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# DPX³ 630 S10 electronic (display version) circuit breakers

**Cat.Nos : from 4 228 20 to 4 228 99**

**CONTENT** **Page**



## 1. USE

DPX³ 630 are moulded case MCCBs for switching control isolation and protection of low voltage electrical lines.
Electronic DPX³ 630 circuit breakers equipped with S10 protection units are fully configurable. They can be used to adapt settings as closely as possible to the requirements of your installation, either by enabling/disabling the different protection devices (tripping time delays and currents), or by altering the different trip thresholds.
The tripping curve is therefore fully customised to suit the real-life conditions of each project. A single circuit breaker can operate according to different tripping curves depending on the settings
Thanks to the internal battery, the protection unit can be set even if the circuit breaker is de-energised. Parameters and fault histories can be consulted directly via the LCD screens.

DPX³ 630 electronic circuit breaker is able to cover extended ranges in terms of breaking capacities and rated currents, make protection suitable for different levels of power involved in installations.
DPX³ provides easy assembly procedures during the phase of installation and mounting of accessories, suitable for professional use.
They can be mounted on plate vertically, horizontally, and in supply invertor type in cabinets and enclosures.

## 2. RANGE

### 2.1 DPX³ 630 S10

| Icu | 36 kA | | 50 kA | |
|---|---|---|---|---|
| In (A) | 3P | 4P | 3P | 4P |
| 250 | 4 228 20 | 4 228 25 | 4 228 30 | 4 228 35 |
| 320 | 4 228 21 | 4 228 26 | 4 228 31 | 4 228 36 |
| 400 | 4 228 22 | 4 228 27 | 4 228 32 | 4 228 37 |
| 500 | 4 228 23 | 4 228 28 | 4 228 33 | 4 228 38 |
| 630 | 4 228 24 | 4 228 29 | 4 228 34 | 4 228 39 |

| Icu | 70 kA | | 100 kA | |
|---|---|---|---|---|
| In (A) | 3P | 4P | 3P | 4P |
| 250 | 4 228 40 | 4 228 45 | 4 228 50 | 4 228 55 |
| 320 | 4 228 41 | 4 228 46 | 4 228 51 | 4 228 56 |
| 400 | 4 228 42 | 4 228 47 | 4 228 52 | 4 228 57 |
| 500 | 4 228 43 | 4 228 48 | 4 228 53 | 4 228 58 |
| 630 | 4 228 44 | 4 228 49 | 4 228 54 | 4 228 59 |

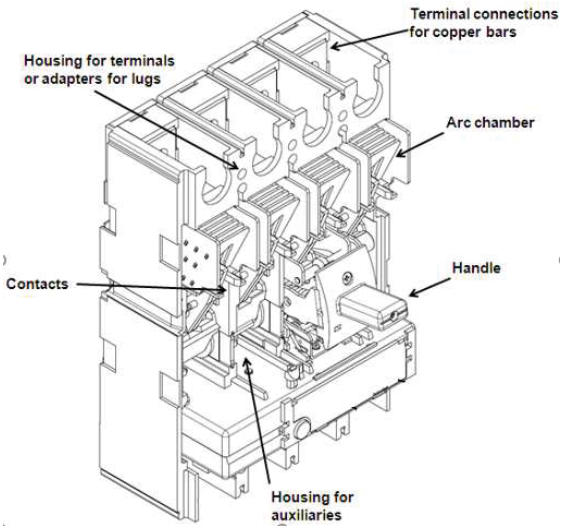
### 2.2 DPX³ 630 S10 with measurement function

| Icu | 36 kA | | 50 kA | |
|---|---|---|---|---|
| In (A) | 3P | 4P | 3P | 4P |
| 250 | 4 228 60 | 4 228 65 | 4 228 70 | 4 228 75 |
| 320 | 4 228 61 | 4 228 66 | 4 228 71 | 4 228 76 |
| 400 | 4 228 62 | 4 228 67 | 4 228 72 | 4 228 77 |
| 500 | 4 228 63 | 4 228 68 | 4 228 73 | 4 228 78 |
| 630 | 4 228 64 | 4 228 69 | 4 228 74 | 4 228 79 |

| Icu | 70 kA | | 100 kA | |
|---|---|---|---|---|
| In (A) | 3P | 4P | 3P | 4P |
| 250 | 4 228 80 | 4 228 85 | 4 228 90 | 4 228 95 |
| 320 | 4 228 81 | 4 228 86 | 4 228 91 | 4 228 96 |
| 400 | 4 228 82 | 4 228 87 | 4 228 92 | 4 228 97 |
| 500 | 4 228 83 | 4 228 88 | 4 228 93 | 4 228 98 |
| 630 | 4 228 84 | 4 228 89 | 4 228 94 | 4 228 99 |

### 2.3 Composition

DPX³ 630 S10 are supplied with:
- fixing screws (4 for 3P and 4P)
- screws for connections (6 for 3P and 8 for 4P)
- phase insulators (2 for 3P and 3 for 4P)



## 3. TECHNICAL CHARACTERISTICS

### ■ 3.1 Electrical characteristics

| | |
|---|---|
| Rated current | 250 A, 320 A, 400 A, 500 A, 630 A |
| Poles | 3P - 4 P |
| Pole pitch | 42 mm |
| Rated insulation voltage at 50/60Hz (Ui) | 800 V |
| Rated operating voltage (50/60Hz) (Ue) | 690 V |
| Rated impulse withstand current (Uimp) | 8 kV |
| Rated frequency | 50 - 60 Hz |
| Electrical endurance at In (cycles) | 4000 |
| Electrical endurance at 0.5 In (cycles) | 8000 |
| Reverse feed | Yes |

The maximum temperature allowed on power terminals is 125°C (absolute).

**Breaking capacity (3P and 4P)**

| | Breaking capacity (kA) & Ics | | | | |
|---|---|---|---|---|---|
| | Ue | Icu | | | |
| | | 36kA (F) | 50kA (N) | 70kA (H) | 100kA (L) |
| IEC 60947-2 | 220/240 V~ | 70 | 100 | 105 | 150 |
| | 380/415 V~ | 36 | 50 | 70 | 100 |
| | 440/460 V~ | 30 | 40 | 60 | 70 |
| | 480/500 V~ | 25 | 30 | 40 | 50 |
| | 480/550 V~ | 20 | 22 | 25 | 28 |
| | 600 V~ | 20 | 22 | 25 | 28 |
| | 690 V~ | 14 | 18 | 20 | 22 |
| | Ics(% Icu) | 100 | 100 | 100 | 70 |
| | Rated making capacity under short circuit Icm | | | | |
| | Icm (kA) at 415 V | 76.5 | 105 | 154 | 220 |

**Rated current (In) at 40°C / 50°C**

| Phases limit trip current | | | | |
|---|---|---|---|---|
| | Thermal (Ir) | | Magnetic (Ii) | |
| **In (A)** | 0.2 x In | 1 x In | 1.5 x Ir | 10 x Ir |
| **250** | 50 | 250 | 375 | 2500 |
| **320** | 64 | 320 | 480 | 3200 |
| **400** | 80 | 400 | 600 | 4000 |
| **500** | 100 | 500 | 750 | 5000 |
| **630** | 126 | 630 | 945 | 6300 |

* For neutral adjustment, please consider the values ratios 100% on set currents.

### ■ 3.2 Mechanical characteristics

Mechanical endurance (cycles): 20000
Mechanical endurance with motor control (cycles): 10000
Utilization category: B (In ≤ 400 A); A (In ≥ 500 A)
Suitable for isolation: Yes

**Load operations**

| | Intensities | |
|---|---|---|
| **Force on handle** | **In ≤ 400 A** | **In ≥ 500 A** |
| **Opening operation (N)** | 80 | 130 |
| **Closing operation (N)** | 180 | 210 |
| **Restore operation (N)** | 145 | 200 |

### ■ 3.3 Climatic characteristics

Operating temperature: -25 to +70 °C

### ■ 3.4 Electrodynamic forces

The table below shows an indication of suggested distances to keep between the breaker and the first fixing point of the conductor and bars in order to reduce the effects of the electrodynamic stresses that may be created during a short circuit. In the realization of anchorage system it is recommend the use of isolators suitable for the type of conductor used and the operating voltage.

| Icc (kA) | Maximum Distance (mm) |
|---|---|
| 36 | 350 |
| 50 | 300 |
| 70 | 250 |
| 100 | 200 |

According to conductor type and bar system (except Legrand bar kits), the choice of the distance to keep is to be calibrated by the installer. Also installer must take into account the weight of the conductors so that this does not affect the electrical junction between the conductor itself and the connection point.

**Power losses per pole under In (W)**

| In (A) | 250 | | 320 | | 400 | | 500 | | 630 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Ph | N | Ph | N | Ph | N | Ph | N | Ph | N |
| **Cage terminals** | 7.5 | 7.5 | 12.3 | 12.3 | 19.2 | 19.2 | 22.1 | 22.1 | 35.0 | 35.0 |
| **Lugs** | 7.5 | 7.5 | 12.3 | 12.3 | 19.2 | 19.2 | 22.1 | 22.1 | 35.0 | 35.0 |
| **External lugs** | 8.2 | 8.2 | 13.5 | 13.5 | 21.1 | 21.1 | 25.1 | 25.1 | 39.8 | 39.8 |
| **Spreaders** | 9.0 | 9.0 | 14.7 | 14.7 | 22.9 | 22.9 | 26.7 | 26.7 | 42.3 | 42.3 |
| **Rear terminals** | 8.7 | 8.7 | 14.2 | 14.2 | 22.3 | 22.3 | 26.9 | 26.9 | 42.7 | 42.7 |
| **Plug-in version** | 15.0 | 15.0 | 24.7 | 24.7 | 38.5 | 38.5 | 52.3 | 52.3 | 83.0 | 83.0 |
| **Circuit breaker + RCD** | 10.6 | 10.6 | 17.4 | 17.4 | 27.2 | 27.2 | 34.6 | 34.6 | 54.9 | 54.9 |

Note: power loss in the table above are referred and measured as described in the standard IEC 60947-2 (Annex G) for circuit-breakers. Values in the table are referred to a single phase.

### ■ 3.5 Electonic protection S10 characteristics

| | |
|---|---|
| Type of protection: | Electronic (with display) |
| Thermal type protection: | Adjustable (Mem On/Off) |
| Ability to enable thermal protection: | On/Off |
| Magnetic type protection: | Adjustable |
| Ability to enable magnetic protection: | On/Off |
| Fixed instantaneous override | Isf = 5 kA |
| Earth leakage trip type: | A - External module |
| Earth leakage trip IΔn [A] | 0,03 - 0,3 - 1 - 3 |
| Earth leakage trip tΔ [s]: | 0 - 0,3 - 1 - 3 |

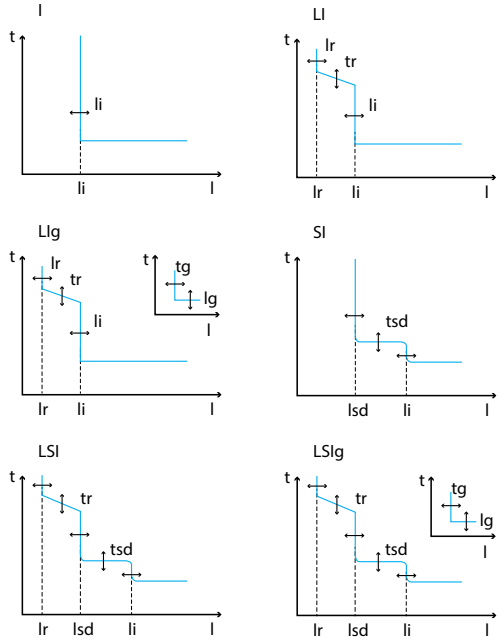
## 3. TECHNICAL CHARACTERISTICS (*continued*)

### ■ 3.5 Electronic protection S10 characteristics *(continued)*

Electronic DPX³ circuit breakers equipped with S10 protection units are fully configurable. They can be used to adapt settings as closely as possible to the requirements of your installation, either by enabling/disabling the different protection devices (tripping time delays and currents), or by altering the different trip thresholds. The tripping curve is therefore fully customised to suit the real-life conditions of each project.

Thanks to the internal battery, the protection unit can be set even if the circuit breaker is de-energised. Parameters and fault histories can be consulted directly via the LCD screens.

A single circuit breaker can operate according to different tripping curves depending on the settings, as explained in the following images:




Ir Long time protection against overloads
tr Long time protection delay
Isd Short time protection against short circuits
tsd Short time protection delay
Ii Instantaneous protection against high-intensity short- circuits
Ig Earth fault current
tg Earth fault current protection delay
IN Neutral protection

See relative instruction sheet for details.

**Settings on S10 electronic protection**

There are 2 options for configuring setting: locally on the circuit breaker or on a PC, smartphone or tablet:

| Settings | Locally on the device | By software or app |
|---|---|---|
| **Ir** | 0.2 to 1 x In, in steps of 1 A | 0.2 to 1 x In - OFF, in steps of 1 A |
| **tr** | DPX³ 630: 3, 5, 10, 15, 20, 25, 30s. @6Ir | DPX³ 630: from 40 ms to 30s with steps of 40ms @6Ir |
| **Isd** | 1.5 to 3 x Ir , in steps of 0.5 x Ir<br>3 to 10 x Ir , in steps of Ir | 1.5 x Ir to 10 x In- OFF, in steps of 1 A* |
| **tsd (t=k, I²t=k @12Ir)** | 40 to 480ms (7 steps) | 40 to 480ms, in steps of 40ms |
| **Ii (t=k)** | OFF | 2 to 15 x In - OFF, in steps of 1 A** |
| **Ig** | 0.2 to 1 x In - OFF, in steps of 0.1 x In | 0.2 to 1 x In - OFF, in steps of 0.1 x In |
| **tg (t=k, I²t=k @12Ir)** | 80 to 480ms (6 steps) and 1s | 80 to 480ms (6 steps) and 1s |
| **Neutral protection for 4P (%Ith of phase pole)** | 0FF-50-100-150-200<br>50% not possible if Ir < 040% In or Ir = OFF;<br>150% not possible if Ir > 66,7% In or Ir = OFF;<br>200% not possible if Ir > 50% In or Ir = OFF; | |

* Isd = xIn if Ir=OFF (see instruction sheet for detail).
**Fixed delay 40ms.

There are several ways to configure the various settings: directly on the protection units (using the +/- and >/< buttons on the front face), on a PC with Power Control Station software installed, or on a tablet or smartphone via the EnerUp+ Project app.

Power Control Station software for PC and the EnerUp+ Project app for smartphone/tablet can be used to exchange data with the DPX³ S10 protection unit.

The software and app can be used to:
- monitor the status of the circuit breaker
- display information (firmware and device versions, alarms, measurements, parameters, fault log, settings)
- configure the different protection devices *
- update the protection unit firmware **
- generate reports based on the data stored and read by the protection unit *
- run diagnostic tests
- upload data linked to your profile and installation to the Cloud (with the EnerUp + Project app only)

* With the Power Control Station software only
** For Legrand technical support via the Power Control Station software only

Together with above protections, activated in case of electric faults, the trip unit also integrates self-protection for:
- Over temperature: in case the internal temperature of protection unit exceed 95°C;
- Auto diagnostics: in case embedded watchdog circuit detects internal malfunctions, which could compromise the correct working of microcontroller.

With electronic DPX³ 630 S10 with integrated measurement, it is very easy to monitor the parameters and consumption of the different circuits in the installation.

Electronic DPX³ circuit breakers equipped with S10 protection units with integrated measurement can be used to display the current, voltage, active and reactive power, frequency and power factor values, as well as the energy consumption.

Alarms can be programmed on some parameters, including minimum and maximum voltage, phase unbalance, and minimum and maximum frequency.

The measured values are displayed directly on the LCD screen on the front of the equipment.
The measurement data can also be displayed on a PC equipped with Power Control Station software or remotely on a smartphone or tablet via the EnerUp+ Project app. It is possible to modify energy and power direction (top / bottom).

In the electronic unit protection, an energy metering central unit is integrated. The possible parameters that can be measured are listed in the following table:

## 3. TECHNICAL CHARACTERISTICS *(continued)*

### ■ 3.5 Electronic protection S10 characteristics *(continued)*

**Settings on S10 electronic protection *(continued)***

| Measured | Unit | Description |
|---|---|---|
| I1 | A | I1 realtime measured value |
| I2 | A | I2 realtime measured value |
| I3 | A | I3 realtime measured value |
| IN (4P) | A | IN realtime measured value |
| IG | A | IG realtime measured value |
| U12 U23 U31 (3P) | V | Phase to phase voltage |
| V1N V2N V3N (4P) | V | Phase voltage |
| Freq. | Hz | Frequency |
| PTot | kW | Active power |
| QTot | kvar | Reactive power |
| PF | | Power factor |
| Ep ↓ | kWh | Incoming active energy |
| Ep ↑ | kWh | Outgoing active energy |
| Eq ↓ | kvar h | Incoming reactive energy |
| Eq↑ | kvar h | Outgoing reactive energy |
| THDU12/THDU23/THDU31 (3P) | % | Chained Voltage THD |
| THDV1N/THDV2N/THDV3N (4P) | % | Voltage THD |
| THDI1/THDI2/THDI3/THDIN | % | Current THD |
| MEM | A - °C | Cause of the last intervention and its value |

**Function performance class according to IEC 61557-12**

| Function symbol | Performance class | Measurement range | | | | | Other complementary characteristics | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DPX³ 630 A | | | | | Imax PMD | | | | |
| In | | 250 A | 320 A | 400 A | 500 A | 630 A | 250 A | 320 A | 400 A | 500 A | 630 A |
| P | 2 | 0.3kW | 0.3kW | 0.3kW | 0.3kW | 0.3kW | 300 A | 380 A | 480 A | 600 A | 750 A |
| | | 360kW | 460kW | 580kW | 720kW | 900kW | Ib = 250 A, Un = 400 V, fn = 50Hz | | | | |
| QV | 2 | 0.6kv Ar | 0.6kv Ar | 0.6kv Ar | 0.6kv Ar | 0.6kv Ar | 300 A | 380 A | 480 A | 600 A | 750 A |
| | | 360kv Ar | 460kv Ar | 580kv Ar | 720kv Ar | 900kv Ar | Ib = 250 A, Un = 400 V, fn = 50Hz | | | | |
| E A | 2 | 0…999 GWh | | | | | 300 A | 380 A | 480 A | 600 A | 750 A |
| | | | | | | | Ib = 250 A, Un = 400 V, fn = 50 Hz | | | | |
| ErV | 2 | 0…999 GWh | | | | | 300 A | 380 A | 480 A | 600 A | 750 A |
| | | | | | | | Ib = 250 A, Un = 400 V, fn = 50 Hz | | | | |
| f | 0.02 | 50…60 Hz | | | | | - | | | | |
| I | 2 | 12.5 A | 12.5 A | 12.5 A | 12.5 A | 12.5 A | 300 A | 380 A | 480 A | 600 A | 750 A |
| | | 300 A | 380 A | 480 A | 600 A | 750 A | Ib = 250 A, Un = 400 V, fn = 50 Hz | | | | |
| $I_n$ | 2 | 12.5 A | 12.5 A | 12.5 A | 12.5 A | 12.5 A | 300 A | 380 A | 480 A | 600 A | 750 A |
| | | 300 A | 380 A | 480 A | 600 A | 750 A | Ib = 250 A, Un = 400 V, fn = 50 Hz | | | | |
| U(3P) V (4P) | 0.05 | 88…690V | | | | | - | | | | |
| PF A | 0.05 | - | | | | | 300 A | 380 A | 480 A | 600 A | 750 A |
| | | | | | | | Ib = 250 A, Un = 400 V, fn = 50Hz | | | | |
| THDu (3P) THD V (4P) | 5 | 110…690V | | | | | - | | | | |

## 3. TECHNICAL CHARACTERISTICS *(continued)*

### ■ 3.5 Electonic protection S10 characteristics *(continued)*

| Function symbol | Performance class | Measurement range | | | | | Other complementary characteristics |
|---|---|---|---|---|---|---|---|
| | | DPX³ 630 A | | | | | Imax PMD |
| THDi | 5 | 250 A | 250 A | 250 A | 250 A | 250 A | - |
| | | 250 A | 320 A | 400 A | 500 A | 630 A | |

**General remarks on protection unit**

The protection units S10 are normally supplied by the internal current transformers (CTs).
When the current flowing through the circuit breaker is greater than 12% of the maximum power (20% of In for single phase load), the internal current supply ensures all operation of the protection unit, included LED status, display indications and diagnostic functions (e.g. trip test).

Display backlight and integrated measure (if available) are instead guaranteed starting from 20% of the maximum power (35% of In for single phase load), in absence of any other supply. In any case the external power supply is strongly recommended for the correct working of measurement, as well as RS485 communication.

To ensure the same performance when the load is less than 12% of the maximum power (20% of In for single phase load) to grant complete functions, one of the following optional power supplies can be used:

- external Auxiliary power supplier or, alternatively, Modbus (Cat.No 4 210 75) /EMS (Cat.No 4 238 90) communication interface.

| Device | Maximum power consumption [mA] |
|---|---|
| Interface EMS/DPX³ | 50 |
| DPX³ 630 S10 : ELE, ELE + RCD | 125 |
| DPX³ 630 S10 : ELE + PMD, ELE + PMD + RCD | 150 |

ELE : Electronic trip unit
RCD : Residual Current Device
PMD : Power Metering Device

- power supply temporarily connected to frontal USB socket, connected to a 5 V DC power bank, Dongle BLE or PC.

## 4. INSTALLATION RULES

### ■ 4.1 Deratings

**Temperature**
Rated current and his adjustment has to be considered relating to a rise or fall of ambient temperature and to a different version or installation conditions. The table below indicates the maximum long-time (LT) protection setting depending on the ambient temperature.

| | Temperature Ta (°C) | | |
|---|---|---|---|
| In (A) | Up to 50 | 60 | 70 |
| 250 | 250 | 250 | 250 |
| 320 | 320 | 320 | 320 |
| 400 | 400 | 360 | 340 |
| 500 | 500 | 500 | 500 |
| 630 | 630 | 567 | 536 |

For derating temperature with other configurations, see table A below.

**Climatic conditions:** according to IEC/EN 60947-1 Annex Q, Cat. F subject to temperature, humidity, vibration, shock and salt mist.

**Electromagnetic disturbances (EMC):** for DPX³ 630 circuit breakers, according to IEC/EN 60947-2 Annex F

**Pollution degree:** degree 3 for DPX³ 630 circuit breakers, according to IEC/EN 60947-2.

**Altitude**

| Altitude (m) | 2000 | 3000 | 4000 | 5000 |
|---|---|---|---|---|
| Ue (V) | 690 | 590 | 520 | 460 |
| In (A) (Ta = 40°C/50°C) | 1 x In | 0.98 x In | 0.93 x In | 0.9 x In |

## 4. INSTALLATION RULES (*continued*)

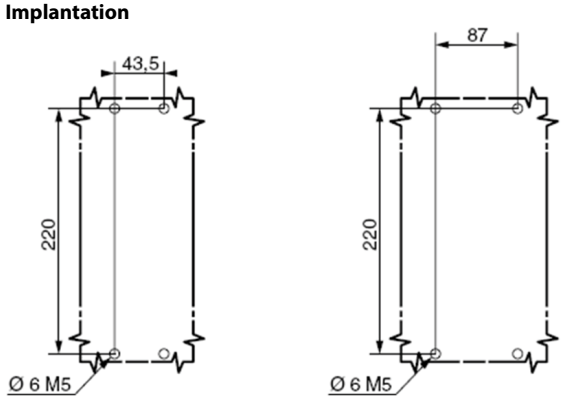
**Derating temperature and configurations**

| Ambient temperature | 30 °C | | 40 °C | | 50 °C | | 60 °C | | 70 °C | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Imax (A) | Ir / In | Imax (A) | Ir / In | Imax (A) | Ir / In | Imax (A) | Ir / In | Imax (A) | Ir / In |
| **DPX³ 630 fixed** | | | | | | | | | | |
| Cage terminals, flexible cable | 630 | 1 | 630 | 1 | 630 | 1 | 567 | 0.9 | 567 | 0.9 |
| Lugs, flexible cable | 630 | 1 | 630 | 1 | 630 | 1 | 567 | 0.9 | 536 | 0.85 |
| Lugs, rigid cable | 630 | 1 | 630 | 1 | 630 | 1 | 599 | 0.95 | 567 | 0.9 |
| Spreaders, flexible cable | 630 | 1 | 630 | 1 | 630 | 1 | 536 | 0.85 | 504 | 0.8 |
| Rear flat staggered terminals, flexible cable | 630 | 1 | 630 | 1 | 630 | 1 | 567 | 0.9 | 536 | 0.85 |
| **DPX³ 630 fixed + RCD** | | | | | | | | | | |
| Cage terminals, flexible cable + RCD | 630 | 1 | 630 | 1 | 536 | 0.85 | 504 | 0.9 | 473 | 0.75 |
| Lugs, flexible cable + RCD | 599 | 0.95 | 599 | 0.95 | 536 | 0.85 | 504 | 0.8 | 473 | 0.75 |
| Lugs, rigid cable + RCD | 630 | 1 | 599 | 0.95 | 536 | 0.85 | 504 | 0.8 | 473 | 0.75 |
| Staggered spreaders, flexible cable + RCD | 630 | 1 | 630 | 1 | 536 | 0.85 | 504 | 0.8 | 473 | 0.75 |
| Rear flat staggered terminals, flexible cable + RCD | 630 | 1 | 630 | 1 | 536 | 0.85 | 504 | 0.8 | 473 | 0.75 |
| **DPX³ 630 draw-out** | | | | | | | | | | |
| Cage terminals, flexible cable | 599 | 0.95 | 567 | 0.9 | 536 | 0.85 | 504 | 0.8 | 441 | 0.7 |
| Cage terminals, rigid cable | 599 | 0.95 | 567 | 0.9 | 536 | 0.85 | 504 | 0.8 | 441 | 0.7 |
| Rear flat terminals, flexible cable | 599 | 0.95 | 567 | 0.9 | 536 | 0.85 | 504 | 0.8 | 441 | 0.7 |
| Rear flat terminals, rigid cable | 599 | 0.95 | 567 | 0.9 | 536 | 0.85 | 504 | 0.8 | 441 | 0.7 |
| **DPX³ 630 draw-out + RCD** | | | | | | | | | | |
| Rear flat terminals, Cu bars, vertical | 599 | 0.95 | 567 | 0.9 | 536 | 0.85 | 504 | 0.8 | 441 | 0.7 |
| Cage terminals, flexible cable + RCD | 504 | 0.8 | 441 | 0.7 | 410 | 0.65 | 378 | 0.6 | 347 | 0.5 |
| Cage terminals, rigid cable + RCD | 504 | 0.8 | 441 | 0.7 | 410 | 0.65 | 378 | 0.6 | 347 | 0.5 |
| Rear flat terminals, flexible cable + RCD | 504 | 0.8 | 441 | 0.7 | 410 | 0.65 | 378 | 0.6 | 347 | 0.5 |
| Rear flat terminals, rigid cable + RCD | 504 | 0.8 | 441 | 0.7 | 410 | 0.65 | 378 | 0.6 | 347 | 0.5 |
| Rear flat terminals, Cu bars, vertical + RCD | 504 | 0.8 | 441 | 0.7 | 410 | 0.65 | 378 | 0.6 | 347 | 0.5 |

## 5. DIMENSIONS AND WEIGHT

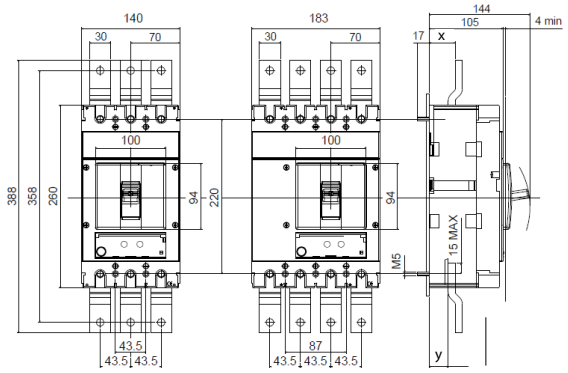
### ■ 5.1 Dimensions

**Implantation**



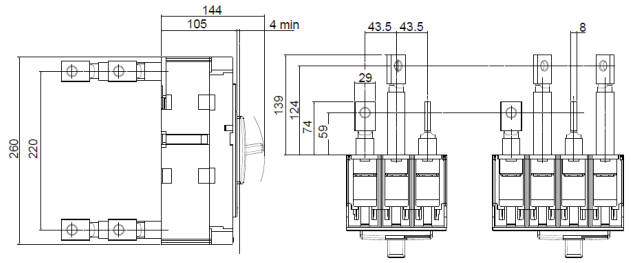

**Fixed version**

- with front terminals



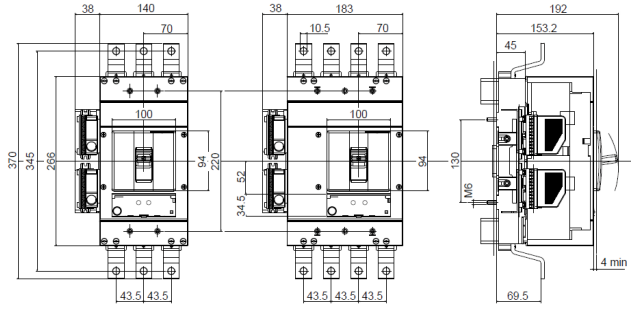

| | In<400 | In≥500A |
|---|---|---|
| x | 37 | 39 |
| y | 27 | 29 |

- with flat rear terminal

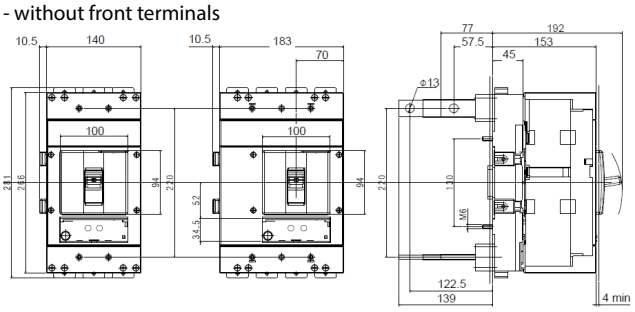



**Plug-in version**

- with cage terminals

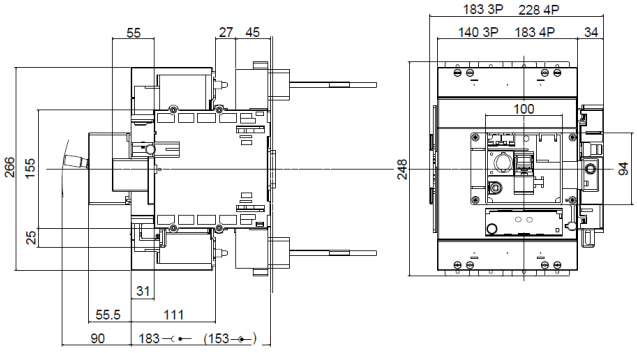



- without front terminals

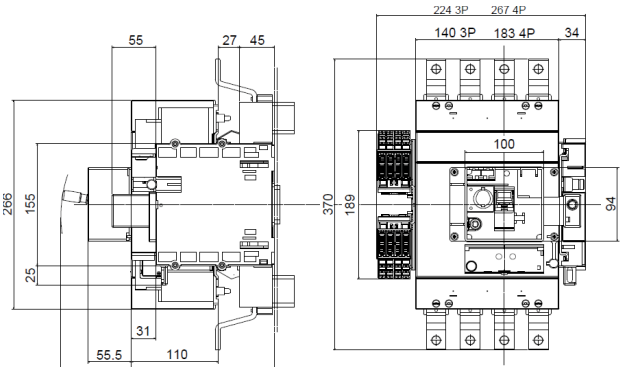



**Draw-out version**

- flat rear terminals

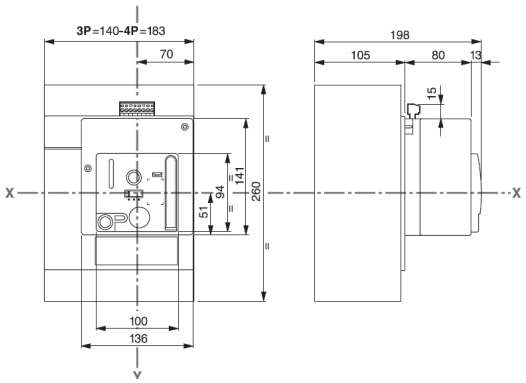



- with sliding auxiliary contacts




**Motor operator**

- for synchronized operations (energy storage type)

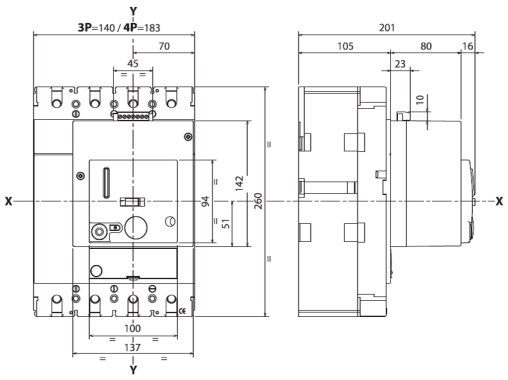


## 5. DIMENSIONS AND WEIGHT (*continued*)

### ■ 5.1 Dimensions*(continued)*

**Motor operator *(continued)***

- for general purpose operations (direct action type)




### ■ 5.2 Weights

| | 3P | | 4P | |
|---|---|---|---|---|
| **In** | **≤ 400 A** | **≥ 500 A** | **≤ 400 A** | **≥ 500 A** |
| **Circuit breaker (fixed version)** | 5.80 | 6.20 | 7.30 | 7.80 |
| **Plug-in (with front terminals)*** | 3.35 | 3.35 | 4.29 | 4.29 |
| **Plug-in (with rear terminals)*** | 3.55 | 3.55 | 4.79 | 4.79 |
| **Draw-out *** | 2.3 | 2.3 | 5.5 | 5.5 |

* to add to fixed version

## 6. CONNECTIONS

It is possible to use:
- busbars;
- lugs;
- spreaders;
- cage terminals;

to unsure the circuit breaker's connection.

For detailed mounting procedures, see instruction sheet.

## 7. EQUIPMENTS AND ACCESSORIES

### ■ 7.1 Earth leakage modules

There are two types of leakage modules:

**Standard**

| | | |
|---|---|---|
| In <= 400 A | 3P | Cat.No 0 260 60 |
| | 4P | Cat.No 0 260 61 |
| In = 500 A-630 A | 3P | Cat.No 0 260 64 |
| | 4P | Cat.No 0 260 65 |

**LED version**

| | | |
|---|---|---|
| In <= 400 A | 4P | Cat.No 0 260 63 |
| In = 500 A-630 A | 4P | Cat.No 0 260 67 |

| | **Standard** | **With LED** |
|---|---|---|
| Type | A - S | A - S |
| Uninterrupted nominal current Iu (A) | Up to 630 | Up to 630 |
| Rated isolated voltage Ui (V~) | 500 | 500 |
| Rated operating voltage Ue (V~) (50-60 Hz) | 500 | 500 |
| Operating voltage (V~) (50-60 Hz) | 230 to 500 | 110 to 500 |
| Nominal frequency (Hz) | 50 - 60 | 50 - 60 |
| Operating temperature (°C) | -25 to 70 | -25 to 70 |
| Trip | Electronic | Electronic |
| Earth leakage time adjustments (s) | 0 - 0.3 - 1 - 3 | 0 - 0.3 - 1 - 3 |
| Earth leakage breaking capacity Idm (% Icu) | 60 | 60 |
| Earth leakage protection adjustments IΔn (A) | 0.03 to 3 | 0.03 to 3 |
| Side-by-side mounting | No | No |
| Underneath mounting | Yes | Yes |
| 50% Earth fault detection contact Idn | No | Yes |
| Clip on rail DIN 35 | No | No |
| Dimensions (W x H x D) (mm) for 4P | 183 x 152 x 105 | 183 x 152 x 106 |

### ■ 7.2 Releases

The releases are suited for DPX³ 630 / DPX³ 1600.
There are 3 types of releases:

**Shunt releases with voltage**

| | |
|---|---|
| 24 V~/⎓ | Cat.No 4 222 39 |
| 48 V~/⎓ | Cat.No 4 222 40 |
| 110 to 130 V~/⎓ | Cat.No 4 222 41 |
| 220 to 250 V~/⎓ | Cat.No 4 222 42 |
| 380 to 440 V~/⎓ | Cat.No 4 222 43 |

| | |
|---|---|
| Rated voltage (Uc) | Both~/⎓ : 24 V / 48 V / 110 to 130 V / 220 to 250 V / 380 to 440 V |
| Voltage range (%Uc) | 70 to 110 |
| Intervention time (ms) | ≤ 50 |
| Power consumption (W/VA) | 300 |
| Minimum opening time (ms) | 50 |
| Insulation voltage (kV) | 2,5 |

**Undervoltage releases with voltage:**

| | |
|---|---|
| 24 V ⎓ | Cat.No 4 222 44 |
| 24 V~ | Cat.No 4 222 45 |
| 48 V ⎓ | Cat.No 4 222 46 |
| 110 to 125 V~ | Cat.No 4 222 47 |
| 220 to 240 V~ | Cat.No 4 222 48 |
| 380 to 415 V~ | Cat.No 4 222 49 |

## 7. EQUIPMENTS AND ACCESSORIES (*continued*)

### ■ 7.2 Releases *(continued)*

**Undervoltage releases with voltage *(continued)***

| | |
|---|---|
| Rated voltage (Uc) | ~ : 24 V / 110 to 125 V / 220 to 240 V<br>380 to 415 V<br>⎓ : 24 V / 48 V |
| Voltage range (%Uc) | 85 to 110 |
| Intervention time (ms) | ≤ 50 |
| Power consumption (W/VA) | 1.6 / 5 |
| Minimum opening time (ms) | 50 |
| Insulation voltage (kV) | 2.5 |

**Time-lag undervoltage releases (800 ms)**

Time-lag modules with voltage:

230 V~ Cat.No 0 261 90

400 V~ Cat.No 0 261 91

Universal Release Cat.No 4 226 23

(to be equipped with a time-lag module Cat.Nos 0 261 90/91)

### ■ 7.3 Auxiliary contacts Cat.No 4 210 11

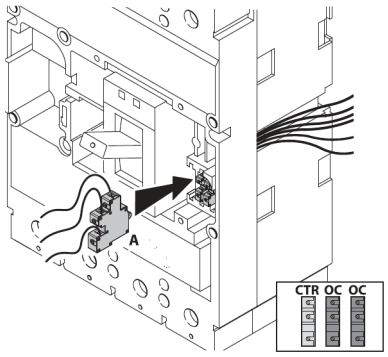
The auxiliary contacts are suited for DPX³ 630 / DPX³ 1600.
Changeover switch 3A – 250 V~.

It shows the state of the contacts or opens the DPX³/DPX³-I in case of a fault, using:
- an auxiliary contact (standard): OC
- a fault signal: CTR

| Rated voltage (Vn) | Intensity (A) |
|---|---|
| 24 V ⎓ | 5A |
| 48 V ⎓ | 1.7A |
| 110 V ⎓ | 0.5A |
| 230 V ⎓ | 0.25A |
| 110 V~ | 4A |
| 230/250 V~ | 3A |

**Configurations**

DPX³ 630 → 2 auxiliary contacts + 1 fault signal + 1 release




To get more information on auxiliary mounting procedures, please refer to product instruction sheet.

### ■ 7.4 Universal keylocks

These keylocks must be used for all the accessories that can be locked:
- rotary handle
- motor operator
- plug-in mechanism
- draw-out mechanism

For each of these, a specific accessory must be added in order to get the complete locking kits for the specific application:

- 1 lock + 1 flat key with random mapping Cat.No 4 238 80
- 1 lock + 1 flat key with fixed mapping (EL43525) Cat.No 4 238 81
- 1 lock + 1 flat key with fixed mapping (EL43363) Cat.No 4 238 82
- 1 lock + 1 star key with random mapping Cat.No 4 238 83

### ■ 7.5 Rotary handles

There are four types of suited rotary handles:

**Direct on DPX³ (with auxiliary option)**
- Standard (black) Cat.No 0 262 41
- For emergency use (red / yellow) Cat.No 4 222 38

adapting on standard handle

**Direct on DPX³ (no auxiliary option and door defeat function)**
- Standard (black) Cat.No 4 201 62
- For emergency use (red / yellow)

adapting on standard handle Cat.No 4 201 65

**Vary depth handle IP55 (with auxiliary option)**
- Standard (black) Cat.No 0 262 81
- For emergency use (red / yellow) Cat.No 0 262 82

adapting on standard handle

**Vary depth handle IP55 (no auxiliary option and door defeat function)**
- Standard (black) Cat.No 4 201 63
- For emergency use (red / yellow) Cat.No 4 201 76

adapting on standard handle

They can be locked with:

**Locking accessories (for vary depth handle with auxiliary option)**

Key lock accessory for vary depth rotary handle Cat.No 4 228 07

Which must be used with universal keylocks to get the complete locking kit for rotary handle.

**Locking accessories (for direct handle)**

Key barrel and flat key Cat.No 0 262 25

### ■ 7.6 Motor operators (front operated)

There are two types of motor operators:

**For general purpose operations (direct action type):**
- 230 V~ Cat.No 4 226 30

| Type | Direct drive | |
|---|---|---|
| Rated operating voltage (Uc)~ | 230 V~ 50-60 Hz | |
| Rated operating voltage (Uc) ⎓ | 230 V~ 50-60 Hz | |
| Voltage range (%Uc) | 85 to 110 | |
| Opening Closing Opening Closing | Opening | Closing |
| Pick-up consumption (W / VA) | 240 | 200 |
| Hold consumption (W / A) | 80 | 120 |
| Operating time / complete electric operation (ms) | 450 | 550 |
| Operating time / main contacts change position (ms) | 270 | 550 |
| Mechanical endurance (O-C cycles) In = 630A | 10000 | |
| Electrical endurance (O-C cycles) In = 630A | 4000 | |
| Cycles / minutes | Up to 8 automatic open/close operations in a row | |

## 7. EQUIPMENTS AND ACCESSORIES (*continued*)

### ■ 7.6 Motor operators (front operated) *(continued)*

**For synchronized operations (energy storage type):**

- 24 V~/⎓ Cat.No 0 261 40
- 48 V~/⎓ Cat.No 0 261 41
- 230 V~ Cat.No 0 261 42

| Type | Energy storage | |
|---|---|---|
| Rated operating voltage (Uc)~ | 24 - 48 - 230 | |
| Rated operating voltage (Uc) ⎓ | 24 - 48 - 230 | |
| Voltage range (%Uc) | 85 to 110 | |
| | Opening | Closing |
| Pick-up consumption (W / VA) | 300 | 300 |
| Hold consumption (W / A) | 300 | 300 |
| Operating time / complete electric operation (ms) | 2000 | 100 |
| Operating time / main contacts change position (ms) | - | - |
| Mechanical endurance (O-C cycles) In = 630A | - | |
| Electrical endurance (O-C cycles) In = 630A | 4000 | |
| Cycles / minutes | 10 | 4 |

**Locking accessories**

- Mechanical support Cat.No 4 228 06

Which must be used with universal keylocks to get the complete locking kit for motor operator.

### ■ 7.7 Mechanical accessories

There are many types of mechanical accessories:

- Padlock (for locking in "OPEN" position) Cat.No 0 262 40
- Insulated shields (phase insulators) Cat.No 0 262 30

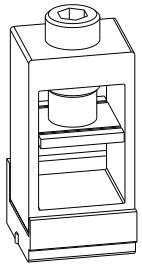
- Sealable terminal shields:
Set of 2 (for 3P) Cat.No 0 262 44
Set of 3 (for 4P) Cat.No 0 262 45

- Terminal covers to guarantee IP20:
Set of 2 (for 3P) Cat.No 0 262 34
Set of 3 (for 4P) Cat.No 0 262 35

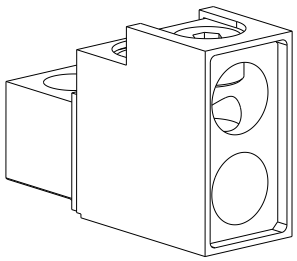
### ■ 7.8 Connection accessories

**Cage terminals**

- Set of 4 terminals for cables 300 mm² max (rigid) or 240 mm² max (flexible) Cu/Al Cat.No 0 262 50



- Set of 4 high-capacity terminals for cables 2 x 240mm² max (rigid) or 2 x 185mm² max (flexible) Cu/Al Cat.No 0 262 51



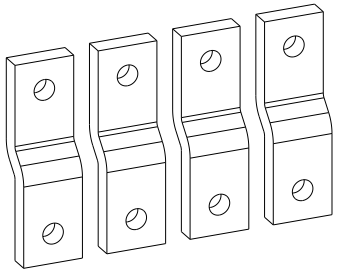
| Type of cage terminal | Cable standard suggested cross section (mm²)* | | |
|---|---|---|---|
| | In(A) | Cu | Al |
| Standard Cat.No 0 262 50 | 250 | 120 | 185 |
| | 320 | 185 | - |
| | 400 | 240 | - |
| | 500 | - | - |
| | 630 | - | - |
| High capacity Cat.No 0 262 51 | 250 | 120 | 185 |
| | 320 | 185 | 2x120 |
| | 400 | 240 | 2x150 |
| | 500 | 2x150 | 2x240 |
| | 630 | 2x185 | - |

| Type of cage terminal | Dimensions limits of cable for cage terminals | |
|---|---|---|
| | Min / Max cross section (mm²) | |
| | Flexible | Rigid |
| Standard Cat.No 0 262 50 | 6 mm²/ 240 mm² | 4 mm² / 300 mm² |
| High capacity Cat.No 0 262 51 | 70 mm²/ 185 mm² | 35 mm² / 240 mm² |

** The suggested cross section are in compliance with standard IEC60947-1 (ed.6 2020/04) and IEC60947-2 (ed.5.1 2019/07)*

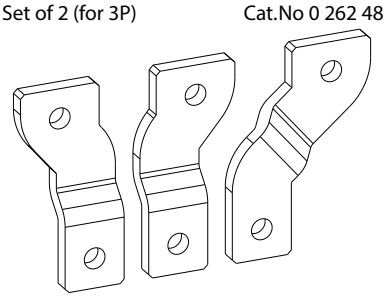
**Extended front terminals**

- Set of 4 Cat.No 0 262 47



**Spreaders (incoming or outgoing):**

- Set of 2 (for 3P) Cat.No 0 262 48

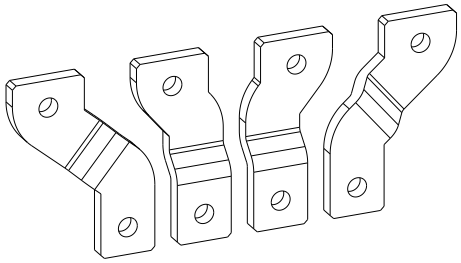


## 7. EQUIPMENTS AND ACCESSORIES (*continued*)

### ■ 7.8 Connection accessories *(continued)*

**Spreaders (incoming or outgoing) *(continued)***

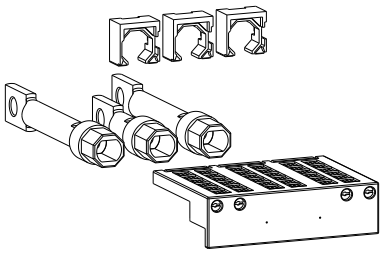
- Set of 3 (for 4P) Cat.No 0 262 49



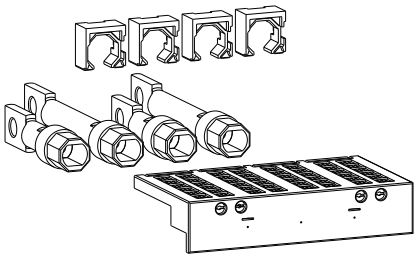
**Rear terminals (incoming or outgoing):**

They are used to convert the fixed version with front terminals into the fixed version with rear terminals:

- for 3P Cat.No 0 263 52



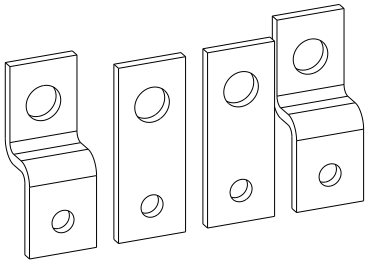
- for 4P Cat.No 0 263 53



**Adaptor for lug**

They are used for connecting bare cables with lugs.

Set of 4 adaptors + insulated shields Cat.No 0 262 46



### ■ 7.9 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**

They are suited for incoming and outcoming terminals.

- Set of 6 terminals (3P) Cat.No 4 222 20
- Set of 8 terminals (4P) Cat.No 4 222 21

**Bases**

Bases accept DPX³/DPX³-I fitted with special terminals.

- Front terminal mounting base for 3P Cat.No 4 222 22
- Front terminal mounting base for 4P Cat.No 4 222 23
- Flat rear terminal mounting base for 3P Cat.No 4 222 24
- Flat rear terminal mounting base for 4P Cat.No 4 222 25

**Bases for breakers with mounted earth leakage module**

- Front terminal mounting base for 4P Cat.No 4 222 26
- Flat rear terminal mounting base for 4P Cat.No 4 222 27

**Accessories**

- Set of 2 extractor handle Cat.No 4 222 28
- Set of connectors (24-pin) Cat.No 4 222 29

### ■ 7.10 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:

- for base only (3P) Cat.No 4 222 31
- for base only (4P) Cat.No 4 222 32
- for base with earth leakage module (4P) Cat.No 4 222 33

**Keylock for "Debro-lift" mechanism**

It enables locking in drawn-out position

- One key for DPX3 only.

Flat key Réf. 0 265 76
Star key Réf. 0 263 43

- One key for motor-driven DPX3 or DPX3 equipped with rotary handle

Flat key Réf. 0 265 78
Star key

**Mechanical support**

- For locking motor-driven DPX³ or DPX³ equipped with rotary handle Cat.No 4 228 08
- For locking DPX³ only Cat.No 4 228 10

Cat.Nos 4 228 08 and 4 228 10 must be used with universal keylocks to get the complete locking kit for draw-out version

**Accessories for "Debro-lift" mechanism**

- Signalling contact (plugged-in / draw-out) Cat.No 0 265 74
- Handle for drawing - out Cat.No 0 265 75

**Auxiliary contacts**

Automatic auxiliary contacts for draw-out version (up to 2 contacts per DPX³) Cat.No 4 222 30

**Plate for transfer switches (factory assembled)**

A transfer switch plate is composed of one plate with interlock for 2 devices.

- Plate for breaker or trip-free switch fixed version Cat.No 0 264 09
- Plate for breaker or trip-free switch plug-in and draw-out version. Cat.No 0 264 04

### ■ 7.11 Specific accessories for electronic version

**Auxiliary power supply**

For supplying electronic units Cat.No 4 210 83

Is used to supply DPX³ electronic circuit breakers S10 with or without earth leakage module and with or without energy metering central unit.

It is mandatory in case of electronic breakers with integrated measure and not interconnected in a supervision system (MODBUS network not requested) to correctly manage the measure functions.

Input voltage: 24 V~/⎓ (+/- 10%)
Dimension: 2 DIN modules
Output: Up to 250mA (to supply many circuit breakers according to the table bellow)

## 7. EQUIPMENTS AND ACCESSORIES (*continued*)

### 7.11 Specific accessories for electronic version *(continued)*

**Auxiliary power supply *(continued)***

| | | |
|---|---|---|
| **Cat.No 4 210 83 Iout MAX = 250 mA** | Electronic/Electronic + RCD (S10) | 70 mA |
| | Electronic/Electronic + RCD with power metering (S10) | 83 mA |

According to single absorptions, it can be possible to connect more than one breaker.

**MODBUS communication**

MODBUS communication works with:
MODBUS interface Cat.No 4 210 75.

It is used for sharing on MODBUS network all information managed by DPX³ electronic circuit breakers S10 with or without earth leakage module and with or without energy metering central unit.

Technical characteristics:

- USB local laptop connection
- Input voltage: 24V~/DC (+/- 10%)
- Dimension: 1 DIN module
- MODBUS address configuration / transmission mode / transmission speed by physic configurators
- Output relay (220 V – 0,2A): to signal tripped position
- Consumption: 90mA

It is possible to connect only one breaker to the interface.
In case of use of MODBUS interface Cat.No 4 210 75, the external power supply module Cat.No 4 210 83 is not necessary because the external power is already provided by the MODBUS module.

**Electronic interface - EMS CX³**

DPX³ electronic interface EMS CX³ Cat.No 4 238 90

It is used for connecting electronic DPX³ S10 to an EMS communication network. All the information managed bu the circuit breaker's electronic card will be shared on the EMS network.

Dimension: 1 module
Power supply: with EMS CX3 power supply module Cat.No 4 149 45.

The address can be modified and set locally by DIP switches or remotely with the EMS configurator software.

**Bluetooth communication key** Cat.No 0 283 10

USB key for BLE communication with electronic DPX³ 630 S10 allows to configure, monitor and manage the circuit breaker remotely through an App.
Connection port USB on front of the circuit breaker.

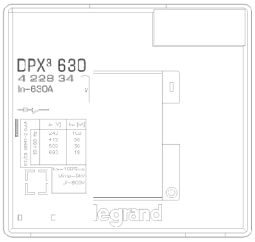
EnerUp + Project App for smartphone and tablet is available on Apple Store and Google Play.
Configuration, monitoring and management software (PCS) is available for download via the e-catalog and does not require the use of Bluetooth communication key Cat.No 0 283 10.

## 8. MARKING

Our products (borh circuit breakers and switch disconnectors) are provided with labelling in full conformity to the referred standard and directives requirements by laser or sticker labels as:

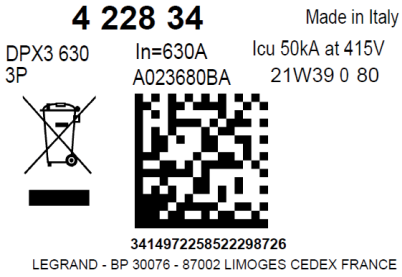
**Product laser label on front**

- Manufacturer
- Denomination, type product, code
- Standard conformity
- Standard characteristics declared
- Coloured identification of Icu at 415V



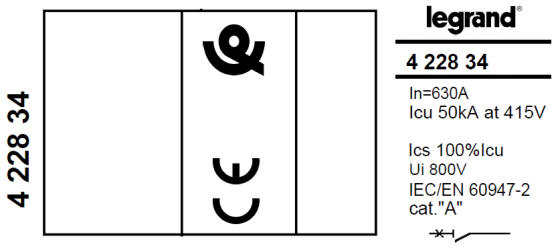

**Product sticker label on side**

- Manufacturer
- Denomination and type product
- Standard conformity
- Mark/Licence (if any)
- Directive requirements
- Bar code identification product
- Manufacturing Country



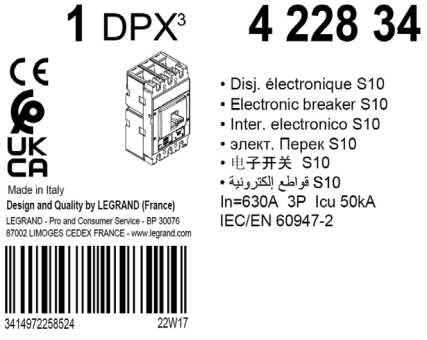

**Mark sticker label on side**

- Product code
- Mark/Licence (if any)
- Country deviation, if any



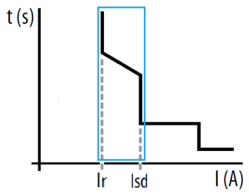

**Packaging sticker label**

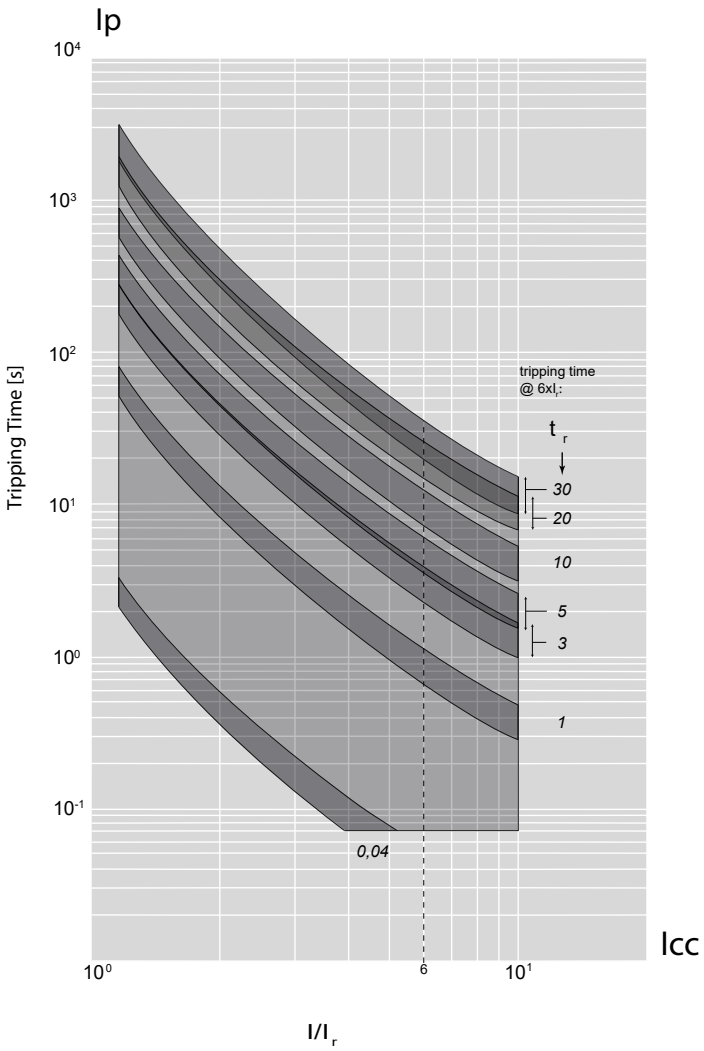
- Manufacturer
- Denomination and type product
- Standard conformity
- Mark/Licence (if any)
- Directive requirements
- Bar code identification product



## 9. CURVES

### 9.1 Tripping curve (1/3)



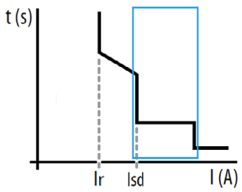



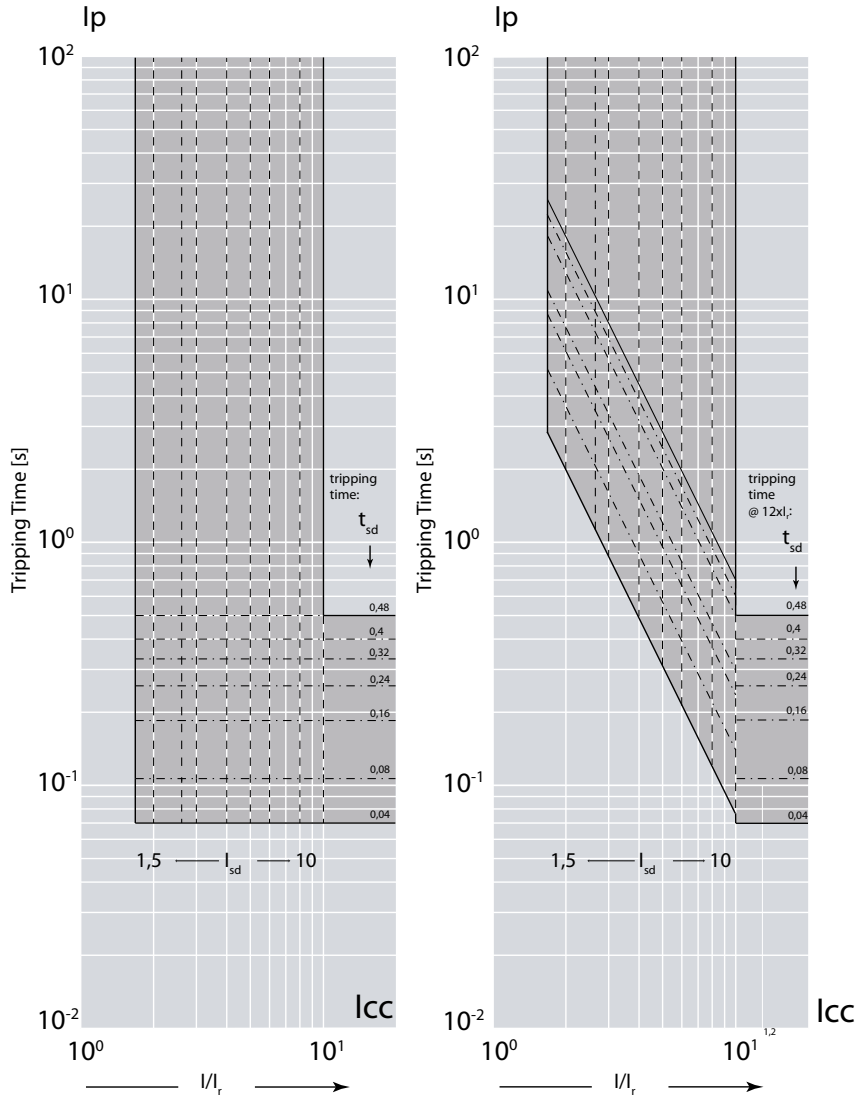

Icu = 36-50-70-100 kA  Imax = 630A  3-4 P  Ue = 415V~ (IEC/EN 60947-2)

| Value | Description |
|---|---|
| t | Time |
| I | Current |
| $I_r$ | Long time setting current |
| $t_r$ | Long time delay |
| $I_{sd}$ | Short time setting current |
| $t_{sd}$ | Short time delay |
| $I_i$ | Instantaneous release |
| $I_{cu}$ | Rated ultimate short-circuit breaking capacity |
| $I^2t = K$ | Constant pass-through energy setting |
| t = K | Constant tripping time setting |
| ---------- | Long time trip curve |
| ---------- | Short time trip curve |
| Current tolerance | 10% Up to isd; 20% up to ii |

## 9. CURVES *(continued)*

### 9.2 Tripping curve (2/3)



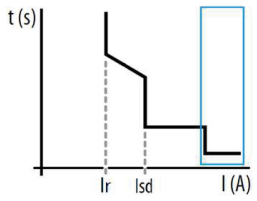



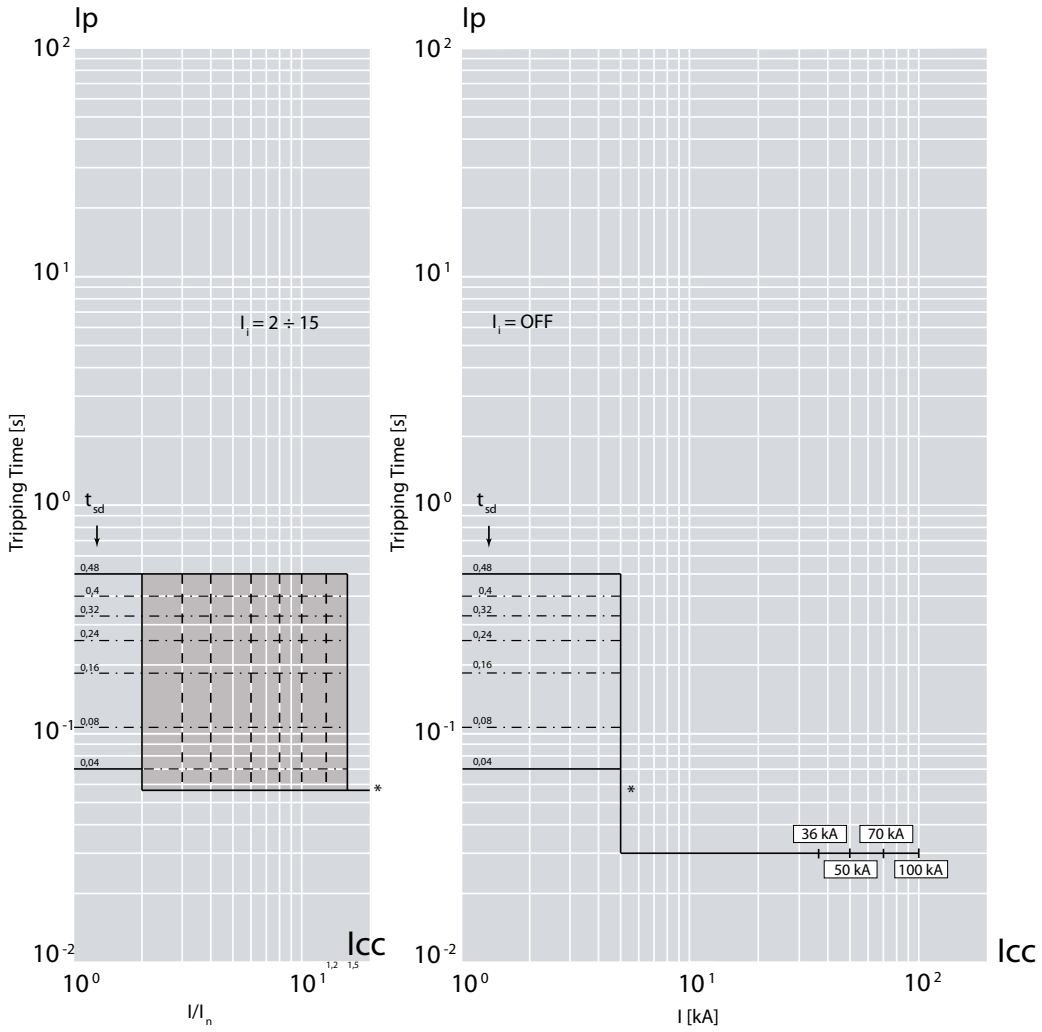

Icu = 36-50-70-100 kA  Imax = 630A  3-4 P  Ue = 415 V~ (IEC/EN 60947-2)

| Value | Description |
|---|---|
| t | Time |
| I | Current |
| Ir | Long time setting current |
| tr | Long time delay |
| Isd | Short time setting current |
| tsd | Short time delay |
| $I_i$ | Instantaneous release |
| Icu | Rated ultimate short-circuit breaking capacity |
| $I^2t = K$ | Constant pass-through energy setting |
| t = K | Constant tripping time setting |
| ---------- | Long time trip curve |
| ---------- | Short time trip curve |
| Current tolerance | 10% Up to isd; 20% up to ii |

## 9. CURVES *(continued)*

### 9.3 Tripping curve (3/3)



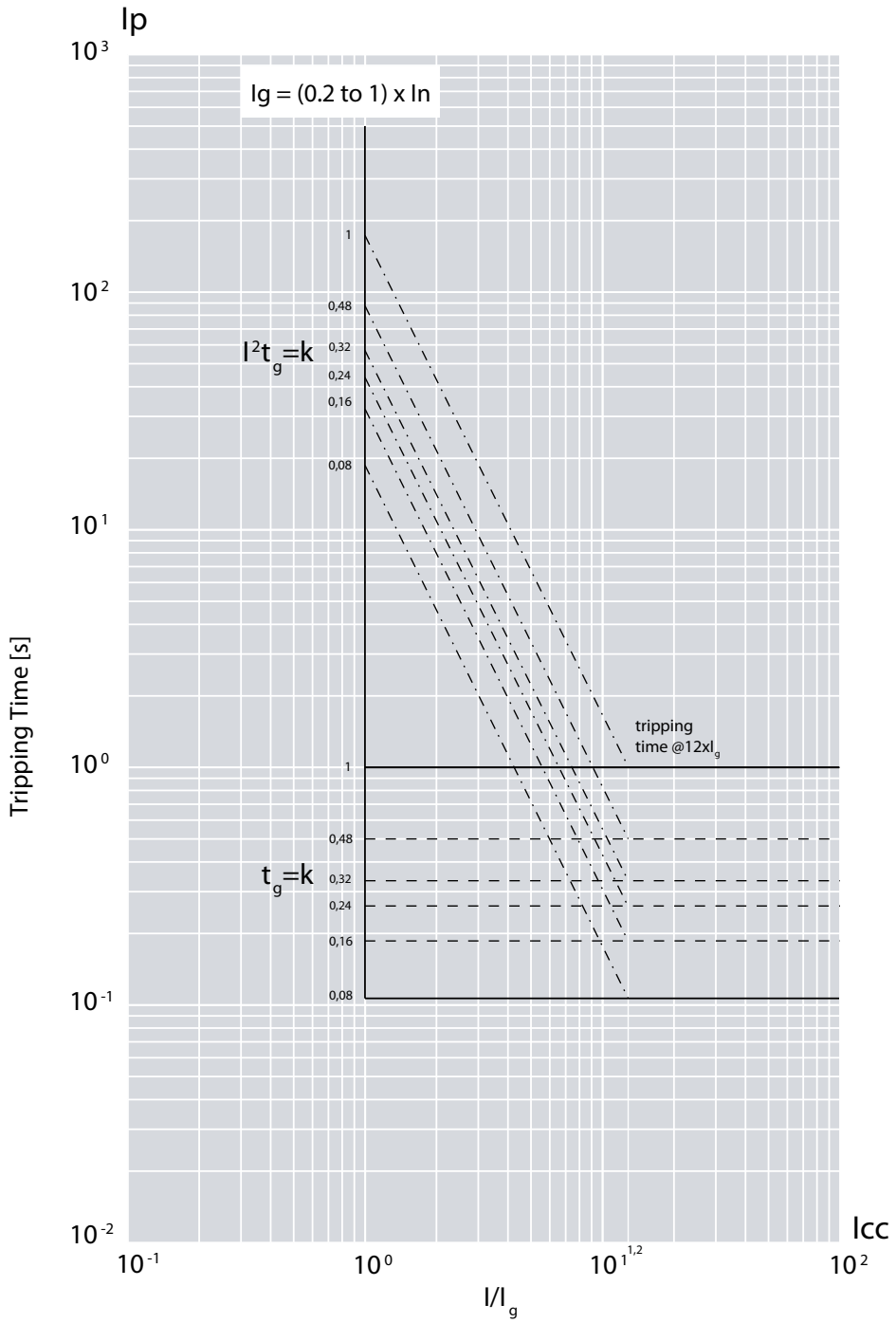

Icu = 36-50-70-100 kA  Imax = 630A  3-4 P  Ue = 415 V~ (IEC/EN 60947-2)

Fixed Instantaneous override $I_{sf}$ = 5kA

| Value | Description |
|---|---|
| t | Time |
| I | Current |
| $I_r$ | Long time setting current |
| tr | Long time delay |
| Isd | Short time setting current |
| tsd | Short time delay |
| $I_i$ | Instantaneous release |
| Icu | Rated ultimate short-circuit breaking capacity |
| $I^2t = K$ | Constant pass-through energy setting |
| t = K | Constant tripping time setting |
| ---------- | Long time trip curve |
| ---------- | Short time trip curve |
| Current tolerance | 10% Up to isd; 20% up to ii |

## 9. CURVES *(continued)*

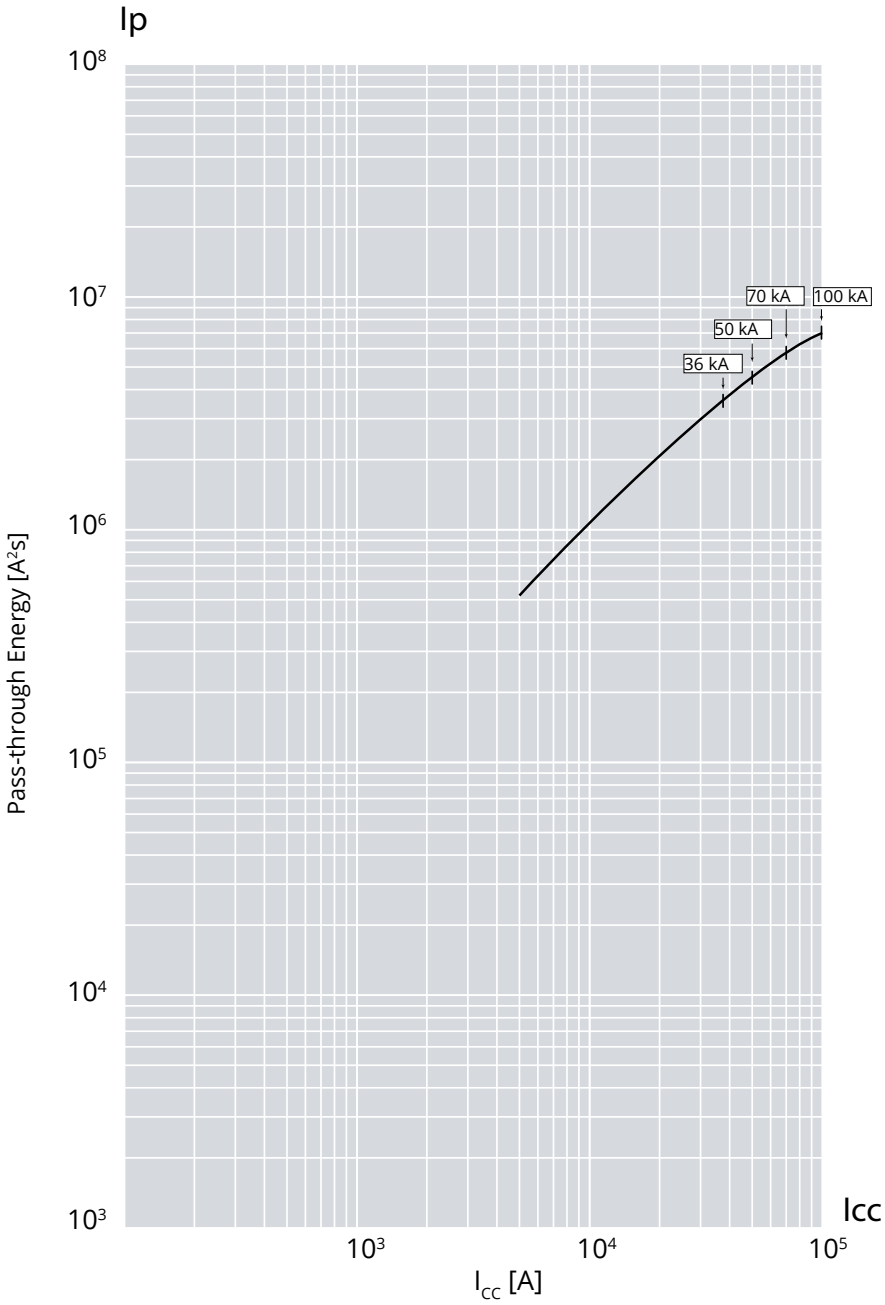
### ■ 9.4 Ground fault curve




Icu = 36-50-70-100 kA Imax = 630A 3-4P Ue = 415 V~ (IEC/EN 60947-2)

## 9. CURVES *(continued)*

### ■ 9.5 Pass-through specific energy characteristic curve

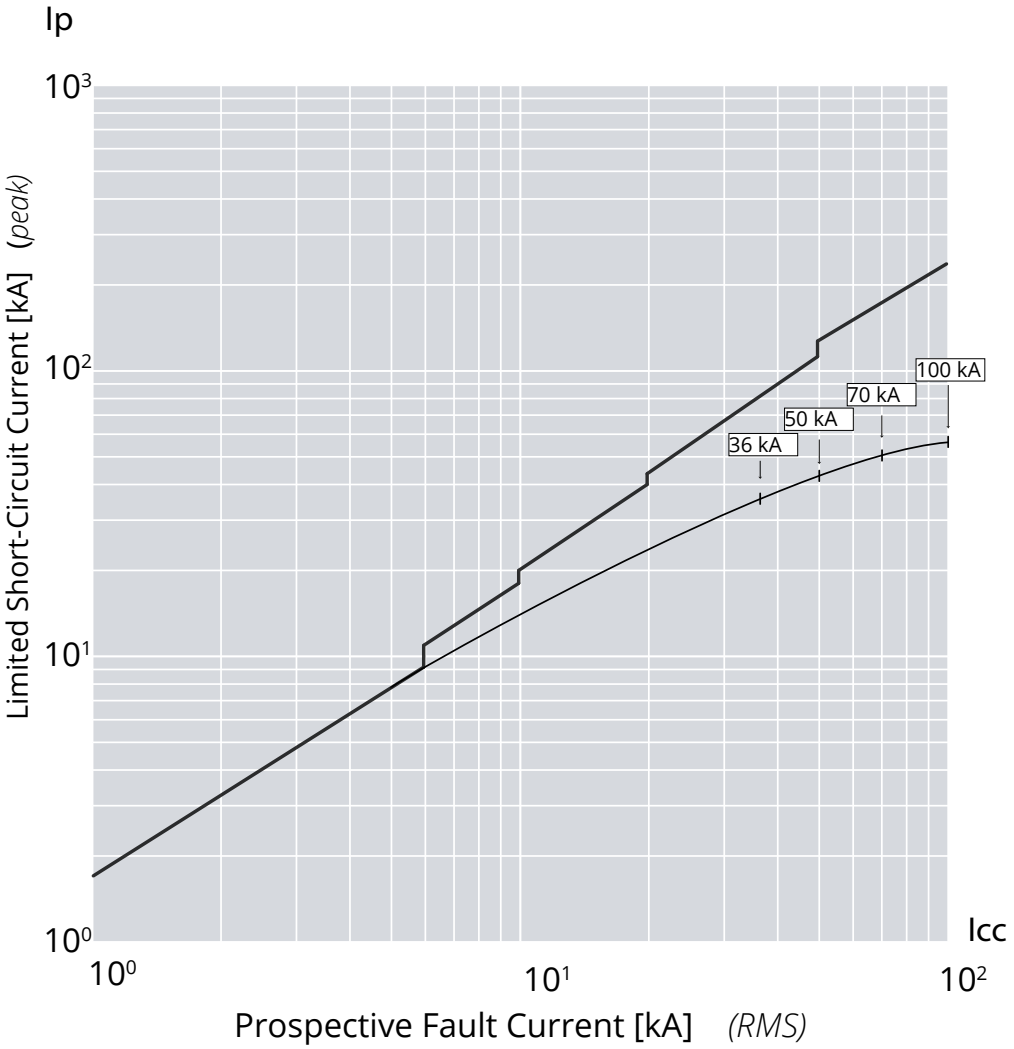



Icu = 36-50-70-100 kA  Imax = 630A  3-4P  Ue = 415 V~ (IEC/EN 60947-2)

| Value | Description |
|---|---|
| Icc | Short circuit current |
| $I^2t$ ($A^2s$) | Pass-through specific energy |

## 9. CURVES *(continued)*

### ■ 9.6 Cut-off peak current characteristic curve (kA)




Icu = 36-50-70-100 kA  Imax = 630A  3-4P  Ue = 415 V~ (IEC/EN 60947-2)

| Value | Description |
|---|---|
| Icc | Estimated short circuit symmetrical current (RMS value) |
| IP | Maximum short circuit peak current |

## 10. CONFORMITY

DPX³ range of product concerning circuit-breakers exceed compliance with:
- IEC/EN standard 60947-2.
- Certification available by IECEE CB-scheme or LOVAG Compliance scheme.
- Marks as CCC (China), EAC (Eurasian Federation) or different local certification are available.

DPX³ are in conformity with the Lloyds Shipping Register, RINA and Bureau Veritas Marine. The range respects the European Directives REACh, RoHS, RAEE and Product Environment Product (PEP Ecopassport) are available.

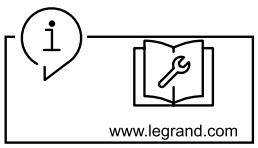
*For specific information, please contact Legrand support.*

## 11. OTHER INFORMATION

**XLPro³ Calcul**: Calculation notes creation software, addressed to installers, design office and maintenance operators. Definition of the electrical characteristics of a low voltage installation in compliance with the applicable standards

**XLPro³ Tool Selectivity Backup**: Software dedicated to installers, panelbuilders and design offices. Definition of the selectivity and backup values of an association of electrical devices and obtention of the tripping curves of the selected products.

**XLPro³ Panels**: Distribution panel design software, addressed to panelbuilders and electrical panel designers. Design of the electrical distribution of the panel, production of electrical diagrams, establishment of products and overall costing of the project.




**Workshop book:** mounting informations, equipments, accessories and spare parts available on e-catalogue

**Instruction sheet**: all mounting information, available on e-catalog.

**PEP:** available on e-catalog.

For further technical information, please contact Legrand technical support.

Unless otherwise indicated, data reported in this document refers exclusively to test conditions according to product standards.

For different conditions of use of the product, inside electrical equipment or in any different installation context, refer to the regulatory requirements of the equipment, local regulations and design specifications of the system.