kA	No	4

T1+T2 - Iimp 8 kA/pole

SPDs for small installations without external lightning protection (LPS)
Up: 1.3 kV - Imax: 50 kA/pole - Uc: 320 V~
Recommended MCB: DX³ 40 A - C curve

Pack	Cat.Nos	Number of poles	Neutral position	Itotal (10/350)	Remote status monitoring (FS contact)	Number of modules
1	4122 50	1P	-	8 kA	No	1
1	4122 56[1]	1P+N	Right	16 kA	No	2
1	4122 51	2P	-	16 kA	No	2
1	4122 52	3P	-	25 kA	No	3
1	4122 57[1]	3P+N	Right	25 kA	No	4
1	4122 53	4P	-	32 kA	No	4

SPDs for high risk level installations

SPDs for big installations with external lightning protection (LPS) and for high risk level installations according to EN/IEC 62305 standards.

T1 - Iimp 50 kA/pole - 440V~ (IT) - Monobloc

Up: 2.5 kV - Uc: 440 V~
Earthing systems: TT, TNC, TNS, IT
Recommended MCCB: DPX³160 - 80 A

Pack	Cat.Nos	Number of poles	Itotal (10/350)	Remote status monitoring (FS contact)	Number of modules
1	0030 00[2]	1P	50 kA	No	2

SPDs for high risk level installations (continued)

T1 - Iimp 35 kA/pole - 440V~ (IT) - Plug-in

SPDs with plug-in modules and status indicators:
- Green: SPD operational
- Red: plug-in modules to be replaced
Up: 2.5 kV - Uc: 440 V~
Earthing systems: TT, TNC, TNS, IT
Recommended MCCB: DPX³ 160 - 80 A

Pack	Cat.Nos	Number of poles	Neutral position	Itotal (10/350)	Remote status monitoring (FS contact)	Number of modules
1	4122 80	1P	-	35 kA	Yes	2

T1 - Iimp 25 kA/pole

SPDs with plug-in modules and status indicators:
- Green: SPD operational
- Red: plug-in modules to be replaced
Up: 1.5 kV - Uc: 350 V~
Earthing systems: TT, TNC, TNS.
Recommended MCCB: DPX³ 160 - 80 A

Pack	Cat.Nos					
1	4122 81[1]	1P+N	Right	50 kA	Yes	4
1	4122 82	3P	-	75 kA	Yes	6
1	4122 83[1]	3P+N	Right	100 kA	Yes	8

Replacement plug-in modules

Pack	Cat.Nos	
1	4123 02	For SPDs T1+T2 - 8 kA Cat.Nos 4122 50/51/52/53/56/57
1	4123 03	For SPDs T1+T2 - 12.5 kA Cat.Nos 4122 70/71/72/73/76/77
1	4122 84	For SPDs T1 - 25 kA Cat.Nos 4122 81/82/83 and 0030 20/22/23/27
1	4122 85	N-PE module for SPDs T1 - 25 kA Cat.Nos 4122 81/83 and 0030 23
1	4122 86	For SPDs T1 - 35 kA Cat.No 4122 80

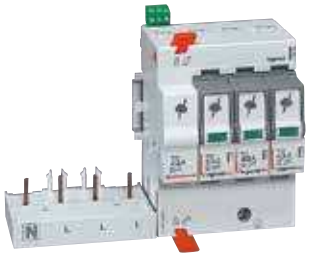
Cabling accessories

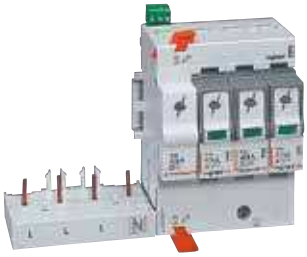
Pack	Cat.Nos	
1	4123 10	Ready to use cabling kit consisting of 5 conductors (including the earth conductor) Cross section :16 mm² Lenght : 40 cm For cabling SPDs in industrial enclosures (for EN/IEC 61439 compliance).

1: 1P+N and 3P+N: L-N and N-PE protection modes (common and differential modes), the N pole being protected by encapsulated spark gaps. Also called sometimes 1+1 and 3+1
2: Replaced mid 2015 by Cat.No 4122 80

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

Class II (T2) low voltage SPDs


4122 65


4122 67

4122 45

4122 99

Technical characteristics **p. 304-306**

Protection against transient overvoltagess for 230/400 V~ power networks (50/60 Hz). SPDs compliant with EN/IEC 61643-11 standards
Recommended for distribution boards

T2 add-on SPDs

SPDs with plug-in modules and status indicators:
- Green: SPD operational
- Orange: plug-in modules to be replaced

SPDs providing increased safety during their lifetime and maintenance cycles. Prewired MCB connexions for increased reliability and for quick and easy Installation.
To be equipped with DX³ MCBs (1 module/pole)
Earthing systems: TT, TNS

T2 - Imax 40 kA/pole

SPDs recommended for power installations
Up: 1.7 kV - In: 20 kA/pole - Uc: 320 V~
Recommended MCB: DX³ 25 A - C curve

Pack	Cat.Nos	Number of poles	Neutral position	Remote status monitoring (FS contact)	Number of modules
1	4122 66[1]	1P+N	Right	Yes	4
1	4122 67[1]	3P+N	Right	Yes	8

T2 - Imax 20 kA/pole

SPDs recommended for small installations
Up: 1.2 kV - In: 5 kA/pole - Uc: 320 V~
Recommended MCB: DX³ 20A - C curve

Pack	Cat.Nos	Number of poles	Neutral position	Remote status monitoring (FS contact)	Number of modules
1	4122 62[1]	1P+N	Right	Yes	4
1	4122 63[1]	3P+N	Right	Yes	8

T2 SPDs

SPDs with plug-in modules and status indicators:
- Green: SPD operational
- Orange: plug-in modules to be replaced

T2 - Imax 40 kA/pole

SPDs recommended for power installations
Up: 1.7 kV - In: 20 kA/pole - Uc: 320 V~
Earthing systems : TT, TNC, TNS
Recommended MCB: DX³ 25 A - C curve

Pack	Cat.Nos	Number of poles	Neutral position	Remote status monitoring (FS contact)	Number of modules
1	4122 40	1P	-	No	1
1	4122 46[1]	1P+N	Right	No	2
1	4122 41	2P	-	No	2
1	4122 42	3P	-	Yes	3
1	4122 47[1]	3P+N	Right	No	4
1	4122 43	4P	-	No	4

T2 - Imax 40 kA/pole - 440 V~ (IT)

SPDs recommended for big installations
Up: 2.1 kV - In: 20 kA/pole - Uc: 440 V~
Earthing systems : TT, TNC, TNS, IT
Recommended MCB: DX³ 25 A - C curve

Pack	Cat.Nos	Number of poles	Neutral position	Remote status monitoring (FS contact)	Number of modules
1	4122 30	1P	-	No	1
1	4122 32	3P	-	Yes	3
1	4122 33	4P	-	Yes	4

T2 - Imax 20 kA/pole

SPDs recommended for small installations
Up: 1.2 kV - In: 5 kA/pole - Uc: 320 V~
Earthing systems : TT, TNC, TNS
Recommended MCB: DX³ 20 A - C curve

Pack	Cat.Nos	Number of poles	Neutral position	Remote status monitoring (FS contact)	Number of modules
1	4122 20	1P	-	No	1
1	4122 26[1]	1P+N	Right	No	2
1	4122 21	2P	-	No	2
1	4122 27[1]	3P+N	Right	No	4
1	4122 23	4P	-	No	4

Replacement plug-in modules

Pack	Cat.Nos	
1	4122 99	For SPDs T2 - 40 kA Cat.Nos 4122 40/41/42/43/44/45/46/47/66/67
1	4123 00	N-PE module for SPDs T2 - 40 kA Cat.Nos 4122 46/47
1	4123 01	For SPDs T2 - 440 V Cat.Nos 4122 30/32/33
1	4122 97	For SPDs T2 - 20 kA Cat.Nos 4122 20/21/23/26/27/62/63
1	4123 98	N-PE module for SPDs T2 - 20 kA Cat.Nos 4122 24/25/26/27

1: 1P+N and 3P+N: L-N and N-PE protection modes (common and differential modes), the N pole being protected by encapsulated spark gaps. Also called sometimes 1+1 and 3+1

Class II (T2) low voltage SPDs with integrated protection

0039 51

0039 53

0039 54

Technical characteristics **p. 304-306**

SPDs with integrated protection against overload currents and short-circuit currents
SPDs compliant with EN/IEC 61643-11 standards
For 230/400 V~ power networks (50/60 Hz)

Pack	Cat.Nos	Protection for consumer units			
		For residential and small commercial installations With plug-in modules and status indicators: - Green: SPD operational - Red: plug-in module need to be replaced			
		T2 self protected SPDs - Imax 12 kA/pole			
		For installations with low risk level (in urban areas, underground power supplies, etc.) In: 10 kA/pole - Uc: 275 V~ Earthing systems: TT, TNS Cat.No 0039 51: SPDs with Y connection (both incoming and outgoing terminals ar the top of the SPDs) providing better protection against overvoltages			
		Number of poles	Neutral position	Integrated protection	Number of modules
1	0039 51[1]	1P+N	Left	Isc ≤ 6 kA	2
1	0039 53[1]	3P+N	Left	Isc ≤ 6 kA	6

		Protection for secondary distribution boards			
		Protection of sensitive equipment. With plug-in modules and status indicators: - Green: SPD operational - Red: plug-in module need to be replaced In: 10 kA/pole - Uc: 275 V~ Earthing systems: TT, TNS. Cat.No 0039 71: both incoming and outgoing terminals ar the top of the SPDs, providing better protection against overvoltages			
		T2 self protected SPDs - Imax 12 kA/pole			
		Number of poles	Neutral position	Integrated protection	Number of modules
1	0039 71[1]	1P+N	Left	Isc ≤ 10 kA	2
1	0039 73[1]	3P+N	Left	Isc ≤ 10 kA	6

		Replacement plug-in modules
		For self protected SPDs
1	0039 54	Cat.Nos 0039 51/53
1	0039 74	Cat.Nos 0039 71/73
		For old SPDs
1	0039 28	Cat.Nos 0039 20/21/22/23
1	0039 34	Cat.Nos 0039 30/31/32/33
1	0039 39	Cat.Nos 0039 35/36/38
1	0039 44	Cat.Nos 0039 40/41/43

SPDs for telephone lines

0038 28

0038 29

Technical characteristics **p. 304-306**

Pack	Cat.Nos	SPDs for telephone and data lines			
		Overvoltage protection of equipment such as telephones, modems, video door entry phones, RS485 networks, measurement loops, etc. Not compatible with VDSLs SPDs needed to provide complete protection of the installation when low voltage SPDs are present (TS/IEC 61643-12). SPDs with status indicators: - Green: SPD operational - Orange: plug-in module need to be replaced Compliant with EN/IEC 61643-21 standards			
		"Analogue" SPD (STN, non-unbundled ADSL, etc.)			
		In/Imax	Max. voltage(Uc)	Level of protection (Up)	Number of modules
1	0038 28	5/10 kA	170 V	260 V	1
		"Digital" SPD (unbundled ADSL, SDSL, ISDN, etc.)			
1	0038 29	5/10 kA	48 V	100 V	1

1: 1P+N and 3P+N: L-N and N-PE protection modes (common and differential modes), the N pole being protected by encapsulated spark gaps. Also called sometimes 1+1 and 3+1

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

Technical data

Specifications	IS/IEC 60898-1 2002	
Number of poles	SP, SPN, DP, TP, TPN, FP	
Characteristics	C & D Curve	
Breaking capacity	10 kA 0.5 A to 63 A as per IS/IEC 60898-1 2002 16 kA for 0.5 A to 25 A as per IEC 60947-2	
Rated voltage	230 V/400 V	
Current limitation class	Class 3	
Frequency	50 Hz/60 Hz	
Minimum operating voltage	12 V AC/DC	
Enclosures	Polyester self extinguishing, heat and fire resistant according to IEC 60898-1, glow-wire test at 960 °C for external parts made of insulating material necessary to retain in position current-carrying parts and parts of protective circuit (650 °C for all other external parts made of insulating material)	
Mounting position	Vertical / Horizontal / Upside down / On the side	
Fixing	On symmetric rail EN/IEC 60715 or DIN 35	
Maximum cable size	Top/Bottom Rigid cable	1 x 1.5 mm² to 35 mm² 2 x 1.5 mm² to 16 mm²
	Top/Bottom Flexible cable	1 x 1.5 mm² to 25 mm² 2 x 1.5 mm² to 10 mm²
Applied connection torque	Recommended : 2.5 Nm Minimum : 2 Nm Maximum: 3 Nm	
Mechanical endurance	20000 operations without load	
Electrical endurance	10000 operations with load (under In*cos φ = 0.9) 2000 operations under In, DC current	
Permissible ambient temperature	0.5 to 63A - Maximum + 70 °C Minimum -25 °C	

Specifications	IEC 60947-2	
Number of poles	SP, DP, TP, FP	
Breaking capacity	10 kA 80 A to 125 A as per IEC 60898 16 kA for 80 A to 125 A as per IEC 60947-2	
Rated voltage	230 V/400 V	
Current limitation class	Class 3	
Frequency	50 Hz/60 Hz	
Minimum operating voltage	12 V AC/DC	
Enclosures	Polyester self extinguishing, heat and fire resistant according to IEC 60898-1, glow-wire test at 960 °C for external parts made of insulating material necessary to retain in position current-carrying parts and parts of protective circuit (650 °C for all other external parts made of insulating material)	
Mounting position	Vertical / Horizontal / Upside down / On the side	
Fixing	On symmetric rail EN/IEC 60715 or DIN 35	
Maximum cable size	Top/Bottom Rigid cable	1 x 1.5 mm² to 50 mm² 2 x 1.5 mm² to 25 mm²
	Top/Bottom Flexible cable	1 x 1.5 mm² to 35 mm² 2 x 1.5 mm² to 20 mm²
Applied connection torque	Recommended : 2.5 Nm Minimum : 2 Nm Maximum: 3 Nm	
Mechanical endurance	20000 operations without load	
Electrical endurance	10000 operations with load (under In*cos φ = 0.9) 2000 operations under In, DC current	
Permissible ambient temperature	80 to 125 A - Maximum + 70 °C Minimum -25 °C	

Power dissipated in Watt per pole at In

Circuit breakers C and D curves

In (A)	0,5	1	1,6	2	3	4	5	6	7,5	10	16	20	25	32	40	50	63
1P ÷ 4P	**1.7**	**2**	**2**	**2**	**2**	**2**	**2.1**	**1.1**	**1.4**	**1.8**	**2**	**2.2**	**2.7**	**3.2**	**4**	**4.5**	**5.5**
Permitted limit as per IEC 60898	3	3	3	3	3	3	3	3	3.5	4.5	4.5	6	7.5	9	13		

$$\text{Impedance per pole } (\Omega) = \frac{\text{P dissipated}}{\text{In}^2}$$

	Ambient Temperature / In									
In (A)	- 25 °C	- 10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C	70 °C
0,5	0.62	0.6	0.57	0.55	0.52	0.5	0.47	0.42	0.40	0.38
1	1.5	1.4	1.3	1.2	1.1	1	0.9	0.8	0.7	0.6
2	2.8	2.6	2.5	2.3	2.2	2	2	1.9	1.8	1.7
3	3.8	3.6	3.5	3.3	3.2	3.0	2.9	2.8	2.7	2.6
4	4.5	4.2	4.0	3.9	3.7	3.5	3.4	3.3	3.2	3.1
5	6.4	6.0	5.8	5.5	5.3	5.0	4.8	4.7	4.5	4.6
6	7.5	7.0	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3
10	12.5	11.5	11.1	10.7	10.3	10.0	9.7	9.3	9.0	8.7
16	20.0	18.7	18.0	17.3	16.6	16.0	15.4	14.7	14.1	13.5
20	25.0	23.2	22.4	21.6	20.8	20.0	19.2	18.4	17.6	16.8
25	31.5	29.5	28.3	27.2	26.0	25.0	24.0	22.7	21.7	20.7
32	41.0	37.8	36.5	34.9	33.3	32.0	30.7	29.1	27.8	26.5
40	51.0	48.0	46.0	44.0	42.0	40.0	38.0	36.0	34.0	32.0
50	64.0	60.0	57.5	55.0	52.5	50.0	47.5	45.0	42.5	40.0
63	80.6	75.6	72.5	69.9	66.1	63.0	59.8	56.1	52.9	49.7

Choice of DX³ MCBs for capacitor banks

This table shows the rated current of MCBs to be used when controlling capacitor banks so as to guarantee its function and shortcircuit protection.
Overload protection is not necessary since these installations cannot be overloaded.
This data refers to shortcircuit protection in absence of harmonics or heavy transitory currents.

	DX³ MCB rating in amps			
	C characteristic		D characteristic	
Power of capacitor bank in kVAr	**Single phase 240 V**	**Three phase 415 V**	**Single phase 240 V**	**Three phase 415 V**
0.5	10	6	3	1
1	20	6	6	2
1.5	32	10	10	3
2.5	40	16	10	4
3	50	16	16	4
3.5	63	20	16	6
4	63	25	16	6
4.5	...	25	20	10
5	...	32	20	10
5.5	...	32	25	10
6	...	32	25	10
6.5	...	40	25	10
7	...	40	32	10
7.5	...	50	32	16
8	...	50	32	16
8.5	...	50	40	16
9	...	50	40	16
9.5	...	63	40	16
10		63	40	16
10.5	80	63	60	16
11	80		50	16
11.5	80		50	16
12	80		50	20
12.5	80		50	20
13	100	...	63	20
13.5	100	...	63	20
14	100	...	63	20
14.5	100	...	63	25
15	100	...	63	25
15.5	100	...		25
16	100	...		25
16.5	125	...	...	25
17	125	...	...	25
17.5	125	...	...	25
18	125	...	...	32
18.5	125	...	...	32
19	125	...	...	32
19.5	125	...	...	32
20	125	...	...	32
20.5	...	...	...	32
21	...	...	...	32
21.5	...	...	...	32
22	...	...	...	32
22.5	...	...	...	32
23	...	...	...	32
23.5	...	...	...	40
24	...	...	...	40
24.5	...	...	...	40
25	...	...	...	40
25.5	...	...	...	40
26	...	...	...	40
26.5	...	...	...	40
27	...	...	...	40
27.5	...	...	...	40
28	...	...	...	40
28.5	...	...	...	40
29	...	...	...	50
29.5	...	...	...	50
30	...	...	...	50
30.5	...	80	...	50
31	...	80	...	50
31.5	...	80	...	50
32	...	80	...	50
32.5	...	80	...	50
33	...	80	...	50
33.5	...	80	...	50
34	...	80	...	50
34.5	...	80	...	50
35	...	80	...	50
35.5	...	80	...	50
36	...	80	...	50
36.5	...	80	...	63
37	...	80	...	63
37.5	...	80	...	63
38	...	80	...	63
38.5	...	80	...	63
39	...	100	...	63
39.5	...	100	...	63
40	...	100	...	63
40.5	...	100	...	63
41	...	100	...	63
41.5	...	100	...	63
42	...	100	...	63
42.5	...	100	...	63
43	...	100	...	63
43.5	...	100	...	63
44	...	100	...	63
44.5	...	100	...	63
45	...	100	...	63
45.5 to 48	...	100	...	...
48.5 to 60	...	125	...	...

■ Technical data

Specification	SPEC/E-12/1/14
Number of poles	1
Characteristic	As applicable
Line terminal Load terminal	Indicated by LN Indicated by LD
Rated Voltage	130 V⎓
Max. Operating Voltage	440 V⎓
Min. Operating Voltage	12 V ⎓
Voltage resistance	> 2500 V∿
Enclosure	Moulded out of DMC (thermoset plastic) bone grey colour, flamability class V1-UL94, Tracking index - 600+volts
Dolly	Black, can be locked or lead sealed in ON or OFF position
Fire retardent grade of enclosure	V
Mounting position	Optional
Fixing	Snap fixing on standard DIN RAIL profile EN 50023 - 35 x 7.5
Terminals	With flat Cu terminal extension mounting as per skel 3700. Current Carring Capacity 100 Amp. Max. Continuous.
On-Off indication	MCB in on position when marking I-ON appears on dolly. MCB in OFF position when making O-Off appears on dolly.
Mech. Service Life	10000 operation
Electrical Endurance	6000 operation at rated load
Climate resistance : Permissible Ambient :	25/95-40/93 ('C/RH) T max. - 45 °C, T min - 25 °C temperature
Shock resistance	20 g minimum 20 impacts duration of shock 13 ms.
Vibration resistance	3 g

As per international STD, MCB in 'ON' condition when dolly is in upper position.

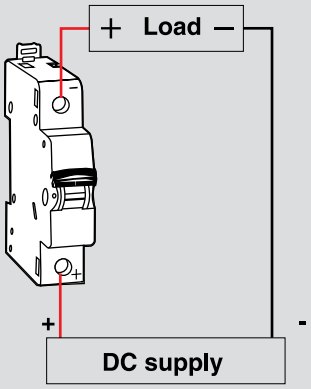
Technical data

Correct polarity connections for DC MCBs

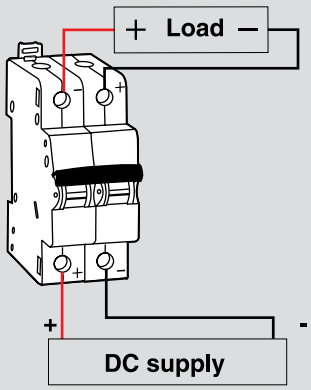
• Supply terminals

When supply is given at lower terminals

Single pole MCB



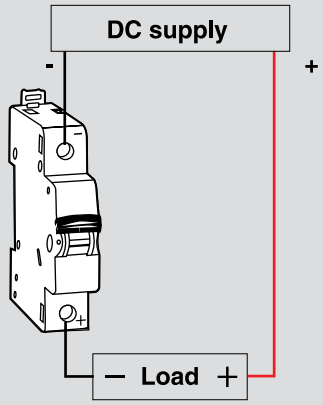
Double pole MCB



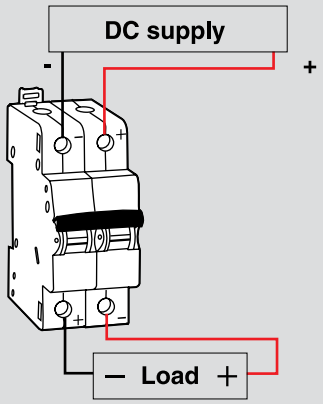
• Supply terminals

When supply is given at upper terminals

Single pole MCB



Double pole MCB



Derating of MCB for use with fluorescent lights

Ferromagnetic and electronic ballasts have a high inrush current for a short time. These currents can cause the tripping of circuit breakers. At the time of the installation, it should take into account the maximum number of ballasts per circuit breaker that the manufacturers of lamps and ballasts indicate in their catalogues.

Influence of the altitude

	≤2000 m	3000 m	4000 m	5000 m
Dielectric holding	3000 V	2500 V	2000 V	1500 V
Max operational voltage	400 V	400 V	400 V	400 V
Derating at 30 °C	none	none	none	none

Derating of MCBs function of the number of devices side by side:

When several MCBs are juxtaposed and operate simultaneously, the thermal evacuation of the poles is limited. This results in an increase in operating temperature of the circuit breakers which can cause unwanted tripping. It is recommended to apply the following coefficients to the rated currents.

Influence of the altitude

Number of circuit breakers side by side	Coefficient
2 - 3	0.9
4 - 5	0.8
6 - 9	0.7
≥10	0.6

These values are given by the recommendation of IEC 60439-1, NF C 63421 and EN 60439-1 standards.

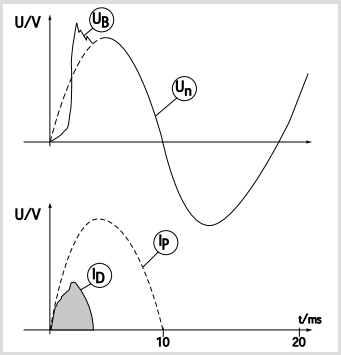
Tripping characteristics

Standards has established different tripping characteristics depending on minimum and maximum values of magnetic trip.

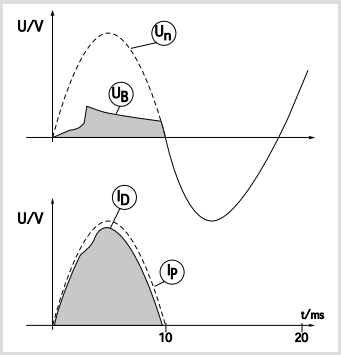
DX³ MCB	Type	Im1	Im2	Typical application
0.5 A to 63 A	D	10 In	20 In	Protection of cable and appliance which has very high starting currents.
6 A to 63 A	C	5 In	10 In	Protection of cable used for lighting load, power load and induction loads with high starting current.

Im1 - hold limit
Im2 - Trip limit

DX³ MCBs versus zero point extinguishing MCBs



Current limiting DX³ MCB



Zero point extinguishing MCB

Un = Mains Voltage
UB = Arc Voltage
ID = Let-through short circuit current
IP = Prospective short circuit current

Technical data

Association of protection devices

Association is the technique by which the breaking capacity of a MCB is increased by coordinating it with another protection device, placed upstream. This coordination makes it possible to use a protection device with a breaking capacity which is lower than the maximum prospective short-circuit current at its installation point

The breaking capacity of a protection device must be at least equal to the maximum short-circuit which may occur at the point at which this device is installed.

In exceptional cases, the breaking capacity may be lower than the maximum prospective short-circuit, as long as:

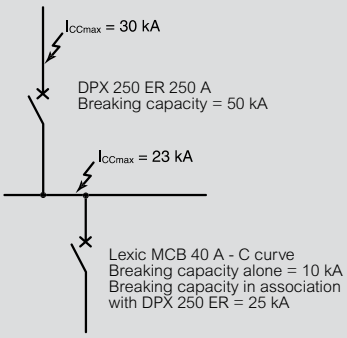
- It is associated with a device upstream which has the necessary breaking capacity at its own installation point
- The downstream device and the trunking being protected can withstand the power limited by the association of the devices.

Association therefore leads to substantial savings.

The association values given in the tables on the following pages are based on laboratory tests carried out in accordance with IEC 60947-2.

Note: In the case of single phase circuits (protected by P+N or 2P MCBs) in a 415 V AC supply, supplied upstream by a 3-phase circuit, it is advisable to use the association tables for 230 V.

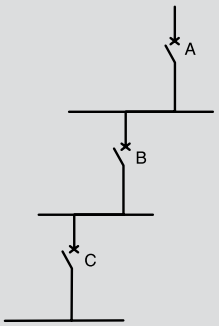
Example of association



3-level association

An association may be created on three levels if one of the conditions below is met.

- The upstream device A must have an adequate breaking capacity at its installation point. Devices B and C are associated with device A. Simply check that the association values B+A and C+A have the necessary breaking capacity.
In this case, there is no need to check the association between devices B and C.
- The association is made between successive devices: Upstream device A, which has an adequate breaking capacity at its installation point, device C is associated with device B which is in turn associated with device A.



Simply check that the association values C+B and B+A have the necessary breaking capacity. In this case, there is no need to check the association between devices A and C.

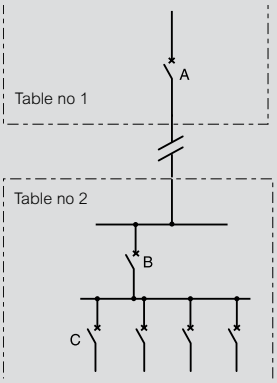
Association in IT connection systems

The values given in the tables should only be used for TN and TT systems.

Although this practice is not widely used, these values may also be used for installations with IT systems. It is therefore advisable to check that each protection device, on its own, can break, on a single pole, the maximum double fault current at the point in question.

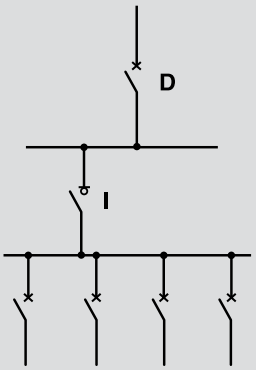
Association between distribution boards

Association applies to devices installed in the same distribution board as well as in different boards. It is therefore generally possible to benefit from the advantages of the association between devices located, for example, in a main distribution board and in a secondary board.



MCB - switch association

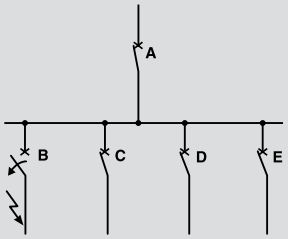
The switches must be systematically protected by an MCB placed upstream. There is considered to be protection against overloads if the rating of switch I is at least equal to that of the upstream MCB, D. If this is not the case, the thermal stresses (devices and conductors) must be checked.
The tables on the following pages give the breaking capacity limits of the MCB - switch associations.



Discrimination of protection devices

Discrimination is a technique which consists of coordinating the protection in such a way that a fault on one circuit only trips the protection placed at the head of that circuit, thus avoiding rendering the remainder of the installation inoperative. Discrimination improves continuity of service and safety of the installation

Discrimination rules are set by the regulations concerning public buildings and for safety installations in general.



Discrimination between A and B is said to be “total” if it is provided up to the value of the maximum prospective short-circuit at the point at which B is installed.

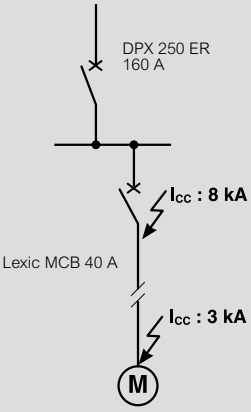
By extension, in the tables on the following pages, total discrimination, indicated by T, means that there is discrimination up to the breaking capacity of device B.

Discrimination between A and B is said to be “partial” in the other cases.

The discrimination limit (given in the following tables) is therefore defined. This gives the short-circuit current value below which only MCB B will open and above which MCB A will also open.

There are a number of techniques for providing discrimination:

- Current discrimination, used for terminal circuits which have low short-circuits.
- Time discrimination, provided by a delay on tripping the upstream MCB
- Logical discrimination, a variant of time discrimination, used on electronic MCBs via a special link between the devices.



Since almost all faults occur during use, partial discrimination may be adequate if the discrimination limit is higher than the value of the maximum short-circuit which may occur at the point of use (or at the end of the trunking). This is referred to as “operating discrimination“. This technique is very often adequate, more economical and less restricting in terms of implementation.

The discrimination limit for the association DPX 250 ER (160 A) with Lexic MCB 40 A (C curve) is 6 kA. Since the prospective ISC at the point of installation is 8 kA, the discrimination is not total. However, there is discrimination at the point of use at which the prospective short-circuit is only 3 kA.

Current discrimination

This technique is based on the offset of the intensity of the tripping curves of the upstream and downstream MCBs. It is checked by comparing these curves and checking that they do not overlap. It applies for the overload zone and the short-circuit zone, and the further apart the ratings of the devices, the better the discrimination.

- On overloads

To have discrimination in the overload zone, the ratio of the setting currents (Ir) must be at least 2.

- On short-circuits

To have discrimination in the short circuit zone, the ratio of the magnetic setting currents (Im) must be at least 1.5.

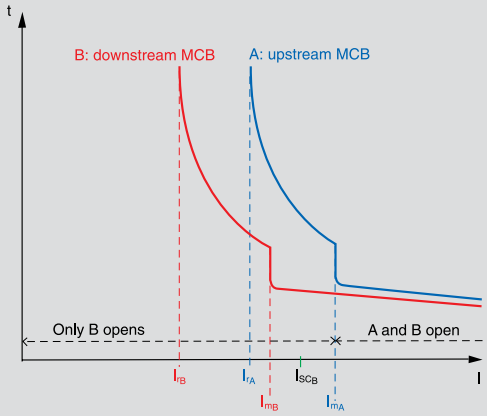
The discrimination limit is then equal to the magnetic release current ImA of the upstream MCB. The discrimination is then total as long as IscB is less than ImA.

Current discrimination is therefore very suitable for terminal circuits where the short-circuits are relatively weak.

In other cases, time discrimination may be used together with current discrimination.

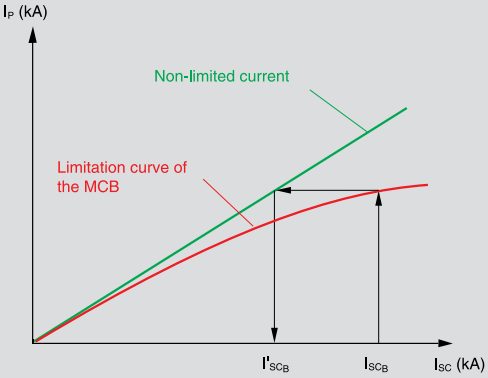
Current discrimination

The discrimination is total for Isc_B



I_{SCB} : maximum short-circuit at the point at which MCB B is installed

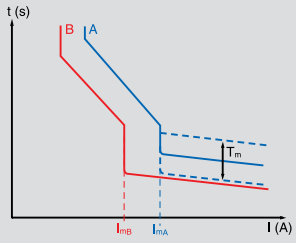
When the downstream MCB B is a limiting device, the short-circuit current is limited in terms of time and amplitude. The discrimination is therefore total if the limited current IscB, which device B allows to pass, is lower than the tripping current of device A



I_{SCB} : prospective short-circuit at the point at which the device is installed
I'_{SCB} : short-circuit limited by device B

Time discrimination

This technique is based on the offset of the times of the tripping curves of the MCBs in series. It is checked by comparing the curves and is used for discrimination in the short-circuit zone. It is also used in addition to current discrimination in order to obtain discrimination beyond the magnetic setting current of the upstream MCB (ImA).



The following is necessary:

- It must be possible to set a time delay on the upstream MCB
- The upstream MCB must be able to withstand the short-circuit current and its effects for the whole period of the time delay
- The trunking through which this current passes must be able to withstand the thermal stresses (I^2t).

The non-tripping time of the upstream device must be longer than the breaking time (including any time delay) of the downstream device.

DPX MCBs have a number of time delay setting positions for creating discrimination with a number of stages.

Technical data

Coordination between Modular Circuit-Breakers and fuses, three-phase network (+ neutal) 400 / 415 V~ according to standard IEC/EN 60947-2:

For TT or TN neutral system in 240/415 V network, to know the breaking capacity of the combination of a double pole breaker (connected between phase and neutral under 230 V) downstream of a triple-pole circuit-breaker, take the values shown in Tables 230/400 V.

		Fuse upstream gG Type									
MCB downstream		≤20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	10 A	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	16 A	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	20 A	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	25 A	-	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	32 A	-	-	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	40 A	-	-	-	-	-	100 kA	100 kA	100 kA	100 kA	40 kA
	50 A	-	-	-	-	-	-	100 kA	100 kA	100 kA	40 kA
	63 A	-	-	-	-	-	-	100 kA	100 kA	100 kA	40 kA

		Fuse upstream aM Type									
MCB downstream		≤20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	10 A	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	16 A	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	20 A	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	25 A	-	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	32 A	-	-	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	40 A	-	-	-	-	-	100 kA	100 kA	100 kA	100 kA	40 kA
	50 A	-	-	-	-	-	-	100 kA	100 kA	100 kA	40 kA
	63 A	-	-	-	-	-	-	100 kA	100 kA	100 kA	40 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the threshold and size of upstream fuse which must necessarily be higher.

Coordination between Modular Circuit-Breakers, three-phase network (+ neutal) 400 / 415 V~ according to IEC/EN 60947-2:

For TT or TN neutral system in 230/400 V network, to know the breaking capacity of the combination of a double pole breaker (connected between phase and neutral under 230 V) downstream of a triple-pole circuit-breaker, take the values shown in Tables 230/400 V.

		MCB upstream DX³ 10000/16 kA C and D Curves							
MCB downstream		≤25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A
DX³ 10000 A C Curves	≤6 A	16 kA	16 kA	16 A	16 kA	16 kA	16 kA	16 kA	16 kA
	10 A	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	16 A	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	20 A	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	25 A	-	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	32 A	-	-	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	40 A	-	-	-	16 kA	16 kA	16 kA	16 kA	16 kA
	50 A	-	-	-	-	16 kA	16 kA	16 kA	16 kA
	63 A	-	-	-	-	-	16 kA	16 kA	16 kA

		MCB upstream DX³ 25 kA C and D Curves							
MCB downstream		≤25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A
DX³ 10000 A C Curves	≤6 A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	10 A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	16 A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	20 A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	25 A	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	32 A	-	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	40 A	-	-	-	25 kA	25 kA	25 kA	25 kA	25 kA
	50 A	-	-	-	-	25 kA	25 kA	25 kA	25 kA
	63 A	-	-	-	-	-	25 kA	25 kA	25 kA

All these values are also valid for circuit breakers associated to RCD add-on modules.
According to the curves and ratings of circuit breakers, attention to the magnetic threshold and to the size of upstream circuit breakers which must necessarily be higher.

Technical data

Coordination between Modular Circuit-Breakers, three-phase network (+ neutal) 400/415 V~ according to IEC/EN 60947-2:

For TT or TN neutral system in 240/415 V network, to know the breaking capacity of the combination of a double pole breaker (connected between phase and neutral under 230 V) downstream of a triple-pole circuit-breaker, take the values shown in Tables 240/415 V.

		MCB upstream										
		DX³ 36 kA						DX³ 50 kA				
		C Curve						C and D Curves				
MCB downstream		≤25 A	32 A	40 A	50 A	63 A	80 A	≤25 A	32 A	40 A	50 A	63 A
DX³ 10000 A C Curves	≤6 A	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	10 A	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	16 A	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	20 A	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	25 A	-	36 kA	36 kA	36 kA	36 kA	36 kA	-	50 kA	50 kA	50 kA	50 kA
	32 A	-	-	36 kA	36 kA	36 kA	36 kA	-	-	50 kA	50 kA	50 kA
	40 A	-	-	-	36 kA	36 kA	36 kA	-	-	-	50 kA	50 kA
	50 A	-	-	-	-	36 kA	36 kA	-	-	-	-	50 kA
	63 A	-	-	-	-	-	36 kA	-	-	-	-	-

All these values are also valid for circuit breakers associated to RCD add-on modules.
According to the curves and ratings of circuit breakers, attention to the magnetic threshold and to the size of upstream circuit breakers which must necessarily be higher.

Coordination between Modular Circuit-Breakers (MCB) and Moulded Case Circuit Breakers (MCCBs), three-phase network (+ neutal) 400 / 415 V~ according to standard IEC/EN60947-2:

For TT or TN neutral system in 240/415 V network, to know the breaking capacity of the combination of a double pole breaker (connected between phase and neutral under 230 V) downstream of a triple-pole circuit-breaker, take the values shown in Tables 240/415 V.

		MCCB upstream							
		DPX³ 160 / DPX³ 160 + RCD							
		16 kA							
MCB downstream		16 A	25 A	40 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	10 A	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	16 A	-	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	20 A	-	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	25 A	-	-	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	32 A	-	-	16 kA	16 kA	16 kA	16 kA	16 kA	16 kA
	40 A	-	-	-	16 kA	16 kA	16 kA	16 kA	16 kA
	50 A	-	-	-	16 kA	16 kA	16 kA	16 kA	16 kA
	63 A	-	-	-	-	16 kA	16 kA	16 kA	16 kA

		MCCB upstream							
		DPX³ 160 / DPX3 160 + RCD							
		25 – 36 - 50 kA							
MCB downstream		16 A	25 A	40 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	10A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	16A	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	20A	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	36 kA
	25A	-	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	32A	-	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	40A	-	-	-	25 kA	25 kA	25 kA	25 kA	25 kA
	50A	-	-	-	25 kA	25 kA	25 kA	25 kA	25 kA
	63A	-	-	-	-	25 kA	25 kA	25 kA	25 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the magnetic threshold and to the size of upstream circuit breakers which must necessarily be higher.

Technical data

Coordination between Modular Circuit-Breakers (MCB) and Moulded Case Circuit Breakers (MCCBs), three-phase network (+ neutal) 400 / 415 V~ according to standard IEC/EN60947-2:

For TT or TN neutral system in 240/415 V network, to know the breaking capacity of the combination of a double pole breaker (connected between phase and neutral under 230 V) downstream of a triple-pole circuit-breaker, take the values shown in Tables 240/415 V.

		MCCB upstream			
		DPX³ 250 / DPX³ 250+RCD (Thermal-Magnetic & Electronic)			
		25 - 36 - 50 kA - 70 kA			
MCB downstream		100A	160A	200A	250A
DX³ 10000 A/10 kA C and D curves	≤6 A	25 kA	25 kA	25 kA	25 kA
	10 A	25 kA	25 kA	25 kA	25 kA
	16 A	25 kA	25 kA	25 kA	25 kA
	20 A	25 kA	25 kA	25 kA	25 kA
	25 A	25 kA	25 kA	25 kA	25 kA
	32 A	25 kA	25 kA	25 kA	25 kA
	40 A	25 kA	25 kA	25 kA	25 kA
	50 A	25 kA	25 kA	25 kA	25 kA
	63 A	25 kA	25 kA	25 kA	25 kA

		MCCB upstream												
		DPX / H / L 250 (Thermal-Magnetic & electronic)						DPX 400AB		DPX / DPXH / DPXL 630 (Thermal-Magnetic & electronic)				
		36 - 70 - 100 kA						36 kA		36 - 70 - 100 kA				
MCB downstream		25A	40A	63A	100A	160A	250A	320A	400A	250A	320A	400A	500A	630A
DX³ 10000 A/10 kA C and D curves	≤6 A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	10 A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	16 A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	20 A	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	25 A	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	32 A	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	40 A	-	-	25 kA	25 kA	25 kA	25 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
	50 A	-	-	25 kA	25 kA	25 kA	25 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
	63 A	-	-	-	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the magnetic (or electronic) threshold and to the size of upstream circuit breakers which must necessarily be higher.

Coordination between Modular Circuit-Breakers (MCB) and Moulded Case Circuit Breakers (MCCBs), three-phase network (+ neutal) 400 / 415 V~ according to standard IEC/EN60947-2:

For TT or TN neutral system in 240/415 V network, to know the breaking capacity of the combination of a double pole breaker (connected between phase and neutral under 230 V) downstream of a triple-pole circuit-breaker, take the values shown in Tables 240/415 V.

		MCCB upstream	
		DPX / H / L 1250 (Thermo-Magnetic)	DPX / H 1600 (Electronic)
		50 - 70 - 100 kA	36 - 70 kA
MCB downstream		500 to 1250A	630 to 1600A
DX³ 10000 A/10 kA C and D curves	≤6 A	25 kA	25 kA
	10 A	25 kA	25 kA
	16 A	25 kA	25 kA
	20 A	25 kA	25 kA
	25 A	20 kA	20 kA
	32 A	16 kA	16 kA
	40 A	16 kA	16 kA
	50 A	16 kA	16 kA
	63 A	16 kA	16 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the magnetic (or electronic) threshold and to the size of upstream circuit breakers which must necessarily be higher.

Coordination between Modular Circuit-Breakers and fuses, three-phase network (+ neutal) 230/240 V~ according to standard IEC/EN 60947-2:

		Fuse upstream									
		gG Type									
MCB downstream		≤20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	10 A	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	16 A	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	20 A	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	25 A	-	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	32 A	-	-	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	40 A	-	-	-	-	-	100 kA	100 kA	100 kA	100 kA	40 kA
	50 A	-	-	-	-	-	-	100 kA	100 kA	100 kA	40 kA
	63 A	-	-	-	-	-	-	100 kA	100 kA	100 kA	40 kA

		Fuse upstream									
		aM Type									
MCB downstream		≤20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	10 A	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	16 A	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	20 A	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	25 A	-	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	32 A	-	-	-	-	100 kA	100 kA	100 kA	100 kA	100 kA	40 kA
	40 A	-	-	-	-	-	100 kA	100 kA	100 kA	100 kA	40 kA
	50 A	-	-	-	-	-	-	100 kA	100 kA	100 kA	40 kA
	63 A	-	-	-	-	-	-	100 kA	100 kA	100 kA	40 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the threshold and to the size of upstream fuses which must necessarily be higher.

Technical data

Coordination between modular circuit-breakers, three-phase network (+ neutal) 230/240 V~ according to IEC/EN 60947-2:

		MCB upstream DX³ 10000/16 kA B, C and D Curves							
MCB downstream		≤25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A
DX³ 10000 A C Curves	≤6 A	32 kA	32 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	10 A	32 kA	32 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	16 A	32 kA	32 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	20 A	32 kA	32 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	25 A	-	32 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	32 A	-	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	40 A	-	-	-	25 kA	25 kA	25 kA	25 kA	25 kA
	50 A	-	-	-	-	25 kA	25 kA	25 kA	25 kA
	63 A	-	-	-	-	-	25 kA	25 kA	25 kA

		MCB upstream DX³ 25 kA							
MCB downstream		≤25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A
DX³ 10000 A C Curves	≤6 A	50 kA	50 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	10 A	50 kA	50 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	16 A	50 kA	50 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	20 A	50 kA	50 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	25 A	-	50 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	32 A	-	-	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	40 A	-	-	-	25 kA	25 kA	25 kA	25 kA	25 kA
	50 A	-	-	-	-	25 kA	25 kA	25 kA	25 kA
	63 A	-	-	-	-	-	25 kA	25 kA	25 kA

All these values are also valid for circuit breakers associated to RCD add-on modules.
According to the curves and ratings of circuit breakers, attention to the magnetic threshold and to the size of upstream circuit breakers which must necessarily be higher.

Coordination between Modular Circuit-Breakers, three-phase network (+ neutal) 230/240 V~ according to IEC/EN 60947-2:

		MCB upstream										
		DX³ 36 kA						DX³ 50 kA				
MCB downstream		≤25 A	32 A	40 A	50 A	63 A	80 A	≤25 A	32 A	40 A	50 A	63 A
DX³ 10000 A C Curves	≤6 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	10 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	16 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	20 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	25 A	-	50 kA	50 kA	50 kA	50 kA	50 kA	-	50 kA	50 kA	50 kA	50 kA
	32 A	-	-	50 kA	50 kA	50 kA	50 kA	-	-	50 kA	50 kA	50 kA
	40 A	-	-	-	50 kA	50 kA	50 kA	-	-	-	50 kA	50 kA
	50 A	-	-	-	-	50 kA	50 kA	-	-	-	-	50 kA
	63 A	-	-	-	-	-	50 kA	-	-	-	-	-

All these values are also valid for circuit breakers associated to RCD add-on modules.
According to the curves and ratings of circuit breakers, attention to the magnetic threshold and to the size of upstream circuit breakers which must necessarily be higher.

Coordination between Modular Circuit-Breakers (MCB) and Moulded Case Circuit Breakers (MCCBs), three-phase network (+ neutal) 230/240 V~ according to standard IEC/EN 60947-2:

		MCCB upstream DPX³ 160 / DPX³ 160 + RCD 16 kA							
MCB downstream		16 A	25 A	40 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA
	10 A	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA
	16 A	-	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA
	20 A	-	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA
	25 A	-	-	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA
	32 A	-	-	28 kA	28 kA	28 kA	28 kA	28 kA	28 kA
	40 A	-	-	-	28 kA	28 kA	28 kA	28 kA	28 kA
	50 A	-	-	-	28 kA	28 kA	28 kA	28 kA	28 kA
	63 A	-	-	-	-	28 kA	28 kA	28 kA	28 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the magnetic threshold and to the size of upstream circuit breakers which must necessarily be higher.

Technical data

Coordination between Modular Circuit-Breakers (MCB) and Moulded Case Circuit Breakers (MCCBs), three-phase network (+ neutal) 230/240 V~ according to standard IEC/EN 60947-2:

		MCCB upstream							
		DPX³ 160 / DPX³ 160 + RCD							
		25 kA							
MCB downstream		16 A	25 A	40 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA
	10 A	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA
	16 A	-	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA
	20 A	-	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA
	25 A	-	-	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA
	32 A	-	-	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA
	40 A	-	-	-	40 kA	40 kA	40 kA	40 kA	40 kA
	50 A	-	-	-	40 kA	40 kA	40 kA	40 kA	40 kA
	63 A	-	-	-	-	40 kA	40 kA	40 kA	40 kA

		MCCB upstream							
		DPX³ 160 / DPX³ 160 + RCD							
		36 - 50 kA							
MCB downstream		16 A	25 A	40 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	10 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	16 A	-	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	20 A	-	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	25 A	-	-	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	32 A	-	-	50 kA	-	50 kA	50 kA	50 kA	50 kA
	40 A	-	-	-	50 kA	50 kA	50 kA	50 kA	50 kA
	50 A				50 kA	50 kA	50 kA	50 kA	50 kA
	63 A					50 kA	50 kA	50 kA	50 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the magnetic threshold and to the size of upstream circuit breakers which must necessarily be higher.

Coordination between Modular Circuit-Breakers (MCB) and Moulded Case Circuit Breakers (MCCBs), three-phase network (+ neutal) 230/240 V~ according to standard IEC/EN 60947-2:

		MCCB upstream			
		DPX³ 250 / DPX³ 250+RCD (Thermal-magnetic & electronic)			
		25 kA			
MCB downstream		100 A	160 A	200 A	250 A
DX³ 10000 A/10 kA C and D curves	≤6 A	40 kA	40 kA	40 kA	40 kA
	10 A	40 kA	40 kA	40 kA	40 kA
	16 A	40 kA	40 kA	40 kA	40 kA
	20 A	40 kA	40 kA	40 kA	40 kA
	25 A	40 kA	40 kA	40 kA	40 kA
	32 A	40 kA	40 kA	40 kA	40 kA
	40 A	40 kA	40 kA	40 kA	40 kA
	50 A	40 kA	40 kA	40 kA	40 kA
	63 A	40 kA	40 kA	40 kA	40 kA

All these values are also valid for circuit breakers associated to differential blocks.

Technical data

Coordination between Modular Circuit-Breakers (MCB) and Moulded Case Circuit Breakers (MCCBs), three phase network (+ neutal) 230/240 V~ according to standard IEC/EN 60947-2:

		MCCB upstream									
		DPX³ 250 / DPX³ 250+RCD (Thermal-magnetic & electronic)				DPX / H / L 250 (Thermal-magnetic & electronic)					
		36 - 50 - 70 kA				36 - 70 - 100 kA					
MCB downstream		100 A	160 A	200 A	250 A	25 A	40 A	63 A	100 A	160 A	250 A
DX³ 10000 A/10 kA C and D curves	≤6 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	10 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	16 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	20 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	25 A	50 kA	50 kA	50 kA	50 kA	-	50 kA	50 kA	50 kA	50 kA	50 kA
	32 A	50 kA	50 kA	50 kA	50 kA	-	50 kA	50 kA	50 kA	50 kA	50 kA
	40 A	50 kA	50 kA	50 kA	50 kA	-	-	50 kA	50 kA	50 kA	50 kA
	50 A	50 kA	50 kA	50 kA	50 kA	-	-	50 kA	50 kA	50 kA	50 kA
	63 A	50 kA	50 kA	50 kA	50 kA	-	-	-	50 kA	50 kA	50 kA

		MCCB upstream						
		DPX 400AB		DPX / DPXH / DPXL 630MT (Thermal-magnetic & electronic)				
		36 kA		36 - 70 - 100 kA				
MCB downstream		320 A	400 A	250 A	320 A	400 A	500 A	630 A
DX³ 10000 A/10 kA C and D curves	≤6 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	10 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	16 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	20 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	25 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	32 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	40 A	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	50 A	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA
	63 A	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the magnetic (or electronic) threshold and to the size of upstream circuit breakers which must necessarily be higher.

Coordination between Modular Circuit-Breakers(MCB) and Moulded Case Circuit Breakers (MCCBs), three phase network (+ neutal) 230/240 V~ according to standard IEC/EN 60947-2:

		MCCB upstream	
		DPX / H / L 1250 (Thermal-magnetic)	DPX / H 1600 (electronic)
		50 - 70 - 100 kA	36 - 70 kA
MCB downstream		500 to 1250 A	630 to 1600 A
DX³ 10000 A/10 kA C and D curves	≤6 A	50 kA	50 kA
	10 A	50 kA	50 kA
	16 A	50 kA	50 kA
	20 A	50 kA	50 kA
	25 A	50 kA	50 kA
	32 A	50 kA	50 kA
	40 A	50 kA	50 kA
	50 A	36 kA	36 kA
	63 A	36 kA	36 kA

All these values are also valid for circuit breakers associated to differential blocks.
According to the curves and ratings of circuit breakers, attention to the magnetic (or electronic) threshold and to the size of upstream circuit breakers which must necessarily be higher.

Selectivity between two levels of protection

- The downstream circuit breaker must always have a magnetic threshold and a rated current lower than those of the upstream protection.
- Selectivity is indicated total (T) if there is selectivity up to the value of breaking capacity (according to IEC / EN 60947-2) of the downstream circuit breaker.

Selectivity between modular circuits breakers and fuses:

- Selectivity limit at 400 V~: values in Ampere.

		Fuse upstream							
		gG Type							
MCB downstream		32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	1300	1900	2500	4000	4600	11000	T	T
	10 A	-	1600	2200	3200	3600	7000	11000	T
	16 A	-	1400	1800	2600	3000	5600	8000	15000
	20 A	-	1200	1500	2200	2500	4600	6300	10000
	25 A	-	-	1300	2000	2200	4100	5500	9000
	32 A	-	-	1200	1700	1900	3500	4500	8000
	40 A	-	-	-	-	1700	3000	4000	6000
	50 A	-	-	-	-	16000	2600	3500	5000
	63 A	-	-	-	-	-	2400	3300	5000

		Fuse upstream								
		aM Type								
MCB downstream		25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/10 kA C and D curves	≤6 A	1000	1600	2100	3200	6200	15000	T	T	T
	10 A	-	1100	1700	2500	5000	7800	12000	T	T
	16 A	-	1000	1400	2100	4000	6000	9000	T	T
	20 A	-	-	1300	1800	3400	5100	7000	14000	T
	25 A	-	-	1100	1600	3000	4500	6000	9300	14000
	32 A	-	-	-	1300	2400	3800	5000	7700	9000
	40 A	-	-	-	-	2100	3100	4200	6400	7000
	50 A	-	-	-	-	2000	2900	3700	6000	6000
	63 A	-	-	-	-	-	2800	3500	5500	6000

T = Total discrimination

Technical data

Selectivity between modular circuits breakers:
Selectivity limit at 400 V~: values in Ampere.

		MCB upstream										
		DX³ 25 kA										
MCB downstream		10 A	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A
DX³ 10000 A/10 kA C and D curves	≤6 A	40	64	80	100	700	1200	1500	3000	4000	T	T
	10 A	-	64	80	100	500	700	1000	1800	3000	5000	T
	16 A	-	-	80	100	300	500	700	1300	2000	3600	5500
	20 A	-	-	-	100	-	400	500	1000	1600	3000	4000
	25 A	-	-	-	-	-	-	500	800	1300	2400	3300
	32 A	-	-	-	-	-	-	500	600	1000	1800	2700
	40 A	-	-	-	-	-	-	-	600	800	1600	2400
	50 A	-	-	-	-	-	-	-	-	800	900	1700
	63 A	-	-	-	-	-	-	-	-	-	900	1200

		MCB upstream										
		DX³ 25 kA										
MCB downstream		10 A	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A
DX³ 10000 A/10 kA C and D curves	≤6 A	75	120	150	187	700	1200	1500	3000	4000	T	T
	10 A	-	120	150	187	500	700	1000	1800	3000	5000	T
	16 A	-	-	150	187	300	500	700	1300	2000	3600	5500
	20 A	-	-	-	187	300	400	500	1000	1600	3000	4000
	25 A	-	-	-	-	240	400	500	800	1300	2400	3300
	32 A	-	-	-	-	-	300	500	600	1000	1800	2700
	40 A	-	-	-	-	-	-	400	600	800	1600	2400
	50 A	-	-	-	-	-	-	-	500	800	900	1700
	63 A	-	-	-	-	-	-	-	-	650	900	1200

T = Total discrimination

Selectivity between modular circuits breakers:
Selectivity limit at 400 V~: values in Ampere.

		MCB upstream										
		DX³ 25 kA										
MCB downstream		10 A	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A
DX³ 10000 A/10 kA C and D curves	≤6 A	120	192	240	500	700	1200	1500	3000	4000	T	T
	10 A	-	192	240	300	500	700	1000	1800	3000	5000	T
	16 A	-	-	240	300	384	500	700	1300	2000	3600	5500
	20 A	-	-	-	300	384	480	600	1000	1600	3000	4000
	25 A	-	-	-	-	384	480	600	800	1300	2400	3300
	32 A	-	-	-	-	-	480	600	756	1100	1450	2700
	40 A	-	-	-	-	-	-	600	756	1000	1250	2400
	50 A	-	-	-	-	-	-	-	756	950	1200	1700
	63 A	-	-	-	-	-	-	-	-	950	1200	1500

		MCB upstream								
		DX³ 36 kA								
MCB downstream		10 A	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A
DX³ 10000 A/10 kA C and D curves	≤6 A	75	120	170	500	700	1200	1500	3000	4000
	10 A	-	120	150	210	500	700	1000	1800	3000
	16 A	-	-	150	187	300	500	700	1300	2000
	20 A	-	-	-	187	300	400	500	1000	1600
	25 A	-	-	-	-	240	400	500	800	1300
	32 A	-	-	-	-	-	300	500	600	1000
	40 A	-	-	-	-	-	-	400	600	800
	50 A	-	-	-	-	-	-	-	500	800
	63 A	-	-	-	-	-	-	-	-	650

T = Total discrimination

Technical data

Selectivity between modular circuits breakers:
Selectivity limit at 415 V~: values in Ampere.

		MCB upstream							
		DX³ 50 kA							
MCB downstream		10 A	16 A	20 A	25 A	32 A	40 A	50 A	63 A
DX³ 10000 A/10 kA C and D curves	≤6 A	-	64	170	500	700	1200	1500	3000
	10 A	-	-	150	210	500	700	1000	1800
	16 A	-	-	-	-	300	500	700	1300
	20 A	-	-	-	-	-	400	500	1000
	25 A	-	-	-	-	-	-	500	800
	32 A	-	-	-	-	-	-	500	600
	40 A	-	-	-	-	-	-	-	600
	50 A	-	-	-	-	-	-	-	-
	63 A	-	-	-	-	-	-	-	-

		MCB upstream							
		DX³ 50 kA							
MCB downstream		10 A	16 A	20 A	25 A	32 A	40 A	50 A	63 A
DX³ 10000 A/10 kA C and D curves	≤6 A	75	120	170	500	700	1200	1500	3000
	10 A	-	120	150	210	500	700	1000	1800
	16 A	-	-	150	187	300	500	700	1300
	20 A	-	-	-	187	300	400	500	1000
	25 A	-	-	-	-	240	400	500	800
	32 A	-	-	-	-	-	300	500	600
	40 A	-	-	-	-	-	-	400	600
	50 A	-	-	-	-	-	-	-	500
	63 A	-	-	-	-	-	-	-	-

Selectivity between modular circuits breakers:
Selectivity limit at 415 V~: values in Ampere.

		MCB upstream							
		DX³ 50 kA							
MCB downstream		10 A	16 A	20 A	25 A	32 A	40 A	50 A	63 A
DX³ 10000 A/10 kA C and D curves	≤6 A	120	192	240	500	700	1200	1500	3000
	10 A	-	192	240	300	500	700	1000	1800
	16 A	-	-	240	300	384	500	700	1300
	20 A	-	-	-	300	384	480	600	1000
	25 A	-	-	-	-	384	480	600	800
	32 A	-	-	-	-	-	480	600	756
	40 A	-	-	-	-	-	-	600	756
	50 A	-	-	-	-	-	-	-	756
	63 A	-	-	-	-	-	-	-	

Selectivity between modular circuits breakers (MCB) and Moulded Case Circuit Breakers (MCCBs):
Selectivity limit at 415 V~: values in Ampere.

		MCCB upstream							
		DPX³ 160 DPX³ 160 + RCD							
		16 - 25 - 36 - 50 kA							
MCB downstream		16 A	25 A	40 A	63 A	80 A	100 A	125 A	160 A
DX³ 10000 A/ 10 kA C and D curves	≤6 A	6000	12000	12000	T	T	T	T	T
	10 A	5000	7000	7000	7000	T	T	T	T
	16 A	-	6000	6000	6000	6000	T	T	T
	20 A	-	5000	5000	5000	5000	6000	T	T
	25 A	-	-	4500	4500	4500	4500	8500	T
	32 A	-	-	-	3000	4000	4000	7000	10000
	40 A	-	-	-	3000	3000	3000	6000	8000
	50 A	-	-	-	-	3000	3000	5500	7000
	63 A	-	-	-	-	3000	3000	5000	6000

T = Total discrimination

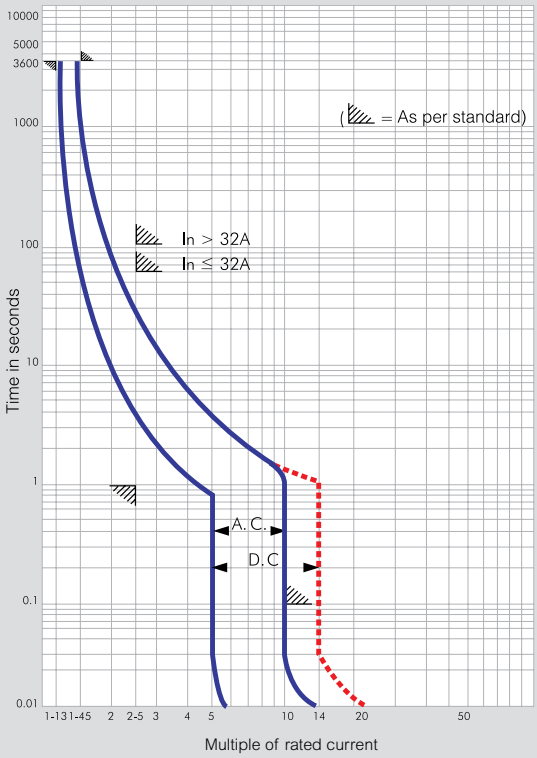
Selectivity between modular circuits breakers (MCB) and Moulded Case Circuit Breakers (MCCBs):
Selectivity limit at 415 V~: values in Ampere.

		MCCB upstream							
		DPX³ 250 DPX³ 250 + diff (Thermo-magnetic & electronic)				DPX 400 AB		DPX / H / L 1250 (Thermo-magnetic)	DPX / H 1600 (electronic)
		25 - 36 - 50 - 70 kA				36 kA		50 - 70 - 100 kA	36 - 70 kA
MCB downstream		100 A	160 A	200 A	250 A	320 A	400 A	500 to 1250 A	630 to 1600 A
DX³ 10000 A/10 kA C and D curves	≤6 A	T	T	T	T	T	T	T	T
	10 A	T	T	T	T	T	T	T	T
	16 A	T	T	T	T	T	T	T	T
	20 A	T	T	T	T	T	T	T	T
	25 A	T	T	T	T	T	T	T	T
	32 A	5000	T	T	T	T	T	T	T
	40 A	5000	T	T	T	T	T	T	T
	50 A	4000	T	T	T	T	T	T	T
	63 A	4000	T	T	T	T	T	T	T

Technical data

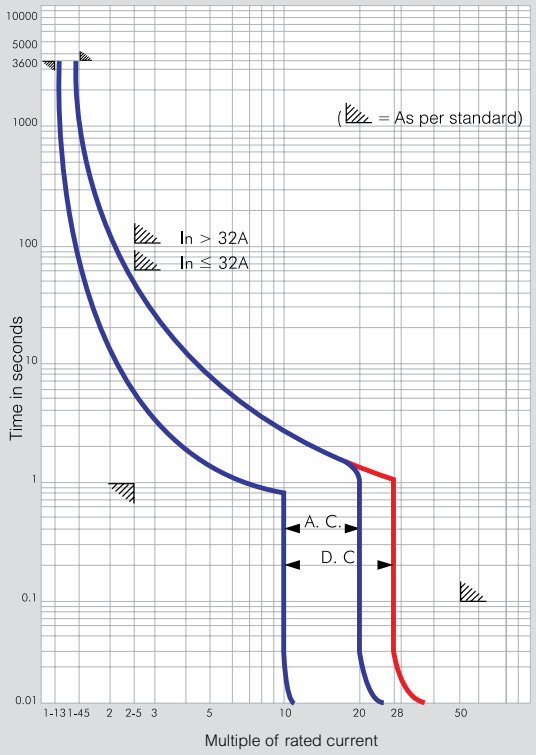
Time current characteristics for C curve

Rating - 6 to 63 A Ref. calibration Temp. : 30 °C
Ref. standard : IS / IEC 60898-1



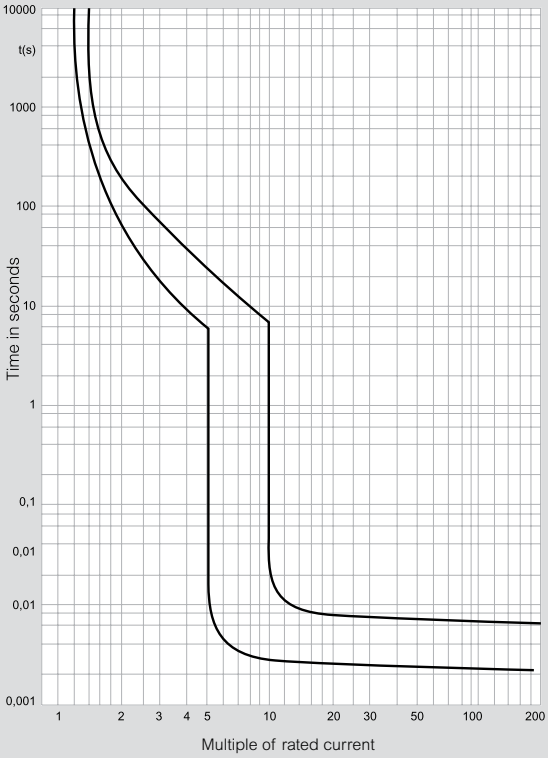
Time current characteristics for D curve

Rating - 0.5 to 63 A Ref. calibration Temp. : 30 °C
Ref. standard : IS / IEC 60898-1



Time current characteristics for 80-125 A

Rating - 80 A to 125 A Ref. calibration Temp. : 30 °C
Ref. standard : IEC 60947-2



Selection chart*

DX³ MCBs (10 kA) and RCBOs 3 phase motor application

Motor H.P.	KW	MCB rating (A)	
		Star Delta	DOL
1	0.75	-	1.6 A
1.5	1.10	-	2 A
2	1.50	-	3 A
3	2.25	-	4 A
4	3.00	-	10 A
5	3.75	10 A	10 A
6	4.50	10 A	10 A
7.5	5.50	16 A	16 A
10	7.50	16 A	20 A
12.5	9.30	20 A	25 A
15	11.00	25 A	32 A
17.5	13.00	25 A	32 A
20	15.00	40 A	40 A
25	18.50	40 A	50 A
30	22.50	50 A	63 A
35	26.00	63 A	-

For MCB/RCBO ratings :

Single phase = P = VI

Three phase = P = 3 VI Cos φ = 1.732 x VI x 0.8

Note : One lighting circuit can have upto 800 W or upto 10 points.
One power circuit can have upto 3000 W or upto 2 power points.
* The data given above is only for guidance.
The exact rating must be selected only after considering the motor characteristics.

Technical data

Isolators

Specifications	IEC 60947-3	
Number of poles	DP, TP, FP	
Utilization category	AC22A	
Rated operational voltage and frequency	415 V, 50/60 Hz	
Insulation voltage Ui	500 V AC	
Impulse voltage Uimp	6 kV	
Short circuit making capacity Icm	1000 A	
Endurance	Electrical - 1500 operations with load AC22A Mechanical - 10000 operation	
Mounting position	Vertical / Horizontal / Upside down / On the side	
Fixing	On symmetric rail EN/IEC 60715 or DIN 35	
Maximum cable size	Top/Bottom	1 x 1.5 mm² to 35 mm²
	Rigid cable	2 x 1.5 mm² to 16 mm²
	Top/Bottom	1 x 1.5 mm² to 25 mm²
	Flexible cable	2 x 1.5 mm² to 10 mm²
Applied connection torque	Recommended : 3 Nm Minimum : 2 Nm Maximum: 3.5 Nm	
Permissible ambient temperature	Maximum + 70 °C Minimum -25 °C	

Technical data for DX³ RCDs

		RCCB		
		Type AC	**Type A-S**	**Type Hpi**
Specification		IS 12640 (part 1) 2008 IEC 61008 - 1	IEC 61008 - 1 EN 61008 - 1	EN 61008 - 1 IEC 61008 - 1
No. of modules	- Double pole	2	2	2
	- Four pole	4	4	4
Electrical characteristics				
Nominal rating In (A)	- Double pole	25, 40, 63, 80, 100	63, 80	25, 40, 63, 80
	- Four pole	25, 40, 63, 80, 100	25, 40, 63, 80	25, 40, 63, 80
Rated sensitivity (mA)	- Double pole	30, 100, 300	300	30
	- Four pole	30, 100, 300	300	30
Rated frequency (Hz)		50 / 60	50 / 60	50 / 60
Rated operating voltage	- Double pole	230	230	230
Ue (V AC)	- Four pole	230 / 415	400	400
Minimum operating voltage (V AC)		12	12	12
Minimum operating voltage for test button (V AC)[1]				
	- Double pole	170	170	170
	- Four pole	196	196	196
Rated insulation	- Double pole	250	250	250
voltage Ui (V AC)	- Four pole	500	500	500
Rated impulse withstand voltage Uimp (kV)		6	6	6
Breaking capacity		**As per IS 12640 (part 1) 2008, IEC 61008 - 1**		
Rated making & breaking capacity (Im)				
	- Up to 40 A	500 A	-	500 A
	- From 63 A and above	10 x In	630 A	630 A
Rated residual making & breaking capacity (IΔm)				
	- Up to 40 A	1000 A	-	1000 A
	- From 63 A and above	1000 A	1000 A	1000 A
Rated conditional short circuit current (Inc)		10000 A	10000 A	10000 A
Rated conditional residual short circuit current (IΔc)		10000 A	10000 A	10000 A
Rated service short circuit capacity (Ics)		-	-	-
Rated short circuit capacity (Icn)		-	-	-
Operating temperature (°C)		- 25 to 70	- 25 to 70	- 25 to 70
Endurance (0.C cycle)	- Mechanical	20,000	20,000	20,000
	- On load at in X cos φ 0.9	10,000	10,000	10,000
	- Via test button	2,000	2,000	2,000
	- By fault current (sensitivity)	2,000	2,000	2,000
Testing		By pressing test button grey dolly will come to OFF position It is recommended to test RCCB once a month	By pressing test button grey dolly will come to OFF position It is recommended to test RCCB once a month	By pressing test button, grey dolly will come to OFF position It is recommended to test RCCB once a month
Fault indication	- Earth leakage	Grey dolly will come to OFF position	Grey dolly will come to OFF position	Grey dolly will come to OFF position
	- Overload and shortcut	-	-	-
Resetting		Switch on grey dolly	Switch on grey dolly	Switch on grey dolly
Terminals	- Rigid	1 - 35 sq. mm	1 - 35 sq. mm	1 - 35 sq. mm
	- Flexible	1 - 25 sq. mm	1 - 25 sq. mm	1 - 25 sq. mm
Type of protection				
Earth leakage		•	•	•
Overload		-	-	-
Short circuit		-	-	-
Add on electrical accessories*				
Auxiliary		•	•	•
Fault signaling		•	•	•
Shunt trip		•	•	•
Under voltage		•	•	•
Over voltage		•	•	•

* - Accessories are mounted on the left hand side of the product.
At a time a maximum of three accessories can be mounted.
[1] - Between phase and neutral

	RCBO			
	Type AC	**Type AC - 2 & 4 modules**	**Type Hpi**	**Type A**
	IS 12640 (part 2) 2008 IEC 61009 - 1	NFC 61 - 410 EN 61009 - 1 IEC 61009 - 1	EN 61009 - 1 IEC 61009 - 1	EN 61009 - 1 IEC 61009 - 1
	4	2	2	-
	7	4	-	4
	6, 10, 16, 25, 32, 40, 63	6, 10, 16, 20, 25, 32	25, 32, 40	25, 32, 40
	16, 25, 32, 40, 63	10, 16, 20, 25, 32	-	-
	30, 100, 300	30, 300	30	30, 300
	30, 100, 300	-	-	-
	50	50	50 / 60	50 / 60
	230	230	230	-
	415	415	-	415
	12	12	12	12
	170	170	170	-
	196	196	-	196
	500	250	250	-
	500	500	-	500
	4	6	6	6
	As per IS 12640 (part 2) 2008, IEC 61009 - 1			
	10000 A	6000 A	6000 A	6000 A
	10000 A	-	-	-
	10000 A	3000 A	3000 A	3000 A
	10000 A	-	-	-
	-	-	-	-
	-	-	-	-
	7500 A	6000 A	6000 A	6000 A
	10000 A	6000 A	6000 A	6000 A
	- 25 to 70	- 25 to 70	- 25 to 70	- 25 to 70
	20,000	20,000	20,000	20,000
	10,000	10,000	10,000	10,000
	1,000	1,000	1,000	1,000
	1,000	1,000	1,000	1,000
	By pressing test button, black dolly will come to OFF position It is recommended to test RCBO once a month	By pressing test button, black dolly will come to OFF position It is recommended to test RCBO once a month	By pressing test button, black dolly will come to OFF position It is recommended to test RCBO once a month	By pressing test button, black dolly will come to OFF position It is recommended to test RCBO once a month
	Black & blue dolly will come to OFF position	Black dolly will come to OFF position & blue indicator will appear on front face window	Black dolly will come to OFF position & blue indicator will appear on front face window	Black dolly will come to OFF position & blue indicator will appear on front face window
	Black dolly will come to OFF position	Black dolly will come to OFF position	Black dolly will come to OFF position	Black dolly will come to OFF position
	Switch on black dolly	Switch on black dolly	Switch on black dolly	Switch on black dolly
	1 - 35 sq. mm	0.75 - 16 sq. mm	0.75 - 16 sq. mm	0.75 - 16 sq. mm
	1 - 25 sq. mm	0.75 - 10 sq. mm	0.75 - 10 sq. mm	0.75 - 10 sq. mm
	•	•	•	•
	•	•	•	•
	•	•	•	•
	•	•	•	•
	•	•	•	•
	•	•	•	•
	•	•	•	•
	•	•	•	•

Technical data

Short-circuit withstanding capacity of RCCBs (in kA)

RCD downstream		DX³ MCB upstream
2P	16	10
	25	10
	40	10
	63	10
	80	10
	100	10
4P	25	10
	40	10
	63	10
	80	10
	100	10

Marking example :

Type A

Type AC

Type A-S

Type Hpi

Technical data

Nature and consequences of electrical risks

Direct and indirect contact

All electrical risks for people are the result of direct or indirect contact. What are these contacts? And how can we protect ourselves against them?

All the answers appear in the following section.

Electrical risks do not just concern people : these risks - especially fire affect installations as well. A 500 mA current, for example, flowing through combustible material is sufficient to ignite such material after a certain time. Every electrical installation is subject to current leakages which can vary considerably depending on such factors as the installation's condition, age, environment, etc.

These current leaks may flow through the fabric of the building (trunking, metal girders or other metal components), generating heat which in turn may lead to fire.

Direct contacts

Direct contact is caused by humans and may be due to either carelessness or clumsiness.

What is a direct contact? How can we protect ourselves? Here are the answers...

This is when someone makes contact with a live electrical component of a device or installation.

For example :

- a person inadvertently touching a live cable.
- a child sticking a metal object into a power socket.
- using male/male extensions or unprotected test cables.

In this case only basic protection is effective

Other examples

Someone touching a live busbar in a distribution panel or cabinet, or someone touching flush-mounted electrical trunking with the end of a tool, etc. In this case basic protection plus additional protection is effective.

How can we protect ourselves?

There are two ways (independent of the neutral earthing system) of ensuring that personnel are protected against direct contact.

- **Preventing access to live parts where possible.**

Basic protection via physical or electrical isolation of live parts.

This protection must ensure that live parts cannot be touched, even inadvertently.

How?

By using barriers, enclosures, closed cabinets which physically or electrically isolate live parts presenting a danger to the user, shuttered sockets, or insulation.

- **Additional protection**

Must be provided by a 30-mA residual current device such as Lexic range of residual current devices. This protection is required in case the basic protection detailed above fails.

Technical data

Indirect contacts

Indirect contacts are independent of humans : it results from an internal hardware fault.

What is an indirect contact?
How can we protect ourselves? Here are the answers...

What is an indirect contact?

This is when a person makes contact with a metal earthed part which has accidentally been powered up following an insulation fault. This type of contact is very dangerous as, unlike direct contact, it is completely unexpected. For example, a person touching the metal frame of an electrical appliance which has defective insulation may be electrocuted through no fault of their own if the appliance is not protected.

How can we protect ourselves?

There are three possibilities :

- Preventing access to potentially dangerous metal components via class II protection.
- Good connection of all exposed conductive parts to an effective earth.
- A protective RCD according to the neutral earthing system.

A person is in danger of electrocution if the fault current raises the voltage of the accessible metal part above 50 V to earth.

Important note:

Under the Indian Electricity Rules [rules 61 (A), 71 (1) and 73 (1)], installation of an RCCB is mandatory in all installations of 5 KW and above, in all luminous tube signs and X-ray installations. The bureau of Indian standards recommends that RCCBs installed at construction sites, temporary installations, agriculture and horticulture premises, limit the residual current to 30 mA.

Residual current devices, selection and operation

The main function of a residual current device is to ensure that people are protected from any risk of electrocution. It can also ensure protection against risk of fire.

What is the nature of these risks ? What are the consequences ?
Here are the answers...

Risks of electrocution-

The dangerous effects of electricity depend on two factors-:

- the flowing time through the human body
- the current value

These two factors are independent and the importance of the risk varies in accordance with the level of each factor.

The dangerous current value through a human body depends on the touch voltage and touch resistance of the human body.

In practice, the current value is defined using a standard "safety" voltage of 50 V. This voltage takes into account the maximum current which can be withstood by a human being with a minimum internal electrical resistance in given conditions. It also takes into account the maximum permissible time for the current to pass through the body without dangerous physio-pathological effects.

50 V is considered as the safe limit of voltage for human body in dry condition.

How does an electrical current affect the human body?

When subject to a voltage, the human body reacts like any other receiver with a given internal resistance. An electrical current passes through the body with three serious risks :

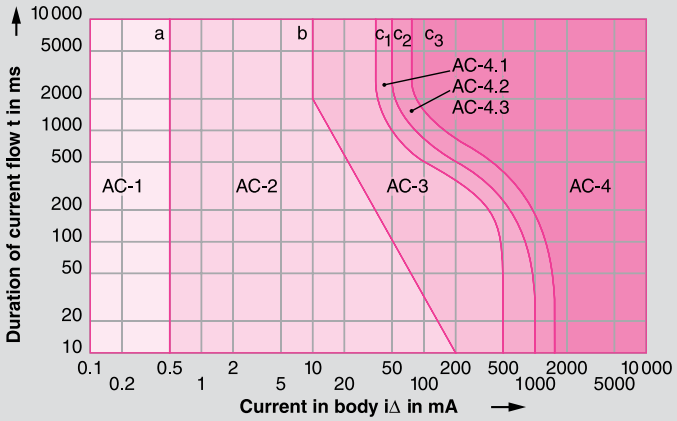
- Locking of the muscles, or tetanisation : the muscles through which the current passes contract and remain contracted : if this includes the rib cage, breathing may be impeded.
- Action on the heart : the cardiac rhythm is completely disrupted (ventricular fibrillation).
- Thermal effects may cause varying levels of damage to body tissue, including severe burns in the case of very high currents.

Examples of electrocution by direct or indirect contact.

Technical data

Effect of current on human body

The standards define the following curves, which take into account the two parameters required to assess the risk :



iΔ : current flowing through body.
t : time taken for current to pass through body.

These curves show the various zones of effect of an alternating current on people : they derive from IEC 60 479 and determine

4 main risk zones

Zone designation	Physiological effects	
zone AC-1	Usually no reaction	
zone AC-2	Usually no harmful physiological effects	
zone AC-3	Usually no organic damage to be expected. Likelihood of cramp like muscular contractions and difficulty in breathing for durations of current-flow longer than 2 s. Reversible disturbances of formation and conduction of impulses in the heart, including atrial fibrillation and transient cardiac arrest without ventricular fibrillation increasing with current magnitude and time	
zone AC-4	Increasing with magnitude and time, dangerous pathophysiological effects such as cardiac arrest, breathing arrest and serious burns may occur in addition to the effects of zone-3	
zone AC-4.1	Probability of ventricular fibrillation increasing up to about 5%	C1 - C2
zone AC-4.2	Probability of ventricular fibrillation up to about 50%	C2 - C3
zone AC-4.3	Probability of ventricular fibrillation above 50%	

* For durations of current flow below 10 ms, the limit for the body current at line b remains constant at a value of 200 mA.

A residual current device continuously measures the difference between the value of the input and the output currents. If the value is not equal to zero, this indicates a leak.

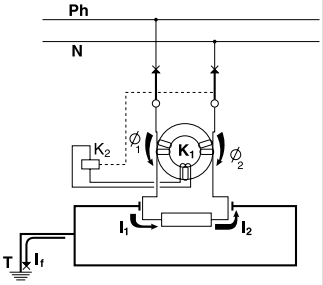
When this leak reaches the level at which the differential is set (its sensitivity), the device trips and breaks the circuit.

What are the operating principles of a residual current device?

What are the selection criteria for a residual current device? Here are the answers...

Operating principle of a residual current device

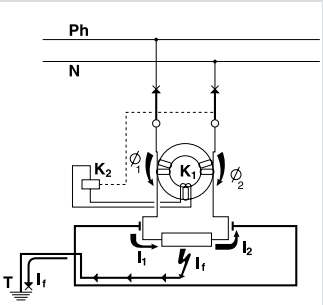
No fault present



Therefore no current is induced in coil K_1, and coil K_2 is not excited. The contacts do not open. The equipment operates normally

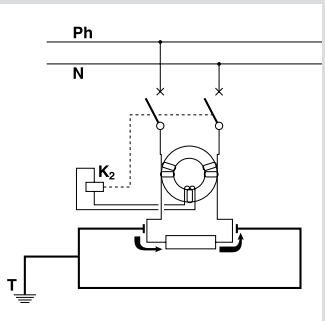
$I_f = 0$, thus
$I_1 = I_2$
$\varnothing_1 = \varnothing_2$
$\varnothing_1 - \varnothing_2 = 0$

Insulation fault



A current is thus induced in coil K_1...

$I_f \neq 0$
$I_1 > I_2$, thus
$\varnothing_1 > \varnothing_2$, thus
$\varnothing_1 - \varnothing_2 \neq 0$



...coil K_2 is excited, the contacts open and the equipment is automatically switched OFF

Selecting a residual current device

First determine your requirement. This exists on two levels :

1 The need to protect against direct or indirect contacts.

2 The need to ensure protection against overloads and short-circuits.

If protection against indirect contact is required, use residual current devices with a sensitivity of : 30 mA,
100 mA,
300 mA,

The rating (40, 63 A, etc.) is selected according to the load.

If protection against direct contact is required, use residual current device with a sensitivity of 30 mA.

The sensitivity of a residual current device IΔn is the current level at which tripping is sure to occur. To do this, the standards concerning residual current devices stipulate that tripping must occur between IΔn / 2 and IΔn.

Technical data

Types of residual current device

There are 2 types of RCD : the AC type and the A type

Both types are produced in the "S" (discriminating) or normal versions. They conform to Indian and International standards IS 12640, IEC 61008 and IEC 61009 as well as European standards EN 61008 and EN 61009.

- **Type A**

Sensitive to residual alternating currents and residual currents with a DC component.

Use : special applications

- if it is possible that the fault currents are not purely sinusoidal (rectifier bridge, etc.)

- **Type AC**

Sensitive to residual alternating currents

Use : standard applications

- **Type S**

Delayed trip for discrimination with other residual current devices.

Use : for discrimination with a downstream device.

- **Type Hpi**

- Enhanced immunity to unwanted tripping in environments with disturbances. eg. diesels, computers, printers, etc.
- Detects faults with DC components eg. thyristors, trio etc.

Residual current circuit-breaker with or without overload protection? Which do I choose?

Choose a residual current circuit-breaker (RCCB) if you do not need to protect against overload and short circuits (caution! an RCCB must be connected to some form of line protection device : either a circuit-breaker or a fuse).

Choose a residual current circuit-breaker with overload and short circuit protection (RCBO) if this type of protection is not available.

Residual current circuit-breakers without overload and short circuit protection (RCCB)

These provide two functions : fault current detection, measurement and cut-off : and isolation of an installation.

RCCBs are governed by standards IS 12640 (part 1), IEC 61008-1.

Residual current circuit-breakers with overload and short circuit protection (RCBO)

These provide three functions : fault current detection, measurement and cut-off : protection against overloads and short-circuits : and isolation of an installation.

Residual current circuit-breakers are governed by standards IS 12640 (part 2), IEC 61009-1.

The "test" function

A residual current device is a safety device, and it is therefore vital that it is regularly tested. This function is therefore required by the standard governing residual current protective devices, and ensures correct operation. All Lexic RCDs are equipped with this function.

Note : We offer Type AC, Type A-S and Type Hpi RCDs

Compatibility MCBs/add-on modules

Breaking capacity	Number of poles	Add-on module for 1.5 module/pole MCBs
16 kA	2P, 4P	In ≥ 80 A
25 kA	4P	In ≥ 32 A
	2P	In ≥ 40 A
	4P	In ≥ 12,5 A
	2P	In ≥ 32 A
50 kA	2P, 4P	All range

Operating principle

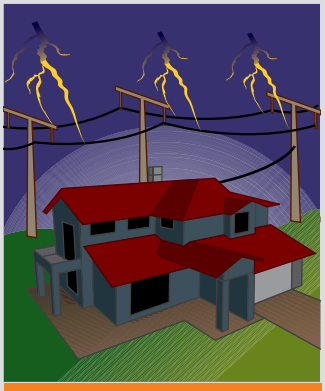
Temporarily electrical disturbances and other external events can cause unwanted tripping of different devices protecting electrical installation

STOP&GO verifies automatically the state of the installation, before resetting and launches a visual and close a contact in case of permanent fault detection (short-circuit or residual current)

After verifying the state of the installation, STOP&GO automatic resets the associated protection device in order to immediatly re-establish power supply and avoid unwanted consequences

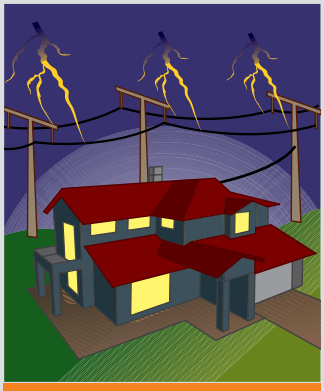
STOP&GO does not protect the installation against lightning strikes
For an efficient protection against lightning, use voltage surge protectors

The Autotest version is specially suitable for installations equipped with residual current protection devices (RCD's and RCBOs)
STOP&GO periodically does an automatic test of the functionning of residual current protection devices. The manual test is no longer needed



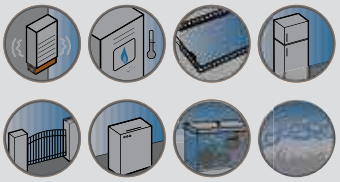
Installation without STOP&GO

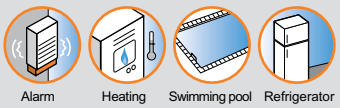
Mains fault due to temporarily electrical disturbances
Electrical devices are not powered anymore



Installation with STOP&GO

STOP&GO automatic resets the associated protection device in order to immediatly re-establish power supply

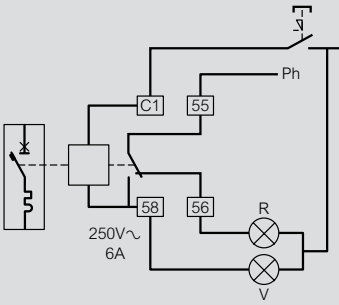




Technical characteristics of auxiliaries

Max. connection cross-section: 2.5 mm²
Operating temperature: - 25 °C to + 70 °C

Shunt trips



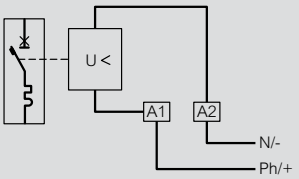
Nominal voltage (Un)
- 12 to 48 V~ and =
- 110 to 415 V~ and 110 to 125 V=

Equipped with a signalling contact which indicates tripping of the shunt trip and automatically breaks the coil.
Min. and max. voltage: 0.7 to 1.1 Un
Tripping time: less than 20 ms
Power consumption: at 1.1 x 48 V = 121 VA
at 1.1 x 415 V = 127 VA
Impedance: 12 to 48 V = 23 Ω
110 to 415 V = 1640 Ω

Consumption	Umin.	Umax.
12 to 48 V	522 mA	2610 mA
110 to 415 V	69 mA	259 mA

Undervoltage releases

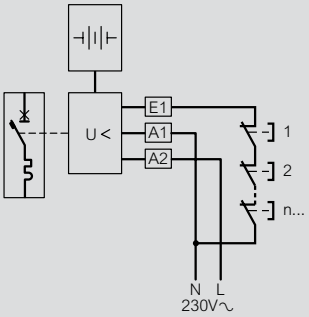
Pull-in voltage ≥ 0.55 Un
Tripping time: 0 to 300 ms ± 10% (adjustable)
Power consumption: 24 V~ and ⎓ : 0.1 VA
48 V~ and ⎓ : 0.2 VA
230 V~ : 1 VA



Nominal voltage:
24 and 48 V~ and ⎓
230 V~

Stand-alone releases for N/C push-buttons

Min. and max. operating voltage: 196 to 250 V~
Power consumption: 1.4 VA

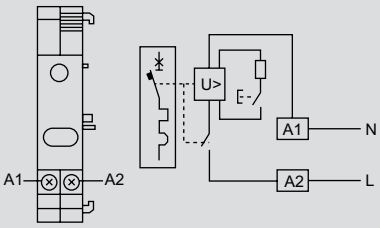


Signalling auxiliaries

Umin.: 24 V~ / ⎓ and Imin.: 5 mA

Electric wiring diagram

Cat.No 4062 86

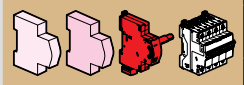


Tripping time:

Limit values of breaking time and non actuation time at a voltage

	255 V	275 V	300 V	350 V	400 V
Breaking time	No tripping	15 Sec	5 Sec	0.75 Sec	0.20 Sec
Non actuation time		3 Sec	1 Sec	0.25 Sec	0.07 Sec

Combinations with auxiliaries:

	CA / SD / ET / MT / DA		CM	
			4062 91/ 93/95	
		4062 58/ 60/62/66	4062 91/ 93/95	
	4062 58/ 60/62/76/78/ 80/82/84/87	4062 58/ 60/62	4062 91	
	4062 58/ 60/62/66/76/ 78/80/82/84/87	4062 66		
	4062 58/ 60/62	4062 58/ 60/62	4062 93/95	
	4062 58/ 60/62/66	4062 66		

Protection of DC circuits

DX³ 6000 and DX³ 10000 MCBs (1P/2P/3P/4P - In ≤ 63 A) designed for use in 230/400 V~ supplies, can also be used in DC circuits In this case, the following deratings and precautions must be taken into account

1 - Protection against short-circuits

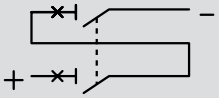
Max. magnetic tripping threshold: multiplied by 1.4
Example: For a C curve MCB for which the AC tripping threshold is between 5 and 10 In, the DC tripping threshold will be between 7 and 14 In

2 - Protection against overloads

The time/current thermal tripping curve is the same as for AC

3 - Operating voltage

Max. operating voltage: 80 V per pole (60 V for single-pole + N MCBs)
For voltages higher than this value, several poles must be wired in series

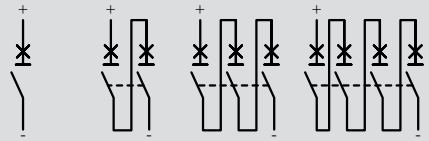


Example: for a 110 V voltage, use a 2-pole MCB and connect the 2 poles in series

4 - Breaking capacity

4000 A for a single pole MCB at max. voltage (80 V⎓ per pole)

For other voltages, the breaking capacities are as follows:



DX³ 6000		voltage	single-pole	2P	3P	4P
Acc. to IEC 60947.2	**Icu**	≤ 48 V	6 kA	6 kA		
		110 V		6 kA	6 kA	
		230 V				10 kA
	Ics(1)	≤ 48 V	100 %	100 %		
		110 V		100 %	100 %	
		230 V				100 %

DX³ 10000		voltage	single-pole	2P	3P	4P
Acc. to IEC 60947.2	**Icu**	≤ 48 V	10 kA	10 kA		
		110 V		10 kA	10 kA	
		230 V				15 kA
	Ics(1)	≤ 48 V	100 %	100 %		
		110 V		100 %	100 %	
		230 V				100 %

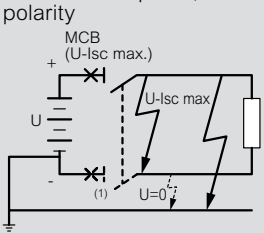
1: As a % of Icu

5 - Distribution of breaking poles

To choose the MCB and determine the pole distribution necessary for breaking on each of the polarities, it is necessary to know how the installation is earthed

• Supply with one polarity earthed:

Place all the poles necessary for breaking on the other polarity If isolation is required, an additional pole must be added on the earthed polarity



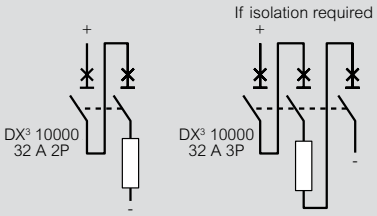
1: Only if isolation required

Protection of DC circuits

Protection of DC circuits

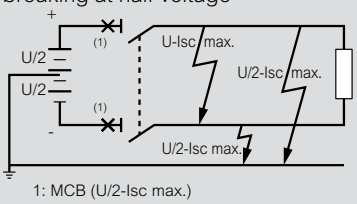
Example: circuit earthed via the negative polarity / U = 110 V⎓ / Isc = 10 kA / In = 32 A
Protect the positive polarity using an MCB capable of breaking 10 kA at 110 V (DX³ 10000 2P 32 A with 2 poles on the positive polarity)
For isolation, use a DX³ 10000 3P 32 A with 2 poles on the positive polarity and one pole on the negative polarity

DX³ 10000		voltage	single-pole	2P	3P	4P
Acc. to IEC 60947.2	Icu	≤ 48 V	10 kA	10 kA		
		110 V		10 kA	10 kA	
		230 V				15 kA



- **Network earthed via a middle point:**

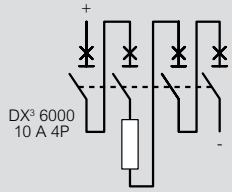
Place on each polarity the number of poles necessary for max. Isc breaking at half voltage



1: MCB (U/2-Isc max.)

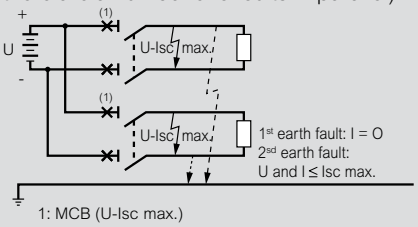
Example: circuit earthed via a middle point / U = 230 V⎓ / Isxc = 6 kA / In = 10 A
Protect each polarity using an MCB capable of breaking 6 kA at half voltage, i.e. 115 V

DX³ 6000		voltage	single-pole	2P	3P	4P
Acc. to IEC 60947.2	Icu	≤ 48 V	6 kA	6 kA		
		110 V		6 kA	6 kA	
		230 V				10 kA



- **Isolated earth supply:**

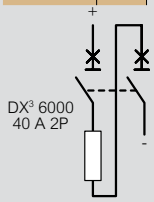
Distribute the poles necessary for breaking over the 2 polarities to provide protection in the event of a double earth fault (particularly if there are a number of circuits in parallel)



1: MCB (U-Isc max.)

Example: isolated earth circuit / U = 48 V⎓ / Isc = 4,5 kA / In = 40 A
Protect the installation with an MCB capable of breaking 4.5 kA at 48 V and protect each polarity

DX³ 6000		voltage	single-pole	2P	3P	4P
Acc. to IEC 60947.2	Icu	≤ 48 V	6 kA	6 kA		
		110 V		6 kA	6 kA	
		230 V				10 kA

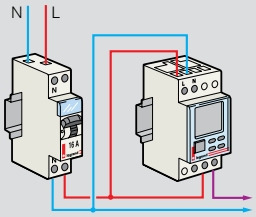


Programmable time switches

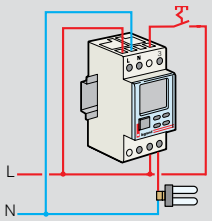
with analogue and digital dial

Diagrams

Cat.No 4126 31



Cat.Nos 4126 54/34/29



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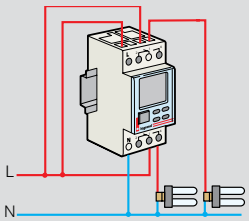

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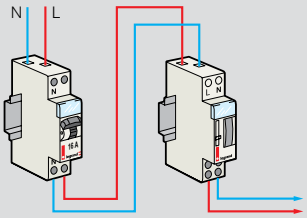
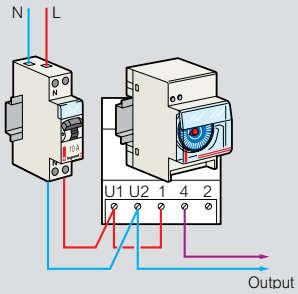


Cat.Nos 4128 12/13/14



Output closing and breaking times are calculated based on the date, the actual time when the device was switched and on geographical coordinates of the actual location

AlphaRex³ digital time switches

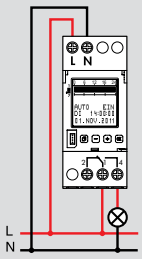
Technical specifications

Type	AlphaRex³ D21	AlphaRex³ D22	AlphaRex³ D21s	AlphaRex³ D21 astro	AlphaRex³ D22 astro	AlphaRex³ DY21	AlphaRex³ DY22
Nominal voltage 230 V 50/60 Hz	4126 31	4126 41	4126 34	4126 54	4126 57	4126 29	4126 30
Number of modules of 17.5 mm each	2	2	2	2	2	2	2
Number of channels	1	2	1	1	2	1	2
Switch output	1 changeover contact	2 changeover contacts	1 changeover contact	1 changeover contact	2 changeover contacts	1 changeover contact	2 changeover contacts
Zero-crossing switching	✓	✓	✓	✓	✓	✓	✓
Switching capacity							
• **Ohmic 250 V~ cos φ = 1**	16 A~	16 A~	16 A~	16 A~	16 A~	16 A~	16 A~
• **Inductive 230 V~ cos φ = 0.6**	10 A~	10 A~	10 A~	10 A~	10 A~	10 A~	10 A~
• **Incandescent lamp load**	2000 W	2000 W	2000 W	2000 W	2000 W	2000 W	2000 W
• **Fluorescent lamp, series compensated**	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA
• **Energy-saving lamp**	1000 W	1000 W	1000 W	1000 W	1000 W	1000 W	1000 W
Programs[1]	56	28 per channel	56	56	28 per channel	84	84 per channel
Control input with switch-off delay 0 s to 23 h 59 min 59 s			✓	✓		✓	
Cycle function (pulse time) min. 1 s, max. 1 h 59 min 59 s	✓	✓	✓	✓	✓	✓	✓
Clock precision (typical)	~ 0.1 s/day[2]						
Running reserve	5 years						
Shortest switching step	1 s						
Operating temperature	–20 to +55 °C						
Degree of protection	IP20						

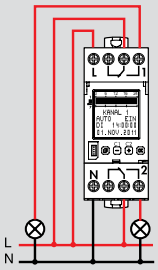
[1] A program consists of a switch-on time, a switch-off time as well as days or day blocks which are assigned as “switched-on” or “switched-off”
[2] Can be set to mains-synchronous operation

Connection diagram

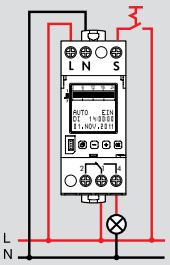
AlphaRex³ D21



AlphaRex³ D22
AlphaRex³ D22 astro
AlphaRex³ DY22



AlphaRex³ D21s
AlphaRex³ D21 astro
AlphaRex³ DY21



Functions

Select menu, go back while in menu
Press > 1 sec. = operating display

OK Confirm the selection or accept the parameter

\- / + Select the menu item or set the parameter; for 2-channel time switches, can be used to select the channel (channel 1 – channel 2)

Brief description of programming functions

Text guidance

Guides the user through programming and setup with plain text prompts. Each step can be read on the screen, and the function that is currently active flashes. An integrated display and button light makes operation easy even in poorly lit environments.

Set language

The language selection function can be accessed using the “MENU” button. The language is set to English by default.
The following languages can be selected: German, English, French, Italian, Spanish, Dutch, Portuguese*, Swedish*, Norwegian*, Finnish*, Danish*, Polish*, Czech*, Russian*, Turkish*.
*) Excluding AstroRex DY64

Time, date, summer time (daylight saving time)

The time switch is preset at the factory to the current time and date. The time can be changed by selecting “MENU” + “SET”.

Reset

Simultaneously pressing all buttons for more than 2 seconds deletes all data. Language, date/time, summer time (daylight saving time) and switch times must be set again.

Data key

If the supply voltage is switched on, the “KEY – READ – WRITE” menu item is automatically opened when a data key is inserted. “WRITE”: Program data is written from the time switch to the key. Caution: Any data present on the key will be overwritten. “READ”: Program data is written from the key to the time switch; any switching programs on the time switch are overwritten. Only one master switching program, which consists of multiple switching programs, can be saved on the time switch or on the key at a time. If the supply voltage is not connected, the “KEY – READ – WRITE” menu item is not automatically opened when a data key is inserted. The “KEY” function can still be selected from the menu even if the supply voltage is not connected.

PC programming

In addition to the easy, text-guided programming directly on the time switch, switching programs can also be created on a PC with the software program from Legrand and transferred to the time switch using a data key. A data transfer device (Cat.No : 4128 73) is required to transfer switching programs created on a PC to the data key. The device is connected to the PC using the USB plug. In addition to the data transfer device, we also offer a CD with the software and the necessary drivers. PC system requirements: USB port; Windows® XP, Windows® Vista, Windows® 7; approx. 40 MB of free memory.

Brief description of programming functions

Weekly programs
To create a weekly program, select “MENU”, “PROGRAM”, and then “CREATE” to easily enter programs which are repeated on a weekly basis. A weekly program consists of a switch-on/switch-off times and days which are assigned as “switched-on” or “switched-off”. The following predefined blocks can be selected: “MONDAY – SUNDAY”, “MONDAY – FRIDAY” [1] or “SATURDAY – SUNDAY”,[1]; the assigned days of the week are fixed. The switch-on/switch-off times must be entered. The user can also set custom day blocks. By selecting “CUSTOM”, switch times can be freely assigned to any days of the week. This option also allows the user to set switch times at midnight.
[1] Excluding AlphaRex³ DY, AstroRex DY64

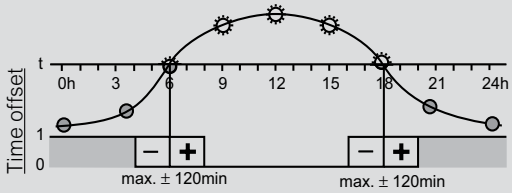
Yearly programs [AlphaRex³ DY21, AlphaRex³ DY22]
This menu item allows the user to enter (additional) yearly programs, which are only executed within a defined validity period. They can overlap with one another and with the weekly programs on the same channel based on an “OR” connective. The validity period is defined by entering the start date (at 00:00:00) and the end date (at 24:00:00). The start date must be entered before the end date. With the “EVERY YEAR” option, the additional switch times have the same validity period each year (Christmas, national holidays, birthdays, etc.) Select the “ONCE” option when additional switch times are needed within a validity period (e.g. during holidays), but the start/end dates of the holiday period change from year to year.

Special programs (priority program) [AlphaRex³ DY21, AlphaRex³ DY22]
Weekly and yearly programs on the same channel are not executed during the validity period of a special program. However, other special programs can be executed during the validity period. Different special programs can overlap with each other based on an “OR” connective. With the “EVERY YEAR” option, the additional switch times have the same validity period each year (Christmas, national holidays, birthdays, etc.). Select the “ONCE” option when additional switch times are needed within a validity period (e.g. during holidays), but the start/end dates of the holiday period change from year to year. Additional options include “MON TO SUN”/“CUSTOM”: the respective channel only switches according to the special program; “PROG ON”/“PROG OFF”: the respective channel is switched on/off during this time period.

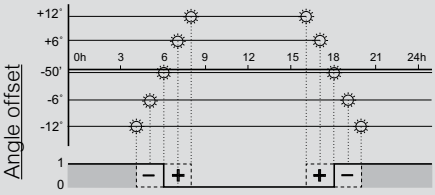
Basic functions for “astro”

Location (astro) [AlphaRex³ D21 astro, AlphaRex³ D22 astro, AlphaRex³ DY21, AlphaRex³ DY22]
The sunrise/sunset times, which change daily, are calculated for the location programmed in the AlphaRex. The unit is delivered with the location set to “GERMANY – SOEST” by default. Enter the actual location for optimal operation. This can be done in two ways. Select “MENU”, “SET” and “ASTRO” to access the two options “LOCATION” and “COORDINATES”. “LOCATION”: With this menu item, the user can select the country and city which is closest to the site of operation. “COORDINATES”: Alternatively, the user can select this menu item to set the geographical coordinates of the location. The longitude and latitude values are entered in degrees or degrees and arcminutes [2] (precision can be set in expert mode). Information on coordinates and time zones can be found in the time zone map included with every time switch.

Offset
By selecting “MENU”, “SET”, “ASTRO” and “OFFSET”, time differentials can be set for the calculated switch times. This can be done in two ways: time offset or angle offset.
In time offset, a time differential can be entered to shift the switch time by up to +/- 120 min relative to the sunrise/sunset times.
In angle offset [2], a value can be entered in degrees and arcminutes to shift the switch time by up to +/- 12° 00´ relative to the sunrise/sunset times.
The time differentials are set separately for sunrise and sunset using the menu items “SUNSET” (opens the screen for setting the sunset offset) and “SUNRISE” (opens the screen for setting the sunrise offset).



Example:
For a time differential of +30 min, the time switch switches 30 min. after sunrise and 30 min. after sunset.
For a time differential of -30 min, the time switch switches 30 min. before sunrise and 30 min. before sunset.



Note:
If the offset is set in degrees, the time switch always switches at points when the brightness is the same, despite the fact that the twilight duration changes over the course of the year. Sunrise and sunset correspond to -50' for the centre of the sun (the edge of the sun is visible on the horizon).

Offset correction function [2]
Select “MENU”, “SET”, “ASTRO” and “CORRECTION” to set a time correction for the 6-month periods surrounding summer and winter. The time correction is set to 0 min. by default and can be set from 1 min. up to 30 min. The time correction for sunset is entered in the “SUNSET” menu item. The time correction for sunrise is set in the “SUNRISE” menu item. The correction function overlaps with the calculated astronomical switch times, including the offset settings.

Example:
Setting a time correction extends the daily switched-on time by up to 60 min. in the middle of the six winter months (switches off up to 30 min. later in the morning and switches on up to 30 min. earlier in the evening). In the middle of the six summer months, the time correction reduces the daily switched-on time by up to 60 min. (switches off up to 30 min. earlier in the morning and switches on up to 30 min. later in the evening). The time correction varies continuously between the two max. values during the rest of the year.

Basic settings using a PC and day key
All of the basic settings described above, with the exception of the current time and date, can be set up using the AlphaSoft software from Legrand and imported to the time switch using the data key. [2] Excluding AstroRex DY64

Additional functions

Relay function
The relay state can be changed by selecting “MENU” and “FUNCTIONS”. The relay is preset to the “AUTO” function; the time switch switches at the programmed times. The following can also be selected: “ALWAYS ON”, “ALWAYS OFF” and “EXTRA”. If “EXTRA” is selected, the switching status specified by the program is inverted. The time switch resumes switching according to the programmed switch times after the next switch command.

Holiday program
In holiday program, the holiday period is set with a start and an end date. It can be activated with the “ACTIVE” program item and deactivated with “PASSIVE”. If the holiday program is activated, the time switch does not carry out any programmed switch commands during this time period. Instead, it remains “ALWAYS OFF” or “ALWAYS ON” during the holiday period, as requested. When the holiday period has ended, the time switch resumes switching according to the programmed switch times.

1 h test
The “1 h TEST” function can be used for a switching simulation. If “1 h TEST” is activated, the switch outputs are switched for one hour. After the time has ended, the time switch resumes switching according to the programmed switch times.

PIN code
Input and programming can be locked using a four-digit “PIN CODE”. The time switch can be unlocked using the “PIN CODE”. The time switch can also be unlocked using the “RESET” function, which also deletes all settings and programs.

Operating hours counter
This function displays the time for which the relay has been switched on and the date of the last reset. Counting range: 65,535 h.

Contrast adjustment
This function allows the user to adjust the display contrast.

Expert mode*
Expert mode is activated by selecting “OPTIONS” and “EXPERT”. After expert mode is activated, the following additional functions can be used: control input “extra” [1], control input “out” [1], cycle function, channel-switching function (2-channel time switches), mains-synchronous operation, offset correction function [2], geographical coordinates in degrees and arcminutes [2].
[1] AlphaRex³ D21s, AlphaRex³ D21 astro, AlphaRex³ DY21 [2] AlphaRex³ astro, AlphaRex³ DY

Control input with switch-off delay
Adjustable switch-off delay via control input. The control input enables an additional switching of the relay, parallel to the switching program. The switch-off delay can be set from 0 s to 23 h 59 min 59 s. The switch-off delay begins as soon as the voltage is removed from the control input.

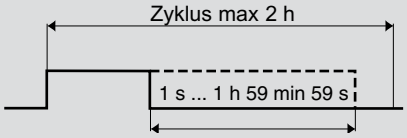
Control input “extra”*
Override of switching state via control input. If the “EXTRA” function is activated, the switching state specified by the program is inverted. The time switch resumes switching according to the programmed switch times after the next switch command. The “EXTRA” function is ended prematurely if the button is pressed again or if a pulse is received at the control input.

Control input “off”*
Switch off via control input. Activating the “OFF” function causes the time switch to be switched off via the control input. The “OFF” function is ended if the button is pressed again or if a pulse is received at the control input. The time switch resumes switching on/off according to the programmed switch times.

Pulse function
Programmable with precision to the second.

Cycle function
Function for cyclical switching. With this function, the time switch is switched on once within a defined time period and for a defined duration. The cycle time can be set between 2 s and 2 h. The switch-on time can be set between 1 s and 1 h 59 min 59 s.

	Min.	Max.
Cycle	2 s	2 h
Switch-on time	1 s	1 h 59 min 59 s



Random function
If the random function is activated, set switch times are randomly shifted within a range of +/- 15 minutes.

Channel-switching function*
With 2-channel time switches, this function can be activated so that the time switch regularly switches between the outputs assigned to the channels, in order to protect connected devices (for example lights/lamps) or so that two devices can be used simultaneously.
The channel-switching function is activated by selecting “MENU”, “OPTIONS” and “CHANNEL 1<>2”. The time switch switches between the outputs according to whether the menu item “DAILY” (once per day at 12:00 p.m.) or “WEEKLY” (once per week on Sunday at 12:00 p.m.) is selected.

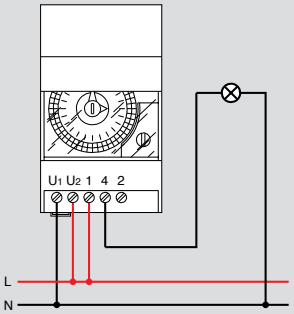
Mains-synchronous operation
Mains-synchronised clock precision. By activating the “SYNC” function and then “ACTIVE”, the quartz-controlled time switch becomes a synchronous time switch.
*) Excluding AstroRex DY64

Technical specifications

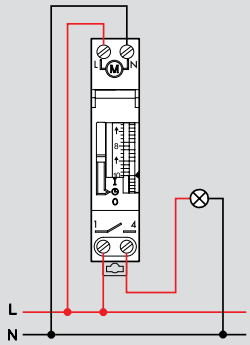
Type	MicroRex T31	MicroRex QT31	MicroRex W31	MicroRex QT11	MicroRex QW11
Number of modules of 17.5 mm each	3	1			
Number of channels	1	1	1	1	1
Drive type	synchronous	quartz	synchronous	quartz	quartz
Switching dial	24 h	24 h	7 days	24 h	7 days
Running reserve	none	100 h	none	100 h	100 h
Switching increment	15 min	15 min	2 h	15 min	2 h
Shortest switching step	30 min	30 min	4 h	15 min	2 h
Switching step	+/- 5 min	+/- 5 min	+/- 30 min	+/- 5 min	+/- 30 min
Clock precision	mains	2.5 s/day	mains	2.5 s/day	2.5 s/day
	synchronised			synchronised	
Switching capacity					
• Ohmic 230 V~ cos φ = 1	16 A~				
• Incandescent lamp 230 V~	4 A~				
• Inductive 230 V~ cos φ = 0.6	12 A~				
Switch output	1 changeover contact	1 changeover contact	1 changeover contact	1 normally open contact	1 normally open contact
Operating temperature	-10 to +55 °C				
Degree of protection	IP20				

Connection diagram

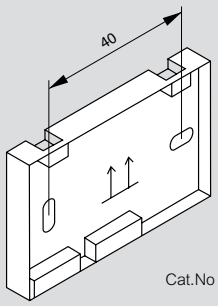
MicroRex – 3 modules



MicroRex – 1 module



Wall bracket – 3 modules

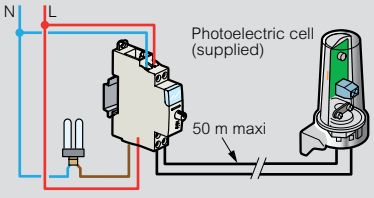


Cat.No 4128 59

3-module MicroRex units can be surface mounted using the wall bracket. A terminal cover is included with delivery.

Standard light sensitive switch (Cat.No 4126 23)

Switch "ON" and "OFF" defined by a light level threshold



CX³ Changeover switches

Power dissipation per role : 1.5 w
Overvoltage category : 4 kV~
Dielectric withstand : 2 kV~
Degree of pollution : 2

CX³ Push-buttons and control switches

Electrical endurance : 30 000 cycles AC12
(cos φ = 0.9) IEC 60947-5-1
Electrical endurance under fluorescent loads : 30 000 cycles according to IEC 60669-1

CX³ LED indicaotrs

Equipped with non replaceable LED lamps
LED life : 100 000 h.
LED consumption :
- 0.17 W under 230 V~
- 0.11 W under 24 V~

Technical characteristics

- Rated impulse withstand voltage (Uimp): 4 kV
- Mechanical endurance (no. of operating cycles): 10^6 cycles
- Operating temperatures: - 25 °C to + 40 °C
- Storage temperatures: - 40 °C to + 70 °C

Contactor protection against short circuits according to standard EN 61095, conditional short-circuit current:

- Iq = 6 kA for 16 to 25 A contactors
- Iq = 3 kA for 40 to 63 A contactors

Circuit breaker or gG fuse rated:

- ≤ 16 A for 16 A rating
- ≤ 25 A for 25 A rating
- ≤ 40 A for 40 A rating
- ≤ 63 A for 63 A rating

• Consumption of a contactor control coil

	16 A and 25 A power contactors				
Coil voltage	24 V∿		230 V∿ low noise	230 V∿	
Current	16 A and 25 A	25 A	25 A	16 A and 25 A	16 A and 25 A
Type of contact	NC + NO 2 NO	4 NO	2 NO	NC + NO 2 NO 2 NC	2 NC + 2 NO 4 NO 4 NC
Dimensions	1 mod.	2 mod.	1 mod.	1 mod.	2 mod.
Holding current	200 mA	300 mA	12 mA	20 mA	20 mA
Inrush current	970 mA	2500 mA	60 mA	90 mA	200 mA

	40 A and 63 A power contactors			
Coil voltage	24 V∿		230 V∿	
Current	40 A and 63 A	40 A and 63 A	40 A and 63 A	40 A and 63 A
Type of contact	2 NO	4 NO	2 NO 2 NC	3 NO 4 NO 4 NC
Dimensions	2 mod.	3 mod.	2 mod.	3 mod.
Holding current	250 mA	270 mA	15 mA	30 mA
Inrush current	1750 mA	1500 mA	150 mA	200 mA

• Recommendations

Insert a spacing module (Cat.No 4063 07 p. 40):
- every two contactors when the ambient temperature is below 40 °C
- every contactor when the ambient temperature is between 40 and 60 °C

Contactor rating	40 °C	50 °C	60 °C
Ie = 16 A	16 A	14 A	12 A
Ie = 25 A	25 A	22 A	20 A
Ie = 40 A	40 A	36 A	32 A
Ie = 63 A	63 A	57 A	50 A

• Max. connection cross-section in mm²

Conductor type	Ratings ≤ 25 A	Ratings 40 & 63 A
Rigid	6^2 or 2 x 2.5^2	25^2 or 2 x 10^2
Flexible	6^2 or 2 x 2.5^2	25^2 or 2 x 10^2
Flexible with single end cap	6^2	16^2
Flexible with double end cap	2 x 4^2	2 x 16^2

Contactor selection charts

• Incandescent lamps

	Tungsten and halogen filaments 230 V∿							
Nominal wattage	**40 W**	**60 W**	**75 W**	**100 W**	**150 W**	**200 W**	**500 W**	**1000 W**
16 A	45	30	24	19	13	10	4	2
25 A	60	48	38	30	20	15	6	3
40 A	96	77	61	48	32	24	10	5
63 A	154	123	97	77	51	38	15	8

	ELV halogen bulbs with ferromagnetic ballast						ELV halogen bulbs with electronic ballast					
Nominal wattage	**20 W**	**35 W**	**50 W**	**75 W**	**100 W**	**150 W**	**20 W**	**35 W**	**50 W**	**75 W**	**100 W**	**150 W**
16 A	32	20	15	12	9	6	60	40	28	18	14	9
25 A	52	30	24	16	12	8	80	50	40	26	20	13
40 A	68	39	31	21	16	10	112	70	56	36	28	18
63 A	88	51	41	27	20	14	157	98	78	51	39	25

Contactor selection charts (continued)

• Fluorescent tubes with ferromagnetic ballast

	Single parallel compensated fluorescent					Double series compensated fluorescent				
Nominal wattage	**18 W**	**20 W**	**36 W**	**58 W**	**115 W**	**2 x 20 W**	**2 x 36 W**	**2 x 40 W**	**2 x 58 W**	**2 x 140 W**
16 A	24	24	16	11	5	30	24	22	15	6
25 A	33	30	25	17	9	45	38	35	24	10
40 A	43	39	33	22	12	68	57	53	36	15
63 A	56	51	42	29	15	101	86	79	54	23

	Quadruple series compensated fluorescent	Compact fluorescent with built-in starter			
Nominal wattage	**4 x 18 W**	**7 W**	**10 W**	**18 W**	**26 W**
16 A	16	50	40	28	19
25 A	24	60	50	42	28
40 A	36	78	65	55	36
63 A	54	101	85	71	47

• Fluorescent tubes with electronic ballast

	Single fluorescent				Double fluorescent		
Nominal wattage	**18 W**	**30 W**	**36 W**	**58 W**	**2 x 18 W**	**2 x 36 W**	**2 x 58 W**
16 A	72	42	36	22	36	20	12
25 A	110	68	58	36	56	30	19
40 A	165	102	87	54	84	45	29
63 A	248	153	131	81	126	68	43

	Triple fluorescent (series compensated)		Quadruple fluorescent (series compensated)	
Nominal wattage	**3 x 14 W**	**3 x 18 W**	**4 x 14 W**	**4 x 18 W**
16 A	34	26	26	20
25 A	46	38	37	28
40 A	62	51	52	39
63 A	84	69	73	55

	Compact fluorescent with built-in electronic power supply				
Nominal wattage	**7 W**	**11 W**	**15 W**	**20 W**	**23 W**
16 A	120	80	64	50	43
25 A	200	125	90	70	60
40 A	280	175	126	98	84
63 A	392	245	176	137	118

• Discharge lamps with compensation

	Metal halogenide						Low pressure sodium vapour					
Nominal wattage	**35 W**	**70 W**	**100 W**	**150 W**	**250 W**	**400 W**	**18 W**	**35 W**	**55 W**	**90 W**	**135 W**	**180 W**
16 A	10	6	5	3	2	1	12	6	5	3	2	2
25 A	15	9	7	5	3	2	20	10	7	5	3	3
40 A	23	14	11	8	5	3	30	15	11	8	5	5
63 A	34	20	16	11	7	5	45	23	16	11	7	7

	High pressure sodium vapour					High pressure mercury vapour				
Nominal wattage	**70 W**	**150 W**	**250 W**	**400 W**	**1000 W**	**50 W**	**80 W**	**125 W**	**250 W**	**400 W**
16 A	8	7	5	3	1	11	8	6	3	2
25 A	10	9	6	4	2	15	10	8	4	3
40 A	15	14	9	6	3	21	14	11	6	4
63 A	23	20	14	9	5	29	20	16	8	6

	High pressure mixed			
Nominal wattage	**100 W**	**160 W**	**250 W**	**400 W**
16 A	9	6	4	2
25 A	11	7	5	3
40 A	14	9	7	4
63 A	19	12	8	5

EMDX³ electrical energy meters

rail mounting

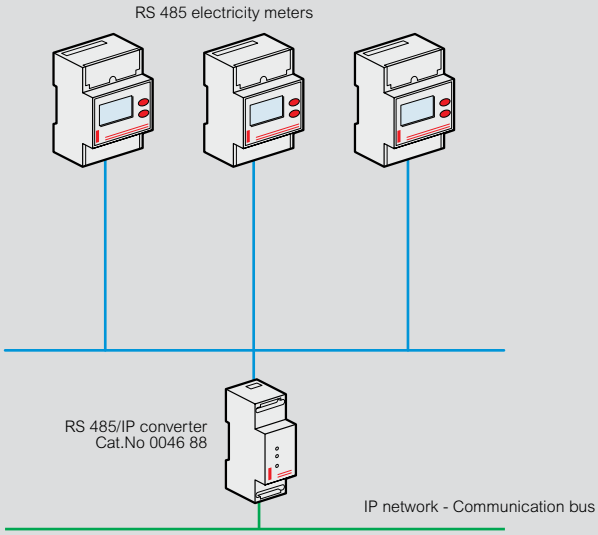
Technical characteristics

Single-phase meters Cat.Nos 0046 70/77
LCD display: 7 digits
Resolution: 0.1 kWh
Maximum indication: 99999.9 kWh
Metrological LED: 1 Wh/pulse (Cat.No 0046 70 : 0.5 Wh/pulse)
Accuracy (EN 62053-21): class 1
Reference voltage Un: 230 V-240 V
Reference frequency: 50-60 Hz
Pulse output: 1 pulse/10 Wh
(Cat.No 0046 70: 2 pulse/Wh)

Three-phase meters Cat.Nos 0046 80/84
LCD display: 8 digits
Resolution: 0.01 kWh(1)
Maximum indication: 99999.99 kWh(1)
Metrological LED: 0.1 Wh/pulse or 1 Wh/pulse
Active energy accuracy (EN 62053-21): class 1
Reactive energy accuracy (EN 62053-23): class 2
Reference voltage Un:
- Single-phase: 230-240 V
- Three-phase: 230(400)-240(415) V
Operating limit range (EN 62053-21, EN 62053-23):
- Single-phase: 110 to 254 V
- Three-phase: 110(190) to 254(440) V
Pulse output: 1 pulse/10 Wh

Cat.Nos		0046 70	0046 77	0046 80	0046 84
Number of modules		1	2	4	4
Connection	Direct	●	●	●	
	Via a current transformer				●
	Single-phase	●	●		●
	Three-phase			●	●
Max. current		32 A	63 A	63 A	5 A (CT)
Metering and measurement	Total active energy	●	●	●	●
	Total reactive energy			●	●
	Partial active energy (reset)		●	●	●
	Partial reactive energy (reset)			●	●
	Active power		●	●	●
	Reactive power			●	●
	Apparent power			●	●
	Current		●	●	●
	Voltage		●	●	●
	Frequency		●	●	●
	Power factor		●	●	●
	Time-of-use		●		
	Average active power			●	●
	Max. average active power value			●	●
	Dual tariff				
Communication	Pulse output	●			●
	RS 485 interface		●	●	●
MID compliant					
Operating conditions	Reference temperature	23 °C ± 2 °C			
	Operating temperature	-20 to +55 °C	-10 to +45 °C	-5 to +55 °C	
	Storage temperature	-40 to +70 °C	-25 to +70 °C	-25 to +70 °C	
	Consumption	≤ 8 VA		≤ 4 VA per phase	≤ 1 VA per phase
	Heat dissipation	≤ 6.5 W		≤ 6 W	≤ 4 W

Interfacing with IP communication network



1: For direct connection meters
If connected via transformers, the resolution and maximum indication depend on the transformation ratios of these transformers

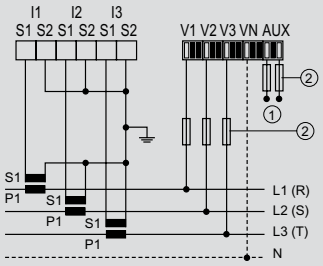
EMDX³ multi-function measuring units

Technical characteristics

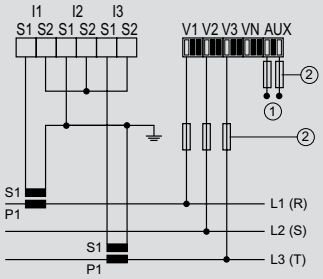
Cat.Nos			0046 76
Connection	Current measurement terminals		4 mm²
	Other terminals		2.5 mm²
Protection index	Front cover		IP 51
	Casing		IP 20
Weight			205/215 g
Display			Backlit LCD
Measurements			3P+N, 3P, 2P, 1P+N
Voltage measurement	Direct	Phase/phase	50 to 520 V~
		Phase/neutral	28 to 300 V~
	From a PT	Primary	-
		Secondary	-
	Permanent overload between phases		760 V~
	Update period		1 s
Current measurement	From a CT	Primary	5 to 9999 A
		Secondary	5 A
	Minimum measurement		5 mA
	Input consumption		< 0.6 VA
	Display		0 to 9999 A
	Permanent overload		6 A
	Intermittent overload		60 A/1 s - 120 A/0.5 s
	Update period		1 s
	Max. CT x PT ratio		-
Power measurement	Total		0 to 9999 kW/kvar/kVA
	Update period		1 s
Frequency measurement	Measurement range		45.0 to 65.0 Hz
	Update period		1 s
Auxiliary power supply	50/60 Hz		200 to 277 V~ ±15%
	DC		-
	Consumption		< 5 VA
Operating temperature			-10 °C to +55 °C
Storage temperature			-20 °C to +70 °C

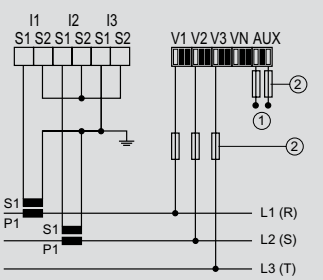
Connection solutions

Unbalanced three-phase network (3 or 4-wire)

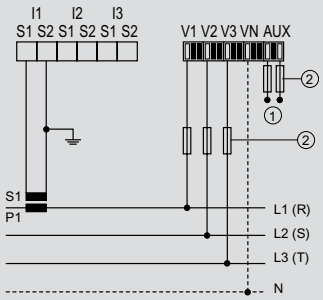


(3-wire)

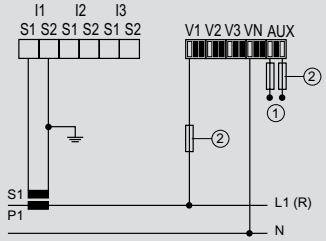




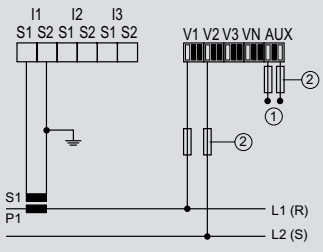
Balanced three-phase network (3 or 4-wire)



Single-phase network (2-wire)

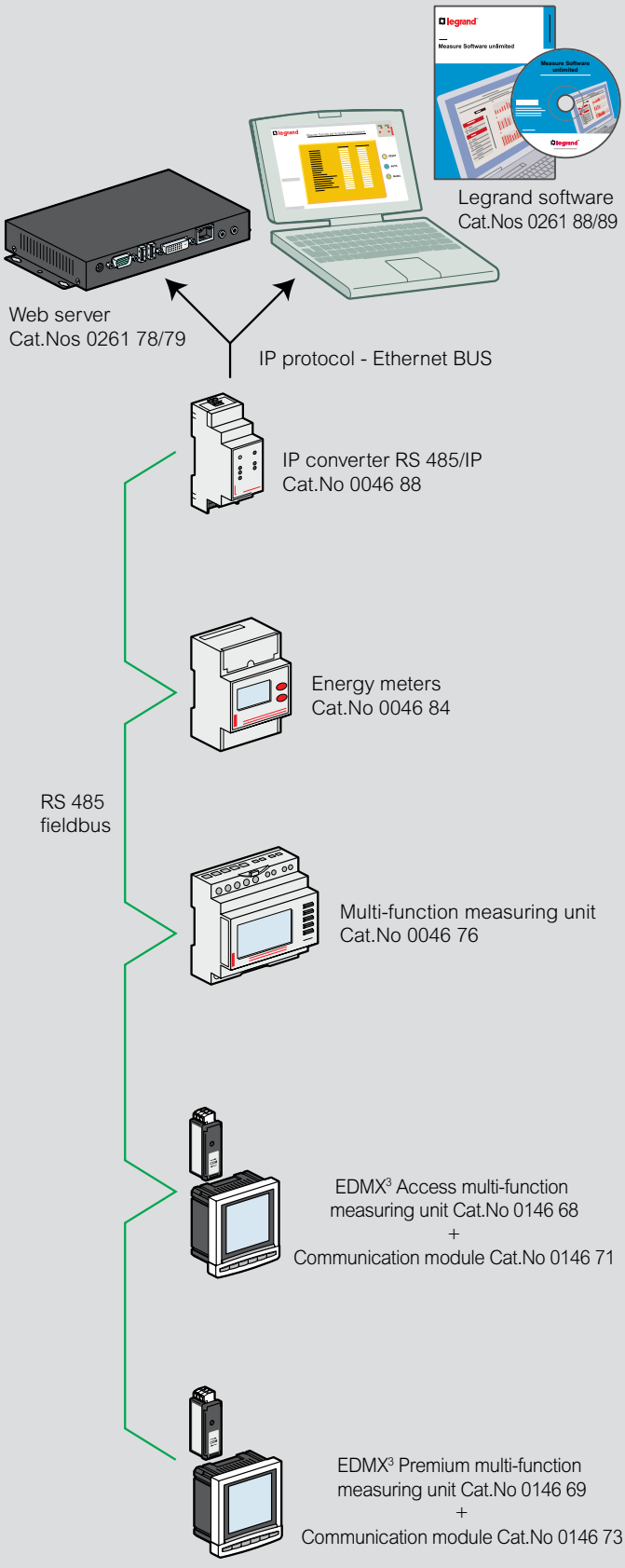


Two-phase network (2-wire)



① Auxiliary power supply: 110 ... 400 VAC/120 ... 350 VDC
② Fuse: 0.5 A gG/BS 88 2 A gG/0.5 A class CC

Wiring example of communication network



Surge Protective Devices (SPDs)

protection against transient overvoltages

Protection against lightning and overvoltages

Protection against the effects of lightning is essentially based on:
• Protecting buildings using a lightning protection system (LPS or lightning conductors) to catch lightning strikes and to drive the lightning current to earth.
• The use of surge protective devices (SPDs) to protect equipment.
• The design of the earthing system (passive protection of the installation).
Throughout the world, there are millions of lightning strikes each day in the summer (up to 1000 lightning strikes/second). Lightning is responsible for 25% to 40% of all damage to equipment. When added to industrial overvoltages (switching overvoltages due to the operation of internal equipment), they account for more than 60% of all electrical damages, which can be prevented by installing SPDs (according to the country and type of installation - source: insurance companies).
In some countries, and depending on the end use of the building, national regulations may always stipulate the installation of SPDs (for example, Germany, Austria, Norway, etc.). If there are no specific national regulations, SPDs are usually specified by national installation standards (based on HD/IEC 60364 international installation standards) and EN/IEC 62305 standards.

External lightning protection system (LPS) or lightning conductors: protection of buildings (EN/IEC 62305)

An external lightning protection system (LPS) protects buildings against direct lightning strikes. It is generally based on the use of lightning conductors (single rod, with sparkover device, meshed cage, etc.) and/or the metallic structure of the building.
If there is an LPS or if a lightning risk assessment has been carried out in accordance with EN/IEC 62305 standards, SPDs are generally required in the main distribution board (T1 SPDs) and distribution boards (T2 SPDs).
Determination of the SPDs in the main distribution board in accordance with EN/IEC 62305 and TS/IEC 61643-12 (if there is insufficient information available):

LPL[1]: Lightning protection level	Total lightning current of the LPS	Min. value of Imp current of the SPD (T1)	Usage practices
I	200 kA	25 kA/pole (IT: 35 kA min.)	Power installations
II	150 kA	18.5 kA/pole	Rarely used
III/IV	100 kA	12.5 kA/pole	Small installations

1: LPL (Lightning Protection Level)

Surge protective device (SPD) (internal protection)

The SPD
• Protects sensitive devices against overvoltages caused by lightning and industrial overvoltages, by limiting the overvoltages to values that are tolerated by the equipment
• Limits the possible harmful consequences in terms of the safety of people (medical equipment installed in the home, security systems, environmental systems, etc.)
• Maximises the continuity of operation of equipment and limits production losses

SPDs and standards

Standards EN/IEC 61643-11

Type of SPD		Test waves
EN 61643-11	IEC 61643-11	
Type 1 (T1)	Class I (T1)	Iimp: 10/350 µs (discharge current) In: 8/20 µs (nominal current, 15 shocks)
Type 2 (T2)	Class II (T2)	Imax: 8/20 µs (discharge current) In: 8/20 µs (nominal current, 15 shocks)

T1+T2 SPDs: tested in accordance with both methods.
T1 or T1+T2 SPDs are being increasingly used at the supply origin of installations, even when there is no lightning conductor, as they enable higher energies to be discharged and increase the service life the SPD.

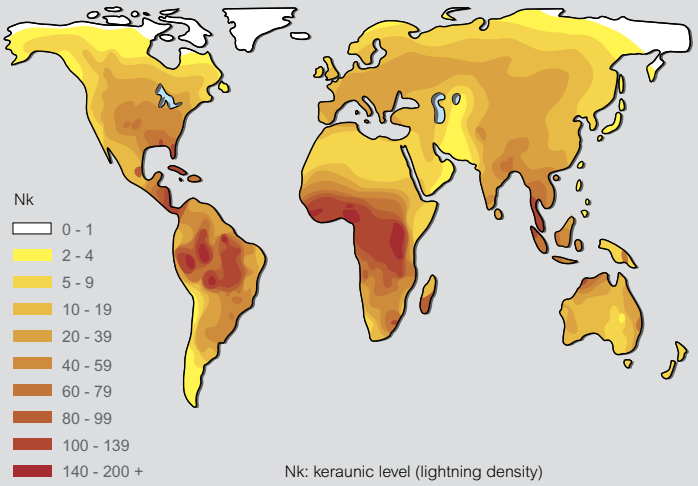
HD/IEC 60364 electrical installation standards

According to articles 443 and 534 of HD/IEC 60364 standards and the TS/IEC 61643-12 guides, the use of SPDs in new or renovated buildings is compulsory at the supply origin of the installation in the following cases:
• Buildings with lightning conductors (T1 SPDs, Iimp ≥ 12.5 kA)
• Buildings with totally or partially overhead power supplies in AQ2 geographical areas (article 443.3.2.1 - AQ2: Nk > 25, see map below) and based on a risk assessment taking into account the type of power supply to the building (article 443.3.2.2)

According to article 443.3.2.2, SPDs (Type 2) are also required in the following cases:
• Commercial/industrial buildings, public buildings and services, religious buildings, schools and large residential complexes, etc.
• Hospitals and buildings containing medical equipment and/or security systems for people and property (fire alarm, technical alarms, etc.)

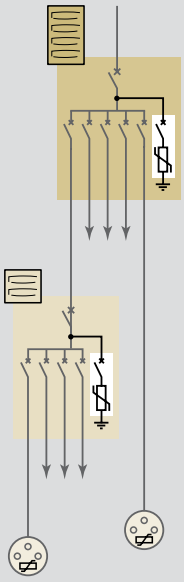
Important: it is advisable to install an SPD when the safety of people may depend on the continuity of service of equipment (even if this is not required by national standards). Although not compulsory according to the installation standards, an SPD should always be installed to protect the communication equipment when there is an SPD on the low voltage power network.

These rules should change in 2015. Please consult Legrand.



Nk: keraunic level (lightning density)

Protection of distribution boards and sensitive equipment (cascaded protection)



Effective protection against overvoltages cannot generally be assured with a single SPD if its protection level (Up) is greater than 1.2 kV (EN/IEC 62305 and TS/IEC 61643-12).
When there are overvoltages, an SPD protects equipment by limiting these overvoltages to values that can be tolerated by the equipment. Thus, depending on its discharge capacity (discharge current In, Imax, etc.) and its protection level (Up), an SPD will limit these overvoltages to varying values depending on the energy levels involved. The overvoltage values that may be transmitted downstream of the SPD may double over distances of more than 10 m due to resonances associated with the type of electrical installation and the type of equipment. Overvoltages greater than 2.5 kV may then occur and damage equipment if the residual energy is high enough (2.5 kV being the insulation level of most electrical and electronic equipment, or typically 1.5 kV for electrical domestic appliances).
SPDs should be installed in the distribution boards supplying equipment that is sensitive or critical for the activity being carried out (and/or near to equipment with proximity SPDs).

Surge Protective Devices (SPDs)

technical characteristics

Modular SPDs

230/400 V~ power network (50/60 Hz) - Degree of protection IP 20
Operating temperature: -10 to +40 °C/Storage temperature: -20 to +70 °C
1P+N (3P+N) SPDs: L-N and N-PE protection, also called 1+1 (3+1 resp.) or CT2 type protection depending on installation standards.

Cat.Nos	Type	Poles	Earthing system	Max. voltage (Uc)	Protection mode	Nominal current In/pole (8/20)	Max. discharge current			Protection level		Max. short-circuit current Isc (Isccr)	Protective device to be used[1]	FS auxiliary (remote status monitoring)
							Imax/ pole (8/20)	Iimp/pole (10/350)	I total (10/350)	Up (L-N/L-PE/N-PE)	Up at 5 kA			
0030 00 4122 80	T1/50 kA T1/35 kA	1P	TT, TNC, TNS, IT	440 V~	CT1	50 kA 35 kA		50 kA 35 kA	50 kA 35 kA	2.5 kV		50 kA	DPX³ 160 80 A	no yes
4122 81	T1/25 kA	1P+N	TT, TNS	350 V~	CT2	25/50 kA		25/50 kA	50 kA	1.5/2.5/1.5 kV				yes
4122 82	T1/25 kA	3P	TNC	350 V~	CT1	25 kA		25 kA	75 kA	1.5 kV				yes
4122 83	T1/25 kA	3P+N	TT, TNS	350 V~	CT2	25/100 kA		25/100 kA	100 kA	1.5/2.5/1.5 kV				yes
4122 70	T1+T2/12.5 kA	1P	TT, TNC, TNS	320 V~	CT1	25 kA	60 kA	12.5 kA	12.5 kA	1.5 kV at 12.5 kA 1.9 kV at 25 kA	1 kV	50 kA	DX³ 63 A C curve	no
4122 71	T1+T2/12.5 kA	2P	TT, TNS	320 V~	CT1	25 kA	60 kA	12.5 kA	25 kA					no
4122 72	T1+T2/12.5 kA	3P	TNC	320 V~	CT1	25 kA	60 kA	12.5 kA	37.5 kA					yes
4122 73	T1+T2/12.5 kA	4P	TT, TNS	320 V~	CT1	25 kA	60 kA	12.5 kA	50 kA					no
4122 76	T1+T2/12.5 kA	1P+N	TT, TNS	320 V~	CT2	25/25 kA	60 kA	12.5/25 kA	25 kA	1.5/1.6/1.5 kV at 12.5 kA 1.9/2.1/1.5 kV at 25 kA	1 kV			yes
4122 77	T1+T2/12.5 kA	3P+N	TT, TNS	320 V~	CT2	25/50 kA	60 kA	12.5/50 kA	50 kA					yes
4122 50	T1+T2/8 kA	1P	TT, TNC, TNS	320 V~	CT1	20 kA	50 kA	8 kA	8 kA	1.2 kV at 8 kA 1.7 kV at 20 kA	1 kV	50 kA	DX³ 40 A C curve	no
4122 51	T1+T2/8 kA	2P	TT, TNS	320 V~	CT1	20 kA	50 kA	8 kA	16 kA					no
4122 52	T1+T2/8 kA	3P	TNC	320 V~	CT1	20 kA	50 kA	8 kA	25 kA					no
4122 53	T1+T2/8 kA	4P	TT, TNS	320 V~	CT1	20 kA	50 kA	8 kA	32 kA					no
4122 56	T1+T2/8 kA	1P+N	TT, TNS	320 V~	CT2	20 kA	50 kA	8 kA	16 kA	1.2/1.5/1.5 kV at 8 kA 1.7/2/1.5 kV at 20 kA	1 kV			no
4122 57	T1+T2/8 kA	3P+N	TT, TNS	320 V~	CT2	20 kA	50 kA	8 kA	25 kA					no
4122 40	T2/40 kA	1P	TT, TNC, TNS	320 V~	CT1	20 kA	40 kA			1.5 kV at 15 kA 1.7 kV at 20 kA	1 kV	50 kA	DX³ 25 A C curve	no
4122 41	T2/40 kA	2P	TT, TNS	320 V~	CT1	20 kA	40 kA					50 kA		no
4122 42	T2/40 kA	3P	TNC	320 V~	CT1	20 kA	40 kA					50 kA		yes
4122 43	T2/40 kA	4P	TT, TNS	320 V~	CT1	20 kA	40 kA					50 kA		no
4122 46 4122 66	T2/40 kA	1P+N	TT, TNS	320 V~	CT2	20 kA	40 kA			1.5/1.6/1.4 kV at 15 kA 1.7/2/1.4 kV at 20 kA	1 kV	50 kA 25 kA		no yes
4122 47 4122 67	T2/40 kA	3P+N	TT, TNS	320 V~	CT2	20 kA	40 kA					50 kA 25 kA		no yes
4122 30	T2/40 kA	1P	TT, TNC, TNS, IT	440 V~	CT1	20 kA	40 kA			1.8 kV at 15 kA 2.1 kV at 20 kA	1.3 kV	50 kA	DX³ 25 A C curve	no
4122 32	T2/40 kA	3P	TNC, IT	440 V~	CT1	20 kA	40 kA							yes
4122 33	T2/40 kA	4P	TT, TNS, IT	440 V~	CT1	20 kA	40 kA							yes
4122 20	T2/20 kA	1P	TT, TNS	320 V~	CT1	10 kA	20 kA			1.2 kV at 5 kA 1.4 kV at 10 kA	1.2 kV	25 kA	DX³ 20 A C curve	no
4122 21	T2/20 kA	2P	TT, TNS	320 V~	CT1	10 kA	20 kA							no
4122 23	T2/20 kA	4P	TT, TNS	320 V~	CT1	10 kA	20 kA							no
4122 26 4122 62	T2/20 kA	1P+N	TT, TNS	320 V~	CT2	10/20 kA	20 kA			1.2/1.4/1.4 kV at 5 kA 1.4/1.4/1.4 kV at 10 kA	1.2 kV			no yes
4122 27 4122 63	T2/20 kA	3P+N	TT, TNS	320 V~	CT2	10/20 kA	20 kA							no yes
0039 51 0039 71	T2+T3/12 kA	1P+N	TT, TNS	275 V~	CT2	10/10 kA	12 kA			1.1/1.2/1.2 kV at 10 kA	1 kV	6 kA 10 kA	integrated protection	no
0039 53 0039 73	T2+T3/12 kA	3P+N	TT, TNS	275 V~	CT2	10/20 kA	20 kA					6 kA 10 kA		

CT1: L(N)-PE protection modes.
CT2: L-N and N-PE protection modes.
1: DPX³ (with T1 SPDs), DX³ or similar type circuit breakers (with T2 and T1+T2 SPDs). For fuse protection or values other than those indicated in the table: please consult Legrand.

Characteristics of proximity SPDs

230 V~ protection: Type 3 (T3) SPDs

Cat.Nos	0775 40	6946 64/66/70	6946 14/48/51/56/71
Protection mode	LN/NPE	LN/LPE/NPE	LN
Up	1/1.2 kV	1 kV	1 kV
Imax	6 kA	-	-
In	1.5 kA	2 kA	2 kA
Uoc	3 kV	4 kV	4 kV

TT earthing system: Installation downstream of a residual current device (HPI type recommended).

RJ 45/RJ 11 protection

Cat. No.	6946 64	6946 70
Uc	200 V	
Up	600 V	
Imax	1.5 kA	
In	1 kA	
Uoc	3 kV	

TV protection (9.5 mm coax.)

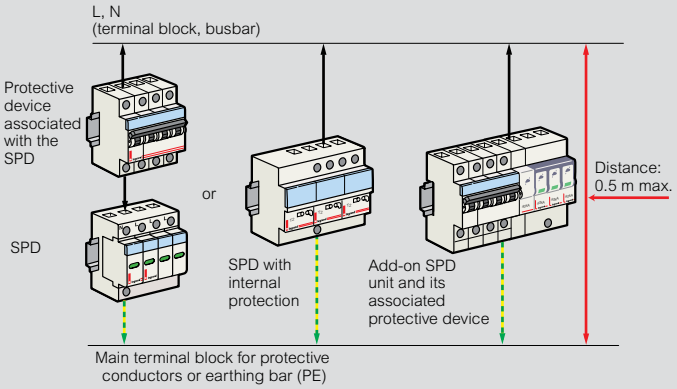
Cat. No.	6946 66
Uc	50 V
Up	900 V
Imax	5 kA
In	1 kA
Uoc	3 kV

Installation

Associated overcurrent protection

SPDs must be protected by a circuit breaker (or fuses), to provide protection in the event of an overload, which may make the SPD reach its end of life (see selection table p. 10-11). This protective device will be defined to be coordinated or discriminating with regard to upstream protective devices.

Connection principles



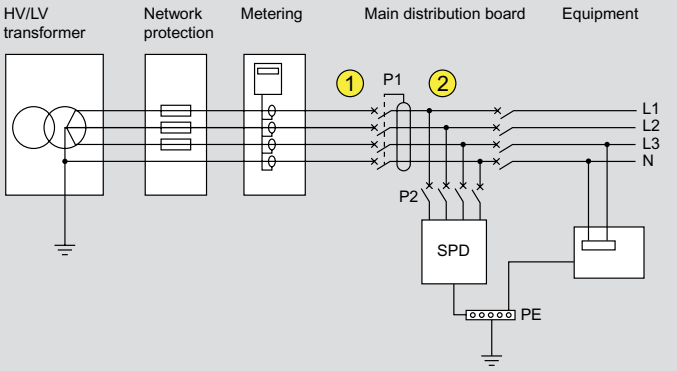
Connection lengths: as short as possible (< 50 cm if possible).

EMC (Electromagnetic Compatibility) rules: avoid loops, fix the cables firmly against the exposed metal conductive parts of the enlcosure.

SPD types and earthing systems

When possible (according to local rules), the SPD and its associated overcurrent protection (P2) should be installed upstream of the main protection (P1) as shown below (according to standards HD/IEC 60364).

SPDs and TT earthing system

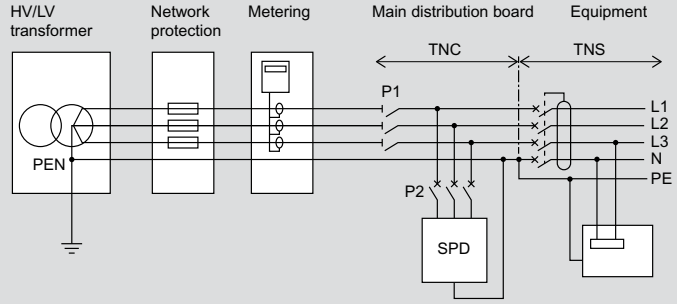


P1: main protection of the installation
SPD: surge protective device with Uc 275 or 320 V recommended

(1) (upstream of P1): 1P+N/3P+N SPDs only (except for Cat.Nos 0039 51/53/71/73).
1P/2P/3P/4P SPDs and Cat.Nos 0039 51/53/71/73 must always be installed downstream of a residual current device (discriminating or delayed, at the supply end of the installation).

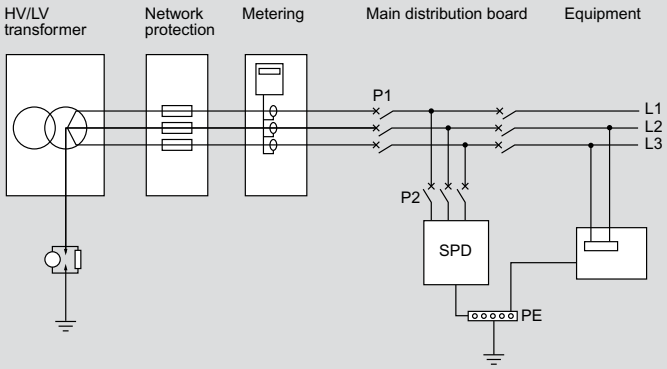
(2) (downstream of P2): any SPD.

SPDs and TN (TNC, TNS and TNC-S) earthing systems



P1: main protection of the installation
SPD: surge protective device with Uc 275 or 320 V recommended

SPDs and IT earthing system



P1: main protection of the installation
SPD: surge protective device with Uc 440 V (Uc < 440 V prohibited)

Coordinating upstream/downstream SPDs

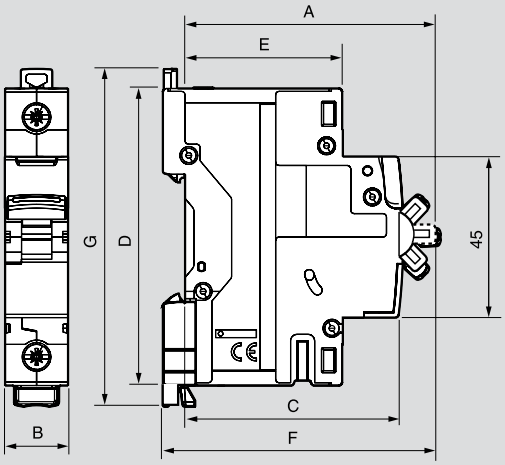
Consists of ensuring that any downstream SPD (in distribution enclosures or proximity SPDs) is correctly coordinated in energy terms with any SPD located upstream (TS 61643-12).

Minimum distances between SPDs

Upstream SPD	Downstream SPD	Min. distance (m)
T1/50 and T1/25	T2/40	10
T1/12.5 and T1/8	T2/40	6
	T2/20, T2/12	8
T2/40	T2/20	4
	T2/12	6
T2/20 and T2/12	Proximity SPD	2

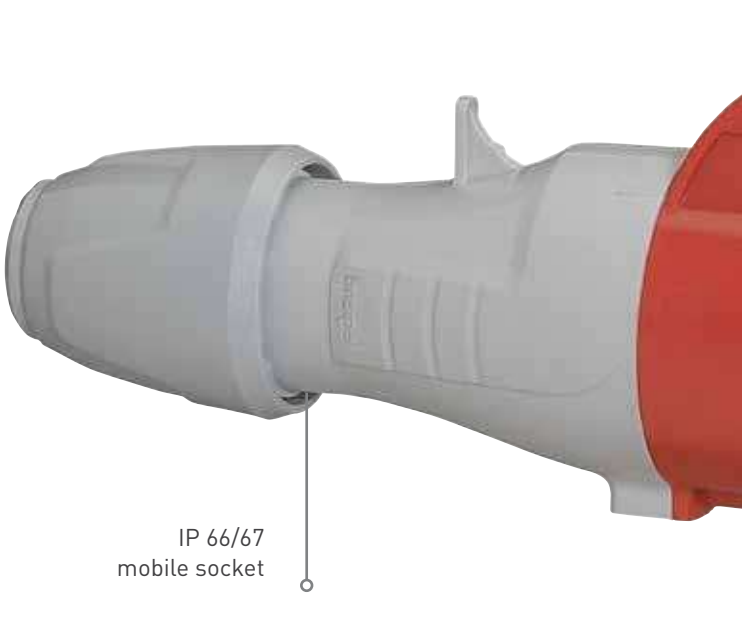
If it is not possible to comply with these distances, insert decoupling inductors on each phase and neutral conductor.

Dimensions



Products	A	B						C	D	E	F	G
		SP	SPN	DP	TP	TPN	FP					
DX³ MCBs (0.5 to 63 A)	70	17.7	35.6	35.6	53.4	71.2	71.2	60	83	44	76	94
DX³ MCBs (80 - 125 A)	70	26.7	-	53.4	80.1	-	106.8	60	83	44	76	89
DX³ Isolators	70	-	-	35.6	53.4	-	71.2	60	83	44	76	94
DX³ RCCB - type AC (DP)	70	-	-	35.6	-	-	-	60	83	44	76	94
DX³ RCCB - type AC (FP)	71.5	-	-	-	-	-	71.2	60	83	44	77.5	94
DX³ RCCB - type A - S (DP)	70	-	-	35.6	-	-	-	60	83	44	76	94
DX³ RCCB - type A - S (FP)	71.5	-	-	-	-	-	71.2	60	83	44	77.5	94
DX³ RCCB - type Hpi (DP)	70	-	-	35.6	-	-	-	60	83	44	76	94
DX³ RCCB - type Hpi (FP)	71.5	-	-	-	-	-	71.2	60	83	44	77.5	94
DX³ RCBO - type AC	70	-	-	71.2	-	-	142.4	60	83	44	76	94
DX³ RCBO - type AC (DP 2 mod.)	70	-	-	35.6	-	-	-	60	83	44	76	94
DX³ RCBO - type Hpi (DP 2 mod.)	70	-	-	35.6	-	-	-	60	83	44	76	94
Auxiliary contacts	70	8.7						60	83	44	76	83
Auxiliary contacts	70	17.7						60	83	44	76	83
Shunt trip	70	17.7						60	83	44	76	83
Minimum voltage trip	70	17.7						60	83	44	76	83
POP over voltage	74	54						74	83	44	80.5	89
Remote control for MCB / RCBO	74	54						74	83	44	80.5	89
CX³ contactors 20 A	62	17.8						60	83	44	67.5	-
CX³ contactors 40 A (2 mod.)	60	35.6						61	80	44	67	-
CX³ contactors 40 A / 63 A (3 mod.)	60	54						61	80	44	67	-
CX³ change over switches	74	17.7						68	83	44	74	94
CX³ pushbutton & control switches	66.65	17.8						43.85	84.5	43.85	61	94.9
CX³ LED indicators	62	17.8						43.85	84.5	43.85	61	94.9

P17 TEMPRA PRO, suitable for all environments



IP 66/67
mobile socket

“The legrand group, a global specialist in electrical and digital building infrastructure has smart solutions for residential, commercial, hospitality and industrial sectors. Legrand in india has been the leader in protection business for the last four decades. It combines the latest technology to design electrical power distribution systems and guarantees efficient protection and effective service. With smart ideas, sleek designs and sheer simplicity, legrand keeps a close track of changing lifestyle and designs products with high value added content, thereby introducing the all new P17 Tempra Pro.”

FOR INSTALLATIONS INVOLVING SPECIFIC CONSTRAINTS RELATED TO WATERPROOFNESS OR TEMPERATURE CONDITIONS, BOTH INDOORS AND OUTDOORS

The P17 Tempra Pro range incorporates numerous benefits for optimum commissioning of installations and increased user safety.
More than ever before, the new range is highly recommended for all sites involving specific constraints related to waterproofness, impact resistance or temperature conditions, both indoors and outdoors: shopping centres, hospitals, office buildings, food-processing facilities, industry, transportation, data centres, markets, etc.

P17 TEMPRA PRO, always ensuring continuity of service

By updating its IP44 and IP 66/67 range of industrial sockets, Legrand is meeting the expectations of professional users. New benefits in terms of safety, implementation, design & ergonomics guarantee the longevity of this family of products, which has already proven itself over time.

IP44

SOCKETS FOR INTERNAL AND EXTERNAL USE, PROTECTED AGAINST PROJECTIONS OF WATER (BUT NOT EXPOSED TO DIRECT JETS)

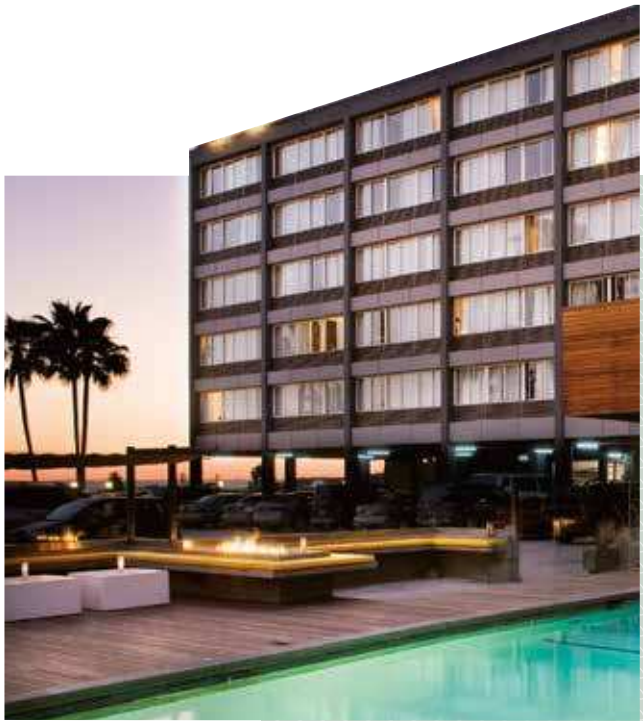
Straight plugs

Mobile sockets

Panel mounting sockets

- From 16 to 32 A
- 2 P+ E / 3 P+E / 3 P+N+E
- From 100 to 500 V~
- 50/60 Hz
- Screw connection

A TRANSFORMED RANGE WHICH HARMONISES WITH THE LEGRAND INDUSTRIAL SOCKETS RANGE



AIRPORTS, DATA CENTRES, HOTELS, ETC. P17 TEMPRA PRO IS IDEAL FOR ALL MAJOR PROJECTS

IP66/67

WEATHERPROOF SOCKETS THAT CAN WITHSTAND TEMPORARY IMMERSION (RAIN, FLOODS, ETC)

Surface mounting sockets

Straight plugs

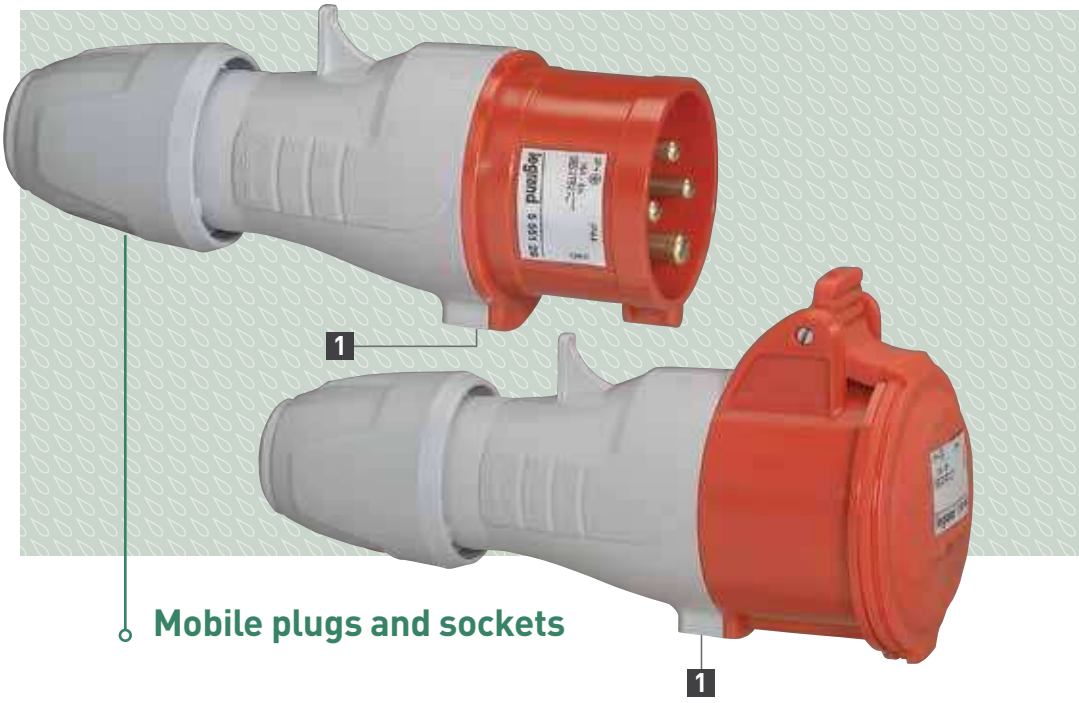
Mobile sockets

Panel mounting sockets

Surface mounting sockets

P17 TEMPRA PRO, ensuring a quick installation

As competitiveness is key to success when working on a site, the P17 Tempra Pro range offers an array of essential and intuitive benefits aimed at simplifying every movement, freeing up wiring space and ensuring quick, accurate cable connection under optimum conditions.



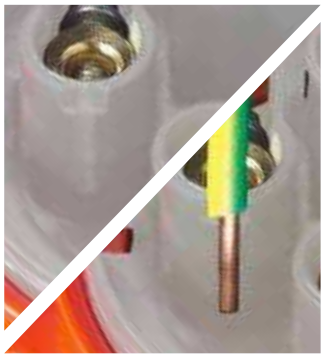
Mobile plugs and sockets

MOBILE PRODUCTS ARE SUPPLIED ASSEMBLED AND UNLOCKED

1 QUICK OPENING/CLOSING SYSTEM

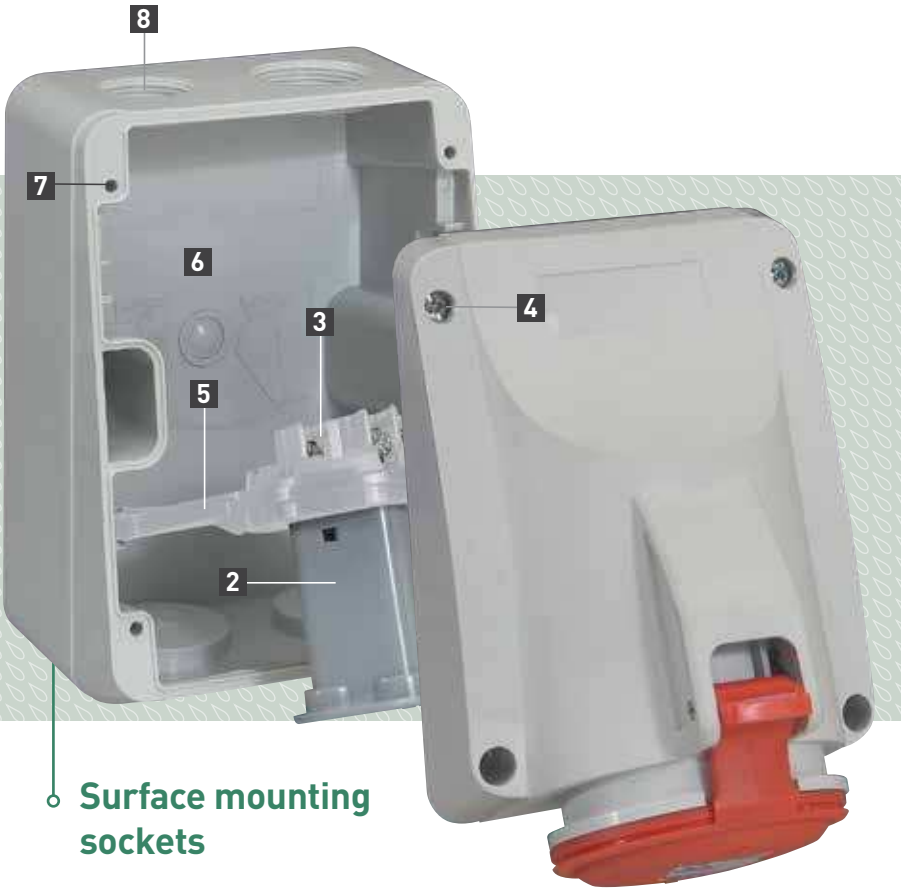
Unlocked by pressing with a screwdriver. Marking indicates the location for the locking clip.

Opened by turning the 2 parts in opposite directions.



2 CABLE STRIPPING

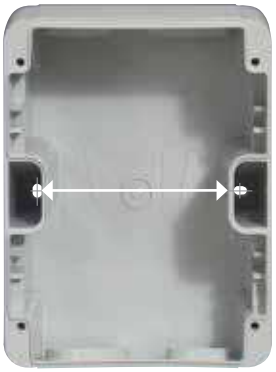
Marking allows the user to see quickly the length of cable to be stripped. Option of using cables with ferrules.



Surface mounting sockets

8 CABLE ENTRIES

4 threaded and sealed cable entries at the top and the bottom and marking at the back of the box for ISO cable glands or conduits.



7 EASIER MAINTENANCE

Fixing centres are identical to the old range (70 mm) for the 16 A sockets and marked at the back of the box for 32 A sockets.

3 JUST ONE SCREW PER TERMINAL

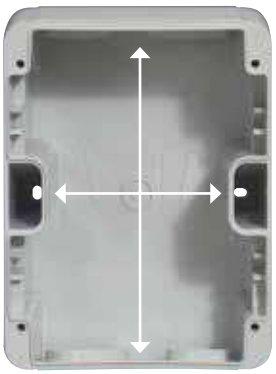
A single captive PZ 2 screw, per connection terminal. Same type of screw for both ratings, 16 and 32 A .

4 EASY COVER FIXING

Stainless steel captive screws with mixed head (for cross or flat screwdriver) for a good seal and anti-corrosion resistance.

5 EASY REMOVAL

The active parts of the product can be removed from the base for easier wiring and changing the socket angle.



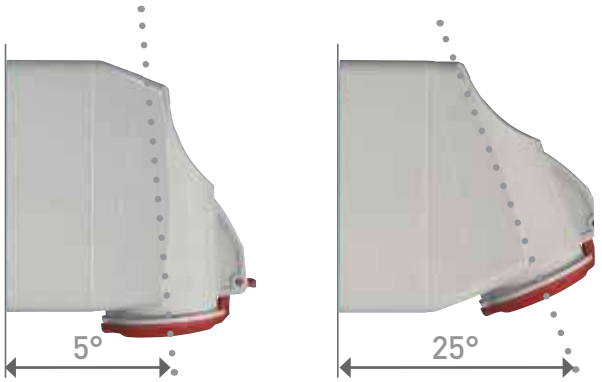
6 EASY WIRING

Optimum wiring area for easier connections.

P17 TEMPRA PRO, ensuring ease of use and safety

The new P17 Tempra Pro range has been subject to extensive research in terms of design and safety in order to make life safer and easier for the user. Good product gripping, compact dimensions for use in tight spaces, easier handling, etc. Compliance with standards, anti-corrosion treated materials and components, etc. A comprehensive set of solutions which comply with the standards.

AN INNOVATIVE DESIGN THAT COMPLIES WITH STANDARDS IEC 60309-1 AND 2 AND RESPECTS THE ENVIRONMENT



1 2 MOUNTING POSITIONS

To solve the problem of limited space, the surface mounting sockets offer 2 different mounting positions (5° or 25°) which allow users to adapt to the space available without changing the box.

2 CABLE GRIP

Captive cable grip with anti-vibration system holds the cable in place permanently.

SAFETY & THE ENVIRONMENT

SAFETY

Connection terminals compliant with standards IEC 60 309 1 & 2

Production sites certified according to ISO 14001 and ISO 9001

Very high resistance to chemical products. Plugs and sockets made of polyamide 6

Anti-corrosion treated screws, stainless steel springs for the socket covers

Resistant to temperatures of -25 °C to + 40 °C

ENVIRONMENT

Halogen-free recyclable materials (silicone, PVC)

Grouped packaging in boxes

PEP products (Eco Passport)

3 EASE OF HANDLING

Gripping areas on the body of the mobile products and the cable grip.

4 OPENING LEVER

For easier connection/ disconnection. Cover held open on panel sockets and surface mounting sockets.

5 POSITION MARKING

Information engraved on the ring cover of IP 66/67 products means the user can check quickly whether it is in the open or closed position. Marking area on the shutter of the sockets and on the upper part of the plugs allows easy identification by the user.

P17 TEMPRA PRO, ensuring customers get exactly what they need

The P17 Tempra Pro range is fully compatible with additional products and accessories from the Legrand industrial socket range and therefore meets the needs of all site configurations. Customised configurations are also available for solutions that are even more suited to your wide-ranging needs.

Combined units

SINGLE-SOCKET UNITS
With or without DIN rail:
16 / 32 A IP 44 et 63 A IP 66
(see page 24)

COMBINED UNITS TO BE COMPOSED
Only 16 catalogue numbers:
8 for the bases and 8 for the faceplates
(see page 25)

IP55 flush-mounting boxes

FOR IP 44 OR IP 66/67 SOCKETS
For 1 x 16 or 32 A
or domestic socket
(see page 14)

FOR IP 44 OR IP 66/67 SOCKETS
For 2 x 16 A
or domestic sockets
(see page 14)

A COMPREHENSIVE RANGE OF PRODUCTS MATCHING THE NEW P17 TEMPRA PRO RANGE PERFECTLY

Worksites combined units

INDIVIDUAL UNITS
Mobile units with integrated handle (see page 28)

FLOOR CABINETS
Fitted with 5, 6 or 7 sockets or in modular version (see page 28)

ENERGY DISTRIBUTION UNITS
Fitted with domestic and IEC pin configuration socket from 16 to 63 A (see page 28)

Interlocked sockets

INTERLOCKED SWITCHED SOCKETS WITH SMALL FLANGE
125 x 105 mm
(see page 24)

P17 Tempra Pro IP 44 - LV 16 and 32 A

selection chart

Conform to IEC 60309-1 and IEC 60309-2 IP 44 according to IEC 60529 IK 09 according to IEC 62262 Material: polyamide 6 Self-extinguishing: 850 °C (support of active parts) / 650 °C (plastic housing)			FUNCTIONS							
			SURFACE MOUNTING SOCKETS	PANEL MOUNTING SOCKETS INCLINED OUTLET	PANEL MOUNTING SOCKETS STRAIGHT OUTLET	INTERLOCKED SWITCHED SOCKETS WITH SMALL FLANGE	MOBILE SOCKETS	STRAIGHT PLUGS	ANGLED PLUG	APPLIANCE INLETS
LV										
100 to 130 V~ 50/60 Hz	16 A	2P+E	5 551 51	5 551 81	0 573 51		5 551 01	5 551 21		0 575 81(2)
		3P+E	5 551 52				5 551 02	5 551 22		
	32 A	2P+E	5 552 51	5 552 81			5 552 11	5 552 31		0 582 81(2)
200 to 250 V~ 50/60 Hz	16 A	2P+E	5 551 54	5 551 84	0 573 54	0 573 00(1)	5 551 04	5 551 24	0 564 53	0 575 84(2)
		3P+E	5 551 55	5 551 85			5 551 05	5 551 25		0 575 85(2)
		3P+N+E	5 551 56	5 551 86			5 551 06	5 551 26		0 575 86(2)
	32 A	2P+E	5 552 54	5 552 84	0 580 54		5 552 14	5 552 34	0 564 73	0 582 84(2)
		3P+E	5 552 55	5 552 85			5 552 15	5 552 35		
		3P+N+E	5 552 56	5 552 86			5 552 16	5 552 36		0 582 86(2)
380 to 415 V~ 50/60 Hz	16 A	2P+E	5 551 57				5 551 07	5 551 27		
		3P+E	5 551 58	5 551 88	0 573 58	0 573 01(1)	5 551 08	5 551 28	0 564 57	0 575 88(2)
		3P+N+E	5 551 59	5 551 89	0 573 59	0 573 02(1)	5 551 09	5 551 29	0 564 58	0 575 89(2)
	32 A	2P+E	5 552 57				5 552 17	5 552 37		
		3P+E	5 552 58	5 552 88	0 580 58		5 552 18	5 552 38	0 564 77	0 582 88(2)
		3P+N+E	5 552 59	5 552 89	0 580 59		5 552 19	5 552 39	0 564 78	0 582 89(2)
440 to 460 V~ 50/60 Hz	16 A	3P+E	5 551 60	5 551 90			5 551 10	5 551 30		
	32 A	3P+E	5 552 60	5 552 90			5 552 20	5 552 40		
480 to 500 V~ 50/60 Hz	16 A	3P+E	5 551 62	5 551 92			5 551 12	5 551 32		
		3P+N+E	5 551 63	5 551 93			5 551 13	5 551 33		
	32 A	3P+E	5 552 62	5 552 92			5 552 22	5 552 42		
		3P+N+E	5 552 63	5 552 93			5 552 23	5 552 43		

1: Can be fitted only on faceplate Cat.No 0 577 23 - 2: Protection covers not supplied

P17 Tempra Pro IP 66/67 - LV 16, 32, 63 and 125 A

selection chart

Conform to IEC 60309-1 and IEC 60309-2 IP 44 according to IEC 60529 IK 09 according to IEC 62262 Material: polyamide 6 Self-extinguishing: 850 °C (support of active parts) / 650 °C (plastic housing)			FUNCTIONS						
			SURFACE MOUNTING SOCKETS	PANEL MOUNTING SOCKETS	INTERLOCKED SWITCHED SOCKETS WITH SMALL FLANGE	MOBILE SOCKETS	STRAIGHT PLUGS	ANGLED PLUG	APPLIANCE INLETS
LV									
100 to 130 V~ 50/60 Hz	16 A	2P+E	5 553 51	5 553 81		5 553 01	5 553 21		0 568 00
	32 A	2P+E	5 554 51	5 554 81			5 554 31		
200 to 250 V~ 50/60 Hz	16 A	2P+E	5 553 54	5 553 84	0 573 20(1)(2)	5 553 04	5 553 24	0 565 03	0 568 03
		3P+E	5 553 55	5 553 85		5 553 05	5 553 25		0 568 04
		3P+N+E	5 553 56	5 553 86		5 553 06	5 553 26		
	32 A	2P+E	5 554 54	5 554 84		5 554 14	5 554 34	0 565 23	0 568 23
		3P+E	5 554 55	5 554 85		5 554 15	5 554 35		
		3P+N+E	5 554 56	5 554 86		5 554 16	5 554 36		
	63 A	2P+E	0 587 40	0 587 20		0 587 10	0 587 00		0 587 30
		3P+E	0 587 41	0 587 21		0 587 11	0 587 01		
		3P+N+E	0 587 42	0 587 22		0 587 12	0 587 02		
380 to 415 V~ 50/60 Hz	16 A	3P+E	5 553 58	5 553 88	0 573 21(1)(2)	5 553 08	5 553 28		0 568 07
		3P+N+E	5 553 59	5 553 89	0 573 22(1)(2)	5 553 09	5 553 29		0 568 08
	32 A	3P+E	5 554 58	5 554 88		5 554 18	5 554 38		0 568 27
		3P+N+E	5 554 59	5 554 89		5 554 19	5 554 39	0 565 28	0 568 28
	63 A	3P+E	0 587 44	0 587 24		0 587 14	0 587 04		0 587 34
		3P+N+E	0 587 45	0 587 25		0 587 15	0 587 05		0 587 35
	125 A	3P+E	0 591 06	0 591 16		0 591 36	0 591 26		0 591 46
		3P+N+E	0 591 07	0 591 17		0 591 37	0 591 27		0 591 47
440 V~ 50/60 Hz for refrigerated containers	32 A	3P+E		5 554 91		5 554 21	5 554 41		
480 to 500 V~ 50/60 Hz	16 A	3P+E	5 553 62	5 553 92		5 553 12	5 553 32		
	32 A	3P+E	5 554 62	5 554 92		5 554 22	5 554 42		
		3P+N+E	5 554 63				5 554 43		
	63 A	3P+E	0 553 48	0 587 27		0 587 17	0 587 07		

1: IP 55 - 2: Can be fitted only on faceplate Cat.No 0 577 23

P17 Tempra Pro IP 44 - LV 16 and 32 A

sockets, plugs, mobile sockets, appliance inlets and interlocked switched sockets

5 552 58

5 551 88

Technical characteristics **p. 326**

Surface mounting sockets

Two possible angles (5° or 25°)

Pack	Cat.Nos	
	N IP 44	
	16 A	**100/130 V~**
5	5 551 51	2P+E
5	5 551 52	3P+E
		200/250 V~
10	5 551 54	2P+E
5	5 551 55	3P+E
5	5 551 56	3P+N+E
		380/415 V~
5	5 551 57	2P+E
10	5 551 58	3P+E
10	5 551 59	3P+N+E
	32 A	**100/130 V~**
5	5 552 51	2P+E
		200/250 V~
5	5 552 54	2P+E
5	5 552 55	3P+E
5	5 552 56	3P+N+E
		380/415 V~
5	5 552 57	2P+E
10	5 552 58	3P+E
10	5 552 59	3P+N+E

Panel mounting sockets inclined outlet

Can be fixed on plain faceplates or pre-drilled (p. 18) and on flush mounting boxes

Pack	Cat.Nos	
	N IP 44	
	16 A	**100/130 V~**
5	5 551 81	2P+E
		200/250 V~
10	5 551 84	2P+E
5	5 551 85	3P+E
5	5 551 86	3P+N+E
		380/415 V~
10	5 551 88	3P+E
10	5 551 89	3P+N+E
	32 A	**100/130 V~**
5	5 552 81	2P+E
		200/250 V~
10	5 552 84	2P+E
5	5 552 85	3P+E
5	5 552 86	3P+N+E
		380/415 V~
10	5 552 88	3P+E
10	5 552 89	3P+N+E

Panel mounting sockets straight outlet small flange

Can be fixed only on plain faceplates Cat.Nos 0 577 15/16 (p. 18)

Pack	Cat.Nos	
	IP 44	
	16 A	**200/250 V~**
5	0 573 54	2P+E
		380/415 V~
5	0 573 58	3P+E
5	0 573 59	3P+N+E
	32 A	**200/250 V~**
5	0 580 54	2P+E
		380/415 V~
5	0 580 58	3P+E
5	0 580 59	3P+N+E

Interlocked switched sockets with small flange

Dimensions: 125 x 105 mm
Can be fixed only on faceplate Cat.No 0 577 28 (p. 18)

Pack	Cat.Nos	
	16 A IP 44	**200/250 V~**
1	0 573 00	2P+E
		380/415 V~
1	0 573 01	3P+E
1	0 573 02	3P+N+E
	IP 55	**200/250 V~**
1	0 573 20	2P+E
		380/415 V~
1	0 573 21	3P+E
1	0 573 22	3P+N+E

P17 Tempra Pro IP 44 - LV 16 and 32 A

sockets, plugs, mobile sockets, appliance inlets and interlocked switched sockets

5 551 08

5 551 28

Mobile sockets

Pack	Cat.Nos	
	N IP 44	Cable clamping and closing without screws Supplied unlocked
	16 A	**100/130 V~**
10	5 551 01	2P+E
5	5 551 02	3P+E
		200/250 V~
10	5 551 04	2P+E
5	5 551 05	3P+E
5	5 551 06	3P+N+E
		380/415 V~
5	5 551 07	2P+E
10	5 551 08	3P+E
10	5 551 09	3P+N+E
	32 A	**100/130 V~**
5	5 552 11	2P+E
		200/250 V~
10	5 552 14	2P+E
5	5 552 15	3P+E
5	5 552 16	3P+N+E
		380/415 V~
5	5 552 17	2P+E
10	5 552 18	3P+E
10	5 552 19	3P+N+E

Straight plugs

Pack	Cat.Nos	
	N IP 44	Cable clamping and closing without screws Supplied unlocked
	16 A	**100/130 V~**
10	5 551 21	2P+E
5	5 551 22	3P+E
		200/250 V~
10	5 551 24	2P+E
5	5 551 25	3P+E
5	5 551 26	3P+N+E
		380/415 V~
5	5 551 27	2P+E
10	5 551 28	3P+E
10	5 551 29	3P+N+E
	32 A	**100/130 V~**
5	5 552 31	2P+E
		200/250 V~
10	5 552 34	2P+E
5	5 552 35	3P+E
5	5 552 36	3P+N+E
		380/415 V~
5	5 552 37	2P+E
10	5 552 38	3P+E
10	5 552 39	3P+N+E

Phase inverter plugs

Pack	Cat.Nos	
	IP 44	Straight plugs for changing rotation direction of a 3-phase electric motor
	16 A	**380/415 V~**
5	0 574 40	3P+E
5	0 574 41	3P+N+E
	32 A	**380/415 V~**
5	0 581 40	3P+E
5	0 581 41	3P+N+E

Appliance inlets

Pack	Cat.Nos	
	IP 44	
	16 A	**100/130 V~**
10	0 575 81	2P+E
		200/250 V~
5	0 575 84	2P+E
5	0 575 85	3P+E
5	0 575 86	3P+N+E
		380/415 V~
5	0 575 88	3P+E
5	0 575 89	3P+N+E
	32 A	**100/130 V~**
10	0 582 81	2P+E
		200/250 V~
5	0 582 84	2P+E
5	0 582 86	3P+N+E
		380/415 V~
5	0 582 88	3P+E
5	0 582 89	3P+N+E

Maximum versatility

- Supplied with hinges connecting the cover to the back of the cabinet.
- For use with 12 and 18 module cabinets using joining kit Cat.No 019 67.
- Can be fitted with control units and accessories: P17 tempra pro 16 A and 32 A sockets with standard fixing centres, flush mounted IP 55 Plexo wiring accessories, Osmoz, modular rail at the back of the box .

P17 Tempra - domestic pin configuration 16 A - 250 V~

0 577 22

Technical characteristics **p. 327**

Pack	Cat.Nos	Flush-mounting boxes
3	0 577 21	IP 55 For panel mounting sockets inclined outlet installation (IP 44 or IP 66/67) Flush mounting boxes with faceplates For 2 panel mounting sockets With single fixing centres 70 x 70 mm - 16 A
3	0 577 22	For 1 panel mounting socket With single fixing centres 70 x 70 mm - 16 or 32 A (32 A to be fixed horizontally)

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

P17 Tempra IP 44 - ELV 16 and 32 A

0 552 06

0 552 21

0 552 45

Technical characteristics **p. 328**

Pack	Cat.Nos	Surface mounting sockets
		20/25 V~
	16 A	
5	0 552 06	2P
	32 A	
5	0 552 56	2P
		Panel mounting sockets
		20/25 V~
	16 A	
5	0 552 45	2P
	32 A	
5	0 552 95	2P
		Straight plugs
		20/25 V~
	16 A	
5	0 552 21	2P
	32 A	
5	0 552 71	2P
		Mobile sockets
		20/25 V~
	16 A	
5	0 552 31	2P
	32 A	
5	0 552 81	2P
		Appliance inlets
		20/25 V~
	16 A	
5	0 552 41	2P
	32 A	
5	0 552 91	2P

P17 Tempra Pro IP 66/67 LV 16 and 32 A

5 554 58

Technical characteristics **p. 326**

Pack	Cat.Nos	Surface mounting sockets
		Two possible angles (5° or 25°)
		200/250 V~
	16 A	
5	5 553 54	2P+E
5	5 553 55	3P+E
5	5 553 56	3P+N+E
		380/415 V~
5	5 553 58	3P+E
5	5 553 59	3P+N+E
		200/250 V~
	32 A	
5	5 554 54	2P+E
5	5 554 55	3P+E
5	5 554 56	3P+N+E
		380/415 V~
5	5 554 58	3P+E
5	5 554 59	3P+N+E
		Panel mounting sockets
		Can be fixed on the faceplates (p. 21)
		200/250 V~
	16 A	
5	5 553 84	2P+E
5	5 553 85	3P+E
5	5 553 86	3P+N+E
		380/415 V~
5	5 553 88	3P+E
5	5 553 89	3P+N+E
		200/250 V~
	32 A	
5	5 554 84	2P+E
5	5 554 85	3P+E
5	5 554 86	3P+N+E
		380/415 V~
5	5 554 88	3P+E
5	5 554 89	3P+N+E
		Mobile sockets
		Supplied unlocked
		200/250 V~
	16 A	
5	5 553 04	2P+E
5	5 553 05	3P+E
5	5 553 06	3P+N+E
		380/415 V~
5	5 553 08	3P+E
5	5 553 09	3P+N+E
		200/250 V~
	32 A	
5	5 554 14	2P+E
5	5 554 15	3P+E
5	5 554 16	3P+N+E
		380/415 V~
5	5 554 18	3P+E
5	5 554 19	3P+N+E

P17 Tempra Pro IP 66/67
LV 16 and 32 A

5 553 28

Pack	Cat.Nos	Straight plugs
	N	Supplied unlocked
	16 A	**200/250 V~**
5	5 553 24	2P+E
5	5 553 25	3P+E
5	5 553 26	3P+N+E
		380/415 V~
5	5 553 28	3P+E
5	5 553 29	3P+N+E
	32 A	**200/250 V~**
5	5 554 34	2P+E
5	5 554 35	3P+E
5	5 554 36	3P+N+E
		380/415 V~
5	5 554 38	3P+E
5	5 554 39	3P+N+E
		Appliance inlets
	16 A	**200/250 V~**
5	0 568 03	2P+E
5	0 568 04	3P+E
		380/415 V~
5	0 568 07	3P+E
5	0 568 08	3P+N+E
	32 A	**200/250 V~**
5	0 568 23	2P+E
		380/415 V~
5	0 568 27	3P+E
5	0 568 28	3P+N+E

P17 Tempra Pro IP 66/67
LV 32 A for refrigerated containers

6 571 06

Pack	Cat.Nos	Combined unit, plug and mobile socket for refrigerated containers
		32 A - 440 V~ - 50/60 Hz -
		3P+E - 3 hours IK 09
		Plastic body and cover - Stainless steel screws
1	6 571 06	Combined unit with interlocked switched
	N	socket - Double mechanical interlock - Cable glands are not supplied
5	5 554 91	Panel mounting socket
5	5 554 21	Mobile socket
		With cable grip Ø12 to 21.5 mm
5	5 554 41	Straight plug
		With cable grip Ø12 to 21.5 mm

P17 Tempra IP 66/67 - LV 63 and 125 A

0 587 05 0 587 14

Technical characteristics **p. 331**

Pack	Cat.Nos	
		Surface mounting sockets
	63 A	**200/250 V~**
2	0 587 40	2P+E
		380/415 V~
2	0 587 44	3P+E
2	0 587 45	3P+N+E
	125 A	**380/415 V~**
1	0 591 06	3P+E
1	0 591 07	3P+N+E
		Panel mounting sockets
		Can be fixed on the faceplates Cat.Nos 0 577 17/19 (p. 22)
	63 A	**200/250 V~**
2	0 587 20	2P+E
		380/415 V~
2	0 587 24	3P+E
2	0 587 25	3P+N+E
	125 A	**380/415 V~**
1	0 591 16	3P+E
1	0 591 17	3P+N+E
		Straight plugs
	63 A	**200/250 V~**
2	0 587 00	2P+E
		380/415 V~
2	0 587 04	3P+E
2	0 587 05	3P+N+E
	125 A	**380/415 V~**
1	0 591 26	3P+E
1	0 591 27	3P+N+E
		Mobile sockets
	63 A	**200/250 V~**
2	0 587 10	2P+E
		380/415 V~
2	0 587 14	3P+E
2	0 587 15	3P+N+E
	125 A	**380/415 V~**
1	0 591 36	3P+E
1	0 591 37	3P+N+E
		Appliance inlets
	63 A	**200/250 V~**
2	0 587 30	2P+E
		380/415 V~
2	0 587 34	3P+E
2	0 587 35	3P+N+E
	125 A	**380/415 V~**
1	0 591 46	3P+E
1	0 591 47	3P+N+E

P17 WORKSITES COMBINED UNITS

Power supply made easy

- Provide temporary power supplies on building sites and for events
- 2 types of worksites combined units:
  - individual units (ready to use or to be equipped)
  - floor cabinets (to be equipped)
- Can take P17 Tempra Pro panel mounting sockets, Arteor sockets outlets (via the dedicated adaptor)
- Easy to hang on a wall without having to open the unit

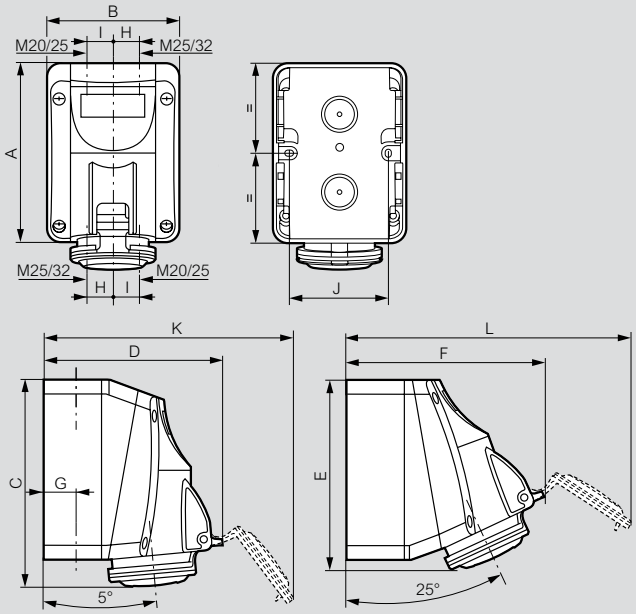
P17 Tempra Pro IP 44 - LV 16 and 32 A

Characteristics

Terminal connection:
• Panel and surface mounting sockets
16 A: max. 1 x 4 mm² rigid
32 A: max. 1 x 10 mm² rigid
• Appliance inlets:
16 A: max. 1 x 2.5 mm² rigid
32 A: max. 1 x 6 mm² rigid
• Plugs and mobile sockets:
16 A: max. 1 x 2.5 mm² flexible
32 A: max. 1 x 6 mm² flexible
IP 44 according to IEC and EN 60529
IK 08 according to EN 50102 for interlocked switched sockets with small flange
IK 09 according to IEC 62262 and EN 62262
Material: polyamide 6
Self-extinguishing: 850 °C (support of active parts) / 650 °C (plastic housing)
- 25 °C to + 40 °C according to IEC 60309-1

Dimensions

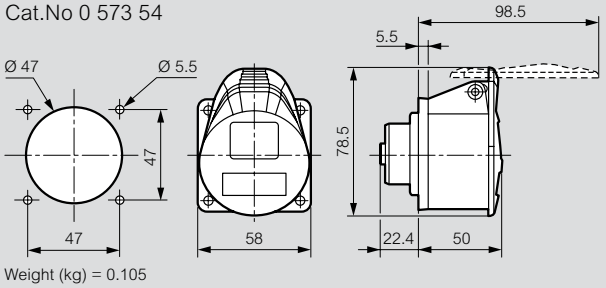
Surface mounting sockets



	A	B	C	D	E	F	G	H	I	J	K	L
LV 16 A												
2P+E	125	93	147	126	138	139	22	17	20	70	176	195
3P+E	125	93	147	134	138	147	22	17	20	70	190	210
3P+N+E	125	93	147	140	138	153	22	17	20	70	201	221
LV 32 A												
2P+E	150	113	174	156	163	172	28	22	26	90	220	245
3P+E	150	113	174	156	163	172	28	22	26	90	220	245
3P+N+E	150	113	174	162	163	177	28	22	26	90	230	256

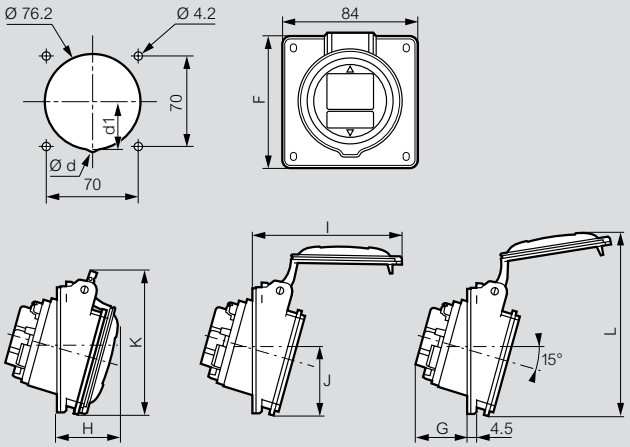
Panel mounting socket straight outlet small flange

Cat.No 0 573 54



Weight (kg) = 0.105

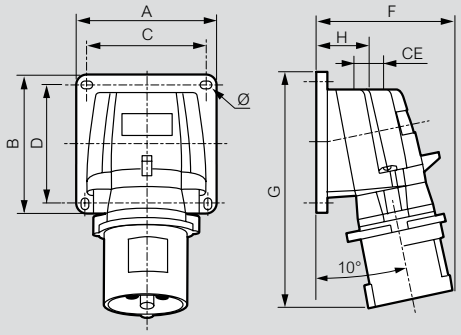
Panel mounting sockets inclined outlet



	Ød	d1	F	G	H	I	J	K	L
LV 16 A									
2P+E	-	-	84	33.5	37.5	85	42	88.5	112.5
3P+E	-	-	84	35.5	38.5	93	42	91.5	118.5
3P+N+E	-	-	84	36.5	39.5	100	43.3	97	123.5
LV 32 A									
2P+E	-	-	94	41.5	45.5	110	47	102	131
3P+E									
3P+N+E	8	36	94	42.5	46.5	117	47	107.5	138

Appliance inlets

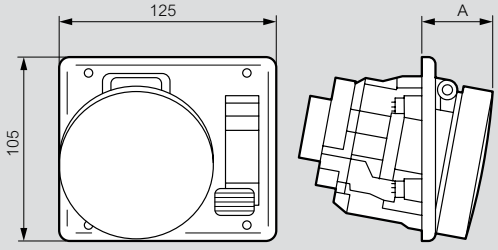
Cat.Nos 0 575 84/88/89 and 0 582 84/88/89



	Weight (kg)	A	B	C	D	F	G	H	CE	Ø
LV 16 A										
2P+E	0.168	84	84	72	72	77	126	34	M20	4.3
3P+E	0.232	84	84	72	72	84	134	34	M20	4.3
3P+N+E	0.256	84	84	72	72	91	141	34	M20	4.3
LV 32 A										
2P+E	0.325	110	110	98	98	96	168	39	M25	5.3
3P+E										
3P+N+E	0.364	110	110	98	98	102	168	39	M25	5.3

Interlocked switched sockets with small flange

Cat.Nos 0 573 00/01/02 and 0 573 20/21/22



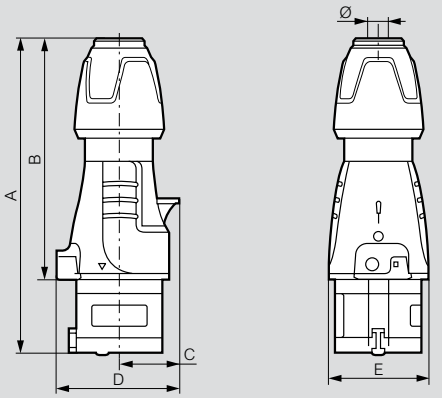
16 A	IP	A	IP	A
2P+E	44	38	55	45
3P+E	44	38	55	45
3P+N+E	44	38	55	45

P17 Tempra Pro IP 44 - LV 16 and 32 A

mobile products

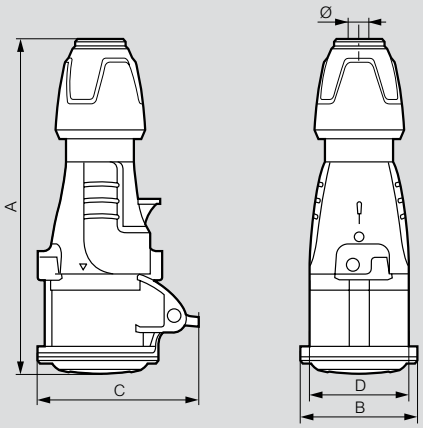
Dimensions

Straight plugs



	A	B	C	D	E	Ø
LV 16 A						
2P+E	146 to 157	109.5 to 120.5	30	61	50	6.5 to 14
3P+E	146 to 157	109.5 to 120.5	34	67	55	7.10 to 15.5
3P+N+E	163 to 176	126.5 to 139.5	38	76	65	8 to 20
LV 32 A						
2P+E	172 to 185	127 to 140	40	78	65	8 to 20
3P+E	172 to 185	127 to 140	40	78	65	8 to 20
3P+N+E	179 to 189	133 to 143	45	86	71	11.9 to 22.2

Mobile sockets



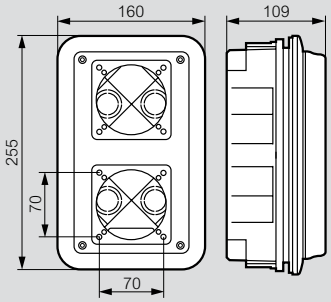
	A	B	C	D	Ø
LV 16 A					
2P+E	156 to 167	59	81	50	6.5 to 14
3P+E	157 to 168	65	88	55	7.10 to 15.5
3P+N+E	175 to 188	72	94	65	8 to 20
LV 32 A					
2P+E	184 to 197	73	99	65	8 to 20
3P+E	184 to 197	73.5	99	65	8 to 20
3P+N+E	190 to 203	79.5	105	71	11.9 to 22.2

P17 Tempra domestic pin configuration 16 A - 250 V~

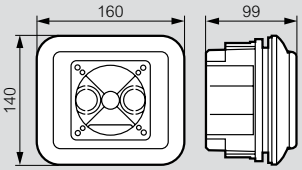
Dimensions

Flush mounting boxes

Cat.No 0 577 21



Cat.No 0 577 22



P17 Tempra IP 44 - ELV 16 and 32 A

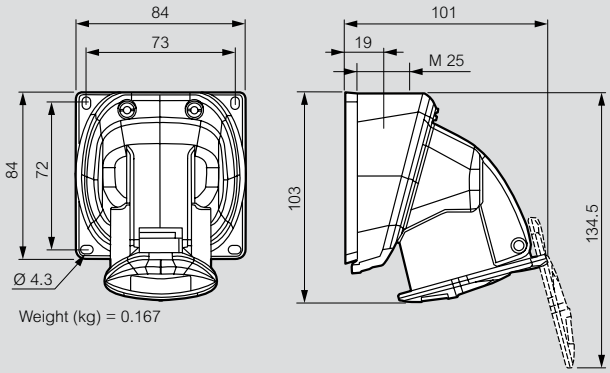
Characteristics

Terminal connection:
Max. 1 x 10 mm² (rigid for fixed products flexible for mobile products)
IP 44 according to IEC 60529 and EN 60529
IK 09 according to IEC 62262 and EN 62262
Material: plastic
Self-extinguishing: 850 °C (support of active parts) / 650 °C (plastic housing)
Temp. rating: - 25 °C to + 40 °C
Conform to IEC 60309-1 / IEC 60309-2 and EN 60309-1 / EN 60309-2

Dimensions

Surface mounting sockets

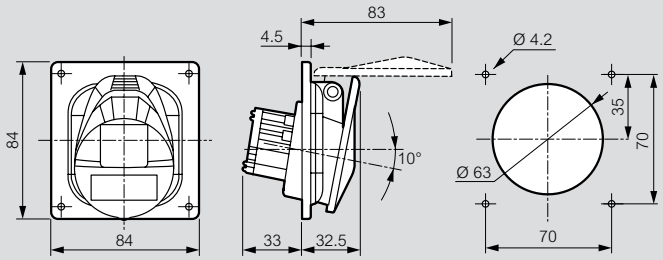
Cat.Nos 0 552 06/56



Weight (kg) = 0.167

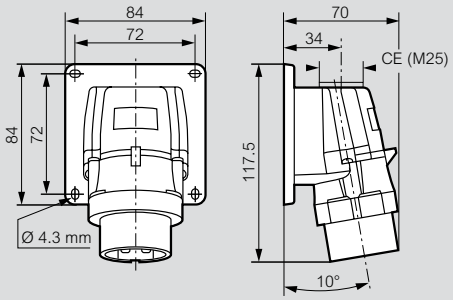
Panel mounting sockets

Cat.Nos 0 552 45/95



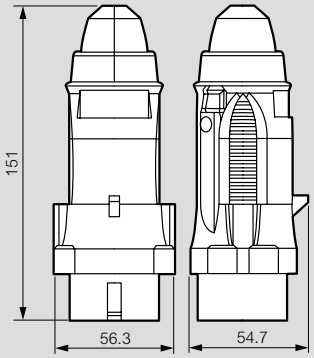
Appliance inlets

Cat.Nos 0 552 41/91



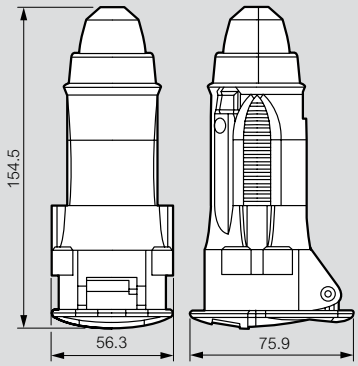
Dimensions ELV 16 and 32 A

Straight plugs



Weight (kg) = 0.132

Mobile sockets



Weight (kg) = 0.16

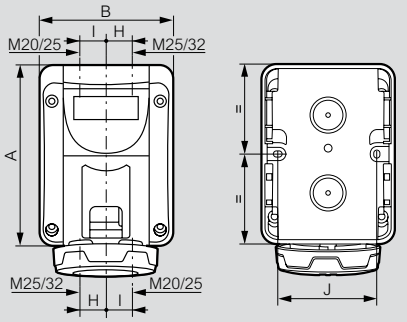
P17 Tempra Pro IP 66/67 - LV 16 and 32 A

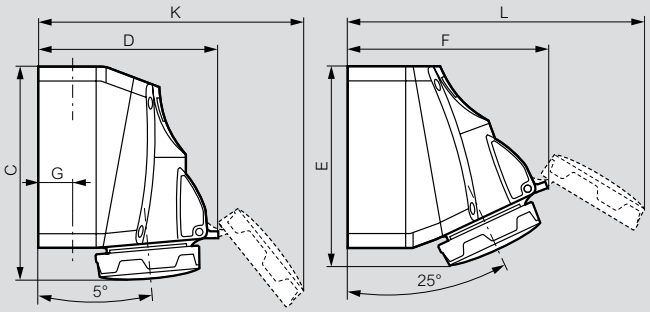
Characteristics

Terminal connection:
• Panel and surface mounting sockets
16 A: max. 1 x 4 mm² rigid - 32 A: max. 1 x 10 mm² rigid
• Plugs, mobile sockets:
16 A: max. 1 x 2,5 mm² flexible - 32 A: max. 1 x 6 mm² flexible
• Appliance inlets:
16 A: max. 1 x 2.5 mm² rigid - 32 A: max. 1 x 6 mm² rigid
IP 66/67 according to IEC 60529 and EN 60529
IK 09 according to IEC 62262 and EN 62262
Material: polyamide 6
Self-extinguishing: 850 °C (support of active parts) / 650 °C (plastic housing)
Temp. rating: - 25 °C to + 40 °C
Conform to IEC 60309-1 and IEC 60309-2

Dimensions

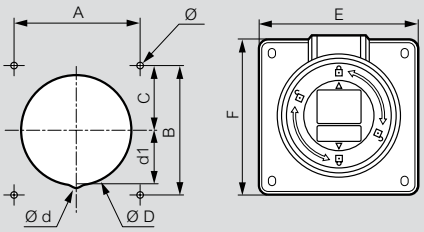
Surface mounting sockets

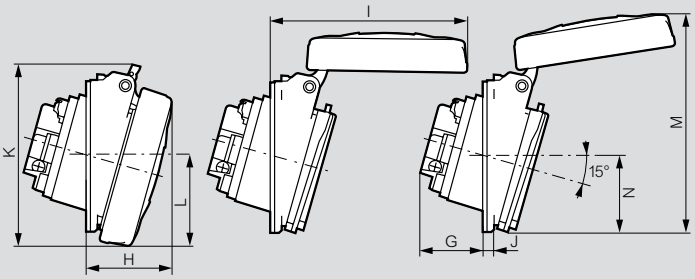




	A	B	C	D	E	F	G	H	I	J	K	L
LV 16 A												
2P+E	125	93	144	125	131	137	22	17	20	70	178	200
3P+E	125	93	144	133	131	145	22	17	20	70	194	215
3P+N+E	125	93	144	139	131	150	22	17	20	70	205	227
LV 32 A												
2P+E	150	113	171	155	156	170	28	22	26	90	224	250
3P+E												
3P+N+E	150	113	171	161	156	175	28	22	26	90	231	260

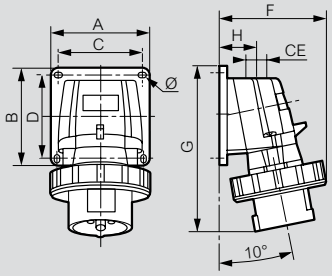
Panel mounting sockets





	Dimensions (mm)															
	A	B	C	ØD	Ød	d1	E	F	G	H	I	J	K	L	M	N	Ø
LV 16 A																	
2P+E	70	70	35	76.2	-	-	84	84	33.5	42	94	4.5	88	42.5	114	42	4.2
3P+E	70	70	35	76.2	-	-	84	84	35.5	43	101	4.5	94.5	46	118	42	4.2
3P+N+E	70	70	35	76.2	-	-	84	84	36.5	44	108.5	4.5	101	50	123	42.5	4.2
LV 32 A																	
2P+E/ 3P+E	70	70	35	76.2	-	-	84	94	41.5	50.5	118	4.5	105.5	54.5	129.5	47.5	4.2
3P+N+E	70	70	35	76.2	8	36	84	94	42.5	51.5	124.5	4.5	112	57.5	137	51	4.2

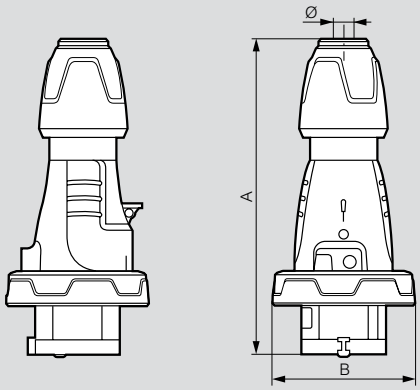
Appliance inlets



	Weight (kg)	A/B	C/D	F	G	H	CE	Ø
LV 16 A								
2P+E	0.188	84	72	87	126	34	M 20	4.3
3P+E	0.257	84	72	95	134	34	M 20	4.3
3P+N+E	0.297	84	72	100	141	34	M 20	4.3
LV 32 A								
2P+E	0.370	110	98	107	168	39	M 25	5.3
3P+E								
3P+N+E	0.413	110	98	113	168	39	M 25	5.3

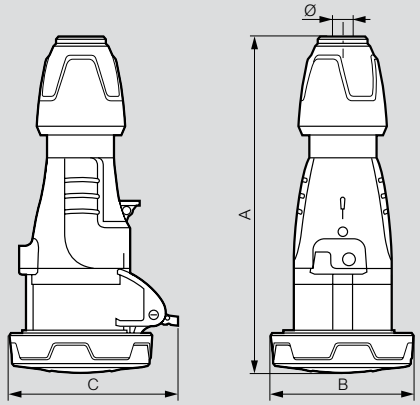
Dimensions

Straight plugs



	A	B	Ø
LV 16 A			
2P+E	146 to 157	72.5	6.5 to 14
3P+E	146 to 157	80.5	7.10 to 15.5
3P+N+E	163 to 176	89	8 to 20
LV 32 A			
2P+E	172 to 185	93	8 to 20
3P+E	172 to 185	93	8 to 20
3P+N+E	179 to 189	100	11.9 to 22.2

Mobile sockets



	A	B	C	Ø
LV 16 A				
2P+E	159 to 170	72.5	86	6.5 to 14
3P+E	159 to 170	80.5	93	7.1 to 15.5
3P+N+E	179 to 190	89	100	8 to 20
LV 32 A				
2P+E	187 to 200	93	104	8 to 20
3P+E	187 to 200	93	104	8 to 20
3P+N+E	192 to 205	100	110.5	11.9 to 22.2

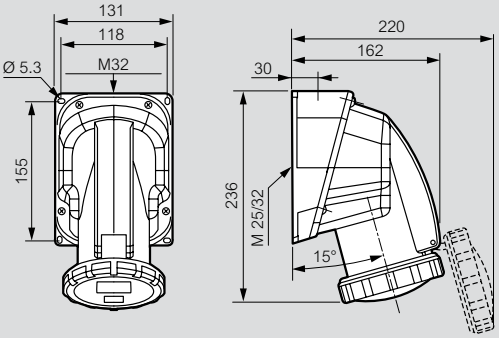
Characteristics

Terminal connection:
• Panel and surface mounting sockets
63 A: max. 1 x 25 mm² rigid - 125 A: max. 1 x 70 mm² rigid
• Appliance inlets:
63 A: max. 1 x 16 mm² rigid - 125 A: max. 1 x 50 mm² rigid
• Plugs and mobile sockets:
63 A: max. 1 x 16 mm² flexible - 125 A: max. 1 x 50 mm² flexible
IP 66/67 according to IEC 60529 and EN 60529
IK 09 according to IEC 62262 and EN 62262
Material: plastic
Self-extinguishing: 850 °C (support of active parts) / 650 °C (plastic housing)
Temp. rating: - 25 °C to + 40 °C. Conform to IEC 60309-1 and IEC 60309-2

Dimensions

Surface mounting sockets

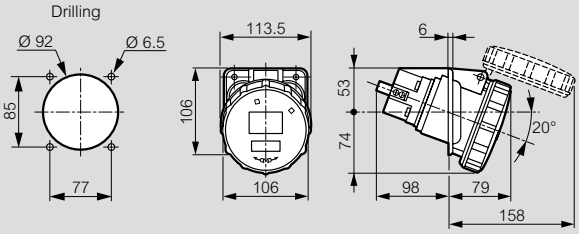
Cat.Nos 0 587 40/44/45



	Weight (kg)
3P+E	0.900
3P+N+E	0.950

Panel mounting sockets (inclined outlet)

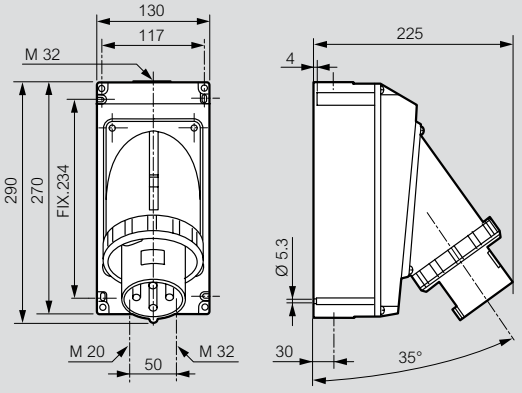
Cat.Nos 0 587 20/24/25



	Weight (kg)
3P+E	0.710
3P+N+E	0.770

Appliance inlets

Cat.Nos 0 587 30/34/35



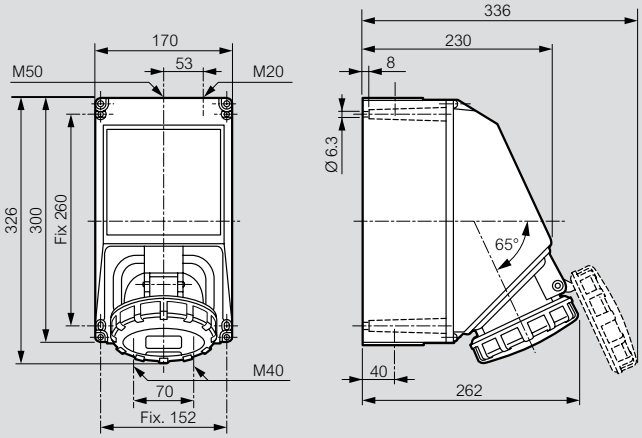
	Weight (kg)
3P+E	1.540
3P+N+E	1.610

P17 Tempra IP 66/67 - LV 125 A

Dimensions

Surface mounting sockets

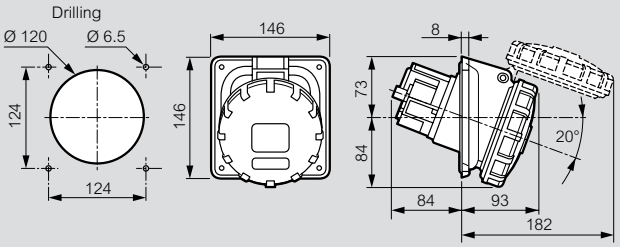
Cat.Nos 0 591 06/07



	Weight (kg)
3P+E	2.600
3P+N+E	2.730

Surface mounting sockets

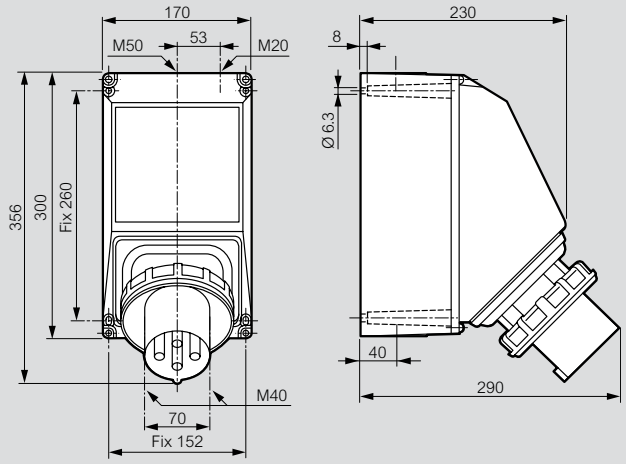
Cat.Nos 0 591 16/17



	Weight (kg)
3P+E	1.000
3P+N+E	1.200

Appliance inlets

Cat.Nos 0 591 46/47

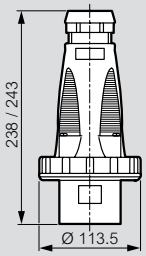


P17 Tempra IP 66/67 - LV 63 and 125 A

mobile products

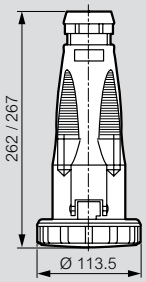
Dimensions LV 63 A

Straight plugs



	Weight (kg)
	Straight plugs
3P+E	0.570
3P+N+E	0.640

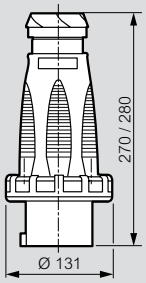
Mobile sockets



	Weight (kg)
	Mobile sockets
3P+E	0.780
3P+N+E	0.850

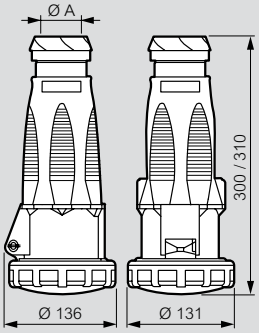
Dimensions LV 125 A

Straight plugs



	Ø
3P+E	26 to 43
3P+N+E	28.5 to 50

Mobile sockets



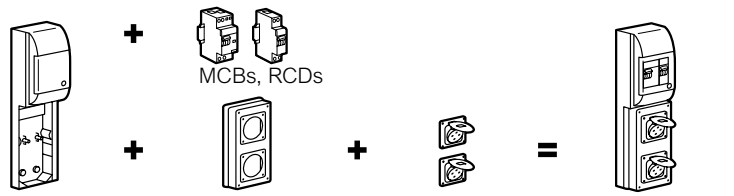
	A
3P+E	26 to 43
3P+N+E	28.5 to 50

P17 Tempra combined units to be composed

- IK 08 according to IEC 62262
- Self-extinguishing: 650 °C
- Max. IP 66

Bases and faceplates dimensions **p. 26**

Example of combined unit configuration



COMBINED UNITS HEIGHT 220 MM TO 441 MM

BASES FOR 220 x 125 MM FACEPLATES - MAX IP 66

Surface mounting box	Base up to 2 sockets 16 A	Base up to 4 sockets 16 A	Base up to 6 sockets 16 A
220 x 125 mm(4)	371 x 125 mm(4) Rail 5 modules 17.5 mm	441 x 265 mm(4) Rail 12 modules 17.5 mm	441 x 405 mm(4) Rail 18 modules 17.5 mm

Pack	Cat.No	Pack	Cat.No	Pack	Cat.No	Pack	Cat.No
2	0 577 10	1	0 589 38	1	0 577 05	1	0 577 06

220 X 125 MM FACEPLATES

1 socket 16 or 32 A	2 sockets 16 A	1 socket 63 A	Plain plate

Pack	Cat.No	Pack	Cat.No	Pack	Cat.No	Pack	Cat.No
5	0 577 12	5	0 577 13(1)	2	0 577 17	5	0 577 15

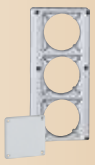
COMBINED UNITS HEIGHT 280 MM TO 501 MM

BASES FOR 280 x 125 MM FACEPLATES - MAX IP 66

Surface mounting box	Base up to 3 sockets 16 A	Base up to 6 sockets 16 A	Base up to 9 sockets 16 A
280 x 125 mm(4)	421 x 125 mm(4) Rail 5 modules 17.5 mm	501 x 265 mm(4) Rail 12 modules 17.5 mm	501 x 405 mm(4) Rail 18 modules 17.5 mm

Pack	Cat.No	Pack	Cat.No	Pack	Cat.No	Pack	Cat.No
3	0 577 11	1	0 577 20	1	0 577 03	1	0 577 04

280 x 125 MM FACEPLATE

2 sockets 16 or 32 A	2 interlocked switched sockets 16 A (p. 16)	1 socket 16 or 32 A and 1 socket 63 A	3 sockets 16 A(2)	Plain plate
				

Pack	Cat.No	Pack	Cat.No	Pack	Cat.No	Pack	Cat.No	Pack	Cat.No
4	0 577 18(1)	1	0 577 23	2	0 577 19(1)	4	0 577 14(1)	4	0 577 16

1: Supplied with blanking plate - 2: To be fixed horizontally except 16 A domestic pin sockets, vertically (IP 44 - connected) - 3: IP 54 cover closed - IP 44 connected
4: External dimensions: H x W - 5: Interlocked switched socket with small flange - 6: IP 55 - Interlocked switched socket with small flange

0 577 04 with emergency stop button, appliance inlet and interlocked switched sockets

0 577 20 with interlocked switched sockets

EXAMPLE OF SOCKETS

			IP 44		
ELV					
20/25 V~	16 A	2P	0 552 45		
	32 A	2P	0 552 95		
LV			**IP 44**	**IP 66-67**	
100/130 V~	16 A	2P+E	5 551 81	-	
200/250 V~	16 A	2P+E	5 551 84	5 553 84	
	32 A	2P+E	5 552 84	5 554 84	
	63 A	2P+E	-	0 587 20	
380/415 V~	16 A	3P+E	5 551 88	5 553 88	
		3P+N+E	5 551 89	5 553 89	
	32 A	3P+E	5 552 88	5 554 88	
		3P+N+E	5 552 89	5 554 89	
	63 A	3P+E	-	0 587 24	
		3P+N+E	-	0 587 25	

Possible combinations with bases for 220 x 125 mm faceplates

Cat.No	Nb of sockets	Intensity			Number of faceplates		
		16 A	16 A or 32 A	63 A	0 577 12	0 577 13	0 577 17
With box or base							
0 577 10 or 0 589 38	1 socket	-	1	-	1	-	-
		-	-	1	-	-	1
	2 sockets	2	-	-	-	1	-
0 577 05	2 sockets	-	2	-	2	-	-
		-	1	1	1	-	1
		-	-	2	-	-	2
	3 sockets	3	-	-	1	1	-
		2	1	-	1	1	-
		2	-	1	-	1	1
	4 sockets	4	-	-	-	2	-
0 577 06	3 sockets	-	3	-	3	-	-
		-	-	3	-	-	3
		-	1	2	1	-	2
		-	2	1	2	-	1
	4 sockets	2	1	1	1	1	1
		2	2	-	2	1	-
		2	-	2	-	1	2
	5 sockets	4	1	-	1	2	-
		4	-	1	-	2	1
	6 sockets	6	-	-	-	3	-

EXAMPLE OF SOCKETS

			IP 44		
ELV					
20/25 V~	16 A	2P	0 552 45		
	32 A	2P	0 552 95		
LV			**IP 44**	**IP 66-67**	
100/130 V~	16 A	2P+E	5 551 81	-	
200/250 V~	16 A	2P+E	5 551 84	5 553 84	
			0 573 00[5]	0 573 20[6]	
	32 A	2P+E	5 552 84	5 554 84	
	63 A	2P+E	-	0 587 20	
380/415 V~	16 A	3P+E	5 551 88	5 553 88	
			0 573 01[5]	0 573 21[6]	
		3P+N+E	5 551 89	5 553 89	
			0 573 02[5]	0 573 22[6]	
	32 A	3P+E	5 552 88	5 554 88	
		3P+N+E	5 552 89	5 554 89	
	63 A	3P+E	-	0 587 24	
		3P+N+E	-	0 587 25	

Possible combinations with bases for 280 x 125 mm faceplates

Cat.No	Nb of sockets	Intensity			Number of faceplates			
		16 A	16 A or 32 A	63 A	0 577 18	0 577 23	0 577 19	0 577 14
Avec boîtier ou embase								
0 577 11 or 0 577 20	2 sockets	-	2	-	1	-	-	-
		-	1	1	-	-	1	-
	2 interlocked sw. sockets	-	-	-	-	1	-	-
	3 sockets	3	-	-	-	-	-	1
0 577 03	4 sockets	-	4	-	2	-	-	-
		-	2	2	-	-	2	-
		-	3	1	1	-	1	-
	4 interlocked sw. sockets	-	-	-	-	2	-	-
	5 sockets	3	1	1	-	-	1	1
		3	2	-	1	-	-	1
	6 sockets	6	-	-	-	-	-	2
0 577 04	6 sockets	-	6	-	3	-	-	-
		-	3	3	-	-	3	-
		-	5	1	2	-	1	-
		-	4	2	1		2	-
	6 interlocked sw. sockets	-	-	-	-	3	-	-
	7 sockets	3	2	2	-	-	2	1
		3	4	-	2	-	-	1
		3	3	1	1	-	1	1
	8 sockets	6	1	1	-	-	1	2
		6	2	-	1	-	-	2
	9 sockets	9	-	-	-	-	-	3

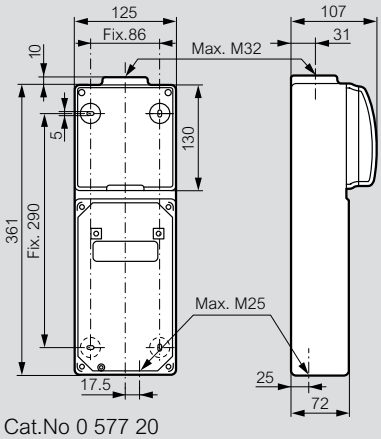
P17 Tempra combined units to be composed

Dimensions

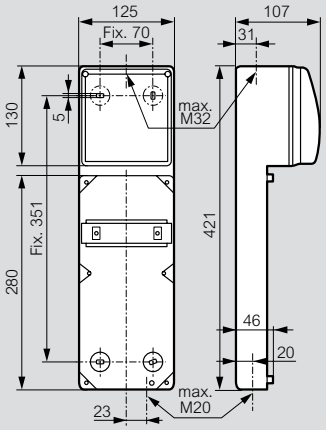
Cable glands are not supplied
Entries to drill

Bases

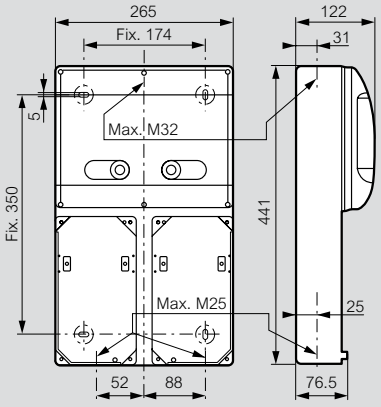
Cat.No 0 589 38



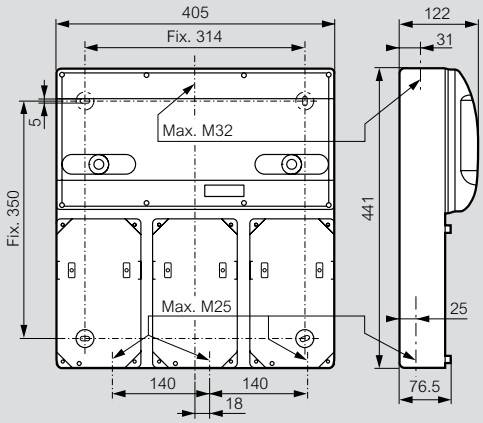
Cat.No 0 577 20



Cat.No 0 577 05



Cat.No 0 577 06



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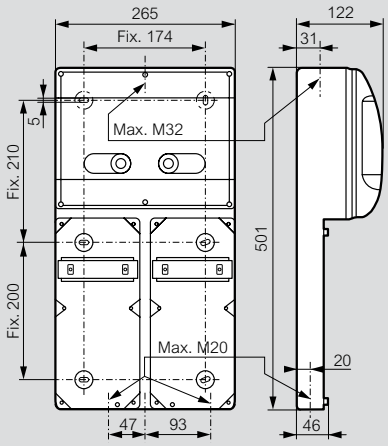
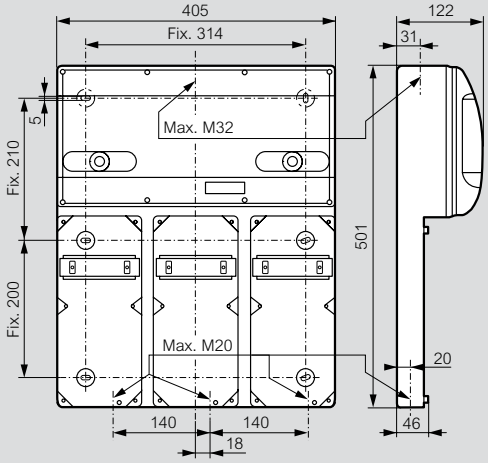
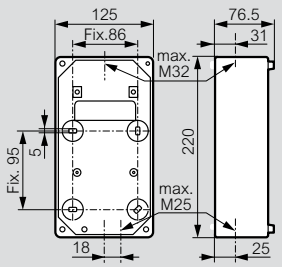


Cat.No 0 577 04



Surface mounting boxes

Cat.No 0 577 10



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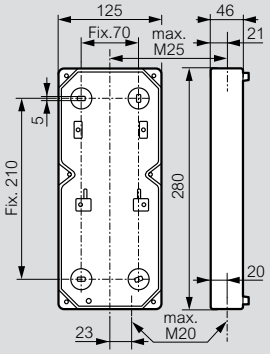


P17 Tempra combined units LV 16 to 63 A

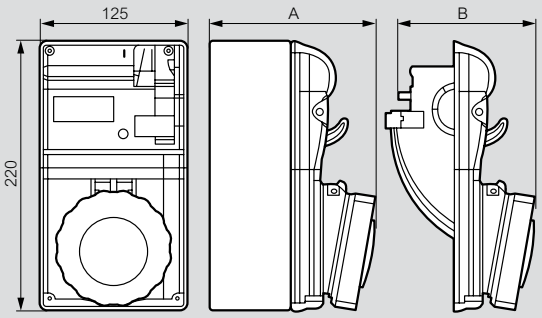
interlocked switched sockets

16-32 A			without rail				with empty Din rail			
• IP 44, IP 55, IP 66 according to IEC 60529 and EN 60529 • IK 08 according to IEC 62262 • Conform to IEC 60439-1 • Supplied without cable glands • Self-extinguishing: 650 °C			125 x 220 mm				125 x 280 mm			
			IP 44		IP 55		IP 44		IP 66	
			Pack	Cat.Nos	Pack	Cat.Nos	Pack	Cat.Nos	Pack	Cat.Nos
200 to 250 V~ 50/60 Hz	16 A	2P+E	1	0 566 01	1	0 566 21	1	0 566 41	1	0 566 61
	32 A	2P+E	1	0 566 09	1	0 566 29	1	0 566 49	1	0 566 69
380 to 415 V~ 50/60 Hz	16 A	3P+E	1	0 566 05	1	0 566 25	1	0 566 45	1	0 566 65
		3P+N+E	1	0 566 06	1	0 566 26	1	0 566 46	1	0 566 66
	32 A	3P+E	1	0 566 13	1	0 566 33	1	0 566 53	1	0 566 73
		3P+N+E	1	0 566 14	1	0 566 34	1	0 566 54	1	0 566 74

63 A			without rail		with empty Din rail	
• IP 66 according to IEC 60529 and EN 60529 • IK 08 according to IEC 62262 • Conform to IEC 60439-1 • Supplied without cable glands • Self-extinguishing: 650 °C			IP 66		IP 66	
			Pack	Cat.Nos	Pack	Cat.Nos
380 to 415 V~ 50/60 Hz	63 A	3P+E	1	0 572 98	1	0 589 18
		3P+N+E	1	0 589 10	1	0 572 99

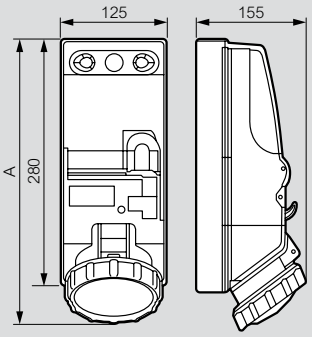
Dimensions

Without rail
LV 16/32 A



		IP 44 Cat.Nos	Dimensions (mm) A	Dimensions (mm) B	IP 55 Cat.Nos	Dimensions (mm) A	Dimensions (mm) B
LV 16 A	2P+E	0 566 01	127	122	0 566 21	133	128
	3P+E	0 566 05	129	124	0 566 25	134	129
	3P+N+E	0 566 06	130	125	0 566 26	135	130
LV 32 A	2P+E	0 566 09	138	133	0 566 29	143	138
	3P+E	0 566 13	138	133	0 566 33	143	138
	3P+N+E	0 566 14	139	134	0 566 34	144	139

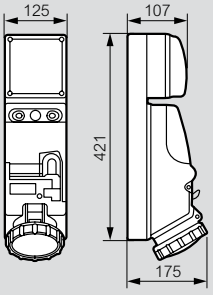
With empty Din rail
LV 16/32 A



	A	
	IP 44	IP 66
LV 16 A	290	300
LV 32 A	295	310

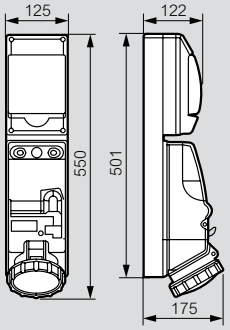
LV 63 A

Cat.Nos 0 572 98 and 0 589 10



LV 63 A

Cat.Nos 0 589 18 and 0 572 99



P17 worksites combined units

individual units

0 589 44

0 589 45

0 589 43

Technical characteristics **p. 337**

Conforming to standard IEC 60439-4 and the decree of 14 November 1988 on the protection of workers, and to the recommendations of the OPPBTP (French professional organisation for accident prevention in building and civil engineering)
Provide temporary power supplies on building sites and for events
RAL 7016 and RAL 7035

Pack	Cat.Nos	Individual units
		Worksite combined units with integrated handle (can be fitted with security chain), to provide a power supply for portable electric tools Material: body ABS - window polycarbonate Operating temperature: - 25 °C to + 40 °C Easy to hang on a wall without having to open the unit (fixed via the outside of the unit) Replaceable window (spare part on request) Notches on each side for winding up the cord The cord can be locked for transport Dimensions (H x W): 506.5 x 181.5 mm
1	0 589 44	**With 6 sockets** IP 54 - body IK 10 Composition: - 6 x 2P+E 16 A, German standard sockets (Cat.No 0 576 75) - Protection by 30 mA 2-pole RCBO With 3 m cord Fitted with a domestic pin plug
1	0 589 45	**With 3 sockets** IP 55 - body IK 10 Composition : - 2 x 2P+E 16 A, German standard sockets with transparent cover - 1 x 3P+E 16 A, 380/415 V~, IP 67 panel mounting socket - Protection by 30 mA 4-pole RCBO To be equipped with 3G 2.5 mm² cable, connected as follows: - protective conductor on terminal block - power supply on the terminals of the RCBO
1	0 589 43	**To be equipped** IP 44 - body IK 10 Can take up to 3 x 16 A max. sockets : - P17 domestic pin configuration panel mounting sockets Cat.Nos 0 576 72 or 0 576 76 - P17 panel mounting sockets, LV 16 A IEC, with standard fixing centres (horizontal fitting) - Plate with Osmoz emergency stop button Cat.No 0 577 40 or emergency break button Cat.No 0 577 45 - 1 adaptor Cat.No 0 539 48 to be equipped with Mosaic or Arteor wiring devices (except special surface mounting type) Supplied with 2 blanking plates Equipped with: - IP 2X terminal block for connecting the protective conductor - A rail taking up to 6 x 17.5 mm DIN modules

P17 worksites combined units

floor cabinet

0 589 57

0 577 43 - example of installation with floor cabinet

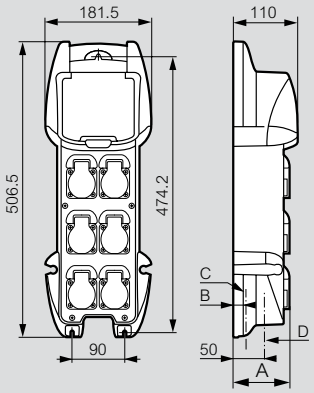
Technical characteristics **p. 337**

Conforming to standard IEC 60439-4 and the decree of 14 November 1988 on the protection of workers, and to the recommendations of the OPPBTP (French professional organisation for accident prevention in building and civil engineering)
Provide temporary power supplies on building sites and for events
RAL 7016 and RAL 7035

Pack	Cat.Nos	Floor cabinet
		IP 44 - enclosure IK 09 Material: body ABS - window polycarbonate Operating temperature: - 25 °C to + 40 °C Esay to hook on a wall without having to open the unit (fixed via the outside of the unit) or on frame Cat.No 0 577 43 Replaceable window (spare part on request) Pre-marked for optional addition of: - 2 cable entries (max. M32) on the bottom and 1 on each side of the unit - 1 additional P17 domestic pin socket on each side of the unit Notches on each side for winding up the cable (not supplied), can be wound round the frame Option of adding a padlock Cat.No 0 044 43 to lock the window Dimensions (H x W): 479.6 x 431 mm
1	0 589 57	**To be equipped** 40 A - 400 VA max. Can take up to 6 sockets: - P17 panel mounting domestic pin sockets Cat.Nos 0 576 72 or 0 576 76 - P17 panel mounting sockets,LV 16/32 A IEC, with standard fixing centres - Plate with Osmoz emergency stop button Cat.No 0 577 40 or emergency break button Cat.No 0 577 45 - 1 adaptor Cat.No 0 539 48 to be equipped with Mosaic or Arteor wiring devices (except special surface mounting type) Equipped with: - IP 2X terminal block for connecting the protective conductor - 9 modular blanking plates - 3 blanking plates for sockets
1	0 577 43	**Foldable frame** For floor cabinets The unit can be fixed on the frame without opening the unit The unit equipped with its frame can be wall or floor-mounted Can be folded for easy transport and storage

Dimensions of individual units

Cat.Nos 0 589 43/44/45

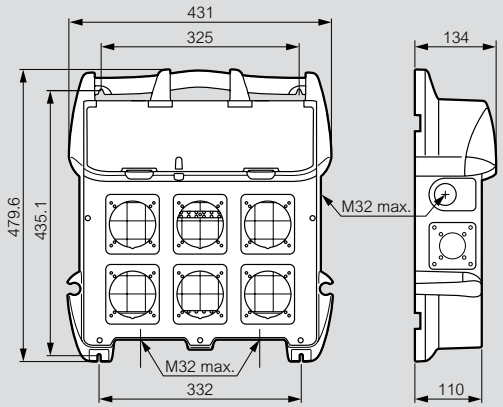


C: Pre-cut cable entry for cable gland (see below table, column C)
D: Cable enty to be drilled (see below table, column D)

Cat.Nos	A	B	C	D
0 589 43	-	20	M20	max M20
0 589 44	96	20	M20	max M20
0 589 45	125	22.5	M25	-

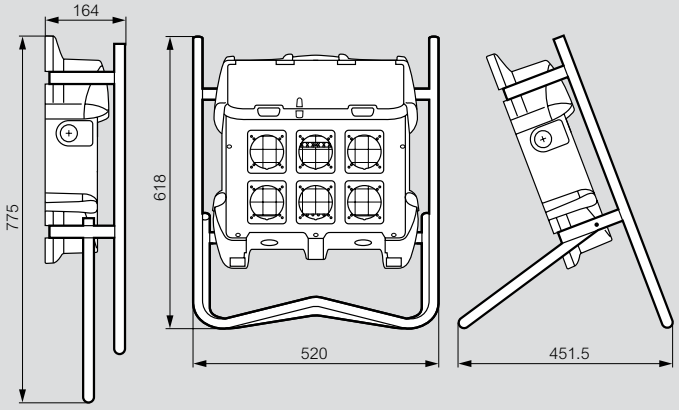
Dimensions of floor cabinets

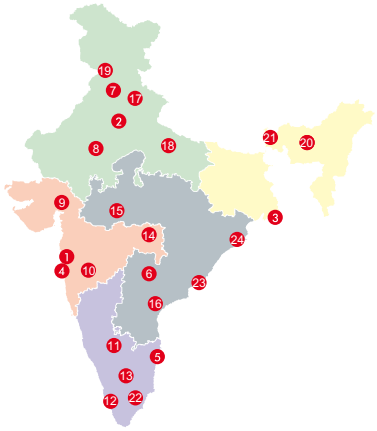
Cat.No 0 589 57



Mounting on foldable frame

Cat.Nos 0 577 43 and 0 589 57





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Fax: 0484 2801921, 2802921

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