

SPECIFICATIONS

WORKSHOP

# DPX<sup>3</sup> 125 HP & 250 HP DPX<sup>3</sup> 630 & 1600

MOULDED CASE CIRCUIT BREAKERS



In addition to reliable and accurate protection, the whole DPX<sup>3</sup> range provides numerous advantages for your low voltage boards. The wide choice of features and versions covers the needs of all electrical installations, commercial, tertiary and industrial applications. .

The **integrated measurement** allows monitoring of the parameters and consumption of the installation without a device or additional accessory.

The different **selectivity** techniques that can be used to ensure optimal **service continuity**.

The complete range of electric auxiliaries facilitates **operation** and **maintenance**.

**Perfect synergy** with Legrand XL<sup>3</sup> and XL<sup>3</sup> S enclosures simplifies the study with XLPRO<sup>3</sup> software and the implementation by panel builders.

Many accessories are available and allow you to adapt to all configurations.

Discover in detail the whole range DPX<sup>3</sup> 125 HP, DPX<sup>3</sup> 250 HP, DPX<sup>3</sup> 630, DPX<sup>3</sup> 1600 and all its advantages in this document.

#### LEGAL INFORMATION

Presentation pictures do not always include Personal Protective Equipment (PPE), but this is a legal and regulatory obligation that must be scrupulously respected.

In accordance with its continuous improvement policy, Legrand reserves the right to change the specifications and illustrations without notice. All illustrations, descriptions and technical information included in this document are provided as indications and cannot be held against Legrand.

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# SAFETY

# INSTRUCTIONS

## General information

- Use only the products and accessories recommended by the Legrand Group in the catalogue, instructions, technical data sheets and all other documents provided by Legrand (hereinafter referred to as «the Documentation») in compliance with the installation rules.
- Improper installation and/or use may result in the risk of arcing in the enclosure, overheating or fire. The enclosures must be used under normal conditions, they must not be subjected to Voltage / Current / Temperature values other than those specified in the Documentation.
- Legrand declines all responsibility for any modification or repair of the equipment making up the enclosure that is not authorized by the Legrand Group, as well as any failure to comply with the rules and recommendations specified by Legrand in the Documentation. In addition, in the cases mentioned above, the warranty granted by Legrand will not be applicable.
- It is necessary to check that the characteristics of the products are appropriate for their environment and use during maintenance operations, and to refer to the Documentation. If you have any questions or require clarification, please contact Legrand Group.
- The installation, use and maintenance of the enclosures and their components must be carried out by qualified, trained and authorized personnel, in accordance with the regulations in force in each country.




### **RISK OF ELECTRIC SHOCK, BURNS AND EXPLOSION.**

- People working on the installation must have the appropriate electrical authorizations for the work to be carried out.
- Wear the PPE (Personal Protective Equipment) necessary to work on live products.
- Respect the safety rules related to electrical work.
- Improper electrical and mechanical use of equipment can be dangerous and may result in personal injury or damage to property.
- Depending on the maintenance operations to be carried out, partial or total power cuts of the enclosure concerned should be planned before any work.
- When performing operations that involve access to the inside of the enclosure, be aware of the risk of burns before touching any products or metal parts.
- Before turning the power back on, make sure that there are no foreign bodies and that all physical protections have been put back in place (e.g.: screens, covers, shields).

Any failure to strictly apply the procedures and to respect these recommendations, could lead to serious risk of accident, endangering people and property (in particular, without limitation, risk of burns, electric shocks, etc.).



 The rules and recommendations in this document are based on our knowledge of the typical conditions of use of our products in the fields of application usually encountered. However, it is always the customer's responsibility to verify and validate that Legrand products are suitable for its installation and use.

The customer must ensure proper installation, maintenance and operation of the equipment to avoid any risk of injury to personnel or damage to property in the event of product failure, especially for applications that require a very high level of safety (e.g., those in which the failure of a component may endanger human life or health).

The rules for storage, handling, installation and maintenance and the appropriate precautions and warnings must be strictly observed and applied.

# DPX<sup>3</sup> 125 HP & 250 HP DPX<sup>3</sup> 630 & 1600

## Range overview

The strengths of the DPX<sup>3</sup> range of circuit breakers and trip-free switches are their optimized dimensions, their ease of installation, use and accessorizing, as well as their reliability.

The circuit breakers are available in thermal magnetic, electronic, electronic with energy metering control unit or magnetic only, with nominal currents from 16 to 125 A (for DPX<sup>3</sup> 125 HP), 16 to 250 A (for DPX<sup>3</sup> 250 HP), 250 to 630 A (for DPX<sup>3</sup> 630) and 500 to 1600 A (for DPX<sup>3</sup> 1600) and breaking capacities range from 36 kA to 100 kA.

The trip-free switches are available in 3P and 4P with nominal current of 125 A for the DPX<sup>3</sup>-I 125 HP, 250 A for the DPX<sup>3</sup>-I 250 HP, two nominal currents (400 A and 630 A) for the DPX<sup>3</sup>-I 630 and 4 nominal currents (630 A, 800 A, 1250 A, 1600 A) for the DPX<sup>3</sup>-I 1600. All these products can be installed in XL<sup>3</sup> and XL<sup>3</sup> S cabinets on plates, associated with dedicated faceplates.



DPX<sup>3</sup> 125 HP-3P



DPX<sup>3</sup>-I 125 HP-4P



DPX<sup>3</sup> 250 HP-4P + residual current protection



DPX<sup>3</sup> 250 HP-3P



DPX<sup>3</sup> 250 HP-4P



DPX<sup>3</sup> 630-3P

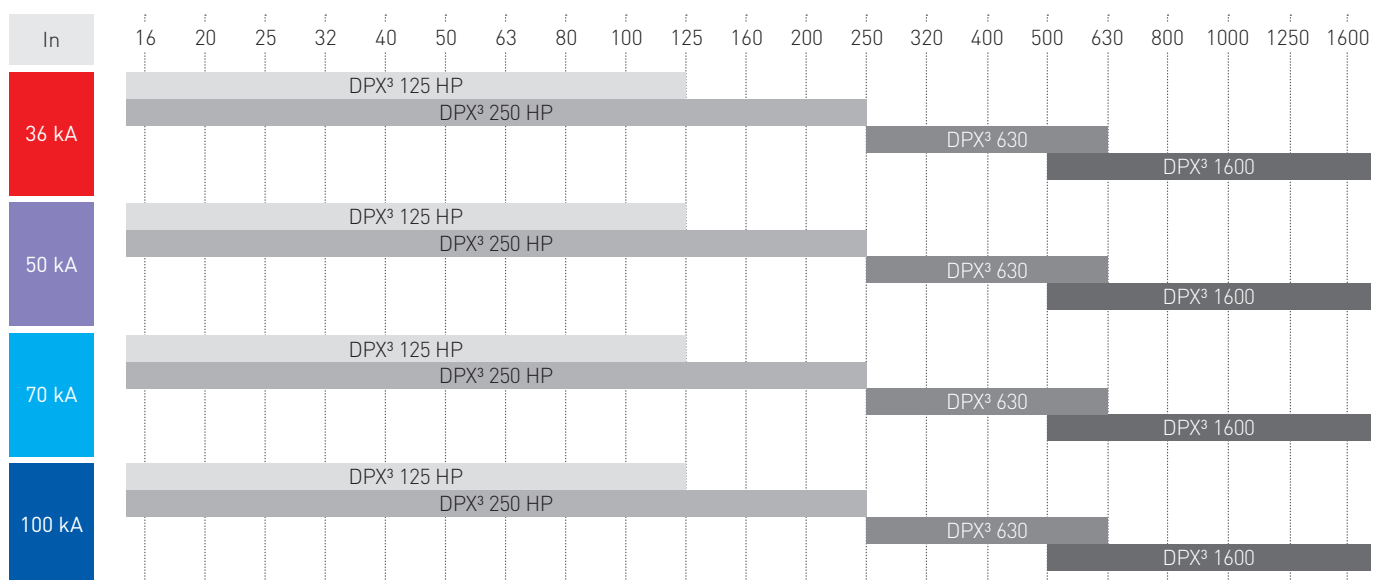


DPX<sup>3</sup> 1600-4P



DPX<sup>3</sup>-I 1600-3P

### IDENTIFICATION OF BREAKING CAPACITIES



Easy identification of the breaking capacities by colored sticker:

36 kA

50 kA

70 kA

100 kA

Below are some examples of breaking capacities illustrated by the colors on the circuit breakers:



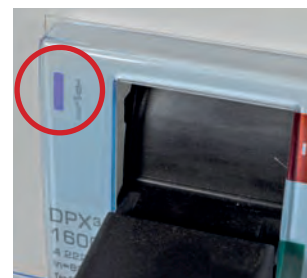
DPX<sup>3</sup> 125 HP 36 kA



DPX<sup>3</sup> 250 HP 36 kA



DPX<sup>3</sup> 630 70 kA



DPX<sup>3</sup> 1600 100 kA

# DPX<sup>3</sup> 125 HP & 250 HP DPX<sup>3</sup> 630 & 1600

The DPX<sup>3</sup> range of circuit breakers offers a wide choice of versions to meet all requirements:

- Thermal magnetic, electronic, electronic with energy metering control unit or magnetic only, triggers depending on the level of protection required.
- Fixed, plug-in or draw-out version depending on the required level of maintenance, maintainability and safety.
- Without or with integrated earth leakage protection for DPX<sup>3</sup> 125 HP and DPX<sup>3</sup> 250 HP, without or with downstream earth leakage module for DPX<sup>3</sup> 630 and without and with earth leakage protection with external associable residual current relay and coils for DPX<sup>3</sup> 1600.



| CIRCUIT BREAKERS |   | DPX <sup>3</sup> 125 HP | DPX <sup>3</sup> 250 HP | DPX <sup>3</sup> 630 | DPX <sup>3</sup> 1600 |
|------------------|---|-------------------------|-------------------------|----------------------|-----------------------|
| Poles            | 3P                                      | •                       | •                       | •                    | •                     |
|                  | 4P                                      | •                       | •                       | •                    | •                     |
| Version          | Fixed                                   | •                       | •                       | •                    | •                     |
|                  | Plug-in                                 |                         | •                       | •                    | •                     |
|                  | Draw-out                                |                         | •                       | •                    | •                     |
| Shunt releases   | Thermal magnetic                        | •                       | •                       | •                    | •                     |
|                  | Electronic S1                           |                         | •                       | •                    | •                     |
|                  | Electronic S2 and Sg                    |                         |                         | •                    | •                     |
|                  | Magnetic-only                           |                         | •                       | •                    | •                     |
| Options          | Integrated earth leakage protection     | •                       | •                       |                      |                       |
|                  | Earth leakage module                    |                         |                         | •                    | • <sup>[1]</sup>      |
|                  | Integrated energy metering control unit |                         | • <sup>[2]</sup>        | • <sup>[2]</sup>     | • <sup>[3]</sup>      |

[1] : with external residual current relay associated with shunt trip (ST) or undervoltage release (UVR)

[2] : S2 and Sg electronics

| TRIP-FREE SWITCHES |  | DPX <sup>3</sup> 125 HP | DPX <sup>3</sup> 250 HP | DPX <sup>3</sup> 630 | DPX <sup>3</sup> 1600 |
|--------------------|--|-------------------------|-------------------------|----------------------|-----------------------|
| Poles              | 3P                                       | •                       | •                       | •                    | •                     |
|                    | 4P                                       | •                       | •                       | •                    | •                     |
|                    | 4P residual current with external module |                         |                         |                      | •                     |
|                    | 4P residual current                      | •                       | •                       |                      |                       |
| Version            | Fixed                                    | •                       | •                       | •                    | •                     |
|                    | Plug-in                                  |                         | •                       | •                    | •                     |
|                    | Draw-out                                 |                         | •                       | •                    | •                     |



|                               | Protection against overloads |                | Protection against short circuits      |                 |   | Neutral                                    | Earth fault protection |                | Measurement |
|-------------------------------|------------------------------|----------------|--|-----------------|---|--|------------------------|----------------|-------------|
|                               | I <sub>r</sub>               | t <sub>r</sub> | Short delay                            |                 | Instantaneous<br>I <sub>i</sub>           | N  | I <sub>g</sub>         | t <sub>g</sub> |             |
|                               |                              |                | I <sub>sd</sub>                        | t <sub>sd</sub> |   |  |                        |                |             |
| <b>DPX<sup>3</sup> 125 HP</b> |                              |                |  |                 |   |  |                        |                |             |
| <b>Thermal magnetic</b>       | 0.8 ÷ 1 x I <sub>n</sub>     | -              | 10 x I <sub>n</sub> <sup>(1)</sup>     | -               | -   | 100%                                       | -                      | -              | -           |
| <b>DPX<sup>3</sup> 250 HP</b> |                              |                |  |                 |   |  |                        |                |             |
| <b>Thermal magnetic</b>       | 0.8 ÷ 1 x I <sub>n</sub>     | -              | 5 ÷ 10 x I <sub>n</sub> <sup>(1)</sup> | -               | -   | 100%                                       | -                      | -              | -           |
| <b>Electronic S1</b>          | 0.4 ÷ 1 x I <sub>n</sub>     | 5 s            | 1.5 ÷ 10 x I <sub>r</sub>              | 100 ms          | Fixed                                     | (OFF 0,5 - 1) I <sub>r</sub>               | -                      | -              | -           |
| <b>Magnetic-only</b>          | -                            | -              | 6 ÷ 14 x I <sub>n</sub>                | -               | -   | 100%                                       | -                      | -              | -           |
| <b>DPX<sup>3</sup> 630</b>    |                              |                |  |                 |   |  |                        |                |             |
| <b>Thermal magnetic</b>       | 0.8 ÷ 1 x I <sub>n</sub>     | -              | 5 ÷ 10 x I <sub>n</sub>                | -               | -   | 100%                                       | -                      | -              | -           |
| <b>Electronic S1</b>          | 0.4 ÷ 1 x I <sub>n</sub>     | 5s             | 1.5 – 10 x I <sub>r</sub><br>(A) (B)   | 100 ms          | (A) (B) F <sup>(1)</sup>                  | (OFF - 50% - 1) x I <sub>r</sub>           | -                      | -              | -           |
| <b>Electronic S2</b>          | 0.4 ÷ 1 x I <sub>n</sub>     | 3 ÷ 30s        | 1.5 – 10 x I <sub>r</sub><br>(A) (B)   | 0 ÷ 500 ms      | (A) F <sup>(1)</sup> F <sup>(2)</sup>     | (OFF - 0.5 - 1 - 1.5 - 2) x I <sub>r</sub> | -                      | -              | YES         |
| <b>Electronic Sg</b>          | 0.4 ÷ 1 x I <sub>n</sub>     | 3 ÷ 30s        | 1.5 – 10 x I <sub>r</sub><br>(A) (B)   | 0 ÷ 500 ms      | (A) F <sup>(1)</sup> F <sup>(2)</sup>     | (OFF - 0.5 - 1 - 1.5 - 2) x I <sub>r</sub> | R                      | R              | YES         |
| <b>Magnetic-only</b>          | -                            | -              | 5 ÷ 10 x I <sub>n</sub>                | -               | (A) (B) F <sup>(1)</sup> F <sup>(2)</sup> | 100%                                       | -                      | -              | -           |
| <b>Magnetic Electronic</b>    | -                            | -              | 5 ÷ 10 x I <sub>n</sub>                | 0 ÷ 500 ms      | (A) (B) F <sup>(1)</sup> F <sup>(2)</sup> | (OFF - 0.5 - 1) x I <sub>r</sub>           | -                      | -              | -           |
| <b>DPX<sup>3</sup> 1600</b>   |                              |                |  |                 |   |  |                        |                |             |
| <b>Thermal magnetic</b>       | 0.8 ÷ 1 x I <sub>n</sub>     | -              | 5 ÷ 10 x I <sub>n</sub>                | -               | -   | 100%                                       | -                      | -              | -           |
| <b>Electronic S1</b>          | 0.4 ÷ 1 x I <sub>n</sub>     | 5s             | 1.5 – 10 x I <sub>r</sub><br>(A) (B)   | 100 ms          | (A) (B) F <sup>(1)</sup>                  | (OFF-50%-1) x I <sub>r</sub>               | -                      | -              | -           |
| <b>Electronic S2</b>          | 0.4 ÷ 1 x I <sub>n</sub>     | 3 ÷ 30s        | 1.5 – 10 x I <sub>r</sub><br>(A) (B)   | 0 ÷ 500 ms      | (A) F <sup>(1)</sup> F <sup>(2)</sup>     | (OFF - 0.5 - 1 - 1.5 - 2) x I <sub>r</sub> | -                      | -              | YES         |
| <b>Electronic Sg</b>          | 0.4 ÷ 1 x I <sub>n</sub>     | 3 ÷ 30s        | 1.5 – 10 x I <sub>r</sub><br>(A) (B)   | 0 ÷ 500 ms      | (A) F <sup>(1)</sup> F <sup>(2)</sup>     | (OFF - 0.5 - 1 - 1.5 - 2) x I <sub>r</sub> | R                      | R              | YES         |
| <b>Magnetic-only</b>          | -                            | -              | 5 ÷ 10 x I <sub>n</sub>                | -               | (A) (B) F <sup>(1)</sup> F <sup>(2)</sup> | 100%                                       | -                      | -              | -           |
| <b>Magnetic Electronic</b>    | -                            | -              | 5 ÷ 10 x I <sub>n</sub>                | 0 ÷ 500 ms      | (A) (B) F <sup>(1)</sup> F <sup>(2)</sup> | (OFF - 0.5 - 1) x I <sub>r</sub>           | -                      | -              | -           |

(A) : For 630 A rating I<sub>sd</sub> ≤ I<sub>i</sub>, only for DPX<sup>3</sup> 630 - In 630 A - I<sub>f</sub> < I<sub>sd</sub> max

(B) : Except DPX<sup>3</sup> 630 A rating : I<sub>sd</sub> max = 5000 A

R : Adjustable (see catalog pages for adjustment ranges)

F(1) : DPX<sup>3</sup> 1600 - I<sub>cw</sub> = 15000 A (1250 A) or 20000 (1600 A rating)

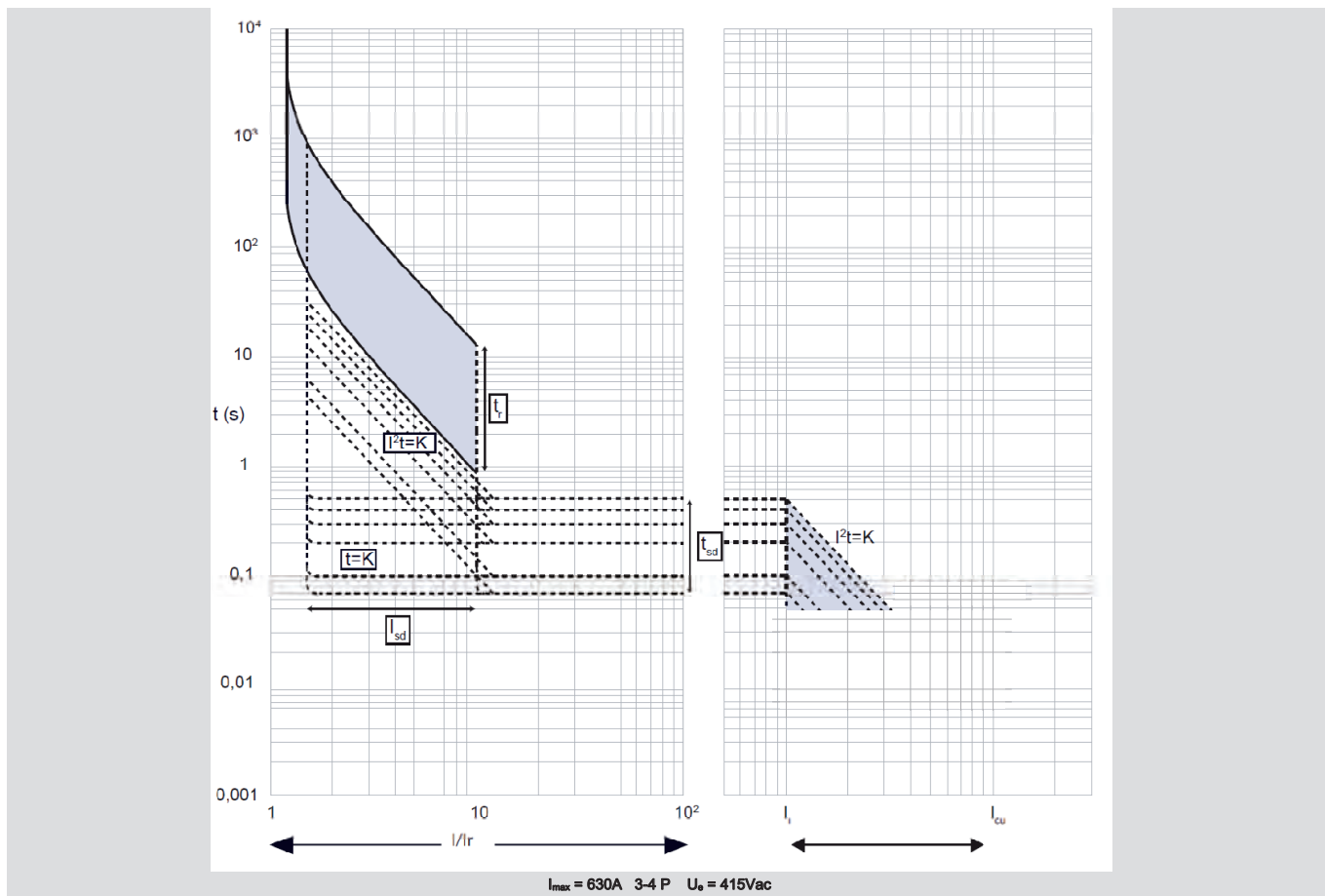
F(2) : SALT : H/L

(1) I<sub>sd</sub> fixed up to 400 A (I<sub>n</sub> ≤ 40 A); (6.5-10-13) x I<sub>n</sub> for I<sub>n</sub>=50 A

# DPX<sup>3</sup> 125 HP & 250 HP DPX<sup>3</sup> 630 & 1600

**!** The Sg release circuit breaker behaves like an S2 if the lg setting is = OFF.

Example of an electronic trigger curve:



| Value                | Description                     |
|----------------------|---------------------------------|
| t                    | time                            |
| I                    | current                         |
| I <sub>n</sub>       | rated current                   |
| I <sub>r</sub>       | current setting for long delay  |
| t <sub>r</sub>       | short delay tripping time       |
| I <sub>sd</sub>      | current setting for short delay |
| t <sub>sd</sub>      | short delay tripping time       |
| I <sup>2</sup> t = K | energy                          |
| t = K                | constant time of triggering     |
| S <sub>g</sub>       | electronic + earth protection   |
| T <sub>g</sub>       | earth current measurement delay |

# DPX<sup>3</sup> 125 HP, DPX<sup>3</sup>-I 125 HP

## PRESENTATION

The DPX<sup>3</sup> 125 HP and DPX<sup>3</sup>-I 125 HP MCCBs fit into our XL<sup>3</sup> and XL<sup>3</sup> S enclosures on a base plate, in vertical and horizontal positions.

The DPX<sup>3</sup> 125 HP thermal-magnetic circuit breakers ensure the disconnection, control, breaking and protection of power lines, they are available with:

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA
- 10 sizes: 16 A, 20 A, 25 A, 32 A, 40 A, 50 A, 63 A, 80 A, 100 A, 125 A
- In 3P, 4P and 4P + residual current protection versions
- Integrated residual current module (type A, available for Icu = 36 kA, 50 kA and 4P version)
- Conforming to IEC 60947-2 standard.



| Size  | DPX <sup>3</sup> 125 HP Thermal magnetic |          |          |          |          |          |          |          | DPX <sup>3</sup> 125 HP Thermal magnetic + Residual current |          |
|-------|--|----------|----------|----------|----------|----------|----------|----------|---|----------|
|       | 36 kA                                    |          | 50 kA    |          | 70 kA    |          | 100 kA   |          | 36 kA   | 50 kA    |
|       | 3P                                       | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       | 4P  |          |
| 16 A  | 4 236 00                                 | 4 236 10 | 4 236 40 | 4 236 50 | 4 236 80 | 4 236 90 | 4 237 00 | 4 237 10 | 4 236 30  | 4 236 70 |
| 20 A  | 4 236 01                                 | 4 236 11 | 4 236 41 | 4 236 51 | 4 236 81 | 4 236 91 | 4 237 01 | 4 237 11 | 4 236 31  | 4 236 71 |
| 25 A  | 4 236 02                                 | 4 236 12 | 4 236 42 | 4 236 52 | 4 236 82 | 4 236 92 | 4 237 02 | 4 237 12 | 4 236 32  | 4 236 72 |
| 32 A  | 4 236 03                                 | 4 236 13 | 4 236 43 | 4 236 53 | 4 236 83 | 4 236 93 | 4 237 03 | 4 237 13 | 4 236 33  | 4 236 73 |
| 40 A  | 4 236 04                                 | 4 236 14 | 4 236 44 | 4 236 54 | 4 236 84 | 4 236 94 | 4 237 04 | 4 237 14 | 4 236 34  | 4 236 74 |
| 50 A  | 4 236 05                                 | 4 236 15 | 4 236 45 | 4 236 55 | 4 236 85 | 4 236 95 | 4 237 05 | 4 237 15 | 4 236 35  | 4 236 75 |
| 63 A  | 4 236 06                                 | 4 236 16 | 4 236 46 | 4 236 56 | 4 236 86 | 4 236 96 | 4 237 06 | 4 237 16 | 4 236 36  | 4 236 76 |
| 80 A  | 4 236 07                                 | 4 236 17 | 4 236 47 | 4 236 57 | 4 236 87 | 4 236 97 | 4 237 07 | 4 237 17 | 4 236 37  | 4 236 77 |
| 100 A | 4 236 08                                 | 4 236 18 | 4 236 48 | 4 236 58 | 4 236 88 | 4 236 98 | 4 237 08 | 4 237 18 | 4 236 38  | 4 236 78 |
| 125 A | 4 236 09                                 | 4 236 19 | 4 236 49 | 4 236 59 | 4 236 89 | 4 236 99 | 4 237 09 | 4 237 19 | 4 236 39  | 4 236 79 |

The DPX-I 125 HP trip-free switches provide on-load disconnection and breaking of electrical circuits. They are available in:

- 1 single size: 125 A
- In 3P, 4P and 4P + residual current protection versions
- Integrated residual current module (type A, available in 4P version)
- Conforming to the IEC 60947-3 standard.

| Size  | DPX <sup>3</sup> -I 125 HP |          | Size  | DPX <sup>3</sup> -I 125 HP + residual-current protection |    |
|-------|----------------------------|----------|-------|--|----|
|       | 3P                         | 4P       |       | 3P   | 4P |
| 125 A | 4 231 84                   | 4 231 85 | 125 A | 4 231 87   |    |

The DPX-I 125 HP switches are easily identifiable with their grey handles.

# DPX<sup>3</sup> 250 HP, DPX<sup>3</sup>-I 250 HP

## PRESENTATION

The DPX<sup>3</sup> 250 HP and DPX<sup>3</sup>-I 250 HP MCCBs fit into our XL<sup>3</sup> and XL<sup>3</sup> S enclosures on a base plate, in vertical and horizontal positions.

The DPX<sup>3</sup> 250 HP thermal-magnetic circuit breakers ensure the disconnection, the control, the breaking and the protection of power lines, they are available with :

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA
- 10 current sizes: 16 A, 20 A, 25 A, 32 A, 40 A, 50 A, 63 A, 80 A, 100 A, 125 A, 160 A, 200 A, 250 A
- In 3P, 4P and 4P + residual current protection versions
- Integrated residual current module (type A, available for Icu = 36 kA, 50 kA and 4P version)
- Conforming to the IEC 60947-2 standard.



| Size  | DPX <sup>3</sup> 250 HP Thermal magnetic |          |          |          |          |          |          |          | DPX <sup>3</sup> 250 HP thermal magnetic + residual current |          |
|-------|--|----------|----------|----------|----------|----------|----------|----------|---|----------|
|       | 36 kA                                    |          | 50 kA    |          | 70 kA    |          | 100 kA   |          | 36 kA   | 50 kA    |
|       | 3P                                       | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       | 4P  |          |
| 16 A  | 4 230 00                                 | 4 230 15 | 4 230 60 | 4 230 75 | 4 231 20 | 4 231 35 | 4 231 50 | 4 231 65 | 4 230 45  | 4 231 05 |
| 20 A  | 4 230 01                                 | 4 230 16 | 4 230 61 | 4 230 76 | 4 231 21 | 4 231 36 | 4 231 51 | 4 231 66 | 4 230 46  | 4 231 06 |
| 25 A  | 4 230 02                                 | 4 230 17 | 4 230 62 | 4 230 77 | 4 231 22 | 4 231 37 | 4 231 52 | 4 231 67 | 4 230 47  | 4 231 07 |
| 32 A  | 4 230 03                                 | 4 230 18 | 4 230 63 | 4 230 78 | 4 231 23 | 4 231 38 | 4 231 53 | 4 231 68 | 4 230 48  | 4 231 08 |
| 40 A  | 4 230 04                                 | 4 230 19 | 4 230 64 | 4 230 79 | 4 231 24 | 4 231 39 | 4 231 54 | 4 231 69 | 4 230 49  | 4 231 09 |
| 50 A  | 4 230 05                                 | 4 230 20 | 4 230 65 | 4 230 80 | 4 231 25 | 4 231 40 | 4 231 55 | 4 231 70 | 4 230 50  | 4 231 10 |
| 63 A  | 4 230 06                                 | 4 230 21 | 4 230 66 | 4 230 81 | 4 231 26 | 4 231 41 | 4 231 56 | 4 231 71 | 4 230 51  | 4 231 11 |
| 80 A  | 4 230 07                                 | 4 230 22 | 4 230 67 | 4 230 82 | 4 231 27 | 4 231 42 | 4 231 57 | 4 231 72 | 4 230 52  | 4 231 12 |
| 100 A | 4 230 08                                 | 4 230 23 | 4 230 68 | 4 230 83 | 4 231 28 | 4 231 43 | 4 231 58 | 4 231 73 | 4 230 53  | 4 231 13 |
| 125 A | 4 230 09                                 | 4 230 24 | 4 230 69 | 4 230 84 | 4 231 29 | 4 231 44 | 4 231 59 | 4 231 74 | 4 230 54  | 4 231 14 |
| 160 A | 4 230 10                                 | 4 230 25 | 4 230 70 | 4 230 85 | 4 231 30 | 4 231 45 | 4 231 60 | 4 231 75 | 4 230 55  | 4 231 15 |
| 200 A | 4 230 11                                 | 4 230 26 | 4 230 71 | 4 230 86 | 4 231 31 | 4 231 46 | 4 231 61 | 4 231 76 | 4 230 56  | 4 231 16 |
| 250 A | 4 230 12                                 | 4 230 27 | 4 230 72 | 4 230 87 | 4 231 32 | 4 231 47 | 4 231 62 | 4 231 77 | 4 230 57  | 4 231 17 |

The DPX<sup>3</sup> 250 HP electronic circuit breakers provide protection, breaking, control and breaking of power lines, they are available in :

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA
- 4 current sizes: 40 A, 100 A, 160 A, 250 A
- 3P, 4P (with neutral adjustment) and 4P + residual current protection versions
- Integrated residual current module (type A, available for Icu = 36 kA, 50 kA in 4P version)
- Conforming to the IEC 60947-2 standard.

|       | DPX <sup>3</sup> 250 HP S1 electronic |          |          |          |          |          |          |          | DPX <sup>3</sup> 250 HP S1 electronic+ residual current protection |          |
|-------|---------------------------------------|----------|----------|----------|----------|----------|----------|----------|--|----------|
|       | 36 kA                                 |          | 50 kA    |          | 70 kA    |          | 100 kA   |          | 36 kA  | 50 kA    |
| Size  | 3P                                    | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       | 4P   |          |
| 40 A  | 4 232 00                              | 4 232 05 | 4 232 20 | 4 232 25 | 4 232 40 | 4 232 45 | 4 232 50 | 4 23 255 | 4 232 15   | 4 232 35 |
| 100 A | 4 232 01                              | 4 232 06 | 4 232 21 | 4 232 26 | 4 232 41 | 4 232 46 | 4 232 51 | 4 232 56 | 4 232 16   | 4 232 36 |
| 160 A | 4 232 02                              | 4 232 07 | 4 232 22 | 4 232 27 | 4 232 42 | 4 232 47 | 4 232 52 | 4 232 57 | 4 232 17   | 4 232 37 |
| 250 A | 4 232 03                              | 4 232 08 | 4 232 23 | 4 232 28 | 4 232 43 | 4 232 48 | 4 232 53 | 4 232 58 | 4 232 18   | 4 232 38 |

The DPX<sup>3</sup> 250 HP magnetic-only circuit breakers provide breaking, control, disconnection and protection (on short-circuit) of three-phase motors. They are available with :

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA
- 9 current sizes: 6.3 A, 12.5 A, 25 A, 32 A, 50 A, 80 A, 100 A, 160 A, 220 A
- In 3P and 4P versions
- Conforming to the IEC 60947-2 standard.

|        | DPX <sup>3</sup> 250 HP Magnetic-only |          |          |          |          |          |          |          |
|--------|---------------------------------------|----------|----------|----------|----------|----------|----------|----------|
|        | 36 kA                                 |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
| Size   | 3P                                    | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 6.3 A  | 4 239 01                              | 4 239 13 | 4 239 25 | 4 239 37 | 4 239 49 | 4 239 61 | 4 239 73 | 4 239 85 |
| 12.5 A | 4 239 02                              | 4 239 14 | 4 239 26 | 4 239 38 | 4 239 50 | 4 239 62 | 4 239 74 | 4 239 86 |
| 25 A   | 4 239 03                              | 4 239 15 | 4 239 27 | 4 239 39 | 4 239 51 | 4 239 63 | 4 239 75 | 4 239 87 |
| 32 A   | 4 239 04                              | 4 239 16 | 4 239 28 | 4 239 40 | 4 239 52 | 4 239 64 | 4 239 76 | 4 239 88 |
| 50 A   | 4 239 05                              | 4 239 17 | 4 239 29 | 4 239 41 | 4 239 53 | 4 239 65 | 4 239 77 | 4 239 89 |
| 80 A   | 4 239 06                              | 4 239 18 | 4 239 30 | 4 239 42 | 4 239 54 | 4 239 66 | 4 239 78 | 4 239 90 |
| 100 A  | 4 239 07                              | 4 239 19 | 4 239 31 | 4 239 43 | 4 239 55 | 4 239 67 | 4 239 79 | 4 239 91 |
| 160 A  | 4 239 08                              | 4 239 20 | 4 239 32 | 4 239 44 | 4 239 56 | 4 239 68 | 4 239 80 | 4 239 92 |
| 220 A  | 4 239 09                              | 4 239 21 | 4 239 33 | 4 239 45 | 4 239 57 | 4 239 69 | 4 239 81 | 4 239 93 |

The DPX-I 250 HP trip-free switches provide on-load disconnection and sectioning of electrical circuits, they are available in :

- 1 single size: 250 A
- In 3P, 4P and 4P + residual current protection versions
- Integrated residual current module (type A, available in 4P version)
- Conforming to the IEC 60947-3 standard.

| Size  | DPX <sup>3</sup> -I 250 HP |          | Calibre | DPX <sup>3</sup> -I 250 HP + residual current protection |
|-------|----------------------------|----------|---------|--|
|       | 3P                         | 4P       |         | 4P   |
| 250 A | 4 231 80                   | 4 231 81 | 250 A   | 4 231 83   |



The DPX-I 250 HP trip-free switches are easily identifiable with their grey handles.

# DPX<sup>3</sup> 630 - DPX<sup>3</sup>-I 630 DPX<sup>3</sup> 630 AB - DPX<sup>3</sup> 630MS



## PRESENTATION

The DPX<sup>3</sup> 630 MCCBs are integrated in XL<sup>3</sup> on a plate only.

The DPX<sup>3</sup> 630 thermal-magnetic circuit breakers ensure the disconnection, the control, the breaking and the protection of power lines, they are available with :

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA
- 5 sizes: 250 A, 320 A, 400 A, 500 A, 630 A
- 3P, 3P+N and 4P versions
- A downstream earth leakage module
- Conforming to the IEC 60947-2 standard

| Size  | DPX <sup>3</sup> 630 Thermal magnetic |          |          |          |          |          |          |          |
|-------|---------------------------------------|----------|----------|----------|----------|----------|----------|----------|
|       | 36 kA                                 |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|       | 3P                                    | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 250 A | 4 220 00                              | 4 220 05 | 4 220 14 | 4 220 19 | 4 220 28 | 4 220 33 | 4 220 42 | 4 220 47 |
| 320 A | 4 220 01                              | 4 220 06 | 4 220 15 | 4 220 20 | 4 220 29 | 4 220 34 | 4 220 43 | 4 220 48 |
| 400 A | 4 220 02                              | 4 220 07 | 4 220 16 | 4 220 21 | 4 220 30 | 4 220 35 | 4 220 44 | 4 220 49 |
| 500 A | 4 220 03                              | 4 220 08 | 4 220 17 | 4 220 22 | 4 220 31 | 4 220 36 | 4 220 45 | 4 220 50 |
| 630 A | 4 220 04                              | 4 220 09 | 4 220 18 | 4 220 23 | 4 220 32 | 4 220 37 | 4 220 46 | 4 220 51 |

The DPX<sup>3</sup> 630 electronic circuit breakers (with and without measurement/earth protection) ensure the breaking, control, disconnection and protection of power lines. They are available with :

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA
- 5 sizes: 250 A, 320 A, 400 A, 500 A, 630 A
- 3P, 4P versions with neutral adjustment
- A downstream residual current block
- Conforming to the IEC 60947-2 standard

| Size  | DPX <sup>3</sup> 630 ELEC S1 |          |          |          |          |          |          |          |
|-------|------------------------------|----------|----------|----------|----------|----------|----------|----------|
|       | 36 kA                        |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|       | 3P                           | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 250 A | 4 224 98                     | 4 225 03 | 4 225 08 | 4 225 13 | 4 225 18 | 4 225 23 | 4 225 28 | 4 225 33 |
| 320 A | 4 224 99                     | 4 225 04 | 4 225 09 | 4 225 14 | 4 225 19 | 4 225 24 | 4 225 29 | 4 225 34 |
| 400 A | 4 225 00                     | 4 225 05 | 4 225 10 | 4 225 15 | 4 225 20 | 4 225 25 | 4 225 30 | 4 225 35 |
| 500 A | 4 225 01                     | 4 225 06 | 4 225 11 | 4 225 16 | 4 225 21 | 4 225 26 | 4 225 31 | 4 225 36 |
| 630 A | 4 225 02                     | 4 225 07 | 4 225 12 | 4 225 17 | 4 225 22 | 4 225 27 | 4 225 32 | 4 225 37 |

| Size  | DPX <sup>3</sup> 630 ELEC S2 |          |          |          |          |          |          |          | DPX <sup>3</sup> 630 ELEC S2 + measurement |          |          |          |          |          |          |          |
|-------|------------------------------|----------|----------|----------|----------|----------|----------|----------|--|----------|----------|----------|----------|----------|----------|----------|
|       | 36 kA                        |          | 50 kA    |          | 70 kA    |          | 100 kA   |          | 36 kA                                      |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|       | 3P                           | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       | 3P   | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 250 A | 4 220 56                     | 4 220 61 | 4 220 66 | 4 220 71 | 4 220 76 | 4 220 81 | 4 220 86 | 4 220 91 | 4 220 96                                   | 4 221 01 | 4 221 06 | 4 221 11 | 4 221 16 | 4 221 21 | 4 221 26 | 4 221 31 |
| 320 A | 4 220 57                     | 4 220 62 | 4 220 67 | 4 220 72 | 4 220 77 | 4 220 82 | 4 220 87 | 4 220 92 | 4 220 97                                   | 4 221 02 | 4 221 07 | 4 221 12 | 4 221 17 | 4 221 22 | 4 221 27 | 4 221 32 |
| 400 A | 4 220 58                     | 4 220 63 | 4 220 68 | 4 220 73 | 4 220 78 | 4 220 83 | 4 220 88 | 4 220 93 | 4 220 98                                   | 4 221 03 | 4 221 08 | 4 221 13 | 4 221 18 | 4 221 23 | 4 221 28 | 4 221 33 |
| 500 A | 4 220 59                     | 4 220 64 | 4 220 69 | 4 220 74 | 4 220 79 | 4 220 84 | 4 220 89 | 4 220 94 | 4 220 99                                   | 4 221 04 | 4 221 09 | 4 221 14 | 4 221 19 | 4 221 24 | 4 221 29 | 4 221 34 |
| 630 A | 4 220 60                     | 4 220 65 | 4 220 70 | 4 220 75 | 4 220 80 | 4 220 85 | 4 220 90 | 4 220 95 | 4 221 00                                   | 4 221 05 | 4 221 10 | 4 221 15 | 4 221 20 | 4 221 25 | 4 221 30 | 4 221 35 |

| Size  | DPX <sup>3</sup> 630 ELEC Sg |          |          |          |          |          |          |          |
|-------|------------------------------|----------|----------|----------|----------|----------|----------|----------|
|       | 36 kA                        |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|       | 3P                           | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 250 A | 4 221 36                     | 4 221 41 | 4 221 46 | 4 221 51 | 4 221 56 | 4 221 61 | 4 221 66 | 4 221 71 |
| 320 A | 4 221 37                     | 4 221 42 | 4 221 47 | 4 221 52 | 4 221 57 | 4 221 62 | 4 221 67 | 4 221 72 |
| 400 A | 4 221 38                     | 4 221 43 | 4 221 48 | 4 221 53 | 4 221 58 | 4 221 63 | 4 221 68 | 4 221 73 |
| 500 A | 4 221 39                     | 4 221 44 | 4 221 49 | 4 221 54 | 4 221 59 | 4 221 64 | 4 221 69 | 4 221 74 |
| 630 A | 4 221 40                     | 4 221 45 | 4 221 50 | 4 221 55 | 4 221 60 | 4 221 65 | 4 221 70 | 4 221 75 |

| Size  | DPX <sup>3</sup> 630 ELEC Sg + measurement |          |          |          |          |          |          |          |
|-------|--|----------|----------|----------|----------|----------|----------|----------|
|       | 36 kA                                      |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|       | 3P   | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 250 A | 4 221 76                                   | 4 221 81 | 4 221 86 | 4 221 91 | 4 221 96 | 4 222 01 | 4 222 06 | 4 222 11 |
| 320 A | 4 221 77                                   | 4 221 82 | 4 221 87 | 4 221 92 | 4 221 97 | 4 222 02 | 4 222 07 | 4 222 12 |
| 400 A | 4 221 78                                   | 4 221 83 | 4 221 88 | 4 221 93 | 4 221 98 | 4 222 03 | 4 222 08 | 4 222 13 |
| 500 A | 4 221 79                                   | 4 221 84 | 4 221 89 | 4 221 94 | 4 221 99 | 4 222 04 | 4 222 09 | 4 222 14 |
| 630 A | 4 221 80                                   | 4 221 85 | 4 221 90 | 4 221 95 | 4 222 00 | 4 222 05 | 4 222 10 | 4 222 15 |

The DPX<sup>3</sup> 630MS circuit breakers provide breaking, control, disconnection and protection of three-phase motors. They are available with :

- 2 breaking capacities: 36 kA, 70 kA
- 4 sizes: 320 A, 400 A, 500 A, 630 A
- 3P or 4P versions
- A downstream residual current device
- Conforming to IEC 60947-2

| Size  | DPX <sup>3</sup> 630 MS |          |          |          | DPX <sup>3</sup> 630 MS - Electronic |          |
|-------|-------------------------|----------|----------|----------|--------------------------------------|----------|
|       | 36 kA                   |          | 70 kA    |          | 36 kA                                | 70 kA    |
|       | 3P                      | 4P       | 3P       | 4P       | 3P                                   |          |
| 320 A |                         |          |          |          | 4 226 08                             | 4 226 10 |
| 400 A | 4 225 98                | 4 226 16 | 4 226 01 | 4 226 18 | 4 226 09                             | 4 226 11 |
| 500 A | 4 225 99                |          | 4 226 02 |          |                                      |          |
| 630 A | 4 226 00                | 4 226 17 | 4 226 03 | 4 226 19 |                                      |          |

The DPX<sup>3</sup>-I 630 switches provide load break and electrical circuit isolation. They are available with :

- 2 sizes: 400 A, 630 A
- Versions in 3P, 4P
- A downstream residual current block
- Conforming to the IEC 60947-3 standard

| Size  | DPX <sup>3</sup> - I 630 |          |
|-------|--------------------------|----------|
|       | 3P                       | 4P       |
| 400 A | 4 222 16                 | 4 222 18 |
| 630 A | 4 222 17                 | 4 222 19 |

The DPX<sup>3</sup> 630 AB circuit breakers are used for the disconnection, control, isolation and protection of EDF installations (monitored power). They are available with :

- 1 single size: 400 A
- Only in 4P version
- A downstream residual current device
- Conforming to the IEC 60947-2 standard

| Size  | DPX <sup>3</sup> 630 AB - Electronic |             |
|-------|--------------------------------------|-------------|
|       | No measurement                       | Measurement |
|       | 4P                                   |             |
| 400 A | 4 225 96                             | 4 225 97    |

# DPX<sup>3</sup> 1600 - DPX<sup>3</sup>-I 1600 DPX<sup>3</sup> 1600 MS

## PRESENTATION

The DPX<sup>3</sup> 1600 MCCBs are integrated into XL<sup>3</sup> on a plate only.

The DPX<sup>3</sup> 1600 thermal-magnetic circuit breakers ensure the disconnection, the control, the breaking and the protection of power lines, they are available with :

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA
- 5 sizes: 500 A, 630 A, 800 A, 1000 A, 1250 A
- 3P or 3P+N (external neutral) or 4P versions
- Conforming to IEC 60947-2 standard



| Size   | DPX <sup>3</sup> 1600 Thermal magnetic |          |          |          |          |          |          |          |
|--------|--|----------|----------|----------|----------|----------|----------|----------|
|        | 36 kA                                  |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|        | 3P                                     | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 500 A  | 4 222 50                               | 4 222 55 | 4 222 62 | 4 222 67 | 4 222 74 | 4 222 79 | 4 222 86 | 4 222 91 |
| 630 A  | 4 222 51                               | 4 222 56 | 4 222 63 | 4 222 68 | 4 222 75 | 4 222 80 | 4 222 87 | 4 222 92 |
| 800 A  | 4 222 52                               | 4 222 57 | 4 222 64 | 4 222 69 | 4 222 76 | 4 222 81 | 4 222 88 | 4 222 93 |
| 1000 A | 4 222 53                               | 4 222 58 | 4 222 65 | 4 222 70 | 4 222 77 | 4 222 82 | 4 222 89 | 4 222 94 |
| 1250 A | 4 222 54                               | 4 222 59 | 4 222 66 | 4 222 71 | 4 222 78 | 4 222 83 | 4 222 90 | 4 222 95 |

The DPX<sup>3</sup> 1600 electronic circuit breakers (with and without measurement/earth protection) ensure the breaking, control, disconnection and protection of power lines. They are available with :

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA
- 6 sizes: 500 A, 630 A, 800 A, 1000 A, 1250 A, 1600 A
- 3P, 4P or 3P+N (external neutral) versions
- Type of releases: S1 - S2 - Sg
- Conforming to IEC 60947-2 standard

| Size   | DPX <sup>3</sup> 1600 Electronic S1 |          |          |          |          |          |          |          |
|--------|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|
|        | 36 kA                               |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|        | 3P                                  | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 500 A  | 4 225 38                            | 4 225 44 | 4 225 50 | 4 225 56 | 4 225 62 | 4 225 68 | 4 225 74 | 4 225 80 |
| 630 A  | 4 225 39                            | 4 225 45 | 4 225 51 | 4 225 57 | 4 225 63 | 4 225 69 | 4 225 75 | 4 225 81 |
| 800 A  | 4 225 40                            | 4 225 46 | 4 225 52 | 4 225 58 | 4 225 64 | 4 225 70 | 4 225 76 | 4 225 82 |
| 1000 A | 4 225 41                            | 4 225 47 | 4 225 53 | 4 225 59 | 4 225 65 | 4 225 71 | 4 225 77 | 4 225 83 |
| 1250 A | 4 225 42                            | 4 225 48 | 4 225 54 | 4 225 60 | 4 225 66 | 4 225 72 | 4 225 78 | 4 225 84 |
| 1600 A | 4 225 43                            | 4 225 49 | 4 225 55 | 4 225 61 | 4 225 67 | 4 225 73 | -        | -        |



| Size   | DPX <sup>3</sup> 1600 Electronic S2 |          |          |          |          |          |          |          | DPX <sup>3</sup> 1600 Electronic S2 + measurement |          |          |          |          |          |          |          |
|--------|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|---|----------|----------|----------|----------|----------|----------|----------|
|        | 36 kA                               |          | 50 kA    |          | 70 kA    |          | 100 kA   |          | 36 kA   |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|        | 3P                                  | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       | 3P  | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 500 A  | 4 222 98                            | 4 223 04 | 4 223 10 | 4 223 16 | 4 223 22 | 4 223 28 | 4 223 34 | 4 223 40 | 4 223 46  | 4 223 52 | 4 223 58 | 4 223 64 | 4 223 70 | 4 223 76 | 4 223 82 | 4 223 88 |
| 630 A  | 4 222 99                            | 4 223 05 | 4 223 11 | 4 223 17 | 4 223 23 | 4 223 29 | 4 223 35 | 4 223 41 | 4 223 47  | 4 223 53 | 4 223 59 | 4 223 65 | 4 223 71 | 4 223 77 | 4 223 83 | 4 223 89 |
| 800 A  | 4 223 00                            | 4 223 06 | 4 223 12 | 4 223 18 | 4 223 24 | 4 223 30 | 4 223 36 | 4 223 42 | 4 223 48  | 4 223 54 | 4 223 60 | 4 223 66 | 4 223 72 | 4 223 78 | 4 223 84 | 4 223 90 |
| 1000 A | 4 223 01                            | 4 223 07 | 4 223 13 | 4 223 19 | 4 223 25 | 4 223 31 | 4 223 37 | 4 223 43 | 4 223 49  | 4 223 55 | 4 223 61 | 4 223 67 | 4 223 73 | 4 223 79 | 4 223 85 | 4 223 91 |
| 1250 A | 4 223 02                            | 4 223 08 | 4 223 14 | 4 223 20 | 4 223 26 | 4 223 32 | 4 223 38 | 4 223 44 | 4 223 50  | 4 223 56 | 4 223 62 | 4 223 68 | 4 223 74 | 4 223 80 | 4 223 86 | 4 223 92 |
| 1600 A | 4 223 03                            | 4 223 09 | 4 223 15 | 4 223 21 | 4 223 27 | 4 223 33 | -        | -        | 4 223 51  | 4 223 57 | 4 223 63 | 4 223 69 | 4 223 75 | 4 223 81 | -        | -        |

| Size   | DPX <sup>3</sup> 1600 Electronic Sg |          |          |          |          |          |          |          | DPX <sup>3</sup> 1600 Electronic Sg + measurement |          |          |          |          |          |          |          |
|--------|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|---|----------|----------|----------|----------|----------|----------|----------|
|        | 36 kA                               |          | 50 kA    |          | 70 kA    |          | 100 kA   |          | 36 kA   |          | 50 kA    |          | 70 kA    |          | 100 kA   |          |
|        | 3P                                  | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       | 3P  | 4P       | 3P       | 4P       | 3P       | 4P       | 3P       | 4P       |
| 500 A  | 4 223 94                            | 4 224 00 | 4 224 06 | 4 224 12 | 4 224 18 | 4 224 24 | 4 224 30 | 4 224 36 | 4 224 42  | 4 224 48 | 4 224 54 | 4 224 60 | 4 224 66 | 4 224 72 | 4 224 78 | 4 224 84 |
| 630 A  | 4 223 95                            | 4 224 01 | 4 224 07 | 4 224 13 | 4 224 19 | 4 224 25 | 4 224 31 | 4 224 37 | 4 224 43  | 4 224 49 | 4 224 55 | 4 224 61 | 4 224 67 | 4 224 73 | 4 224 79 | 4 224 85 |
| 800 A  | 4 223 96                            | 4 224 02 | 4 224 08 | 4 224 14 | 4 224 20 | 4 224 26 | 4 224 32 | 4 224 38 | 4 224 44  | 4 224 50 | 4 224 56 | 4 224 62 | 4 224 68 | 4 224 74 | 4 224 80 | 4 224 86 |
| 1000 A | 4 223 97                            | 4 224 03 | 4 224 09 | 4 224 15 | 4 224 21 | 4 224 27 | 4 224 33 | 4 224 39 | 4 224 45  | 4 224 51 | 4 224 57 | 4 224 63 | 4 224 69 | 4 224 75 | 4 224 81 | 4 224 87 |
| 1250 A | 4 223 98                            | 4 224 04 | 4 224 10 | 4 224 16 | 4 224 22 | 4 224 28 | 4 224 34 | 4 224 40 | 4 224 46  | 4 224 52 | 4 224 58 | 4 224 64 | 4 224 70 | 4 224 76 | 4 224 82 | 4 224 88 |
| 1600 A | 4 223 99                            | 4 224 05 | 4 224 11 | 4 224 17 | 4 224 23 | 4 224 29 | -        | -        | 4 224 47  | 4 224 53 | 4 224 59 | 4 224 65 | 4 224 71 | 4 224 77 | -        | -        |

# DPX<sup>3</sup> 125 HP & 250 HP DPX<sup>3</sup> 630 & 1600

DPX<sup>3</sup> 1600MS (magnetic only) circuit breakers provide breaking, control, disconnection and magnetic protection. They are available with:

- 2 breaking capacities: 50 kA, 70 kA
- 2 sizes: 800 A, 1000 A
- 3P and 4P versions

|        | DPX <sup>3</sup> 1600 MS |          |          |          |
|--------|--------------------------|----------|----------|----------|
|        | 50 kA                    |          | 70 kA    |          |
| Size   | 3P                       | 4P       | 3P       | 4P       |
| 800 A  | 4 226 04                 | 4 226 12 | 4 226 06 | 4 226 14 |
| 1000 A | 4 226 05                 | 4 226 13 | 4 226 07 | 4 226 15 |

The DPX<sup>3</sup>-I 1600 switches provide on-load disconnection and isolation of electrical circuits. They are available with:

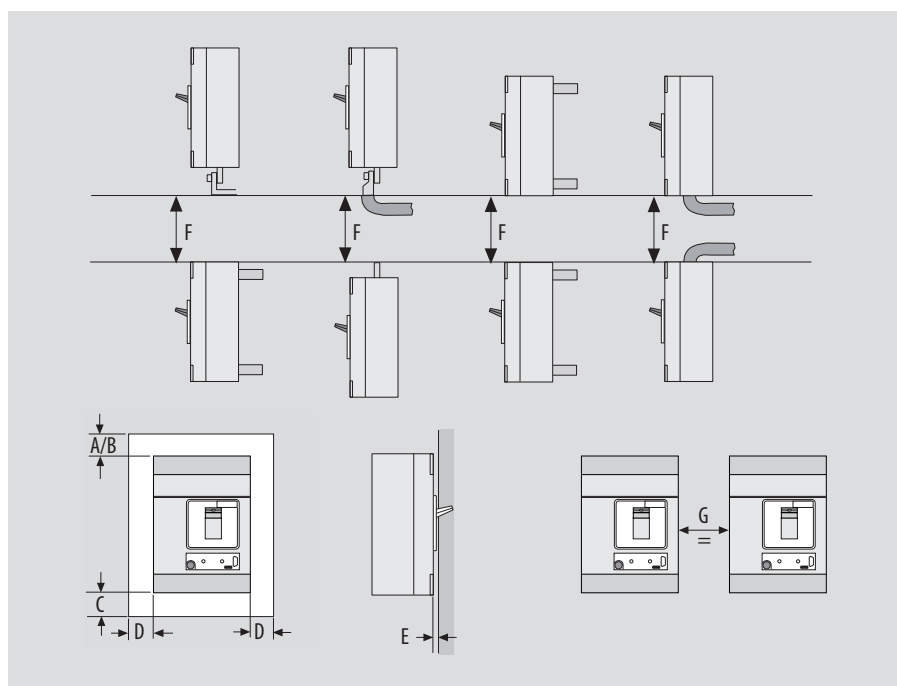
- 4 sizes: 630 A, 800 A, 1250 A, 1600 A
- 3P and 4P versions
- Conforming to IEC 60947-3

| Size   | DPX <sup>3</sup> - I 1600 |          |
|--------|---------------------------|----------|
|        | 3P                        | 4P       |
| 630 A  | 4 224 90                  | 4 224 94 |
| 800 A  | 4 224 91                  | 4 224 95 |
| 1250 A | 4 224 92                  | 4 224 96 |
| 1600 A | 4 224 93                  | 4 224 97 |



## IMPLEMENTATION

### ■ Minimum installation distance



|                         | Electrical bonded wall | Insulated wall | Electrical bonded wall | Metal wall | Faceplate | Distance between two circuit breakers |        |
|-------------------------|------------------------|----------------|------------------------|------------|-----------|---------------------------------------|--------|
|                         | A (mm)                 | B (mm)         | C (mm)                 | D (mm)     | E (mm)    | F (mm)                                | G (mm) |
| DPX <sup>3</sup> 125 HP | 60                     | 30             | 20                     | 20         | 0         | 100                                   | 0      |
| DPX <sup>3</sup> 250 HP | 60                     | 30             | 20                     | 20         | 0         | 100                                   | 0      |
| DPX <sup>3</sup> 630    | 70                     | 25             | 25                     | 25         | 0         | 160                                   | 0      |
| DPX <sup>3</sup> 1600   | 90                     | 40             | 40                     | 40         | 0         | 160                                   | 0      |

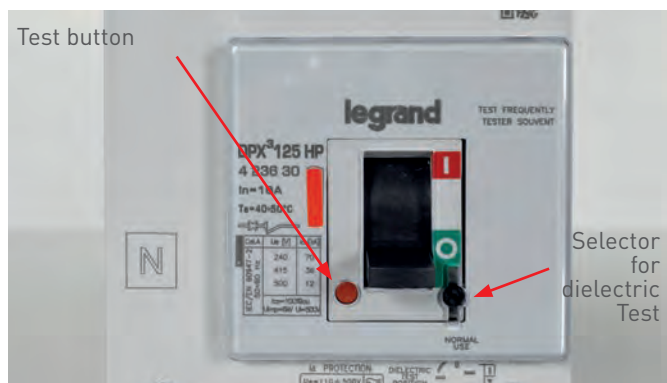
# DPX<sup>3</sup> 125 HP

## Product description

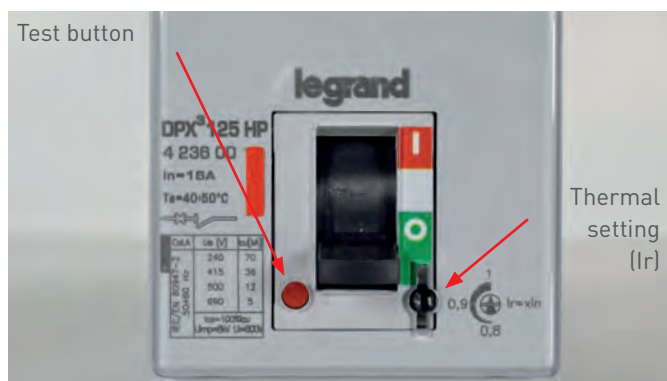
### 1 FRONT PANEL OF THE CIRCUIT BREAKER

Examples of circuit breaker front panels:

**Thermal-magnetic circuit breaker with 4P residual current protection**



**3P thermal-magnetic circuit breaker**



### 2 HANDLE POSITION (ON - TRIPPED - OFF)

Below are the 3 positions of the circuit breaker handles according to their status:



**OPEN (OFF)(O)**



**TRIPPED**



**CLOSED (ON)(I)**

After the DPX<sup>3</sup> 125 HP has tripped, before it can be closed again, it must be reset by turning the handle to the O position (OFF position).

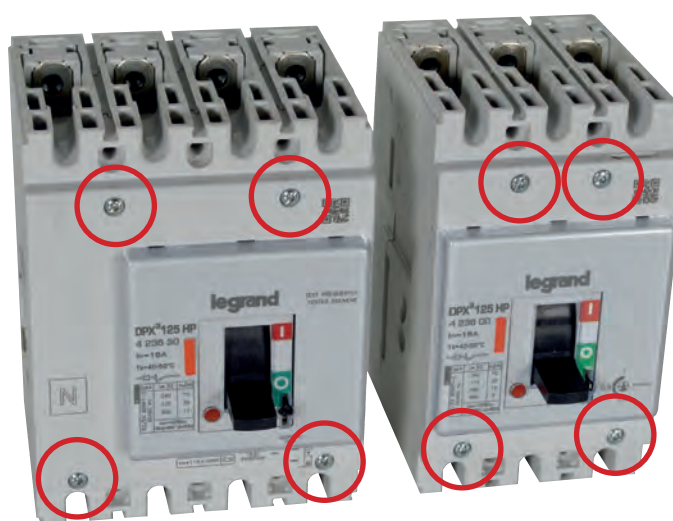
### 3 SETTINGS

For DPX<sup>3</sup> 125 HP thermal-magnetic:

| Thermal: I <sub>r</sub>              |      | Current (A) |     |      |      |     |     |      |     |      |       |
|--------------------------------------|------|-------------|-----|------|------|-----|-----|------|-----|------|-------|
| Multiplying factor of I <sub>n</sub> | Mark | 16          | 20  | 25   | 32   | 40  | 50  | 63   | 80  | 100  | 125   |
| 0.8                                  | 0.8  | 12.8        | 16  | 20   | 25.6 | 32  | 40  | 50.4 | 64  | 80   | 100   |
| 0.9                                  | 0.9  | 14.4        | 18  | 22.5 | 28.8 | 36  | 45  | 56.7 | 72  | 90   | 112.5 |
| 1                                    | 1    | 16          | 20  | 25   | 32   | 40  | 50  | 63   | 80  | 100  | 125   |
| Magnetic: I <sub>i</sub>             |      | 16          | 20  | 25   | 32   | 40  | 50  | 63   | 80  | 100  | 125   |
| Fixed                                |      | 400         | 400 | 400  | 400  | 400 | 500 | 630  | 800 | 1000 | 1250  |

### 4 FRONT OPENING

To open the front panel, simply put the circuit breaker in the open or tripped position and loosen the 2 screws with a PZ1 screwdriver. The front panel is completely separated from the circuit breaker. The screws are captive.



# Electrical accessories

■ **Auxiliary contact (OC)/fault signalling contact (CTR)**

- 4 210 11 24/48/110/230 V DC  
110/230 V AC

■ **Shunt trip (ST)**

- 4 210 12 12 V AC/DC
- 4 210 13 24 V AC/DC
- 4 210 14 48 V AC/DC
- 4 210 15 110-130 V AC
- 4 210 16 200-277 V AC
- 4 210 17 380-480 V AC

■ **Undervoltage release (UVR)**

- 4 210 18 12 V AC/DC
- 4 210 19 24 V AC/DC
- 4 210 20 48 V AC/DC
- 4 210 21 110-130 V AC/DC
- 4 210 22 200-240 V AC/DC
- 4 210 23 277 V AC
- 4 210 24 380-415 V AC
- 4 210 25 440-480 V AC

■ **Time-lag undervoltage release**

- 0 261 90 230 V AC time-lag module
- 0 261 91 400 V AC time-lag module
- 4 210 98 Release for time-lag modules

**1 AUXILIARY CONTACT (OC) / FAULT SIGNALLING CONTACT (CTR)**



This contact Cat.No is common to all DPX<sup>3</sup> circuit breaker and switch ranges. Depending on its position in the product, it acts either as an auxiliary contact or as a fault signal contact..

The auxiliary contact (OC) is used to signal the position of the power contacts of the circuit breaker or switch (open or closed).

The fault signal contact (CTR) allows the signaling of a product disconnection either by an internal trigger or by mechanical action on the red "test" button.

These contacts are of the changeover type (NO/NC) with dry contact (potential free).

**OC contact status**

|           | OC | 12 - 11 | 14 - 11 |
|-----------|----|---------|---------|
| OFF       |    |         |         |
| Déclenché |    |         |         |
| ON        |    |         |         |

**CTR contact status**

|           | CTR | 52 - 51 | 54 - 51 |
|-----------|-----|---------|---------|
| OFF       |     |         |         |
| Déclenché |     |         |         |
| ON        |     |         |         |

**Electrical characteristics (OC & CTR)**

| VOLTAGE | CURRENT (A)    |                |
|---------|----------------|----------------|
|         | RÉSISTIVE LOAD | INDUCTIVE LOAD |
| 24 Vdc  | 10             | 5              |
| 48 Vdc  | 1.3            | 0.7            |
| 110 Vdc | 0.4            | 0.3            |
| 230 Vdc | 0.3            | 0.2            |
| 110 Vac | 10             | 4              |
| 230 Vac | 6              | 2              |

**Implementation**

The contact(s) are inserted after removing the front panel of the product. It is only possible to insert one OC and/or one CTR at the same time. They are placed on the left side of the handle. Markings are indicated on the product.

The locations are different for the OC and the CTR.

■ Front panel opening



2 marks are indicated on the product (OC/CTR)

■ Setting up contacts



One CTR contact in a DPX³ 125 HP 4P



One OC contact in a DPX³ 125 HP 3P

■ Connection

The DPX³ offer several possibilities for the output of the connecting wires: towards the back of the product, laterally and upwards.

Below are some examples of wire outputs:



Upper and lateral output



Rear and lateral output

## 2 SHUNT TRIP (ST)



Both shunt trip and undervoltage releases are common to the DPX<sup>3</sup> 125 HP and DPX<sup>3</sup> 250 HP range.

There is a wide voltage range from 12 volts (AC and DC) to 380 - 480 volts (AC).

The shunt trips allow instantaneous opening of the protection device by powering the coil. Control by external NO contact.

The contact incorporated in the shunt trip cuts off its power supply when an opening command is given (e.g.: emergency stop with hooking) thus avoiding the problem of overheating. Permanent power supply to the shunt trip is possible, preventing the circuit breaker from closing.

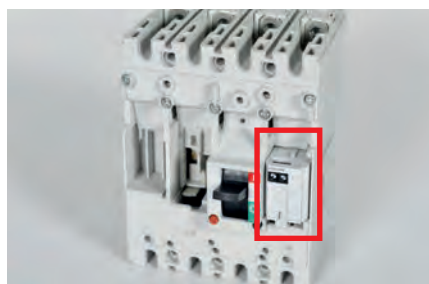
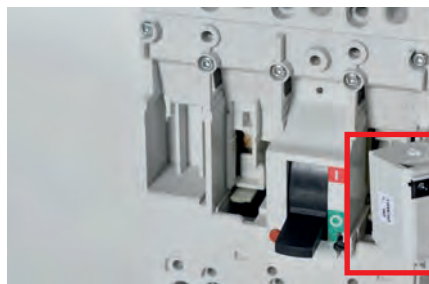
### Electrical characteristics

|                    | DPX <sup>3</sup> 125 HP/<br>DPX <sup>3</sup> 250 HP |
|--------------------|---|
| Operating range    | 70 to 110 % Un                                      |
| Operating time     | ≤ 50 ms   |
| Inrush power       | 400 VA/W  |
| Request time       | > 50 ms   |
| Insulation voltage | 1.8 kV  |

### ■ Setting up

The circuit breakers have a single location for the releases. This location is marked on the products. The installation is done simply by a clip located on the releases.

Set the circuit breaker to the tripped position by pressing the red button on the front panel, open the front panel and insert the shunt trip.



### ■ Connection

It is made with wires of 1.5 mm<sup>2</sup> max. and the wire outputs are identical to the auxiliary contacts, depending on the wiring.

## 3 UNDERVOLTAGE RELEASE (UVR)



There is a wide range of rated voltages from 12 volts (AC and DC) to 440 - 480 volts (AC).

Undervoltage releases allow instant opening of the circuit breaker by cutting off the power supply to their coil: positive safety (e.g.: emergency stop by external NC contact).

The undervoltage release must be supplied with power before it can operate the associated circuit breaker. The circuit breaker must first be reset to the OFF position.

### Electrical characteristics

|                    | DPX <sup>3</sup> 125 HP/<br>DPX <sup>3</sup> 250 HP |
|--------------------|---|
| Operating range    | 85 to 110 %   |
| Operating time     | ≤ 50 ms   |
| Inrush power       | 1.6 W/5 VA  |
| Request time       | > 50 ms   |
| Insulation voltage | 1.8 kV  |



■ **Setting up**

It is identical to the shunt trip above.



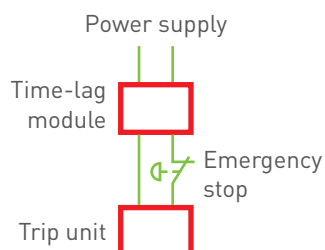
■ **Connection**

It is identical to the shunt trip above.

**4 TIME-LAG MODULES**



These modules are used to delay the opening of the circuit breaker (equipped with the release Cat.No 4 210 98), by 800 ms and thus prevent unwanted tripping in the event of micro cuts in the network. The wiring is done in parallel. 2 voltages are available: 230 volts and 400 volts.



# Mechanical accessories

## ■ Insulated shields

- 4 238 34 : 3P
- 4 238 35 : 4P

## ■ Padlock for locking

- 4 210 49

## ■ Mechanical interlocking

- 4 238 25 : Plate for lateral interlocking
- 4 238 27 : Without electronic module for fixed circuit breakers
- 4 238 28 : With electronic module (contacts) for fixed circuit breakers

## ■ Rotary handle

- 4 238 70 : Direct, standard
- 4 238 71 : Direct, for emergency use
- 4 238 72 : Vari-depth, standard
- 4 238 73 : Vari-depth, standard for emergency use
- 4 238 05 : Keylock support for > vari-depth handle

## ■ Universal key barrel

- 4 238 80 : Universal key barrel and flat key with random mapping
- 4 238 81 : Key barrel and flat key with fixed mapping EL43525
- 4 238 82 : Key barrel and flat key with fixed mapping EL43363
- 4 238 83 : Key barrel star key with random mapping

## ■ Cage terminals

- 4 238 74 : 3P standard
- 4 238 75 : 4P standard
- 4 238 76 : 3P high capacity
- 4 238 77 : 4P high capacity

## ■ Spreaders

- 4 238 88 : 3P
- 4 238 89 : 4P

## ■ Rear terminals

- 4 238 91 : 3P
- 4 238 92 : 4P

## ■ Sealable terminal shields

- 4 238 93 : 3P
- 4 238 94 : 4P

## 1 INSULATED SHIELDS

The shields supplied with the circuit breakers are mounted upstream of them simply by inserting them between the poles (2 shields for 3P circuit breakers and 3 shields for 4P circuit breakers). They are used to prevent the propagation of an electric arc in the event of a short-circuit.

Cat.Nos 4 238 34 and 4 238 35 are sets of shields for 1 circuit breaker 3P or 4P (upstream or downstream part).



## 2 PADLOCK FOR LOCKING



This accessory allows to lock the whole range of DPX<sup>3</sup> 125 HP, by padlocking their handles. It is possible to install a maximum of 3 padlocks, with a minimum diameter of 3 mm and a maximum of 8 mm. It is composed of 2 different parts, one to be fixed on the DPX<sup>3</sup> and the other to be clipped on the first part.

To install, put the DPX<sup>3</sup> on 0 (OFF). Insert the first part on the circuit breaker then clip the second part on the first one. The lockout is then possible with a padlock.



## 3 MECHANICAL INTERLOCKING

The purpose of this accessory is to associate two DPX<sup>3</sup> 125 HP 3P and/or 4P circuit breakers and to prevent the closing of both products at the same time. It is mounted on a dedicated plate (Cat.No 4 238 25).

Below are the 2 interlock mechanisms Cat.Nos 4 238 27 and 4 238 28.



Please check the label on the circuit breaker to see if the mechanism fits on it.



If this number is greater than or equal to 1, the circuit breakers are OK.

In this example the mechanism cannot be mounted

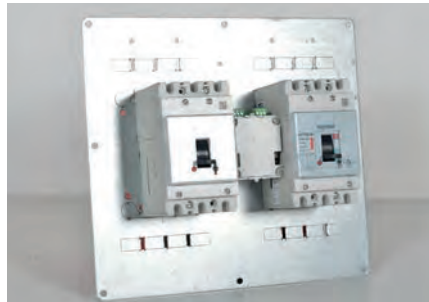
The advantages of this system are simple implementation, small space requirement and no adjustment.



## ■ Setting up

It is not possible to mix DPX<sup>3</sup> 125 HP and DPX<sup>3</sup> 250 HP, but it is possible to mix 2 DPX<sup>3</sup> 125 HP 3P and/or 4P. The 2 interlock versions are mounted identically. The Cat.No 4 238 28 has 4 transfer switch contacts with connectors, which differs from the standard version.

Mounting is done on a dedicated plate (Cat.No 4 238 25).



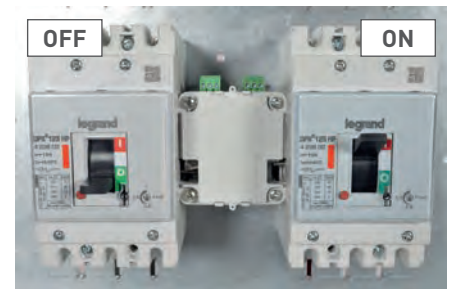
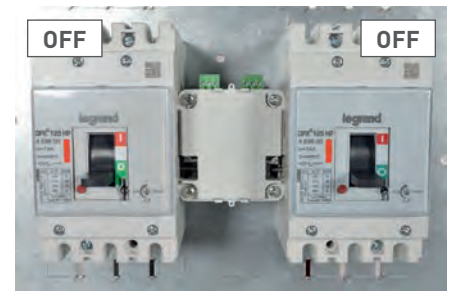
Fix the interlocking mechanism on the central part of the plate using the 4 screws supplied. Put the circuit breaker in the tripped position or in the 0 (OFF) position, and insert the metal rod on the side of the circuit breaker (on the right or on the left depending on the location on the plate).

**i** 4 rods are supplied with the interlocking mechanisms. The small ones (17,8 mm) are for the DPX<sup>3</sup> 125 HP and the large ones (29,5 mm) are for the DPX<sup>3</sup> 250 HP.

Fix the two circuit breakers on either side of the interlock on the plate. It is possible to connect the circuit breakers in front or rear terminals.

The transfer switch systems can be sealed with one or two seals supplied with the product.

Below are the 3 possible positions of the transfer switch system and the truth table.



| Q1 | Q2 |   |  |
|----|----|---|--|
| 0  | 0  | ✓ |  |
| 0  | 1  | ✓ |  |
| 1  | 0  | ✓ |  |
| 1  | 1  | ✗ |  |



#### 4 ROTARY HANDLES

##### 1) DIRECT HANDLES



They exist in standard (dark grey color) and in "emergency" (red and yellow color). Their mounting is identical. These rotary handles cannot be installed on DPX<sup>3</sup> 125 HP with integrated residual current devices. They are sealable.

#### ■ Setting up

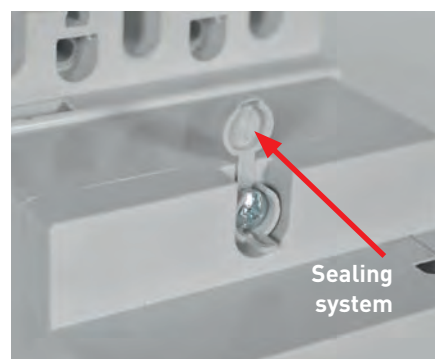
Open the front panel after turning the circuit breaker to the tripped position:



Drill three 4 mm diameter holes in the front panel.



Put back in place the front panel of the circuit breaker, place the handle on the open position (0), and fix the rotary handle system to the front panel of the DPX<sup>3</sup> 125 HP by orienting the handle to 0. Before tightening the top screw, integrate the sealing system.



The rotary handle is ready to operate. Think to paste the sticker with the correct rating of the breaker, as shown below, because the original marking of the circuit breaker is hidden behind the control.



The rotary handles can be padlocked with a maximum of 3 padlocks, with a minimum diameter of 3 mm and a maximum of 8 mm. Simply pull out the tab located in the handle and insert the padlocks.



Two additional functions are available on the direct rotary handles. These functions are locking systems and can be functional or not depending on the installation:

1) Locking in position 0 (OFF) with door open: with this locking it is impossible to close the circuit breaker with the door or a faceplate open without voluntary operation on the rotary control or closing the door or fitting the faceplate.

2) Locking the door or faceplate in position I (ON): it is impossible to open the door or faceplate if the circuit-breaker is closed. For this system, a part must be fixed on the door or faceplate.



On the picture above, the two locks are not functional

To make them functional, you have to remove two small plastic parts located on the front of the rotary control

### Locking 1 :

Remove the pin on the top left of the handle, the locking piece will come out of its housing, preventing the circuit breaker from closing without the door or a faceplate in place.



### Locking 2 :

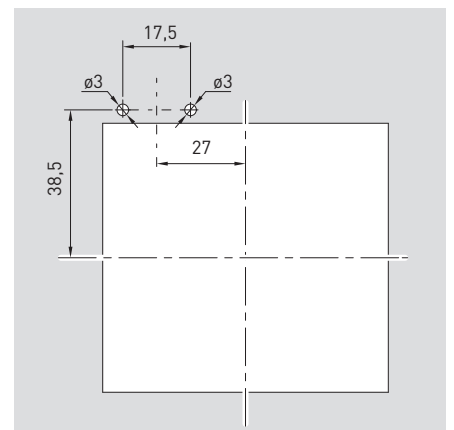
Remove the plastic piece located on the upper right side of the handle. The locking mechanism will come out of its housing, putting the circuit breaker in position I (ON).



To allow the good functioning of the system, it is also necessary to fix the supplied part on the door or on the faceplate.



The mounting dimensions are noted in the instruction sheet.



## 2) VARI-DEPTH HANDLE

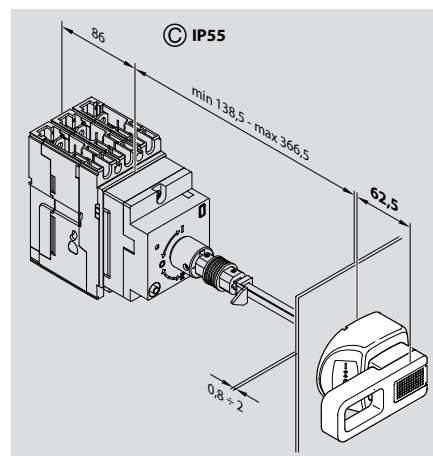
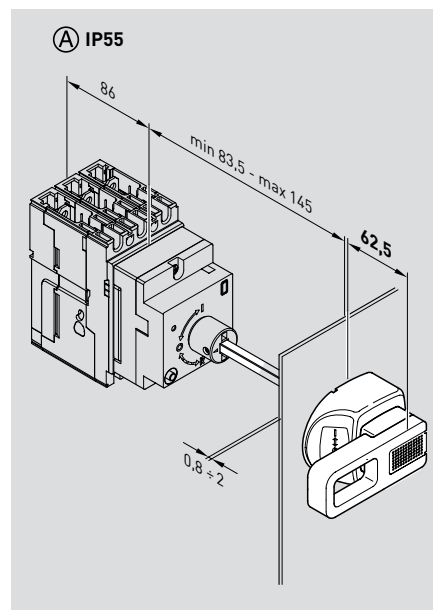


They are available in standard (dark grey color) and "emergency" (red and yellow color). Their mounting is identical. These rotary handles cannot be installed on DPX<sup>3</sup> 125 HP with integrated residual current devices. They are sealable.

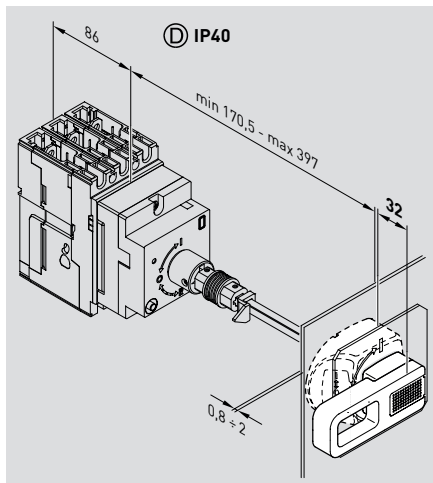
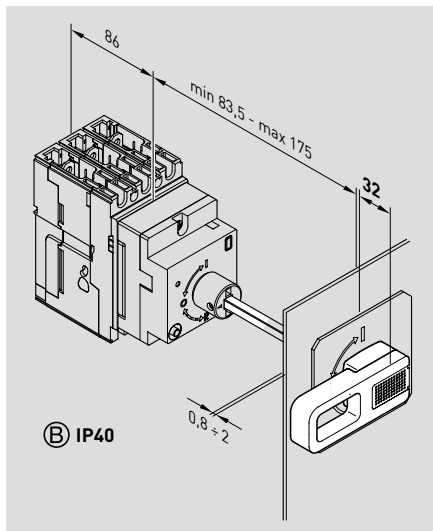
Several assemblies are possible depending on the desired protection index (IP), the length between the circuit breaker and the door and/or faceplate and the presence or absence of a keylock equipped with a barrel. There are 4 barrels Cat.Nos 4 238 80/81/82/83, but only one can be installed on the locking accessory (Cat.No 4 238 05).

### ■ Mounting example:

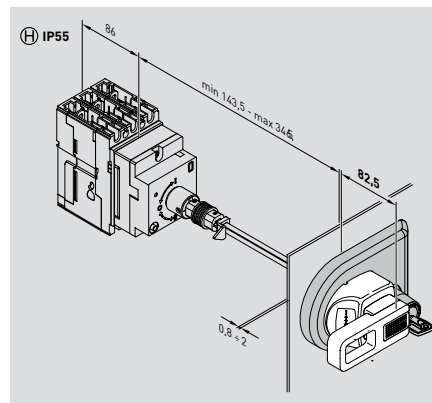
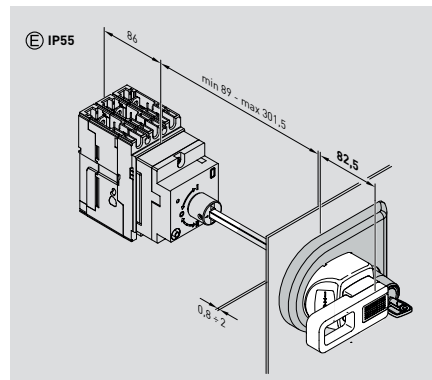
IP 55 vari-depth handle without keylock. Accessories depend on the distance between the MCCB and the door faceplate.



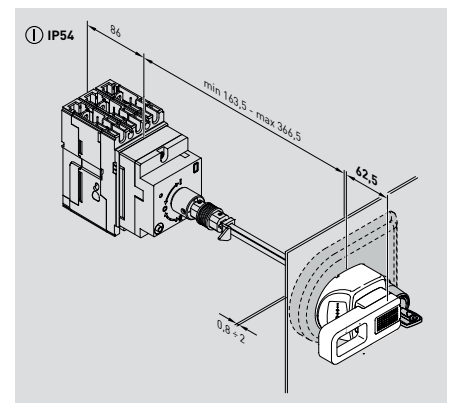
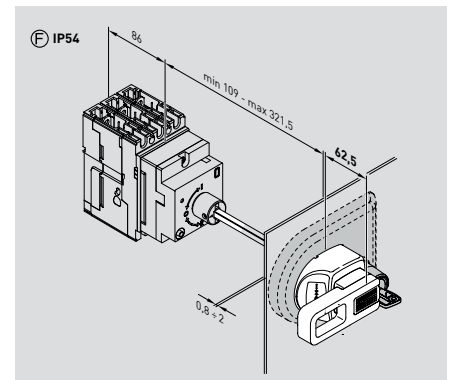
■ **Mounting example:**  
 IP40 vari-depth handle without  
 keylock. Accessories depend on  
 the distance between the MCCB  
 and the door/faceplate.



■ **Mounting example:**  
 IP55 vari-depth handle with  
 keylock. Accessories depend on  
 the distance between the MCCB  
 and the door/faceplate.



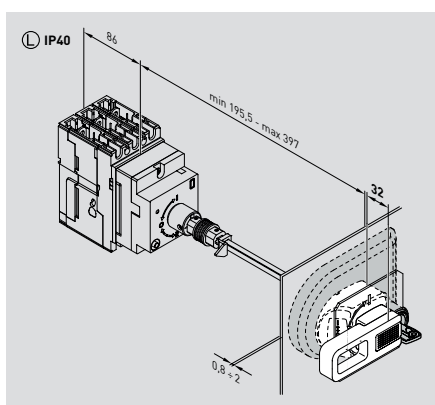
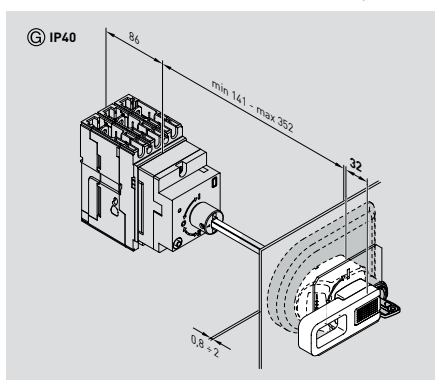
■ **Mounting example:**  
 IP54 vari-depth handle with  
 keylock. Accessories depend on the  
 distance between the MCCB and the  
 door/faceplate.





### ■ Mounting example:

IP40 vari-depth handle with keylock.  
Accessories depend on the distance  
between MCCB and the door/faceplate.



### ■ Mounting and installation



The mounting of the vari-depth handle on the circuit breaker is identical to that of a direct handle, except that the handle is, as its name indicates, fixed on a faceplate and/or a door. See above paragraph.

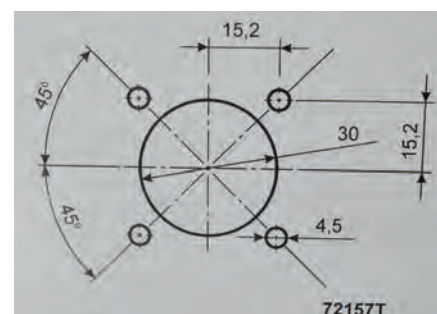
However, the two locking functions available on the direct handles are not available on the vari-depth handles. The door is locked by the vari-depth handle itself and cannot be opened if the circuit breaker is closed (I) (ON).

All the rotary handles can be padlocked with up to 3 padlocks, with a diameter between 5 mm and 8 mm. Simply pull out the tab located under the handle and insert the padlocks.



Think to paste the sticker with the correct rating of the circuit breaker, because the original marking of the circuit breaker is hidden behind the control. One sticker should be placed on the mechanical control and one on the top of the handle support.

The installation of the handle is done with the help of the drilling template, supplied with the product, to be stuck on the door and/or on the faceplate. Drill the 4 external holes at 4,5 mm diameter and the central hole at 30 mm diameter.



# DPX<sup>3</sup> 125 HP

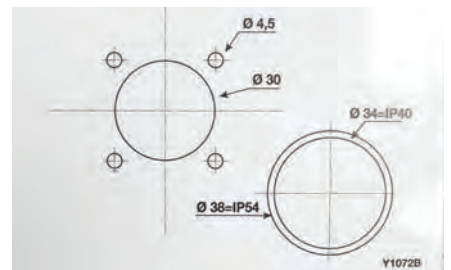
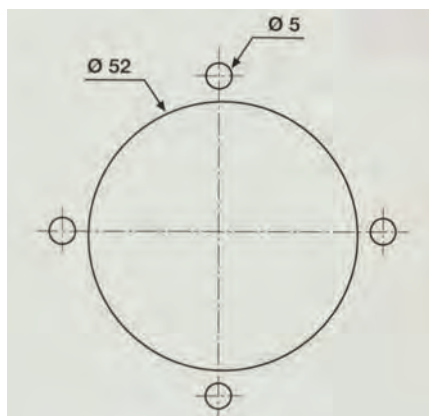
Below are the different steps for mounting the handle for an IP55 version without keylock.



Below is an IP40 installation without keylock.



For the installation of a Keylock bracket, 2 drilling templates are supplied with the product, one of which must be used depending on the desired protection rating (IP55, IP54 or IP40).



Before installing the bracket, the key barrel must be in place and the operating rod prepared.

The key can only be removed when the circuit breaker is in the 0 (OFF) position.



Below are the examples in IP40 and IP55 installation.



IP40



IP55

■ **Screw terminals for lugs, supplied with the circuit breaker**

They can accept one lug or bar of maximum 17 mm width.



■ **Cage terminals for cables or bars (3P: 4 238 74 and 4P: 4 238 75)**



The capacity of these terminals is 14 mm wide, for cables with a section from 2.5 mm<sup>2</sup> minimum to 50 mm<sup>2</sup> maximum for a tightening torque of 8 Nm. They are recommended for copper cables only.

They can be mounted upstream and/or downstream of the circuit breaker.



**5 CAGE TERMINALS**



The DPX<sup>3</sup> 125 HP circuit breakers can be connected via 3 types of terminals:



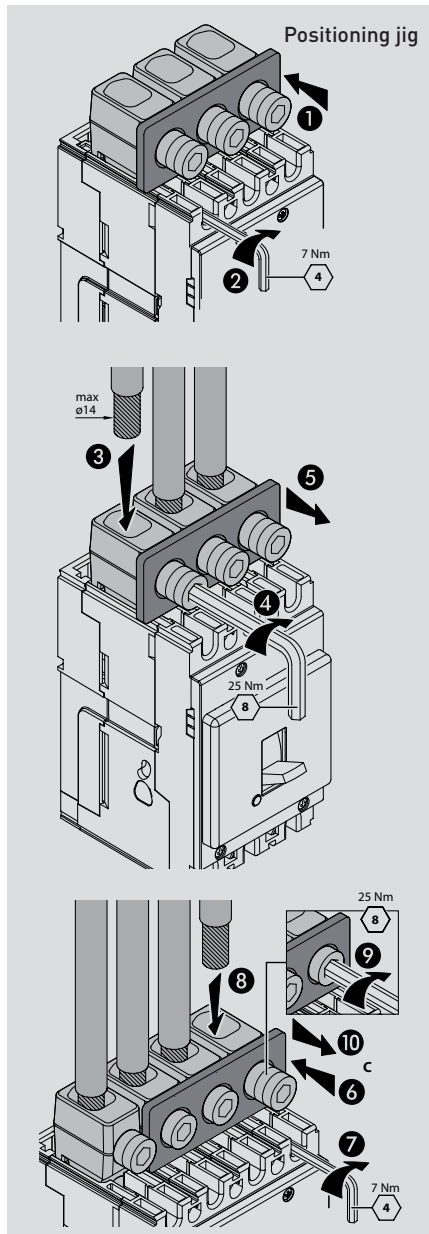
■ **High capacity cage terminals for cables (3P: 4 238 76 and 4P: 4 238 77)**

These terminals are recommended for rigid copper cables from 35 mm<sup>2</sup> to 95 mm<sup>2</sup>, flexible copper from 35 mm<sup>2</sup> to 70 mm<sup>2</sup>, rigid aluminum from 50 mm<sup>2</sup> to 95 mm<sup>2</sup> and flexible aluminum from 50 mm<sup>2</sup> to 70 mm<sup>2</sup>.

Use the positioning jig and tighten the terminals on the circuit breaker to a torque of 7 Nm (4 mm Allen key). Move this positioning jig to the 4th terminal (if a 4-pole circuit breaker) then tighten it on the product.

Insert the cables and tighten them in the terminals to a torque of 25 Nm (8 mm Allen key).

The installation of the partition walls is not allowed when using the terminal shields.



**6 SPREADERS**



This accessory is mounted on the circuit breakers with the screw terminals for lugs supplied.

The tightening torque is 7 Nm. The connection capacity is 22 mm wide for a terminal or a bar with a 10.2 mm drilling diameter. It is mandatory to insert the insulated shields between the spreaders.



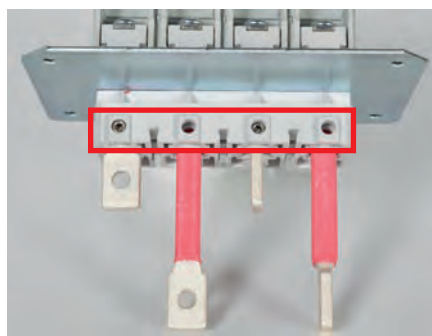
## 7 REAR TERMINALS



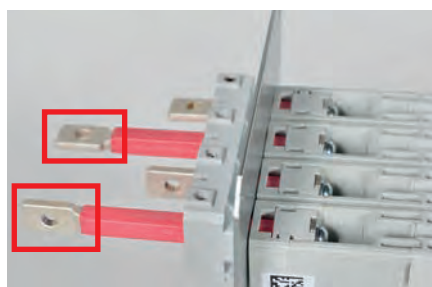
They are used to connect a fixed circuit breaker at the rear. They are mounted directly on the circuit breaker with the help of the small plate to strenghten the assembly. The dedicated terminal shield can be sealable.



4 screws to maintain these rear terminals (one per pole), are provided to avoid excessive bending.



They can be installed horizontally or vertically.



## 8 SEALABLE TERMINAL SHIELDS

These terminal shields can be mounted with or without the high capacity terminals.



They are sealable and can be fixed with the supplied screws.



Small breakable plates are to be inserted or removed on the terminal shields according to the configurations.



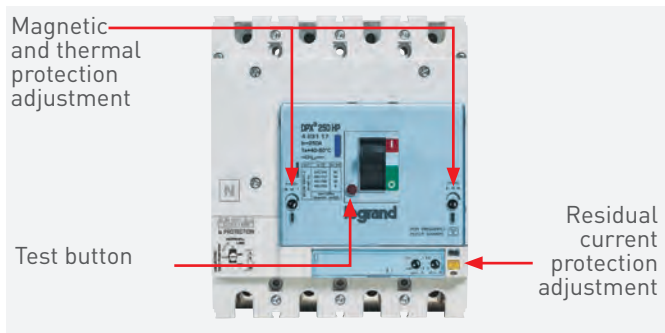
# DPX<sup>3</sup> 250 HP

## Product description

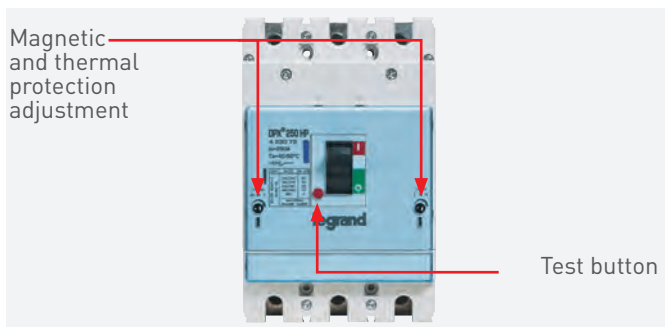
### 1 FRONT PANEL OF THE CIRCUIT BREAKER

Examples of circuit breaker front panels:

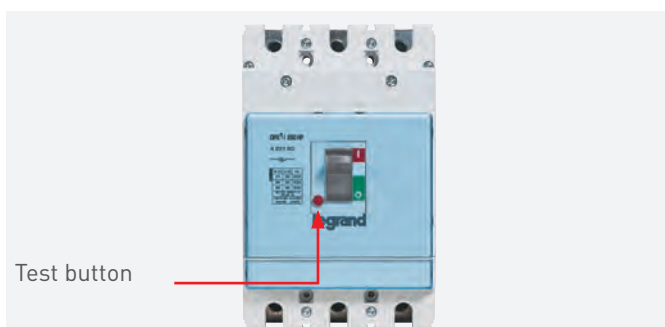
#### 4P thermal-magnetic circuit breaker



#### 3P thermal-magnetic circuit breaker



#### Switch



### 2 HANDLE POSITION (ON - TRIPPED - OFF)

Below are the 3 positions of the circuit breaker handles according to their status:



OPEN (OFF)(O)



TRIPPED



CLOSED (ON)(I)

After the DPX<sup>3</sup> 250 HP has tripped, before it can be closed again, it must be reset by turning the lever to O (OFF position).

### 3 SETTINGS

For DPX<sup>3</sup> 250 HP thermal-magnetic :

| Thermal : I <sub>r</sub>             |      | Current (A) |    |      |      |    |    |      |    |     |       |       |     |     |  |
|--------------------------------------|------|-------------|----|------|------|----|----|------|----|-----|-------|-------|-----|-----|--|
| Multiplying factor of I <sub>n</sub> | Mark | 16          | 20 | 25   | 32   | 40 | 50 | 63   | 80 | 100 | 125   | 160   | 200 | 250 |  |
| 0.8                                  | 0.8  | 13          | 16 | 20   | 26   | 32 | 40 | 51   | 64 | 80  | 100   | 128   | 160 | 200 |  |
| 0.9                                  | 0.9  | 14.4        | 18 | 22.5 | 28.8 | 36 | 45 | 56.7 | 72 | 90  | 115.2 | 115.2 | 180 | 225 |  |
| 1                                    | 1    | 16          | 20 | 25   | 32   | 40 | 50 | 63   | 80 | 100 | 125   | 160   | 200 | 250 |  |

| Magnetic : I <sub>i</sub> | 16  | 20  | 25  | 32  | 40  | 50  | 63  | 80  | 100  | 125  | 160  | 200  | 250  |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| Min                       | 400 | 400 | 400 | 400 | 400 | 325 | 315 | 400 | 500  | 625  | 800  | 1000 | 1250 |
| Max                       | 400 | 400 | 400 | 400 | 400 | 650 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 |

For DPX<sup>3</sup> 250 HP electronic S1 :

| Protection against overloads : I <sub>r</sub> |      | Current (A) |     |     |     | Protection against short circuits : I <sub>i</sub> |     | Current (A) |      |      |  |
|---|------|-------------|-----|-----|-----|--|-----|-------------|------|------|--|
| Multiplying factor of I <sub>n</sub>          | Mark | 40          | 100 | 160 | 250 | Mark   | 40  | 100         | 160  | 250  |  |
| 0.4   | 0.4  | 16          | 40  | 64  | 100 | Min  | 60  | 150         | 240  | 375  |  |
| 1   | 1    | 40          | 100 | 160 | 250 | Max  | 400 | 1000        | 1600 | 2500 |  |

### 4 FRONT OPENING

To open the front panel, simply put the circuit breaker in the open or tripped position and loosen the 4 screws with a PZ1 screwdriver. The front panel is completely separated from the circuit breaker. The screws are captive.



# Electrical accessories

## ■ Auxiliary contact (OC)/fault signalling contact (CTR)

- 4 210 11 24/48/110/230 V DC  
110/230 V AC

## ■ Shunt trip (ST)

- 4 210 12 12 V AC/DC
- 4 210 13 24 V AC/DC
- 4 210 14 48 V AC/DC
- 4 210 15 110-130 V AC
- 4 210 16 200-277 V AC
- 4 210 17 380-480 V AC

## ■ Undervoltage release (UVR)

- 4 210 18 12 V AC/DC
- 4 210 19 24 V AC/DC
- 4 210 20 48 V AC/DC
- 4 210 21 110-130 V AC/DC
- 4 210 22 200-240 V AC/DC
- 4 210 23 277 V AC
- 4 210 24 380-415 V AC
- 4 210 25 440-480 V AC

## ■ Time-lag under voltage release

- 0 261 90 230 V AC time-lag module
- 0 261 91 400 V AC time-lag module
- 4 210 98 Release for time lag modules

## ■ Motor-driven handle

- 4 238 40 24 V AC/DC
- 4 238 41 48 V AC/DC
- 4 238 42 110 V AC
- 4 238 43 230 V AC

## ■ Accessories for motor-driven handle

- 4 238 46 Padlock
- 4 238 45 Locking support
- 4 238 80 Key barrel and flat key with random mapping
- 4 238 81 Key barrel and flat key EL43525
- 4 238 82 Key barrel and flat key EL43363
- 4 238 83 Key barrel star key with random mapping

## 1 AUXILIARY CONTACT (OC)/FAULT SIGNALLING CONTACT (CTR)

Same as DPX<sup>3</sup> 125 HP (see pages 20 and 21)

## 2 SHUNT TRIP (ST)

Same as DPX<sup>3</sup> 125 HP (see page 22)

## 3 UNDERVOLTAGE RELEASE (UVR)

Same as DPX<sup>3</sup> 125 HP (see pages 22 and 23)

## 4 TIME-LAG MODULES

Same as DPX<sup>3</sup> 125 HP (see page 23)



## 5 MOTOR-DRIVEN HANDLE AND ACCESSORIES



The motor-driven handle allows to control a circuit breaker or a trip-free switch remotely. If used as an automatic transfer switch, its management will be managed by an automation control unit.

There are 4 motor voltages, from 24 V AC/DC to 230 VAC. The wiring is done through the terminal block located on the top of the motor. These motor-driven handles are for front installation. 3 operating modes are present on the product: the automatic mode, the manual mode and the mode locked in open position. The 3 operating modes can be set with the help of the selector placed on the front panel.

### ■ Automatic mode (AUT)



The motor-driven handle allows:

- to open the DPX<sup>3</sup> by means of a pulse or maintained control (electric/remote control) or by the red push button (O) on the front panel

- close the DPX<sup>3</sup> using a pulse or hold control (electric/remote control) or the black push button (I) on the front panel (in manual mode). In this case, the DPX<sup>3</sup> and the handle are locked.

### ■ Manual mode (MAN)



Electric or remote controls are disabled. The front handle is used to load the spring manually. The black button (I) closes the DPX<sup>3</sup> and the red button (O) opens it.

### ■ Locked mode (LOCK)



The selector is placed in the "lock" position by pressing the red button (O) simultaneously. It is impossible to operate the motor-driven handle electrically or manually. This position is only possible if the device is in the open position (OFF). In "lock" mode, it is possible to padlock the motor-driven handle with a maximum of 3 padlocks with a maximum diameter of 6 mm.

# DPX<sup>3</sup> 250 HP

Below, example with 2 padlocks.



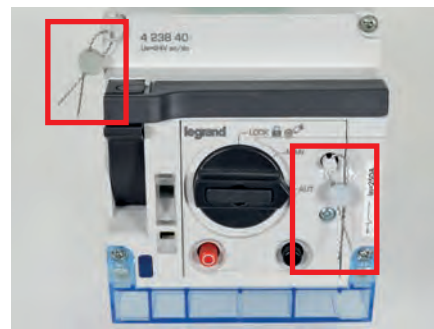
The motor-driven handles can be equipped with a keylock support Cat.No 4 238 45, [barrels identical to the vari-depth rotary handles, Cat.Nos 4 238 80/81/82/83] or a padlocking device Cat.No 4 238 46 accepting up to 3 padlocks with a maximum diameter of 8 mm.




These accessories are fixed instead of the front panel of the motor-driven handle. They can be sealed to the front panel. Put the motor in manual position (MAN), unscrew the front panel and replace it with one of the accessories. The desired barrel must first be inserted into the key lock.



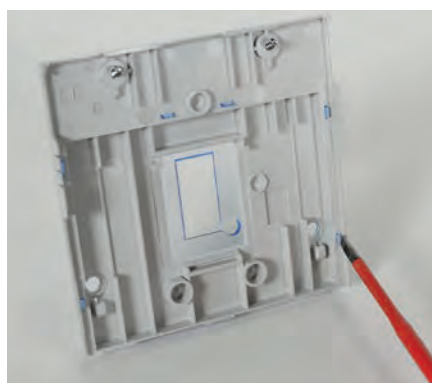
The motor-driven handles can be sealed at the mounting screw level and/or on the front panel.



### ■ Installation

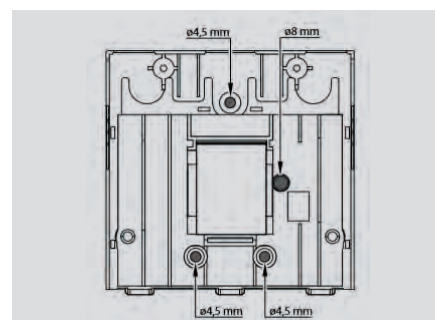
 When unpacking the motor-driven handle from its box, be careful not to break the shaft located at the back of it.

Set the circuit breaker to the tripped position by pressing the red button on the front panel, then remove the front panel.

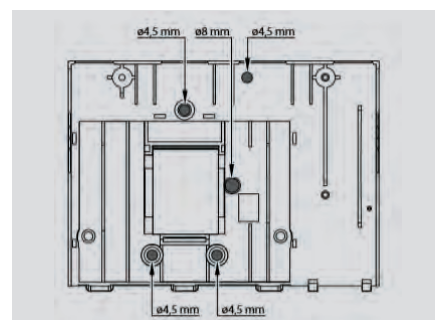


Depending on the type of circuit breaker or trip-free switch, 3-pole or 4-pole, the installation will be different for the fixing screws and the drilling of the front panel.

For a 3P, the 2 front panel fixing screws will have to be discarded, for a 4P only one (the right one) will have to be discarded.



3 poles

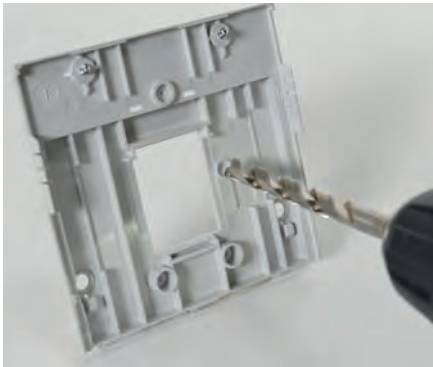


4 poles

For drilling, 4 holes will be necessary for a 3P and 5 holes for a 4P.

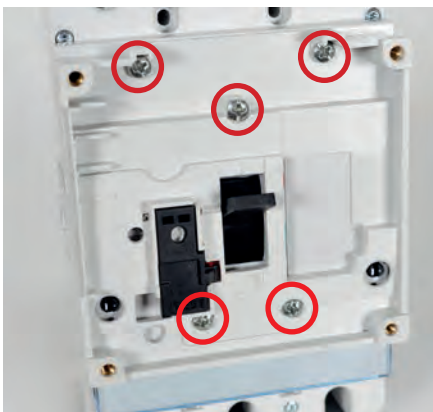


Example of drilling 3 holes of 4.5 mm diameter for a 3-pole MCCB.



Drill the 8 mm diameter hole.

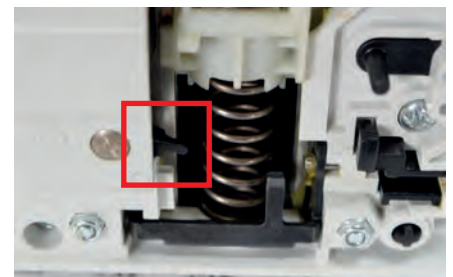
After drilling, fix the front panel with the motor support by using the 5 screws supplied with the motor, make a tripping test.



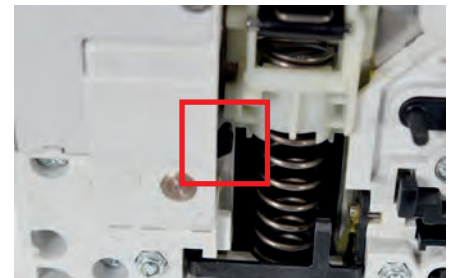
**!** The magnetic and thermal adjustments must be made before to install the motor.



**!** Installation of the motor-driven handle on its support: check that the pin located at the back of the motor is in the upper position.



Low position



High position

Motor-driven handle mounted on a DPX<sup>3</sup> 250 HP 3P thermal-magnetic.





# Mechanical accessories

## ■ Insulated shields

- 4 238 34 : 3P
- 4 238 35 : 4P

## ■ Padlocking

- 4 210 49

## ■ Mechanical interlocking

- 4 238 26 : plate for interlocking
- 4 238 27 : without electronic module for fixed circuit breakers
- 4 238 28 : with electronic module (contacts) for fixed circuit breakers

## ■ Rotary handles

- 4 238 00 : direct standard
- 4 238 01 : direct for emergency use
- 4 238 02 : vari-depth standard
- 4 238 03 : vari-depth for emergency use
- 4 238 04 : keylock support for direct handle
- 4 238 05 : keylock support for vari-depth handle
- 4 238 06 : auxiliary contact for rotary handles

## ■ Universal key barrels

- 4 238 80 : key barrel and flat key with random mapping
- 4 238 81 : key barrel & flat key EL43525
- 4 238 82 : key barrel & flat key EL43363
- 4 238 83 : key barrel and star key with random mapping

## ■ Cage terminals

- 4 238 30 : 3P standard
- 4 238 31 : 4P standard

## ■ Spreaders

- 6 250 14 : 3P
- 6 250 18 : 4P

## ■ Rear terminals

- 4 238 21 : 3P
- 4 238 22 : 4P

## ■ Sealable terminal shields

- 4 238 23 : 3P
- 4 238 24 : 4P

## ■ Plug-in base

- 4 238 50 / 4 238 51 : plug-in bases 3P / 4P (fixed)
- 4 238 52 / 4 238 53 : Plug-in mobile part kit 3P / 4P
- 4 238 29 : mechanical interlock for transfer switches for plug-in or draw-out MCCBs
- 4 210 48 : plug-in/draw-out contact for DPX<sup>3</sup> 250 HP draw-out base
- 0 098 19 : set of connectors for auxiliary contacts for plug-in and draw-out versions
- 4 238 63 : locking accessory

## ■ Draw-out version:

- 4 238 60 / 4 238 61 : debro-lift mechanism 3P/4P
- 4 238 55 : draw-out front cover mask
- 4 238 56 : draw-out front cover mask for DPX<sup>3</sup> 250 HP with motor-driven handle
- 4 238 62 : keylock support for locking in draw-out position
- 4 238 64 : padlocking accessory
- 4 222 30 : auxiliary contact

## 1 INSULATED SHIELDS

Same chapter as DPX<sup>3</sup> 125 HP (page 24)

## 2 PADLOCKING

Same chapter as DPX<sup>3</sup> 125 HP (page 25)

## 3 INTERLOCKING

The purpose of this accessory is to be able to associate two DPX<sup>3</sup> 250 HP 3P and/or 4P circuit breakers and prevent the closing of the 2 products at the same time. It is mounted on a dedicated plate (Cat.No 4 238 26).

Below are the 2 interlocking Cat.Nos 4 238 27/28.





Please check the label on the circuit breaker to see if the mechanism fits, on it.



If this number is greater than or equal to 1, the circuit breakers are OK.

Here the mechanism cannot be mounted. The advantages of this system are simple implementation, small space requirement and no adjustment.

#### ■ Setting up

The installation is the same as for 2 DPX<sup>3</sup> 125 HP, only the mounting plate is different. It is not possible to mix DPX<sup>3</sup> 125 HP and DPX<sup>3</sup> 250 HP, but it is possible to mix 2 DPX<sup>3</sup> 250 HP 3P and/or 4P.



4 rods are supplied with the interlocking mechanisms. The small ones (17,8 mm) are for the DPX<sup>3</sup> 125 HP and the large ones are for the DPX<sup>3</sup> 250 HP.

See "Installation" of the DPX<sup>3</sup> 125 HP interlocking on pages 26 and 27.

## 4 ROTARY HANDLES

### 1) DIRECT HANDLES

They are available in standard (dark grey color) and "emergency" (red and yellow color). Their mounting is identical. They can be installed on the whole range of DPX<sup>3</sup> 250 HP. They are sealable and can be key-locked with the same barrels as for the motor-driven handle.



#### ■ Setting up

Open the front panel after setting the circuit breaker to the tripped or open position:

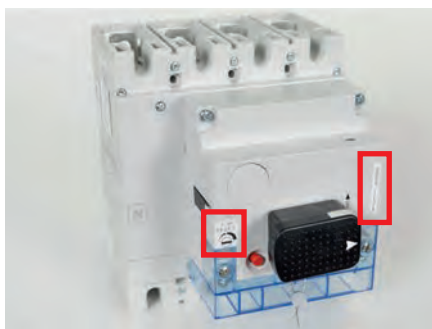


Remove and discard the blue plastic part of the front panel and drill three 4.5 mm diameter holes in it.

Put back in place the front panel on the circuit breaker. Place the handle in the open position (O), and fix the rotary handle system on the front panel of the DPX<sup>3</sup> 250 HP then by orienting the handle on O. The sealing system is located under the handle.



Screw on the lower part of the rotary handle, and install the seal if necessary. The handle is ready to operate. Think to paste the 2 stickers, indicating the correct rating of the circuit breaker and the settings made, because the original marking of the circuit breaker is hidden behind the rotary handle.



The rotary handles can be padlocked with a maximum of 3 padlocks, with a minimum diameter of 5 mm and a maximum of 8 mm. Simply pull out the tab located in the handle and insert the padlocks.



Two additional functions are available on these direct rotary handles as on the DPX<sup>3</sup> 125 HP (see paragraph on page 28). These functions are locking systems and can be functional or not depending on the installation.

It is possible to lock the direct rotary handles with an accessory (Cat.No 4 823 04) and key locks, Cat.Nos identical to the DPX<sup>3</sup> 125 HP. The mounting is done before the installation of the rotary handle on the DPX<sup>3</sup> 250 HP by inserting the barrel on the front of the direct handle, and the mechanism inside it.

**!** Adjustments to the circuit breaker must be made before attaching the lower blue plastic part. These adjustments are only possible in the "tripped" position.





Cat.No 4 238 04

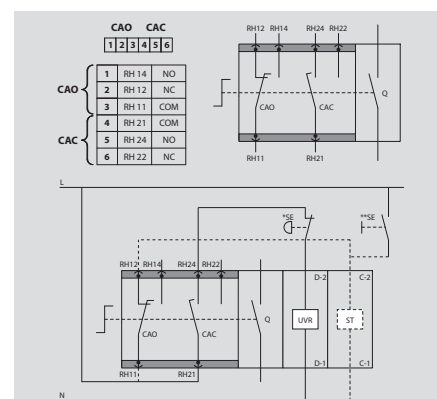
**i** The key can be removed only if the circuit breaker is open (0).

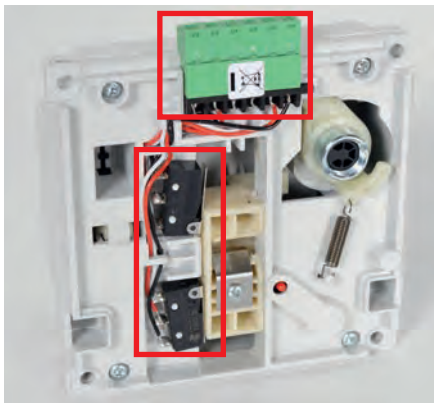


Another accessory available for these direct rotary handles is a set of 2 NO/NC switch contacts (Cat.No 4 238 06). It is mounted inside the case, before fixing it to the circuit breaker. Remove the plastic part on the top of the direct rotary handle bracket and insert the 2 contacts and their connector on the handle.



Cat.No 4 238 06





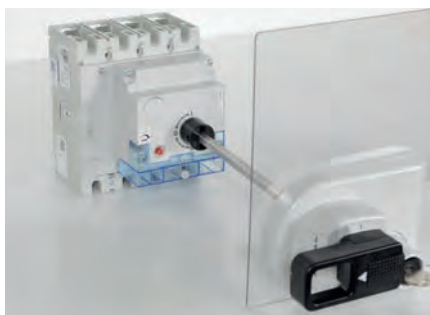
color). Their mounting is identical. They can be installed on the whole range of DPX<sup>3</sup> 250 HP. They are sealable and can be locked with a key with the same barrels as for the motor-driven handle or the direct rotary handle. The mounting of the housing is identical to that of the direct handles (see pages 45 and 46) and the mounting of the handles is identical to that of the DPX<sup>3</sup> 125 HP (see pages 29 to 33). It is possible to install the set of auxiliary contacts as for the direct handles (see previous page and opposite left).



**2) VARI-DEPTH HANDLES**



They are available in standard (dark grey color) and "emergency" (red and yellow



**5 CAGE TERMINALS**

The DPX<sup>3</sup> 250 HP circuit breakers can be connected via 2 types of terminals, screw terminals and cage terminals:

■ **Screw terminals for terminals supplied with the circuit breaker**



Depending on the size of the circuit breakers, they are supplied with different screw terminals: either with 6 mm square nuts ( $I_n \leq 125$  A) for a tightening torque of 7 Nm, or with 8 mm hexagonal nuts ( $I_n > 125$  A) for a tightening torque of 10 Nm.

They have a capacity for a lug or bar up to 28.5 mm wide with a 8.5 mm diameter hole.



■ **Cage terminals for cables or bars**  
(3P: Cat.No 4 238 30 and 4P: 4 238 31)



The maximum capacity of these terminals is 18 mm wide. The section of flexible cables is from 2.5 mm<sup>2</sup> minimum to 120 mm<sup>2</sup> maximum. The section of the rigid cables is from 2,5 mm<sup>2</sup> minimum to 150 mm<sup>2</sup> maximum. Tightening is done with a 5 mm hexagon wrench, the torque is recommended at 10 Nm. They are compatible with copper or aluminum cables and can be mounted upstream and/or downstream of the circuit breaker.



6 **SPREADERS**

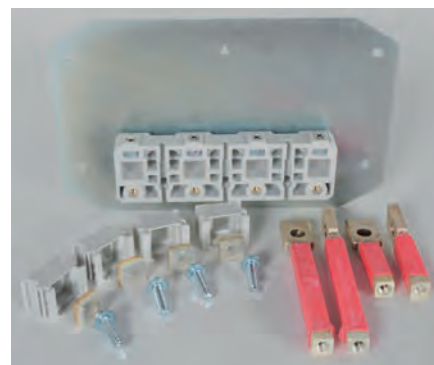


This accessory is mounted on the circuit breakers with the screw terminals for lugs supplied.

The tightening torque is 7 Nm with 6 mm screws and 10 Nm with 8 mm screws. The connection capacity is 30 mm wide for a terminal or a bar with a 13 mm drilling diameter. It is mandatory to insert the dividers between the spreaders.



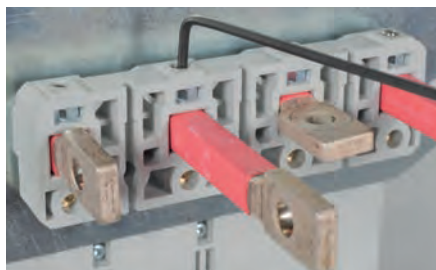
7 **REAR TERMINALS**



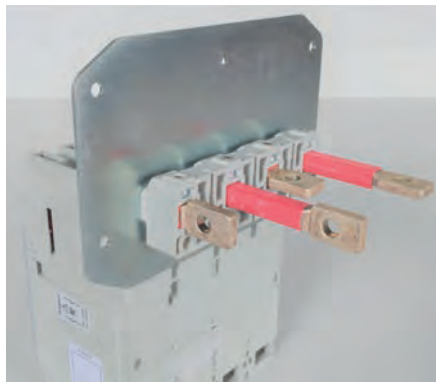
They allow the rear connection of a fixed circuit breaker or of an extractable base. They are mounted directly on the circuit breaker or on the base, using the small plate to strenghten the assembly. The dedicated terminal cover can be sealable. They can be installed upstream and/or downstream of the MCCB. 4 screws are provided to maintain these rear sockets (one per plate) to avoid excessive bending.

They can be installed horizontally or vertically.





They are sealable and to be fixed with the screws supplied.



Small breakable plates are to be inserted or removed on the terminal shields according to the wiring configurations.

## 8 SEALABLE TERMINAL SHIELDS



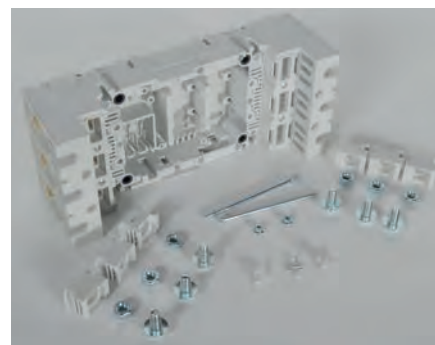
These terminal covers can be mounted on any type of terminal.



## 9 PLUG-IN BASE

The DPX<sup>3</sup> 250 HP range of circuit breakers can be mounted in a plug-in version thanks to a fixed base and a mobile base in 3P or 4P.

### 1) FIXED BASE



The connection types are identical to those of the circuit breakers. Screw terminals, cage clamp terminals, rear terminals and spreaders can be fitted to the fixed bases. The characteristics are the same (see pages 48 to 50).

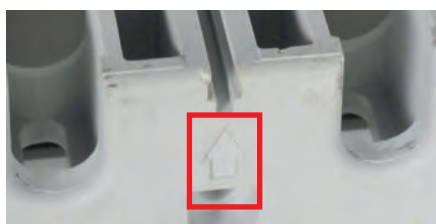




Terminal shields, pole dividers and rear terminals can also be installed on these fixed bases.

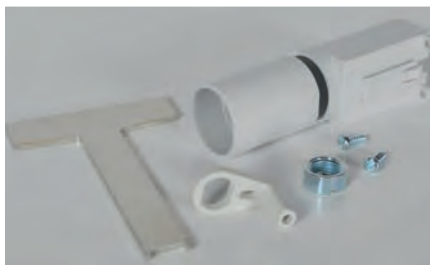


**!** The fixed bases have a mounting direction: an arrow is inlaid on the top of the base as a marker.

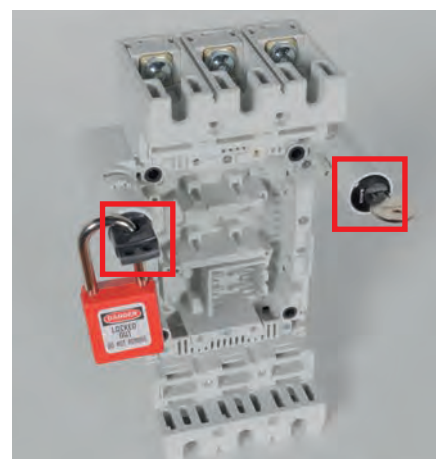
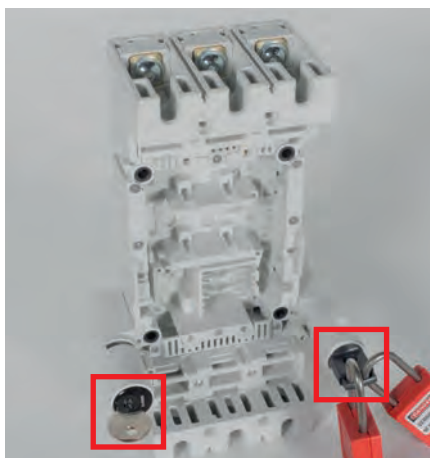


A keylock and/or padlock can be positioned in 4 locations on the fixed base. These locks prevent the circuit breaker from being placed on the fixed base. The key locks (see Cat.Nos on page 44) for locking are identical to those for mounting the rotary handles, motor-driven handles, etc...

The picture below shows the accessory for the key locking.



The 4 locking locations:



The padlock accessory accepts a maximum of 3 padlocks with a maximum diameter of 6 mm and they can be installed only in the locked position.

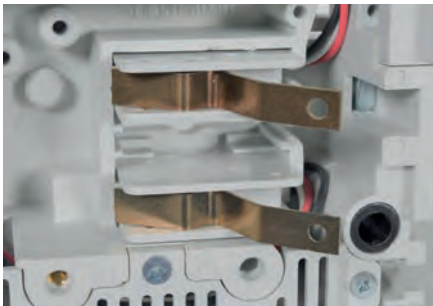
For the key accessory, the key can be removed only in the locked position.



**i** In the locked position, the circuit breaker cannot be inserted on the fixed base.

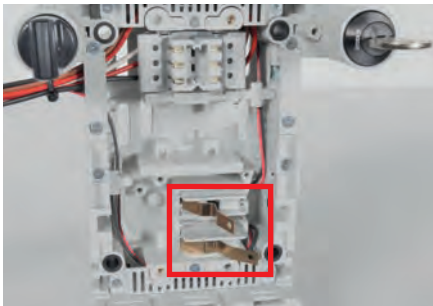
The fixed bases can receive 2 kinds of electrical contacts:

- The "circuit-breaker inserted" contact (Cat.No 4 210 48) is used to report the state of insertion of the circuit-breaker on the fixed base.



It is possible to equip the base with up to 3 contacts. These are switch contacts (NO/NC).

In the picture, 2 "circuit breaker inserted" contacts are installed.



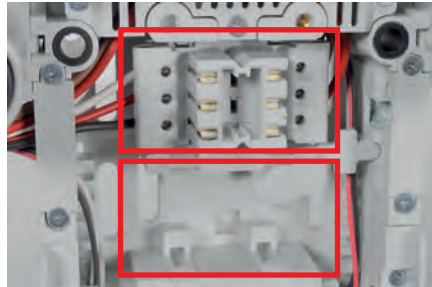
- the contact block (Cat.No 0 098 19) for wiring the electrical accessories of the circuit breaker (coil, auxiliary contacts).



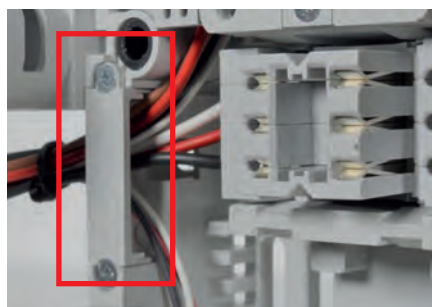
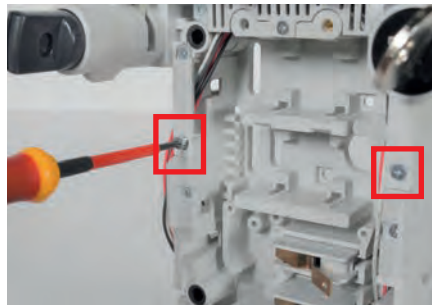
to 2 contact blocks. They have 3 contacts each. One part of the block is clipped on the fixed base and the other on the mobile base.

These contacts must be wired before being installed on the fixed base.

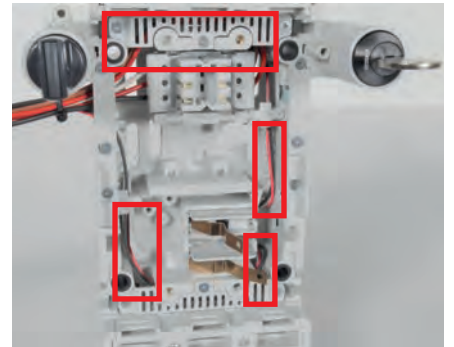
Below, the two locations of the contact blocks.



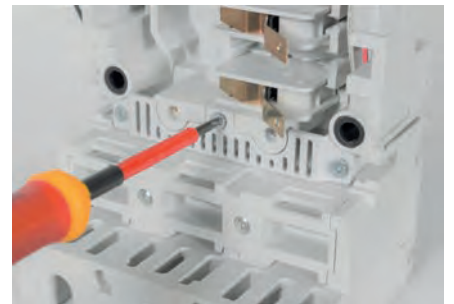
There are 2 wire outputs available on the fixed base. They are located on the right and left side of the base.

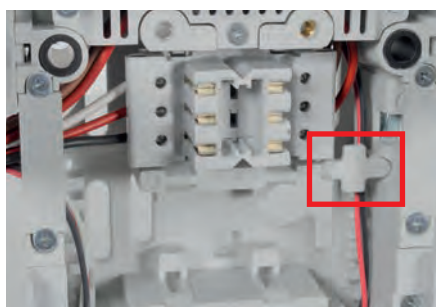


Wires can be guided, protected and supported up or down from the base.



Simply unscrew one of the two wire guides (top or bottom), pass the wires under them, and clip a wire support (delivered with the base) so that the wires remain at the bottom of the base.

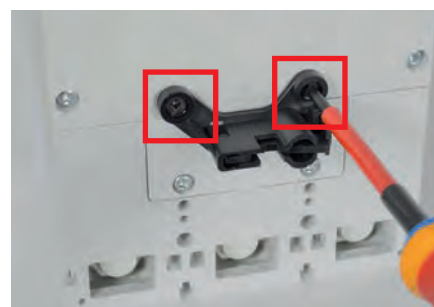




It is essential to place the terminal shields on the fixed base to prevent the operator from touching the cables when removing the circuit breaker.

■ **Setting up**

Installation of the tripping system: remove the small tab located at the back of the circuit breaker to reveal the tripping axis. Fix the system with the 2 screws and clip it with the axis by pushing it with a screwdriver.



Fix the circuit breaker on the mobile base with 2 screws for a 3-pole DPX<sup>3</sup> and 4 screws for a 4-pole DPX<sup>3</sup>, then install the 2 terminal blocks, upstream and downstream, by approaching the 4 screws simultaneously, then tighten them to a torque of 10 Nm. Put in place the screw covers which can be lead-sealed.

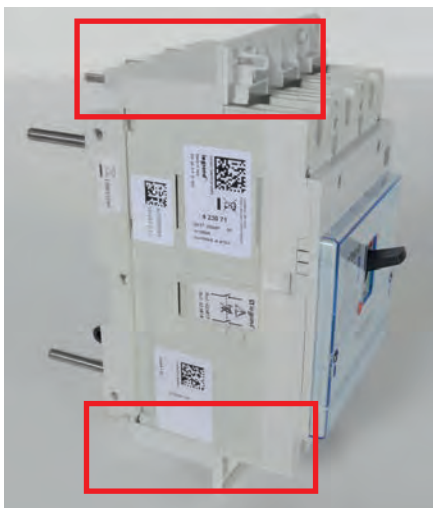


**2) MOBILE BASE**



The mobile base allows the circuit breaker to be plugged-in or removed from the fixed base. When the circuit breaker is removed from the fixed base, it automatically moves to the "tripped" position if it is closed.





There are two ways of wiring the electrical accessories for alarm, status and/or command reporting:

- With the contact blocks (Cat.No 0 098 19) installed on the fixed base (see pages 52 and 53) by fixing the 2nd part of the block on the mobile base.

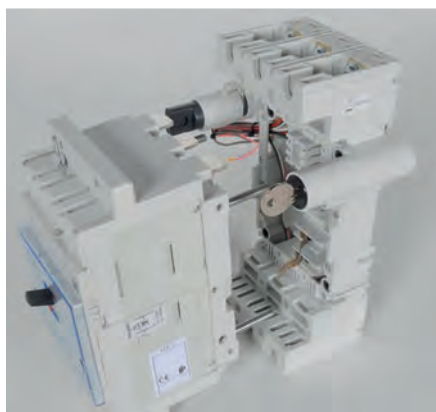
Unscrew the plate at the back of the base, remove the plastic part(s) (1 or 2 blocks installed) to reveal the screwed block.





- With a plug-in contact block (Cat.No 4 222 29). This block is external to the pull-out system, the electrical accessories are wired directly from the circuit breaker to the contact block.

The circuit breaker can be inserted into the fixed base. This one must be fixed by 2 screws with the sealing system which allows an additional safety.



## 10 DRAW-OUT VERSION:

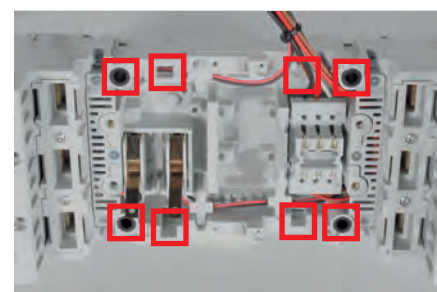
This version is a plug-in DPX<sup>3</sup> 250 HP circuit breaker equipped with a "debro-lift" kit to make it withdrawable with a crank handle. The "debro-lift" kit is mounted on 3P and 4P bases. To complete the mounting, dedicated front panels are to be mounted on the circuit breakers alone or motorized. They can be equipped with another version of the contact block and also with 2 types of locking, a padlock and a keylock with the 4 barrel catalogue numbers.

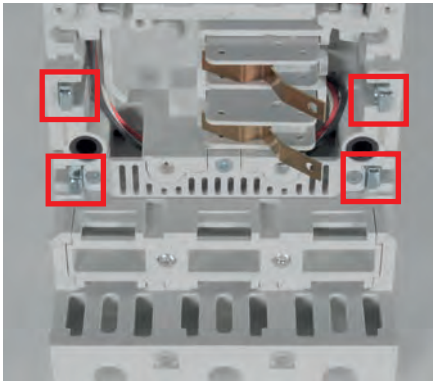
### ■ Setting up

#### Fixed base:

The contacts installed for a plug-in version circuit breaker can be also used for a draw-out circuit breaker, but the locks located on the sides of the fixed base cannot be kept.

Insert the 8 square nuts in the positions provided.

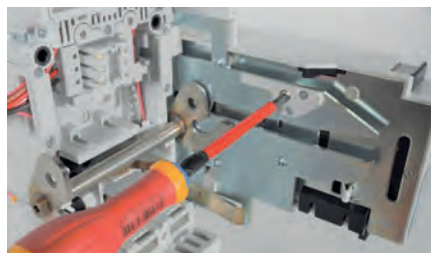
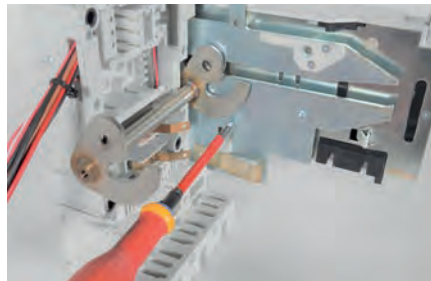
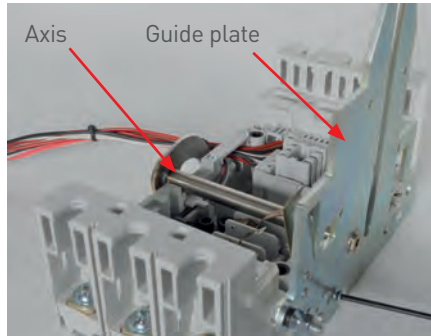




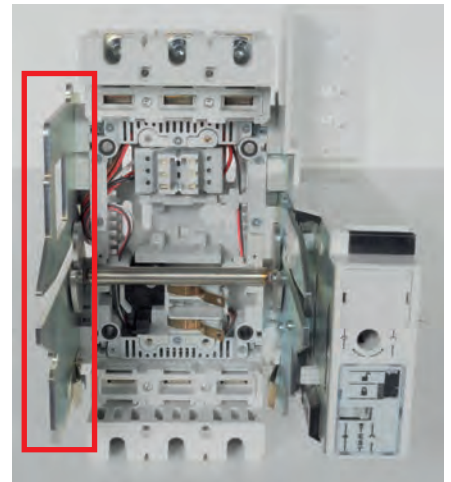
Install the release system part at the bottom of the fixed base using the 2 screws provided.



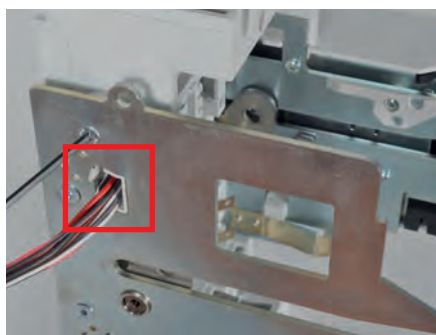
Mount the draw-out system starting with the right side of the base (do the mounting with the base laid flat). Position the rotation shaft and the guiding plate of the circuit-breaker rack on the right-hand side of the base, then fix the drive stud with its centring ring, and verify that the shaft rotates correctly in both directions. Fix the draw-out system to the guiding plate of the circuit-breaker rack already installed by screwing in 4 screws (tightening torque 2 Nm), and verify that the rotation axis is correctly positioned inside it.



Place the centering ring on the left side of the rotation axis and screw the guiding plate of the circuit breaker rack to the left of the base.

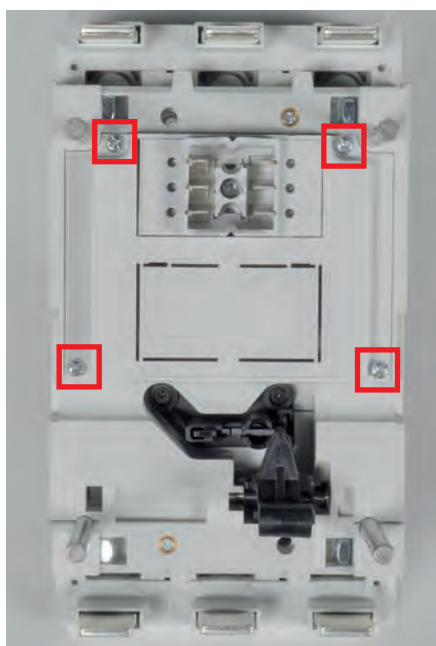


If contacts are installed on the fixed base, the wires must be brought out from the sides of the guiding plates.



**Mobile base:**

Install the 4 nuts at the back of the base and screw the two plates (torque 2 Nm) that will guide the circuit breaker onto the fixed guiding plates.



The system can be operated, the circuit breaker can be inserted or drawn-out with the supplied crank handle. It can be equipped with padlocks to be placed on the system by pulling on the handle located under the withdrawable block only when the circuit breaker is drawn-out. It is possible to install a maximum of 3 padlocks, with a minimum diameter of 5 mm and a maximum of 8 mm.



**Plugged-in**



**Drawn-out**

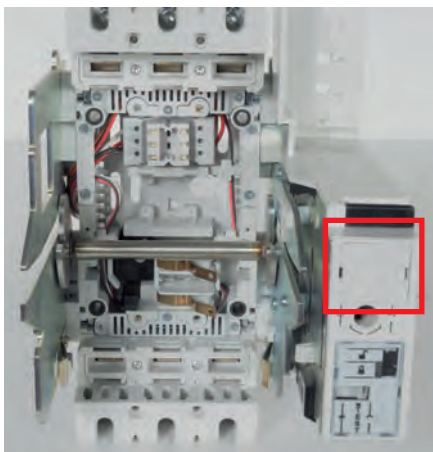


To finalize the mounting, accessories complete the system:

- Padlock accessory (Cat.No 4 238 64) or keylock (Cat.No 4 238 62): these locks are additional to the one present on the system. When locking with the key or padlock, the block lock lever is automatically extended.



Location of locks.



It is possible to insert a maximum of 3 padlocks of 5 mm diameter (example with 2 padlocks below).



DPX<sup>3</sup> in the drawn-out position: the key can be removed.

DPX<sup>3</sup> in inserted position: the key cannot be removed.



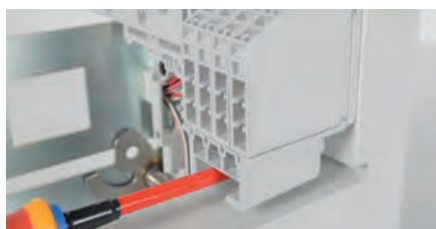
■ **Contact blocks: Cat.No 4 222 30**



This accessory is another alternative for wiring electrical accessories. It is mounted on one side of the draw-out unit and on the other side of the mobile base.

■ **Mobile block**





■ Functional fixed and mobile blocks in drawn-out position



■ Functional fixed and mobile blocks in inserted position



■ Front panel for draw-out version



Cat.No 4 238 55 for a DPX<sup>3</sup> 250 HP circuit breaker and Cat.No 4 238 56 for a circuit breaker equipped with a motor.

**Setting up**

Depending on the type of circuit breaker (thermal-magnetic, electronic), the preparation of the front panel is slightly different, removing the right plastic parts.



Installation is identical to the direct rotary handles (see pages 45 and 46) by drilling 3 holes of 4.5 mm in the front panel of the circuit breaker and removing and discarding the blue plastic part of the circuit breaker front.

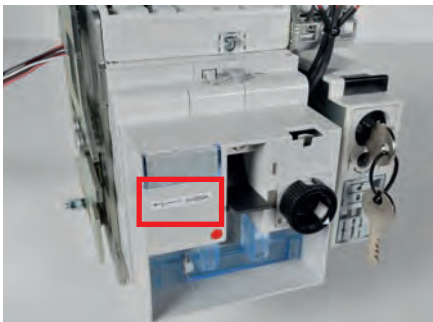
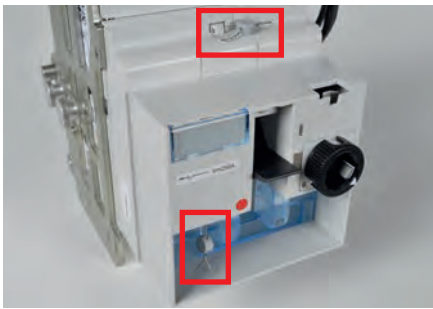
A padlock is supplied, mounted on the front panel. It has the same characteristics as the Cat.No 4 238 64 (3 padlocks with a maximum diameter of 5 mm).



The keylock accessory for the drawn-out unit can also be mounted on the front panel. This locking device replaces the locking device supplied. They allow the circuit breaker to be locked in the open position. The installation of these locks is carried out before installing the front panel on the circuit-breaker (fixing by screw on the back of the front panel).

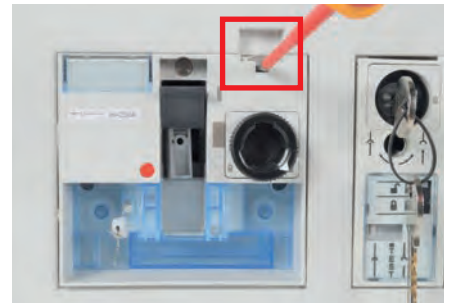
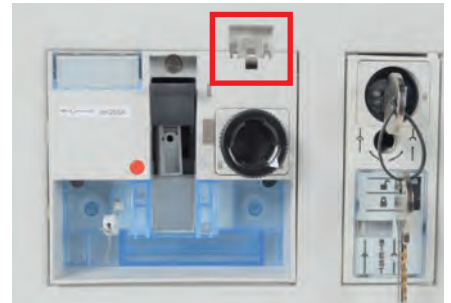
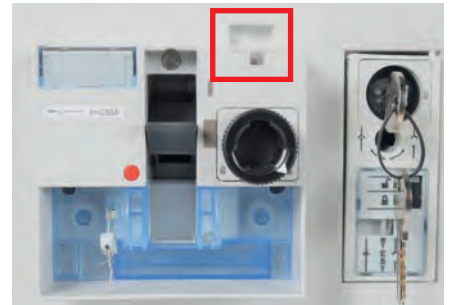
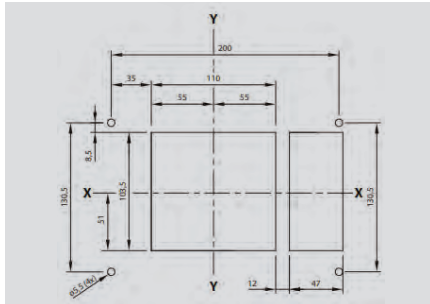
# DPX<sup>3</sup> 250 HP

There are 2 places to seal the front panel, and stickers are provided to show the settings made on the DPX<sup>3</sup> 250 HP as well as the current rating of the breaker.



A finishing plate to be fixed on a faceplate is delivered with the catalogue number. It also prevents the faceplate from being opened if the circuit breaker is in the closed position. This lock can be disengaged with a screwdriver.

The finishing plate is fixed on a faceplate.



When the circuit breaker is in the open or tripped position, the lock is down, when the circuit breaker is in the closed position, the lock is up, the faceplate cannot be opened. Pressing the lock latch opens the closed circuit breaker faceplate.



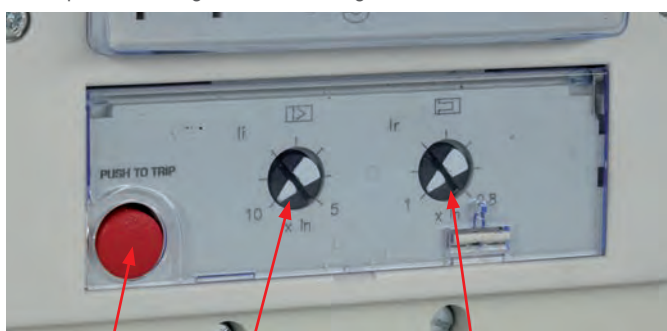
# DPX<sup>3</sup> 630

## Product description

### 1 FRONT FACE OF THE CIRCUIT BREAKER



Example of settings (thermal magnetic circuit breaker) :



Mechanical  
test button

Magnetic  
protection setting

Thermal  
protection setting



Settings are sealable.

### 2 FRONT FACE OF THE SWITCH

The DPX<sup>3</sup>-I 630 switches provide on-load circuit breaking and disconnection of electrical circuits.



The DPX<sup>3</sup>-I switches are easily identifiable with the gray handle.

### 3 HANDLE POSITION (ON - TRIPPED - OFF)



Closed (ON).



Tripped.



Open (OFF).



#### 4 DPX<sup>3</sup> 630 SETTINGS

|                            | Thermal overload protection  |  | Magnetic short circuit protection   |  | Earth faults protection   |   | Neutral setting                          | Associated earth leakage module    |  |
|----------------------------|--|--|---|--|---|---|--|------------------------------------|--|
|                            |  |  |   |  |   |   |  | I $\Delta$ n                       | $\Delta$ t                                     |
| <b>Thermal magnetic</b>    | Ir adjustable<br>0.8-1 x I <sub>n</sub>                                | -  | Ii adjustable<br>5-10 x I <sub>n</sub>  | -  | -   | -   | -  | Adjustable<br>0.03 - 0.3 - 1 - 3 A | Adjustable<br>0 - 0.3 - 1 - 3 s <sup>(1)</sup> |
| <b>Electronic S1</b>       | Ir adjustable<br>0.4 to 1 I <sub>n</sub>                               | Permanent = 5s<br>(MEM ON)   | I <sub>sd</sub> adjustable<br>1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 10 x I <sub>r</sub>     | Permanent = 100ms  | -   | -   | OFF - 0.5 - 1 x I <sub>n</sub>           | Adjustable<br>0.03 - 0.3 - 1 - 3 A | Adjustable<br>0 - 0.3 - 1 - 3 s <sup>(1)</sup> |
| <b>Electronic S2</b>       | Ir adjustable<br>(1A by 1A)<br>0.4 to 1 x I <sub>n</sub>               | tr adjustable<br>(memory ON or memory OFF)<br>3 - 5 - 10 - 15 - 20 - 25 - 30 s | I <sub>sd</sub> adjustable<br>1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 x I <sub>r</sub> | tsd adjustable<br>(I <sup>2</sup> t=k or t = k)<br>0 - 0.1 - 0.2 - 0.3 - 0.4 - 0.5 s | -   | -   | OFF - 0.5 - 1 - 1.5 - 2 x I <sub>r</sub> | Adjustable<br>0.03 - 0.3 - 1 - 3 A | Adjustable<br>0 - 0.3 - 1 - 3 s <sup>(1)</sup> |
| <b>Electronic Sg</b>       | Ir adjustable<br>(1A by 1A)<br>0.4 to 1 x I <sub>n</sub>               | tr adjustable<br>(memory ON or memory OFF)<br>3 - 5 - 10 - 15 - 20 - 25 - 30 s | I <sub>sd</sub> adjustable<br>1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 x I <sub>r</sub> | tsd adjustable<br>(I <sup>2</sup> t=k or t = k)<br>0 - 0.1 - 0.2 - 0.3 - 0.4 - 0.5 s | I <sub>g</sub> adjustable<br>0.2 - 0.3 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 1 x I <sub>n</sub> | t <sub>g</sub> adjustable<br>0 - 0.1 - 0.2 - 0.5 - 1 s<br>(t=k) | OFF - 0.5 - 1 - 1.5 - 2 x I <sub>r</sub> | -                                  | -  |
| <b>Magnetic</b>            | -  | -  | Ii adjustable<br>5 - 10 x I <sub>n</sub>  | -  | -   | -   | -  | Adjustable<br>0.03 - 0.3 - 1 - 3 A | Adjustable<br>0 - 0.3 - 1 - 3 s <sup>(1)</sup> |
| <b>Magnetic electronic</b> | -  | -  | I <sub>sd</sub> adjustable<br>1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 x I <sub>n</sub> | -  | -   | -   | -  | Adjustable<br>0.03 - 0.3 - 1 - 3 A | Adjustable<br>0 - 0.3 - 1 - 3 s <sup>(1)</sup> |
| <b>AB</b>                  | Ir adjustable<br>260 or 280 or 300 or 320 or 340 or 360 or 380 or 400A | tr adjustable<br>(memory ON or memory OFF)<br>3 - 5 - 10 - 15 - 20 - 25 - 30 s | I <sub>sd</sub> adjustable<br>1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 I <sub>r</sub>   | tsd adjustable<br>(I <sup>2</sup> t=k or I = k) 0 - 0.1 - 0.2 - 0.3 - 0.4 - 0.5 s    | -   | -   | OFF-50%-100%''                           | Adjustable<br>0.03 - 0.3 - 1 - 3 A | Adjustable<br>0 - 0.3 - 1 - 3 s <sup>(1)</sup> |

(1) : The setting at 0.03 a must have a time-lag of 0 seconds.

For thermal magnetic circuit breakers, only the settings corresponding to the marking positions have been tested. The other setting values are given as an indication.



**Electronic card consumptions :**

- Electronic DPX<sup>3</sup>: 50 mA
- Electronic DPX<sup>3</sup> with measurement: 62.5 mA
- DPX<sup>3</sup> electronic earth leakage: 50 mA
- DPX<sup>3</sup> electronic earth leakage with measurement: 62.5 mA

## DPX<sup>3</sup> 630 MT

| Thermal : Ir |                          |      | Current (A) |     |     |     |     |
|--------------|--------------------------|------|-------------|-----|-----|-----|-----|
| Catch        | Multiplying factor of Ir | Mark | 250         | 320 | 400 | 500 | 630 |
| 1            | 0.80                     | 0.8  | 200         | 256 | 320 | 400 | 504 |
| 2            | 0.83                     |      | 208         | 266 | 332 | 415 | 523 |
| 3            | 0.86                     |      | 215         | 275 | 344 | 430 | 542 |
| 4            | 0.90                     |      | 225         | 288 | 360 | 450 | 567 |
| 5            | 0.93                     |      | 233         | 298 | 372 | 465 | 586 |
| 6            | 0.96                     |      | 240         | 307 | 384 | 480 | 605 |
| 7            | 1.00                     | 1    | 250         | 320 | 400 | 500 | 630 |

| Magnetic : Ii |                          |      | Current (A) |      |      |      |      |
|---------------|--------------------------|------|-------------|------|------|------|------|
| Catch         | Multiplying factor of Ir | Mark | 250         | 320  | 400  | 500  | 630  |
| 1             | 5.0                      | 5    | 1250        | 1600 | 2000 | 2500 | 3150 |
| 2             | 5.8                      |      | 1450        | 1856 | 2320 | 2900 | 3654 |
| 3             | 6.7                      |      | 1675        | 2144 | 2680 | 3350 | 4221 |
| 4             | 7.5                      |      | 1875        | 2400 | 3000 | 3750 | 4725 |
| 5             | 8.3                      |      | 2075        | 2656 | 3320 | 4150 | 5229 |
| 6             | 9.2                      |      | 2300        | 2944 | 3680 | 4600 | 5796 |
| 7             | 10.0                     | 10   | 2500        | 3200 | 4000 | 5000 | 6300 |

**i** The normative tolerances of the Ir and Ii values are at +/-20% at 40-50 °

### DPX<sup>3</sup> 630 Electronic S1

| Thermal : Ir |                          |       | Current (A) |      |      |      |      |
|--------------|--------------------------|-------|-------------|------|------|------|------|
| Catch        | Multiplying factor of Ir | Mark  | 250         | 320  | 400  | 500  | 630  |
| 1            | 0.40                     | 0.40* | 100*        | 128* | 160* | 200* | 252* |
| 2            | 0.45                     | 0.45* | 113*        | 144* | 180* | 225* | 284* |
| 3            | 0.50                     | 0.50* | 125*        | 160* | 200* | 250* | 315* |
| 4            | 0.55                     | 0.55* | 138*        | 176* | 220* | 275* | 347* |
| 5            | 0.60                     | 0.60* | 150*        | 192* | 240* | 300* | 378* |
| 6            | 0.65                     | 0.65* | 163*        | 208* | 260* | 325* | 410* |
| 7            | 0.70                     | 0.70* | 175*        | 224* | 280* | 350* | 441* |
| 8            | 0.75                     | 0.75* | 188*        | 240* | 300* | 375* | 473* |
| 9            | 0.85                     | 0.85* | 213*        | 272* | 340* | 425* | 536* |
| 10           | 0.95                     | 0.95* | 238*        | 304  | 380* | 475* | 599* |
|              | 1.00                     |       | 250         | 320  | 400  | 500  | 630  |

\* adjustable settings at 0 - 0.005 - 0.01 - 0.015 - 0.02 - 0.025 - 0.03 - 0.035 - 0.04 - 0.05

| Magnetic : Isd |                          |      | Current (A)  |              |              |              |              |
|----------------|--------------------------|------|--------------|--------------|--------------|--------------|--------------|
| Catch          | Multiplying factor of Ir | Mark | 250          | 320          | 400          | 500          | 630          |
| 1              | 1.5                      | 1.5  | 150 to 375   | 192 to 480   | 240 to 600   | 300 to 750   | 378 to 945   |
| 2              | 2.0                      | 2.0  | 200 to 500   | 256 to 640   | 320 to 800   | 400 to 1000  | 504 to 1260  |
| 3              | 2.5                      | 2.5  | 250 to 625   | 320 to 800   | 400 to 1000  | 500 to 1250  | 630 to 1575  |
| 4              | 3.0                      | 3.0  | 300 to 750   | 384 to 960   | 480 to 1200  | 600 to 1500  | 756 to 1890  |
| 5              | 4.0                      | 4.0  | 400 to 1000  | 512 to 1280  | 640 to 1600  | 800 to 2000  | 1008 to 2520 |
| 6              | 5.0                      | 5.0  | 500 to 1250  | 640 to 1600  | 800 to 2000  | 1000 to 2500 | 1260 to 3150 |
| 7              | 6.0                      | 6.0  | 600 to 1500  | 768 to 1920  | 960 to 2400  | 1200 to 3000 | 1512 to 3780 |
| 8              | 7.0                      | 7.0  | 700 to 1750  | 896 to 2240  | 1120 to 2800 | 1400 to 4500 | 1764 to 4410 |
| 9              | 8.0                      | 8.0  | 800 to 2000  | 1024 to 2560 | 1280 to 3200 | 1600 to 4000 | 2016 to 5000 |
| 10             | 10.0                     | 10.0 | 1000 to 2500 | 1280 to 3200 | 2600 to 4000 | 2000 to 5000 | 2520 to 5000 |

Isd values at +/- 10% in amps.



For S1, tr is permanent at 5 sec.  
tsd=100ms permanent

**DPX<sup>3</sup> 630 Electronic S2**

| Thermal : Ir |             |                  | Current (A) |            |            |            |            |
|--------------|-------------|------------------|-------------|------------|------------|------------|------------|
| LCD          | Adjustments | Adjustment range | 250         | 320        | 400        | 500        | 630        |
|              | 0.4 to 1    | 1A by 1A         | 100 to 250  | 128 to 320 | 160 to 400 | 200 to 500 | 252 to 630 |

\* adjustable settings to 0 - 0.005 - 0.01 - 0.015 - 0.02 - 0.025 - 0.03 - 0.035 - 0.04 - 0.05

| Magnetic : Isd |                          |                  | Current (A)  |              |              |              |              |
|----------------|--------------------------|------------------|--------------|--------------|--------------|--------------|--------------|
| LCD            | Multiplying factor of Ir | Adjustment range | 250          | 320          | 400          | 500          | 630          |
|                | 1.5                      | 1.5              | 150 to 375   | 192 to 480   | 240 to 600   | 300 to 750   | 378 to 945   |
|                | 2.0                      | 2.0              | 200 to 500   | 256 to 640   | 320 to 800   | 400 to 1000  | 504 to 1260  |
|                | 2.5                      | 2.5              | 250 to 625   | 320 to 800   | 400 to 1000  | 500 to 1250  | 630 to 1575  |
|                | 3.0                      | 3.0              | 300 to 750   | 384 to 960   | 480 to 1200  | 600 to 1500  | 756 to 1890  |
|                | 4.0                      | 4.0              | 400 to 1000  | 512 to 1280  | 640 to 1600  | 800 to 2000  | 1008 to 2520 |
|                | 5.0                      | 5.0              | 500 to 1250  | 640 to 1600  | 800 to 2000  | 1000 to 2500 | 1260 to 3150 |
|                | 6.0                      | 6.0              | 600 to 1500  | 768 to 1920  | 960 to 2400  | 1200 to 3000 | 1512 to 3780 |
|                | 7.0                      | 7.0              | 700 to 1750  | 896 to 2240  | 1120 to 2800 | 1400 to 3500 | 1764 to 4410 |
|                | 8.0                      | 8.0              | 800 to 2000  | 1024 to 2560 | 1280 to 3200 | 1600 to 4000 | 2016 to 5000 |
|                | 9.0                      | 9.0              | 900 to 2250  | 1152 to 2880 | 1440 to 3600 | 1800 to 4500 | 2268 to 5000 |
|                | 10.0                     | 10.0             | 1000 to 2500 | 1280 to 3200 | 1600 to 4000 | 2000 to 5000 | 2520 to 5000 |

tsd = 0 - 100 - 200 - 300 - 400 - 500 ms (t = K)

tsd = 0 - 100 - 200 - 300 - 400 - 500 ms (I<sup>2</sup>t = K) (\*\*)

(\*\*) @ 12 Ir

Isd values at +/-10% in amps.

### DPX<sup>3</sup> 630 Electronic Sg

| Thermal : I <sub>r</sub> |             |                  | Current (A) |            |            |            |            |
|--------------------------|-------------|------------------|-------------|------------|------------|------------|------------|
| LCD                      | Adjustments | Adjustment range | 250         | 320        | 400        | 500        | 630        |
|                          | 0.4 to 1    | 1A by 1A         | 100 to 250  | 128 to 320 | 160 to 400 | 200 to 500 | 252 to 630 |

| Magnetic : I <sub>sd</sub> |                                      |                  | Current (A)  |              |              |              |              |
|----------------------------|--------------------------------------|------------------|--------------|--------------|--------------|--------------|--------------|
| LCD                        | Multiplying factor of I <sub>r</sub> | Adjustment range | 250          | 320          | 400          | 500          | 630          |
|                            | 1.5                                  | 1.5              | 150 to 375   | 192 to 480   | 240 to 600   | 300 to 750   | 378 to 945   |
|                            | 2.0                                  | 2.0              | 200 to 500   | 256 to 640   | 320 to 800   | 400 to 1000  | 504 to 1260  |
|                            | 2.5                                  | 2.5              | 250 to 625   | 320 to 800   | 400 to 1000  | 500 to 1250  | 630 to 1575  |
|                            | 3.0                                  | 3.0              | 300 to 750   | 384 to 960   | 480 to 1200  | 600 to 1500  | 756 to 1890  |
|                            | 4.0                                  | 4.0              | 400 to 1000  | 512 to 1280  | 640 to 1600  | 800 to 2000  | 1008 to 2520 |
|                            | 5.0                                  | 5.0              | 500 to 1250  | 640 to 1600  | 800 to 2000  | 1000 to 2500 | 1260 to 3150 |
|                            | 6.0                                  | 6.0              | 600 to 1500  | 768 to 1920  | 960 to 2400  | 1200 to 3000 | 1512 to 3780 |
|                            | 7.0                                  | 7.0              | 700 to 1750  | 896 to 2240  | 1120 to 2800 | 1400 to 3500 | 1764 to 4410 |
|                            | 8.0                                  | 8.0              | 800 to 2000  | 1024 to 2560 | 1280 to 3200 | 1600 to 4000 | 2016 to 5000 |
|                            | 9.0                                  | 9.0              | 900 to 2250  | 1152 to 2880 | 1440 to 3600 | 1800 to 4500 | 2268 to 5000 |
|                            | 10.0                                 | 10.0             | 1000 to 2500 | 1280 to 3200 | 1600 to 4000 | 2000 to 5000 | 2520 to 5000 |

| Earth fault protection I <sub>g</sub> |                                      |                  | Current (A) |     |     |     |     |
|---------------------------------------|--------------------------------------|------------------|-------------|-----|-----|-----|-----|
| LCD                                   | Multiplying factor of I <sub>r</sub> | Adjustment range | 250         | 320 | 400 | 500 | 630 |
|                                       | 0.2                                  | 0.2              | 50          | 64  | 80  | 100 | 126 |
|                                       | 0.3                                  | 0.3              | 75          | 96  | 120 | 150 | 189 |
|                                       | 0.4                                  | 0.4              | 100         | 128 | 160 | 200 | 252 |
|                                       | 0.5                                  | 0.5              | 125         | 160 | 200 | 250 | 315 |
|                                       | 0.6                                  | 0.6              | 150         | 192 | 240 | 300 | 378 |
|                                       | 0.7                                  | 0.7              | 175         | 224 | 280 | 350 | 441 |
|                                       | 0.8                                  | 0.8              | 200         | 256 | 320 | 400 | 504 |
|                                       | 0.9                                  | 0.9              | 225         | 288 | 360 | 450 | 567 |
|                                       | 1.0                                  | 1.0              | 250         | 320 | 400 | 500 | 630 |
|                                       | OFF                                  | OFF              | S2          | S2  | S2  | S2  | S2  |

tsd = 0 - 100 - 200 - 300 - 400 - 500 ms (t = K)  
 tsd = 0 - 100 - 200 - 300 - 400 - 500 ms (I<sup>2</sup>t = k) (\*\*)  
 (\*\*) @ 12 I<sub>r</sub>  
 tg : 0.1 - 0.2 - 0.3 - 0.4 - 0.5 - 1 s (t=k)  
 ISD values at +/-10% in amps.

**5 TRANSFER SWITCHES**

The transfer switches plates are supplied with mechanical interlock and accessories.

-Catalogue numbers of the fixing devices + plates + faceplate depending on the mounting:

| Version           | Position   | Configuration   | Accessory     | XL <sup>3</sup> |          |           |
|-------------------|------------|-----------------|---------------|-----------------|----------|-----------|
|                   |            |                 |               | Fixing device   | Plate    | Faceplate |
| <b>Fixed</b>      | vertical   | transfer switch | -             | 0 210 66        | -        | 0 210 67  |
| <b>Plugged-in</b> | vertical   | single          | Nothing       | 0 210 60        | 0 210 62 | 0 210 64  |
|                   |            |                 | Earth leakage | 0 210 61        | 0 210 63 | 0 210 65  |
|                   |            | transfer        | Nothing       | 0 210 66        | -        | 0 210 67  |
|                   | Motor      |                 | 0 210 66      | -               | 0 210 67 |           |
|                   | horizontal | transfer switch | Nothing       | 0 210 73        | -        | 0 210 76  |
| <b>Draw-out</b>   | vertical   | single          | Nothing       | 0 210 60        | 0 210 62 | 0 210 70  |
|                   |            |                 | Earth leakage | 0 210 61        | 0 210 63 | 0 210 71  |
|                   |            |                 | Motor         | 0 210 60        | 0 210 62 | 0 210 72  |
|                   |            | transfer switch | Nothing       | 0 210 66        | -        | 0 210 68  |
|                   |            |                 | Motor         | 0 210 66        | -        | 0 210 69  |
|                   |            |                 | Nothing       | 0 210 73        | -        | 0 210 74  |
|                   | horizontal | transfer switch | Nothing       | 0 210 73        | -        | 0 210 74  |
|                   |            |                 | Motor         | 0 210 73        | -        | 0 210 75  |

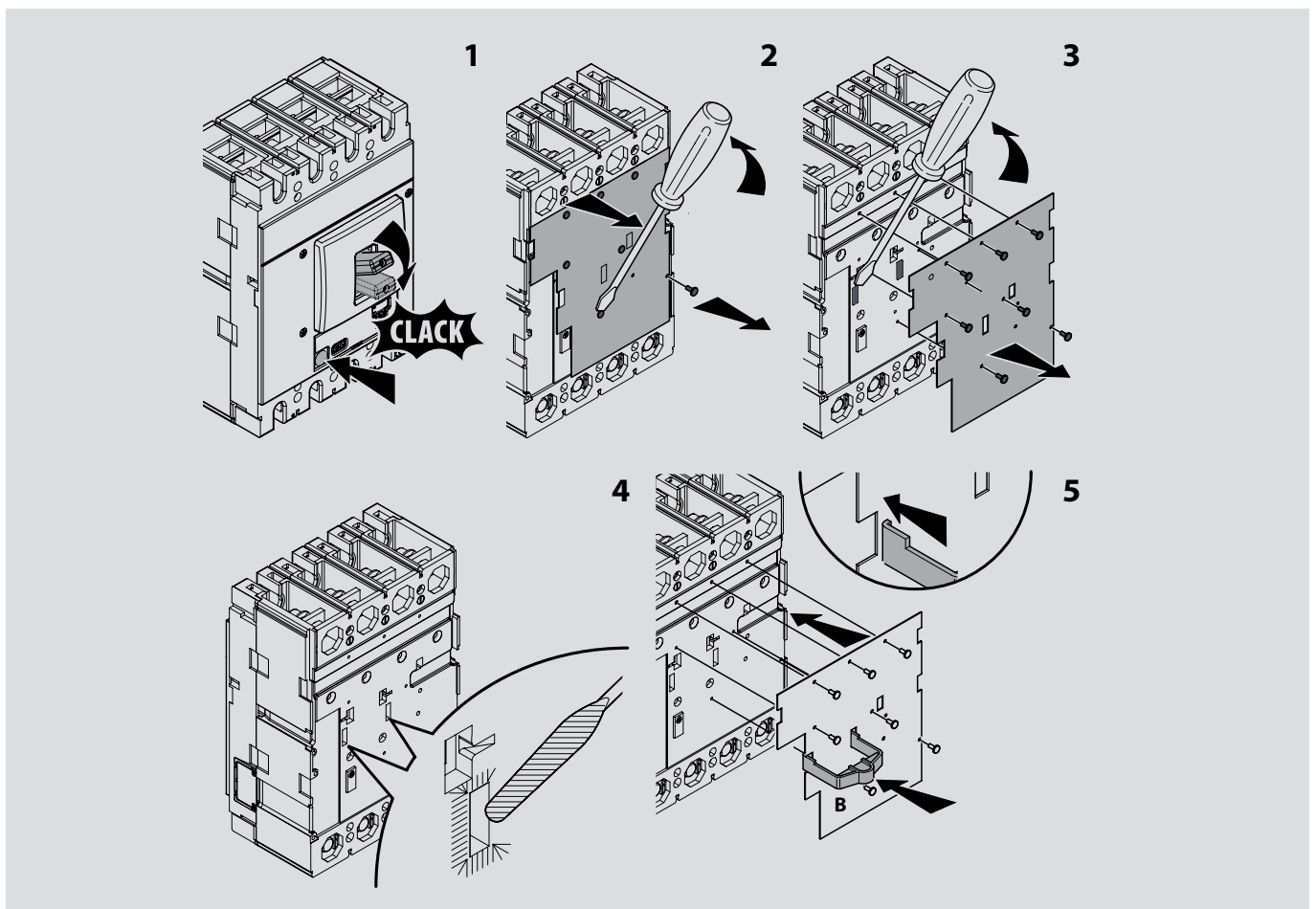
| New catalogue number | Previous catalogue number |   |
|----------------------|---------------------------|---|
| 0 210 60             | 0 207 21                  | Fixing device for 1-2 DPX <sup>3</sup> 630 plug-in/draw-out   |
| 0 210 61             | 0 207 23                  | Fixing device for 1-2 DPX <sup>3</sup> 630 plug-in/draw-out+ e.l.c.bs   |
| 0 210 62             | 0 207 87                  | Mounting plate for device only in vertical position   |
| 0 210 63             | 0 207 88                  | Mounting plate for device with e.l.c.bs in vertical position  |
| 0 210 64             | 0 212 20                  | Metal faceplate for 1-2 DPX <sup>3</sup> 630 plug-in  |
| 0 210 65             | 0 212 22                  | Metal faceplate for 1-2 DPX <sup>3</sup> 630 plug-in+ e.l.c.bs  |
| 0 210 66             | 0 206 76                  | Fixing automatic transfer switches DPX <sup>3</sup> 630 devices in vertical position (fixed/draw-out versions)                  |
| 0 210 67             | 0 209 76                  | Metal faceplates for automatic transfer switches for fixed version DPX <sup>3</sup> 630 (vertical)                              |
| 0 210 68             | 0 212 94                  | Metal faceplates for automatic transfer switches for draw-out DPX <sup>3</sup> 630 in vertical position                         |
| 0 210 69             | 0 212 95                  | DPX <sup>3</sup> 630 faceplate + motor driven handle + transfer switches for draw-out DPX <sup>3</sup> 630 in vertical position |
| 0 210 70             | 0 212 21                  | Metal faceplates for draw-out devices   |
| 0 210 71             | 0 212 23                  | Metal faceplate for 1 DPX <sup>3</sup> 630 draw-out with e.l.c.bs in vertical position  |
| 0 210 72             | 0 212 04                  | Metal faceplate 1 draw-out device without e.l.c.bs in vertical position with motor-driven handle                                |
| 0 210 73             | 0 206 77                  | Fixing automatic transfer switch for 2 DPX <sup>3</sup> 630 in horizontal position  |
| 0 210 74             | 0 212 93                  | Metal faceplate for automatic transfer switch for 2 draw-out DPX <sup>3</sup> 630 in horizontal position                        |
| 0 210 75             | 0 212 97                  | Metal faceplate for automatic transfer switch for 2 draw-out DPX <sup>3</sup> 630 with handle in horizontal position            |
| 0 210 76             | 0 212 98                  | Metal faceplate for automatic transfer switch for 2 fixed DPX <sup>3</sup> 630 in horizontal position                           |

■ Principle

The aim is to combine 2 devices motorized or not and to prevent the possibility of closing the 2 at the same time using the mechanical interlock.

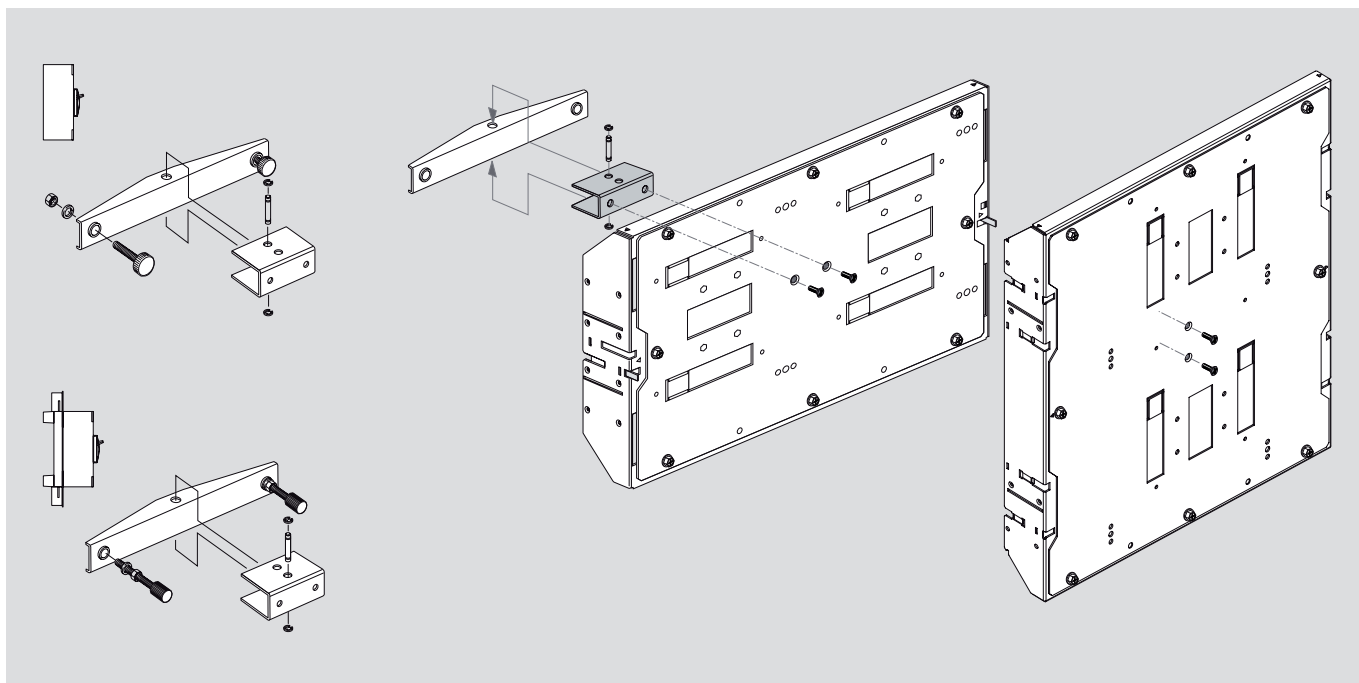
■ Product preparation

Prepare your devices according to the installation leaflet supplied instructions specified in the package according to the configuration.





Set up the mechanical interlock according to the illustrations below:



**Points to check and settings:**

- Check that the U-shaped parts mounted on the circuit breakers slide freely without any special effort. If not, check that the cutout is done correctly.
- Load the spring manually on the 2 devices (Q1 and Q2) and close Q1.
- Adjust the wide head screw so that it has the same length, touch the U-piece on the Q1 side, and adjust (Q2 side) the distance between the screw head and the U-piece (distance between 0.5 and 1 mm).
- Open Q1, load the spring, then close Q2.
- Repeat the same operation for Q1 (distance).



These adjustment operations are identical for the fixed, plugged-in and draw-out versions.

# DPX<sup>3</sup> 630 electrical accessories

## ■ Auxiliary fault signalling contact

- 4 210 11

## ■ Shunt releases

- 4 222 39 24V AC/DC  
 - 4 222 40 48V AC/DC  
 - 4 222 41 110V AC/DC  
 - 4 222 42 230V AC/DC  
 - 4 222 43 400V AC/DC

## ■ Undervoltage releases

- 4 222 44 24V DC  
 - 4 222 45 24V AC  
 - 4 222 46 48V DC  
 - 4 222 47 110V AC  
 - 4 222 48 230V AC  
 - 4 222 49 400V AC  
 (power supply included)

## ■ Time-lag modules

- 0 261 90 230V AC  
 or  
 - 0 261 91 400V AC  
 +  
 - 4 226 23 UVR

## ■ Batteries for DPX<sup>3</sup>

- 4 210 82 2 CR1616 batteries for one circuit breaker+ supports

## ■ Motor-driven handle (front installation)

- 0 261 40 24V AC/DC  
 - 0 261 41 48V AC/DC  
 - 0 261 42 110V AC  
 - 0 261 44 230V AC  
 - 0 261 48 220-250V DC  
 - 4 226 26 110-125V DC  
 - 4 226 30 230V AC (standard)

## ■ Locking for motor-driven handle

- 0 261 58 star key  
 - 0 261 59 flat key

## ■ External power supply

- 4 210 83 24V AC/DC - 250 mA

## ■ Set of connectors - 8 contacts (rear installation)

- 0 263 99 for plugged-in and debr-lift versions

## ■ Set of connectors - 6 contacts (rear installation)

- 0 098 19 for plugged-in and debr-lift versions

## ■ Set of connectors - 24 contacts (lateral installation)

- 4 222 29

## ■ Signalling contact

- 0 265 74 plugged-in/draw-out

## ■ Set of contacts (12) (lateral installation)

- 4 222 30 for draw-out version

## ■ Electronic earth leakage modules

- 0 260 60 standard 3P 400A  
 - 0 260 61 standard 4P 400A  
 - 0 260 63 LED 4P 400A  
 - 0 260 64 standard 3P 630A  
 - 0 260 65 standard 4P 630A  
 - 0 260 67 LED 4P 630A

## ■ Communication interface modbus

- 4 210 75

## 1 AUXILIARY FAULT SIGNALLING CONTACT (OC/CTR, CAT.NO 4 210 11)



All DPX<sup>3</sup> circuit breakers and switches can be equipped with electrical auxiliaries to ensure control functions.

The auxiliary contact Cat.no 4 210 11 is common to the entire DPX<sup>3</sup> range.

Depending on its insertion position in the DPX<sup>3</sup>, the contact acts either as an auxiliary contact or as a fault signalling contact.

The auxiliary contact (OC) allows the signaling of the position of the main contacts of the circuit breaker or switch (open or closed).

It is neither anticipated nor delayed.

The fault signalling contact (CTR) indicates that the circuit breaker has opened on fault, per action of a trigger, by a draw-out operation or by mechanical action on the Red "test" button.

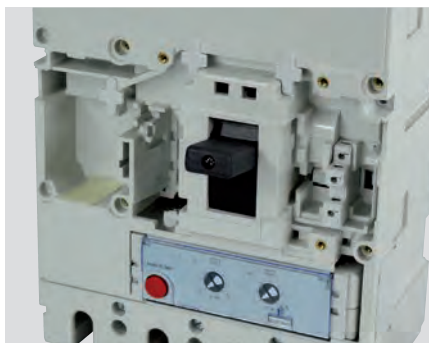
These contacts are of the changeover type (NO-NC) with dry contact (potential free).

### Setting up the OC contact

- Press the Red "test" button to trigger the product and have the handle in the intermediate position.
- Remove the 4 screws from the product cover

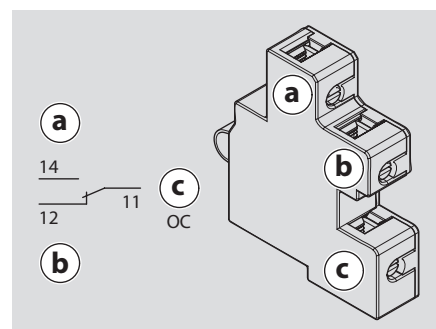


- If the OC contact



**!** Its location is dedicated (possibility to put 2 OC Max. on the DPX<sup>3</sup> 630).

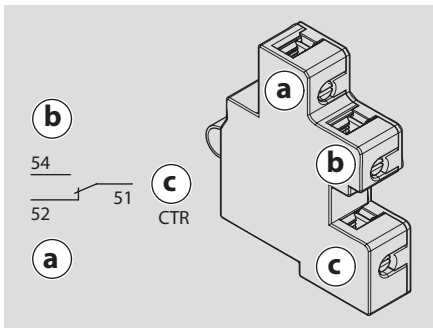
### OC contact presentation :



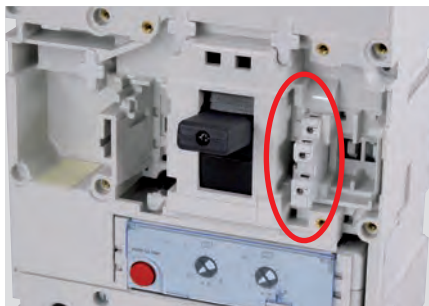
### OC contact status:

|           | OC | 12 - 11 | 14 - 11 |
|-----------|----|---------|---------|
| OFF       |    |         |         |
| Triggered |    |         |         |
| ON        |    |         |         |

**CTR contact presentation :**



- Insert the CTR contact (only 1 possible location):



**2 SHUNT RELEASES (EXAMPLE CAT.NO 4 222 42)**



**CTR contact status :**

| CTR       | 52 - 51 | 54 - 51 |
|-----------|---------|---------|
| OFF       |         |         |
| Triggered |         |         |
| ON        |         |         |

**Electrical characteristics (OC & CTR)**

| VOLTAGE | CURRENT (A)    |                |
|---------|----------------|----------------|
|         | RESISTIVE LOAD | INDUCTIVE LOAD |
| 24 Vdc  | 10             | 5              |
| 48 Vdc  | 1.3            | 0.7            |
| 110 Vdc | 0.4            | 0.3            |
| 230 Vdc | 0.3            | 0.2            |
| 110 Vac | 10             | 4              |
| 230 Vac | 6              | 2              |

Shunt releases allow the instantaneous opening ( $\leq 50\text{ms}$ ) of the device by the power of their coil: external contact control NO.

The contact incorporated into the shunt release switch shuts off the power supply during an opening control (e.g., emergency stop), thus avoiding the heating problem. The permanent supply of the shunt release is possible, prohibiting the closure of the DPX<sup>3</sup>.

**Setting up the fault signaling contact**

- Press the Red "test" button to trigger the product and to have the handle in the intermediate position.
- Remove the 4 screws from the product cover.



**OC and CTR cabling :**

The wires must be pulled out on the side of the circuit breaker, the permissible section extends from 0.35 mm<sup>2</sup> to 1.5 mm<sup>2</sup>. In the case where several OC and CTR contacts are present, the recommended section is 0.50 mm<sup>2</sup>.



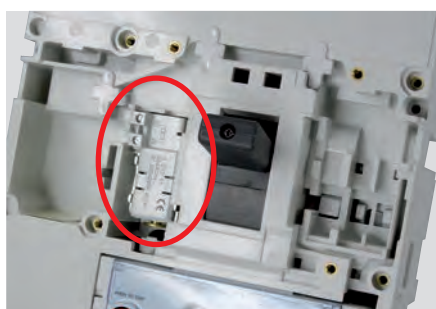
**Electrical characteristics**

| OPERATING VOLTAGE           | AC : 24V/110V/230V/400V<br>DC : 24V/48V |
|-----------------------------|---|
| Operating range IEC 60947-2 | 70 to 110% Un                           |
| Operating time              | $\leq 50\text{ ms}$                     |
| Inrush power                | 300 VA/W                                |
| Request time                | $> 50\text{ ms}$                        |
| Insulation voltage          | 2,5 kV                                  |

### ■ Setting up

A single location is provided for mounting regardless of the product of the DPX<sup>3</sup> 630 range.

These triggers are mounted to the left hand side of the product (front view).



### ■ Connection – cable output

Only one output is possible: lateral output.



The accessory Cat.no 9 803 86 can be used to maintain the cables in place:



### 3 UNDERVOLTAGE RELEASES (EXAMPLE CAT.NO 4 222 48)



The undervoltage release allows the instantaneous opening ( $\leq 50$  ms) of the device by switching off the power supply ( $< 85\%$  UN) of the coil: positive safety (e.g. emergency stop by external contact NF).

The undervoltage release must be pre-energized before putting the associated DPX<sup>3</sup> in the rearming position (OFF) to reset the product.

### Electrical characteristics

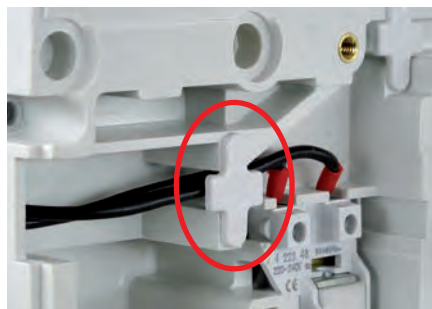
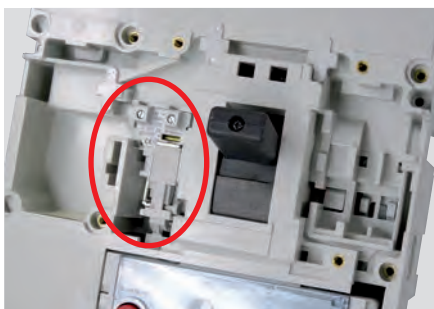
|                                    |   |
|------------------------------------|---|
| <b>OPERATING VOLTAGE</b>           | AC : 24V/110V/<br>230V/400V<br>DC : 24V/48V |
| <b>Operating range IEC 60947-2</b> | 85 to 110% Un                               |
| <b>Operating time</b>              | < 50 ms                                     |
| <b>Holding power</b>               | 1.6 W / 5 VA                                |

### ■ Setting up

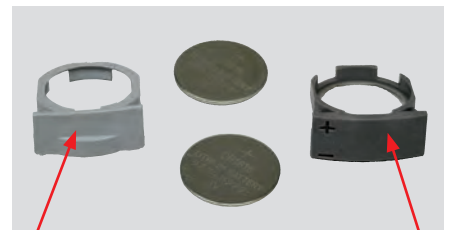
A single location is provided for mounting regardless of the product of the DPX<sup>3</sup> 630 range.

These triggers are mounted to the left of the product (front view).





Cat.no 4 210 82 composition : 2 batteries CR1616 + two battery holders (1 for DPX<sup>3</sup> 160/250 and 1 for DPX<sup>3</sup> 630/1600).



Holder for DPX<sup>3</sup> 160/250

Holder for DPX<sup>3</sup> 630/1600

■ **Connection – cable output**

Only one output is possible: lateral output.

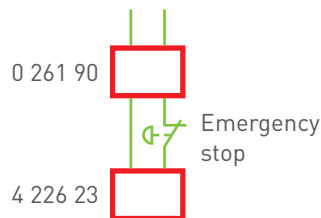


**4 800 MS TIME-LAG MODULES**

- 0 261 90 : voltage 230 VAC (supplied with 2 terminal covers and 1 rail)
- 0 261 91 : voltage 400 VAC (supplied with 2 terminal covers and 1 rail)
- 4 226 23 : specific trigger to be associated with Cat.no 0 261 90 or Cat.no 0 261 91 according to the desired voltage.

The wiring is done in parallel.

Example :



The accessory Cat.no 9 803 86 can be used to maintain the cables in place:



■ **Setting up**

- Remove the battery holder using a small flat screwdriver and place the 2 batteries with the "+" upwards :



- Insert the whole into the product and set the protection unit.



**5 BATTERY FOR DPX<sup>3</sup> CAT.NO 4 210 82**

The internal battery allows the protection unit of the differential DPX<sup>3</sup> to be set before installing the product.



## 6 MOTOR-DRIVEN HANDLE

The motor-driven handle of the DPX<sup>3</sup> 630 offers a significant advantage in all commercial building installations, it allows to close or open a circuit breaker or a remote switch. When used in automatic transfer switch, its control is managed using the automation box.

The front panel has a controller to charge the spring, a status indicator of the "loaded" or "unloaded" spring, a multifunction selector (auto-man lock), a closing button, an opening button and a locking device.

### It is available in several voltages:

AC → 24 V/48 V/110 V/230 V

DC → 24 V/48 V/110 V-125 V /220-250 V

It is only available in front version → no side version. 2 possibilities of electric controls: impulse or sustained.

**In automatic mode**, the motorized control allows to open, close or remotely rearm the DPX<sup>3</sup>.

**In manual mode**, electrical orders are not taken into account. The front handle allows you to load the spring manually and then close the associated device. To open the device press the red button.

**In locked mode**, it is not possible to drive the motorized control electrically or manually. This mode is only possible when the DPX<sup>3</sup> is in the open position "0".

It is possible to fit them with a Key-lock (Cat.no 0 261 58/59) or 1 or more padlocks (quantity: 3 Maxi. diameter 6 mm Maxi, for example with padlock Cat.no 0 227 97), prohibiting the closing of the DPX<sup>3</sup> and the cancellation of all the electrical orders.

For the safety of persons and equipment, when the motorized control cover is removed, a safety contact makes it ineffective to operate.

In the case of the use of a transfer switch, the switching time between the main line and the backup line (time between the opening of the main line and the closure of the backup line) is greater than or equal to 6s.

There are 2 versions of motorized control: a premium version and a standard version.

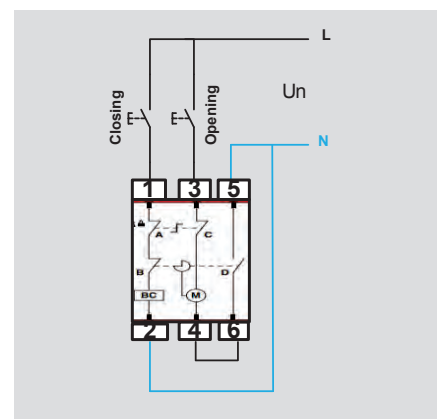
Presentation and composition of the premium version (0 261 40/41/42/44/48 and 4 226 26) :



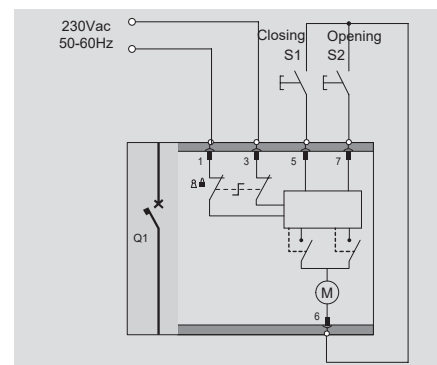
Presentation and composition of the standard version (4 226 30 only) :



Premium version :



Standard version :



**Electrical characteristics of the premium version :**

| Voltages – Un (V) | Power consumption | Opening + rearming <sup>(1)</sup> | Closing <sup>(1)</sup> |
|-------------------|-------------------|-----------------------------------|------------------------|
| 24 Vdc            | 300 W             | 2s                                | ≤ 100ms                |
| 48 Vdc            | 300 W             | 2s                                | ≤ 100ms                |
| 24 Vac            | 300 VA            | 2s                                | ≤ 100ms                |
| 48 Vac            | 300 VA            | 2s                                | ≤ 100ms                |
| 110 Vac           | 300 VA            | 2s                                | ≤ 100ms                |
| 230 Vac           | 300 VA            | 2s                                | ≤ 100ms                |

*(1) provided that these voltages/powers conform to the specifications given.*

**Electrical characteristics of the standard version :**

In the case of the use of a transfer switch, the switching time between the main line and the backup line (time between the opening of the main line and the closure of the backup line) is greater than 6s motor alone without accessories.

| Voltages – Un (V)                         | 230 VAC – 50/60 Hz |         |
|---|--------------------|---------|
|   | Opening            | Closing |
| Inrush current                            | 240 W              | 200 W   |
| Hold consumption                          | 80 W               | 120 W   |
| Request time/electrical operation(s)      | 0.45 s             | 0.55 s  |
| Operating time/main contacts state change | 0.27 s             | 0.55 s  |

**■ Mounting (same for 2 versions)**

**i** It is forbidden to remove the protective cover in operating mode. This operation will result in an inhibition of the electrical function (internal safety contact).

Function of the markers :

The reference part G is a delay of the OFF button of the motor. In the absence of this part, it is not possible to mechanically open the associated device using the OFF button (trigger button).

The reference part H is an axis to position the carry-over of the OFF button on the cover.

Part D is a power connector.

Part C is an associated device power contact position (from the I/O front panel indicator).

Screws B and F are fastening screws.

The reference part E is an XL<sup>3</sup> faceplate power terminal cover.

- Make the two cuts (they must be made in a very clean way, in case of large burr, they will prevent the correct sliding of the status report), then drill the holes as indicated in the installation instructions.



- Place the metal bracket and its axle (toothed part towards the handle) in the intended housing. The bracket must be free in its movement. Any improper implementation will result in the inability to open the associated device via the OFF button in manual mode.







- Reposition the DPX<sup>3</sup> cover.



- Set up the 4 screws for securing the motorized control (tightening torque 2 N. m), then place the motor cover using the 2 screws supplied (tightening torque 1 N. m).

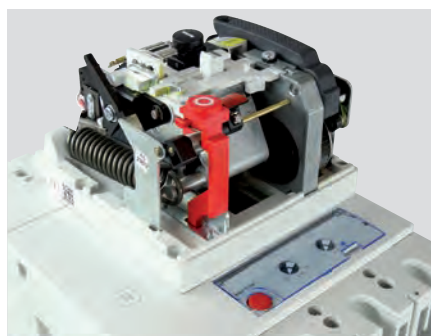
- Perform a few closing and opening operations manually (attention the function selector must be on MAN) in order to check the correct mechanical functioning of the whole.



- Set up the status report. It follows the movement of the circuit breaker mechanism (I - O).



- Remove the protective cover from the motorized control and position it by being vigilant on the insertion position of the circuit breaker handle.



■ Visual and operating differences :

Premium version:



**Standard version:**



Hole for manual opening/closing

- The push button is no longer present on the standard version.
- Absence of the spring reload lever and the status display on the standard version.
- Presence of an orifice (passage of an 8 mm Allen wrench supplied) in case of manual reset.

As the standard version motor drive has no loading spring, the mechanical opening/closing test is always carried out in manual position but only by using the supplied tool (8 mm Allen wrench) in the intended orifice (direction time → closing the DPX<sup>3</sup>, counterclockwise → open/reset).

Illustration photo for mechanical operations on the standard version :



**7 LOCKING ACCESSORIES FOR MOTOR DRIVE**

There are two possibilities to lock the motor drive :

- By padlock, the maximum number is 3 of 6 mm maximum. Example with a padlock Cat.no 0 227 97 :



- By lock Cat.no 0 261 59 (flat key) or Cat.no 0 261 58 (star key).

**■ Example of mounting the Cat.no 0 261 59**

**1. Composition**



**2. Remove the protective cover.**



**3. Drill 2 holes (3 mm) using the drill jig provided.**



**4. Fasten the square piece from the rear using the 2 screws provided (tightening torque 2 N. m) .**



5. Insert the key barrel and fasten it using the supplied nut (tightening torque 2 N. m).



6. Horizontal key position → the key cannot be removed, and the motor is not locked.



7. Position of the vertical key with the red button "0" pressed → the key can be removed, and the motor is locked.



**i** To lock, it is necessary to press the red button "0" then turn the key in the vertical position. To unlock, press the red button "0" and turn the key to the horizontal position.

### 8 EXTERNAL POWER SUPPLY (CAT.NO 4 210 83)



It allows the DPX<sup>3</sup> electronic units to be supplied when the circuit breaker is not energized or when the current passing through it is insufficient. It also provides power to several circuit breakers (maximum output 250 mA). Sidewalls with a specific connector are provided and connected to the side of the circuit breakers.



**i** Warning, the electronic circuit breakers DPX<sup>3</sup> 630 type S1 do not allow the addition of an external power supply.

### 9 SET OF CONNECTORS (CAT.NO 0 098 19 & 0 263 99) → REAR INSTALLATION

See the details of the installation in the "mechanical accessories" section (plug-in/debro-lift). The process is also illustrated in the installation instructions of the Cat.no 4 222 31/32/33.

It is not possible to install these connectors in the case of products mounted using a transfer switch.

### 10 SET OF CONNECTORS FOR PLUGGED-IN VERSION (CAT.NO 4 222 29) → SIDE INSTALLATION

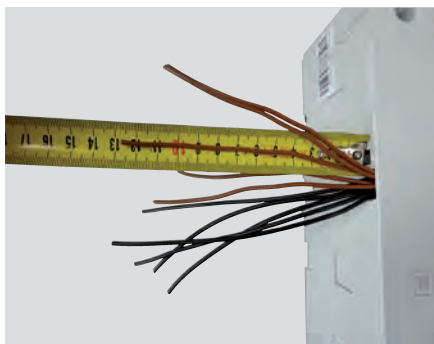
This catalogue number is composed of 2 male/female connectors of 12 terminals each (24 terminals in total) allowing the connection of the accessories (OC - CTR - motor drive - coils).

It is only available in the international catalog.

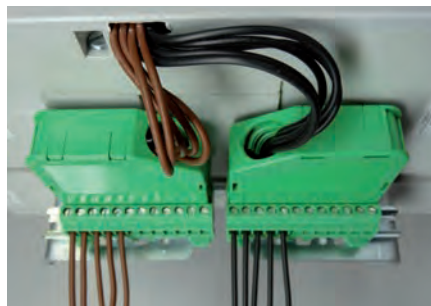


The whole is carried out by following the steps of the installation instructions (supplied with the product but also available on the instructions of the base Cat.nos 4 222 22/23/24/25/26/27) in accordance with the following point :

- Leave a necessary length of wires coming out of the product (triggers, OC/CTR, etc...) → 13 cm.



Final mouting:



Marking is possible thanks to the orange part and the marking plate (numbers) supplied (for the green connectors terminals) :



The different cable sections as well as the location recommendations of the wires are indicated on the instruction sheet according to the accessories present.

**11** **SIGNALLING CONTACT PLUGGED-IN/DRAW-OUT-DEBRO-LIFT MECHANISM (CAT.NO 0 265 74)**

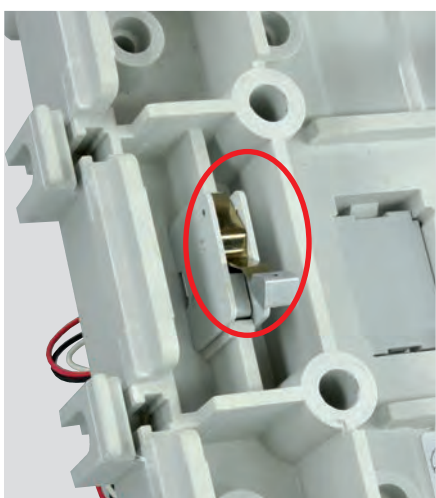
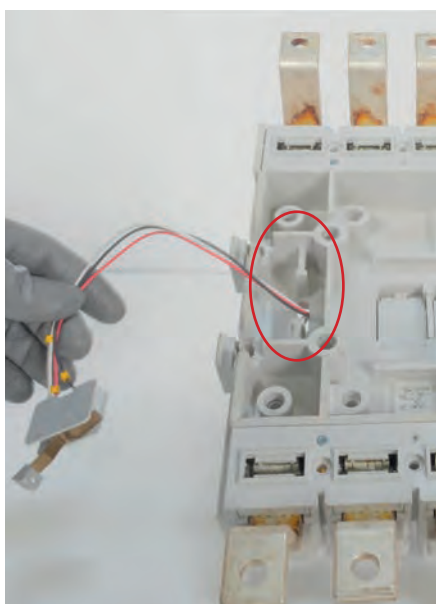
This contact is inserted into the base for a plugged-in or draw-out version.



First, the metal wedge must be screwed with the screw (these 2 parts are supplied) :



Then pass the contact wires in the dedicated hole of the base and insert the contact:



### 12 AUTOMATIC AUXILIARY CONTACT (CAT.NO 4 22230)

This Cat.no is composed of 4 contacts of 3 terminals each. We can install up to 8 contacts per DPX<sup>3</sup> (2 Cat.nos to order). These contacts are positioned on the side of the associated device. They can be on a product alone but also on 2 products for automatic transfer switch configuration.

Composition of the catalogue number :



In addition to the parts composing the Cat.no, others are necessary to complete the assembly. They are supplied with the base and the debr-lift mechanism :

Necessary parts in the base (Cat.nos 4 222 22/23/24/25/26/27): J, K and L marks.

Necessary parts in the debr-lift mechanism (Cat.nos 4 222 31/32/33): T and U marks.

The mounting is detailed on the instruction sheet of the base (for the female part of the contacts) and the debr-lift mechanism (for the male part of the contacts).

The different cable sections as well as the position of the wires are indicated on the instruction sheet according to the accessories.

### 13 ELECTRONIC EARTH LEAKAGE MODULE

An earth leakage module is a measuring device, usually associated with a circuit breaker, but can be a switch. It detects a current difference between the active conductors of an installation and initiates an action when the threshold is reached or crossed.

It is mounted downstream the MCCB.



- Press the Red mechanical test button
- Join the earth leakage module and the DPX<sup>3</sup> and block the 4 screws (or 3 - tripolar) according to the tightening torque indicated in the instruction sheet → 24 N. m.





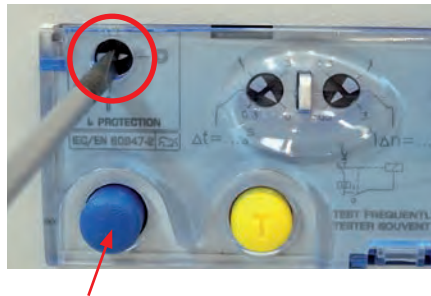
Flat flexible bars, cables or cable with rings can be set up in the downstream terminal blocks of the earth leakage module.

- **Flat bars** : maximum width 32 mm, the center of the hole for the screw passage must be in the middle of the width of the bar and at a maximum of 16 mm from its end. The diameter of this hole is 11 mm. The tightening torque of the screws is 24 N.m.
- **Cables** : maximum diameter 26 mm (bare and without insulation). For installation, the cage terminals Cat.no 0 262 50 must be ordered. The tightening torque of the screws of the cage terminals is 24 N. m.
- **Cables with ferrule** : maximum width 32 mm. The diameter of the ferrule hole must be 11 mm. It is forbidden to put 2 ferrules on each other in the same terminal. The tightening torque of the screws is 24 N. m.

Several checks are required to verify the correct functioning :

**Assembly verification :**

Put the DPX<sup>3</sup> in position "I" and then position the earth leakage module slider on "0".



The blue reset button must be released and the DPX<sup>3</sup> handle must move to the intermediate position. In this configuration, you are not supposed to be able to move the DPX<sup>3</sup> handle on "0" position.

**Checking the possibility of rearming :**

Position the earth leakage module slider to "I" and then push the blue reset button. If you can switch the DPX<sup>3</sup> handle on the "0" position and then on "I", the operation is correct.



Blue button pressed

**Check of the earth leakage tripping :**

This operation must be performed under voltage. When pressing the yellow test button with the DPX<sup>3</sup> in the "I" position, the blue button must extend, and the product must be placed on the intermediate position.

It is possible to remotely view the tripping on an earth leakage fault. You simply need to connect a LED on the 2 terminals located on the side of the earth leakage module :



1. Plugged-in version :

- 4 222 22 → Front terminal mounting base - for DPX<sup>3</sup> only - 3P
- 4 222 24 → Flat rear terminal mounting base - for DPX<sup>3</sup> only - 3P

## 14 COMMUNICATION INTERFACE MODBUS (CAT.NO 4 210 75)

The Cat.no 4 210 75 interface allows to connect certain Legrand products such as DPX<sup>3</sup>, adaptable earth leakage modules, on a MODBUS RS485 communication network.

It is equipped with a contact indicating the triggered status of the associated circuit breaker.



### CHARACTERISTICS

- RS485 communication interface for DPX<sup>3</sup> and adaptive earth leakage module.
- 24 V DC/AC power supply use double galvanic isolation or equivalent power supply, example of Cat.no 1 466 23.
- Consumption 90 mA.
- RS485 communication port.
- Modbus settings by jumpers.
- Free-of-potential contact for status information - tripped circuit breaker Max 220 V 0.2 A.

## PRODUCT SELECTION

Cat.no 4 210 75 communication interface must be used with communicating DPX<sup>3</sup> and adaptative earth leakage modules.

## CONNECTION

### ■ Link between Cat.no 4 210 75 interface and the Legrand product



Connection under the communication interface. The link cord is supplied with the interface.

**i** The length of the cord supplied with the interface Cat.no 4 210 75 is 200 cm.

### ■ Interface power supply

- Power supply 24 V DC / AC.
- Use a double galvanic insulation or equivalent power supply.
- Connection by connector.



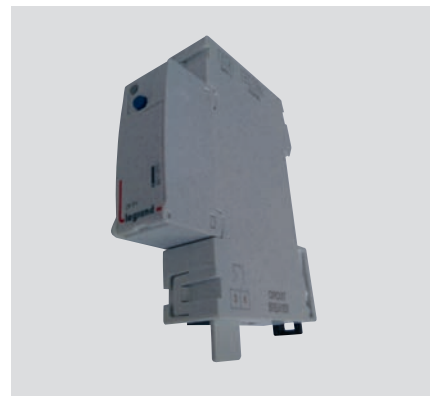
### ■ Connection to the RS485 BUS

- Connection of the interface to RS485 BUS.
- The wiring principle of a RS485 BUS is detailed in the chapter "communication protocols".
- Connection by connectors.



### ■ Using the status contact

- The information of the tripped status of the circuit breaker is present on a potential free contact.
- NF = tripped circuit breaker
- Push button function, relay test, support = NF
- Connection by connector.





### SETTING

Setting of the communication interface Cat.no 4 210 75 is done via jumpers.

- A1 / A2 / A3 : Modbus address.
- M : Modbus transmission mode (RTU / ASCII, parity, stop bit).
- B : transmission speed.
- Jumper 6 : not used.

The setup details are shown in the datasheet.

Configuration jumpers are available under the catalogue numbers: :

- Complete kit from 0 to 9: Cat.no 3501K (10 of each).
- Set of 10 individual jumpers: Cat.no 3501/X (example reference 3501/1 = set of 10 jumpers-1).

### DATA RETURN AND MODBUS ADDRESSING

The Cat.no 4 210 75 remains a communication interface for transcribing the information present on the Legrand circuit breakers in Modbus RS485 Protocol. The different register tables are available in the "product data" paragraphs of the DPX<sup>3</sup> and adaptable earth leakage modules.



# DPX<sup>3</sup> 630 mechanical accessories

■ **DPX<sup>3</sup> base - plugged-in version**

- 4 222 22 Front terminal - 3P
- 4 222 23 Front terminal - 4P
- 4 222 24 Flat rear terminal - 3P
- 4 222 25 Flat rear terminal - 4P
- 4 222 26 Flat rear terminal - 3P
- 4 222 27 Flat rear terminal - 4P with earth leakage modules

■ **Terminals for plugged-in/draw-out version**

- 4 222 20 for DPX<sup>3</sup> 3P
- 4 222 21 for DPX<sup>3</sup> 4P

■ **Set of 2 extractor handles**

- 4 222 28 (plug-in version only)
- 4 222 31 for DPX<sup>3</sup> 3P
- 4 222 32 for DPX<sup>3</sup> 4P
- 4 222 33 for DPX<sup>3</sup> 4P + earth leakage module

■ **Insulated handle for drawing-out**

- 0 265 75

■ **Debro-lift – locking system**

- 0 265 76 flat key
- 0 263 48 star key
- 0 265 77 star key motorised/with rotary handle

- 0 265 78 flat key motorised/with rotary handle

■ **Universal plates for transfer switch**

- 0 264 04 for for plug-in, draw-out
- 0 264 09 for fixed version

■ **Rotary handle**

- 0 262 41 standard (black)
- 4 222 38 emergency (red & yellow)

■ **Remote rotary handle**

- 0 262 81 standard (black)
- 0 262 82 emergency (red & yellow)

■ **Lock for remote rotary handle**

- 0 262 92 eurolock key
- 0 262 93 star key
- 0 262 94 flat key
- 4 228 04 key barrel and Ronis key
- 4 228 05 key barrel and Ronis key

■ **Locking accessory for direct rotary handle**

- 0 262 25

■ **Connection terminals**

- 0 262 50 300mm<sup>2</sup> rigid or 240 mm<sup>2</sup> Maxi. flexible → set of 4 terminals
- 0 262 51 2x240<sup>2</sup> rigid or 2x185<sup>2</sup> flexible → set of 4 terminals

■ **Flat rear socket set upstream and downstream**

- 0 263 52 3P
- 0 263 53 4P

■ **Set of 4 connectors for terminals**

- 0 262 46

■ **Set of 4 DPX extended front terminals**

- 0 262 47

■ **Incoming and outgoing spreader**

- 0 262 48 3P
- 0 262 49 4P

■ **Set of 3 insulated shields**

- 0 262 30

■ **Set of 2 terminal shields**

- 0 262 44 3P
- 0 262 45 4P

■ **Padlock for DPX 630**

- 0 262 40

■ **Set of 2 sealable terminal covers**

- 4 222 34 for 3P
- 4 222 35 for 4P

■ **Plate for D/O version**

- 4 222 36

■ **Retrofit kit DPX 630 – DPX<sup>3</sup> 630**

- 4 222 37

## 1 PLUG-IN VERSION

|    |  |   |                         |
|----|--|---|-------------------------|
| 3P | 4 222 22 → 3P base - front terminals         | + | 4 222 20 → 3P terminals |
|    | 4 222 24 → 3P base rear terminals            |   |                         |
| 4P | 4 222 23 → 4P base front terminals           |   |                         |
|    | 4 222 25 → 4P base-rear terminals            | + | 4 222 21 → 4P terminals |
|    | 4 222 26 → 4P base + e.l.c.b front terminals |   |                         |
|    | 4 222 27 → 4P base + e.l.c.b rear terminals  |   |                         |

### ■ Front/ rear terminal mounting base (4 222 22/23/24/25/26/27)

Composition (ex. Cat.no 4 222 23) :



## 2 SET OF INCOMING AND OUTGOING TERMINALS - PLUGGED-IN BASE 3P-4P (CAT.NO 4 222 20/21)

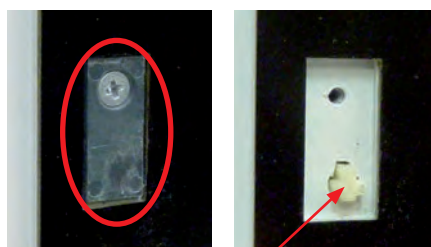
Composition (ex. Cat.no 4 222 21)



### Trigger mechanism for plug-in and draw-out versions :

Plug-in or draw-out devices can be inserted or removed without powering down the system. Connection or disconnection operations (on or off) must be carried out with the devices in open position. However, in the case of unintentional extraction with a closed circuit breaker, the internal safety mechanism opens the unit at the first disconnection operation. This device prevents on-load disconnection of the DPX<sup>3</sup>.

- Remove the protection plate from the trigger mechanism at the back of the circuit breaker.



Push-button

- When removing the protection plate, the circuit breaker or switch triggers (if it is in the closed or open position). As a result, the handle is in the intermediate position → middle. To close the unit, the push button must be pressed. Then put the device in the open position and close it.

- Secure the metal plate (supplied with the set of terminals Cat.no 4 222 20 or 4 222 21) of the mobile connector bracket at the back of the circuit breaker using the 4 screws provided (tightening torque 1 N.m.). When using the connectors Cat.no 0 098 19 or 0 263 99, attach the male part of these connectors to the mounting brackets using the nut provided with these catalogue numbers. (tightening torque 1 N.m.):

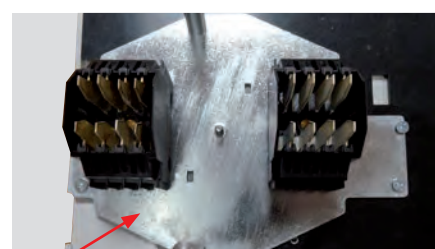
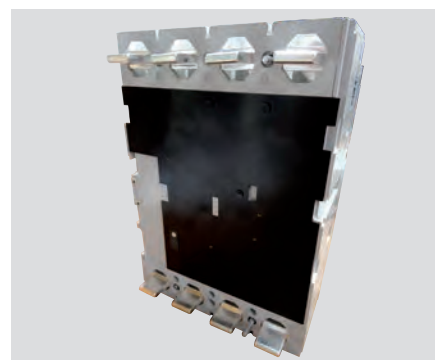
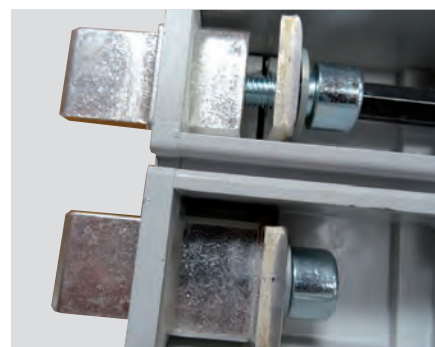


Plate – connectors Cat.no 0 263 99

The different cable sections as well as the position of the wires are indicated in the instruction sheet according to the accessories.

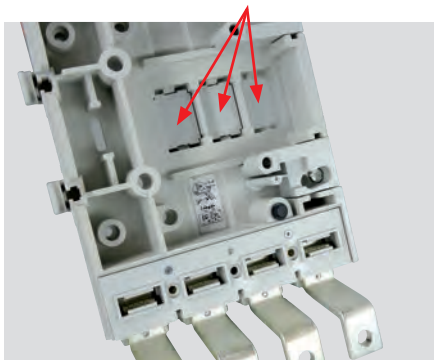
- Set up the upstream and downstream rear connections and use the supplied M8 screws (**without tightening them to put the protective covers in place without difficulty**).



- Put the protective covers, then tighten the screws to the recommended torque → 25 N.m.

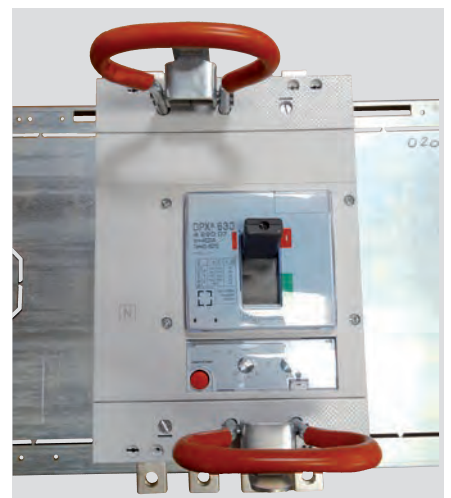
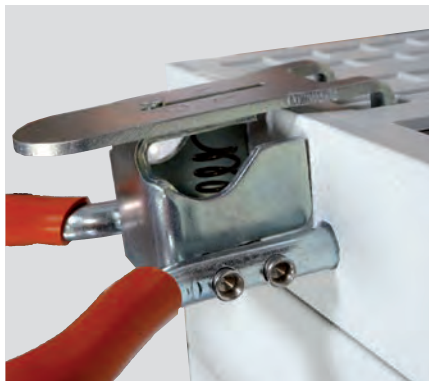
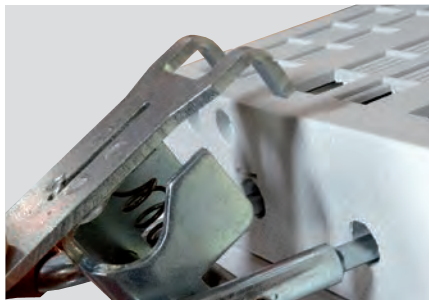


- Perform the required operations according to the terminal's instruction sheet (page 5) Cat.no 4 222 20/21, and put the terminal covers on the circuit breaker.
- When using the connectors Cat.no 0 098 19 or 0 263 99, remove the plastic part and clip the female part of these connectors in the dedicated place (3 slots available):



### 3 SET OF 2 EXTRACTOR HANDLES CAT.NO 4 222 28

These handles allow to extract the product and have a comfortable grip for its removal.



**!** The extraction handles for DPX 630 are not compatible with those for DPX<sup>3</sup> 630.

### 4 DRAW-OUT VERSION (DEBROLIFT)

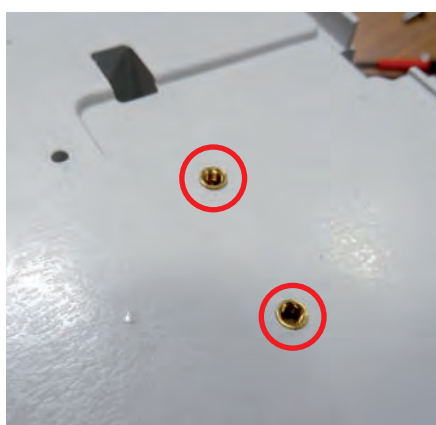
The Debro-lift mechanism allows the operation of plugging or unplugging without removing the faceplate and holding the circuit breaker or switch in its base.

A draw-out version DPX<sup>3</sup> is a plugged-in DPX<sup>3</sup> (1 base + 1 set of terminals → see catalogue numbers in Chapter 1) equipped with a "debro-lift" mechanism →

- 4 222 31 (for DPX<sup>3</sup> 630 3P base)
- 4 222 32 (for DPX<sup>3</sup> 630 4P base)
- 4 222 33 (for DPX<sup>3</sup> 630 4P base / e.l.c.b)

#### ■ Mounting :

- Check that the circuit breaker is open by pressing the Red test button.
- Remove the nuts (upstream and downstream) and their brackets using a screwdriver.
- Fix the 4 inserts supplied as shown in the instructions :

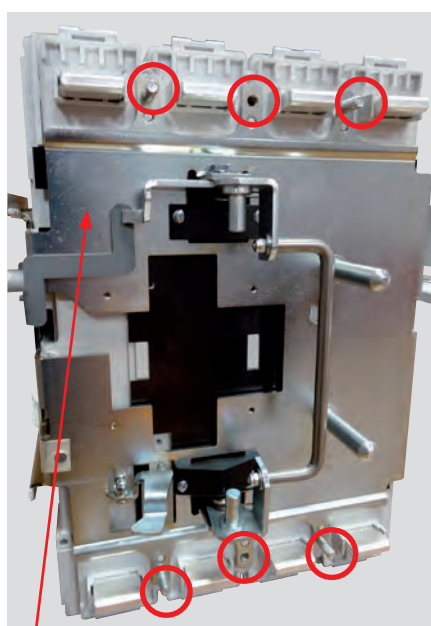


- Remove the protection plate from the trigger mechanism at the back of the circuit breaker :



Push-button

- After removing the front face of the DPX<sup>3</sup>, attach the metal frame of the Debro-lift to the back of the circuit breaker using the 6 long screws provided. When using connectors Cat.no 0 098 19 or 0 263 99, the plate Cat.no 4 222 36 must be added at the rear of the frame using the 4 screws provided (tightening torque 2 N.m.) :



"Debro-lift" metal frame

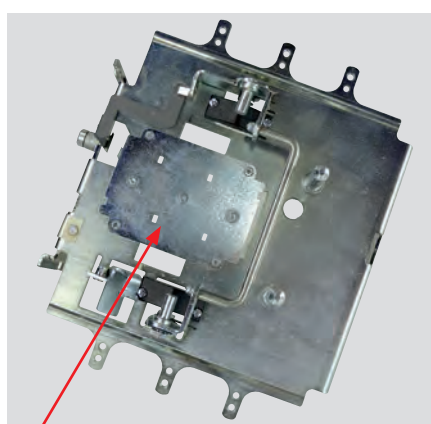
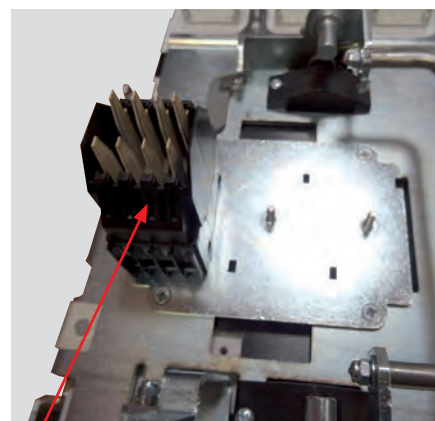


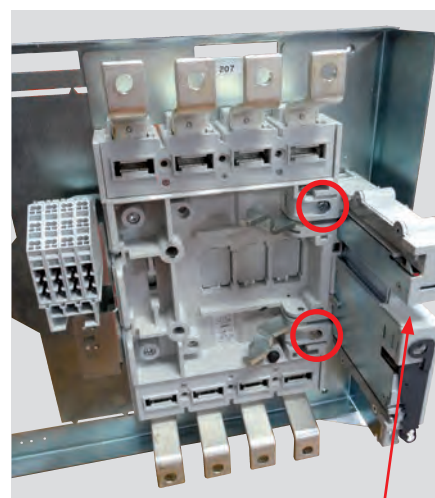
Plate Cat.no 4 222 36

- Then fasten the male part of these connectors to the studs of the plate (3 possible slots) using the nut supplied with the connectors Cat.no (tightening torque 1 N.m.) :



Cat.no 0 263 99

- On the base, place the part marked "I" in the instruction sheet using the 2 screws supplied with the "debro-lift" :



Part I on the instruction sheet

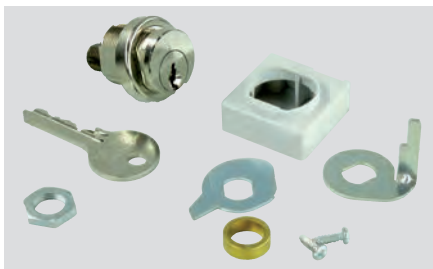
- Follow the installation of the last 2 parts as shown in the instructions.
- Assemble the upstream and downstream rear connections, terminal covers and the female part of the connectors Cat.no 0 098 19 or 0 263 99 (if present) as described above for the plug-in version.

**5.1 FRONT LOCKING OF THE CIRCUIT BREAKER (CAT.NO 0 263 48 → STAR KEY/ 0 265 76 → FLAT KEY)**

This accessory allows the product to be locked (non-motorized) in disconnected position → perform a consignment operation.

The product comes with a unique key. The assembly is detailed on the instruction sheet of the debro-lift mechanism (Cat.no 4 222 31/32/33).

Composition of the Cat.no 0 265 76 :

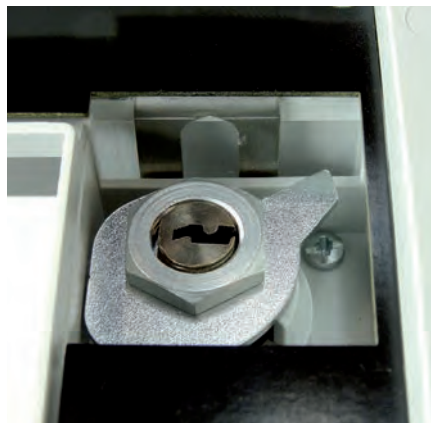


For the assembly, follow the steps of the instructions in accordance with the following points:

- At the beginning of the assembly, first remove the cover from the bracket :



- Check the correct positioning of the cam (at the back) :



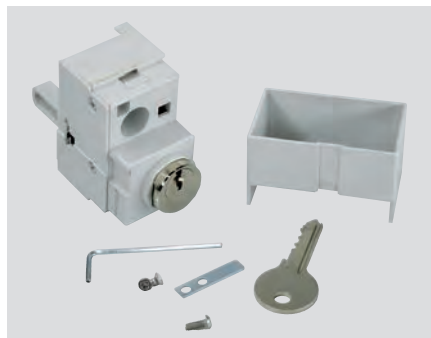
- Once the installation is done, check the operation of the key.

**5.2 FRONT LOCKING (CAT.NOS 0 265 77 → STAR KEY/0 265 78 → FLAT KEY) → DPX<sup>3</sup> MOTOR DRIVE OR ROTARY HANDLE**

This accessory allows you to lock the product (motor drive or rotary handle) in disconnected position → perform a consignment operation.

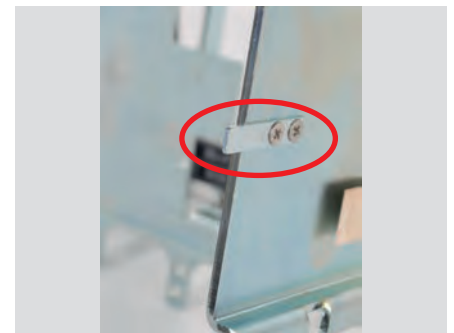
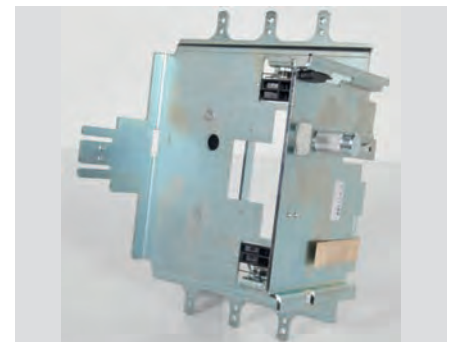
The product comes with a unique key. The assembly is detailed in the instruction sheet of the debro-lift mechanism (Cat.no 4 222 31/32/33).

Composition of the Cat.no 0 265 78 :

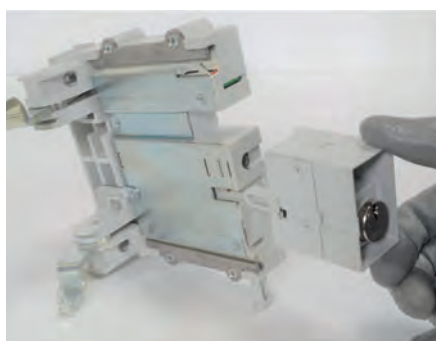


**For the assembly, follow the steps in the instructions in accordance with the following points :**

On the Debro-lift mechanism (movable part), fasten the metal plate (this part is used to prevent the locking in the connected position), in the holes provided :



Put the locking block in the intended location, and tighten with the supplied screw :



**i** It is possible to have the key number customizable with the company STI Montreuil (<http://www.servtrayvou.com/web/contact>) by giving the profile number: flat key N ° ABA90GEL6149 or star N ° HBA-90GPS6149.

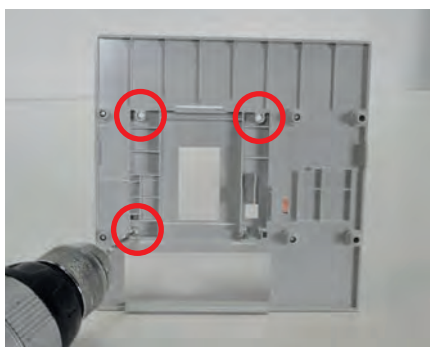
## 6 ROTARY HANDLE (CAT.NO 0 262 41) OR EMERGENCY USE (CAT.NO 4 222 38)

Composition of the Cat.no 0 262 41 :



### ■ Mounting :

- Remove the circuit breaker cover by unscrewing the 4 screws, remove the transparent cover and drill three holes (diameter 4 mm) at the indicated locations :



- Fasten the cover to the circuit breaker.



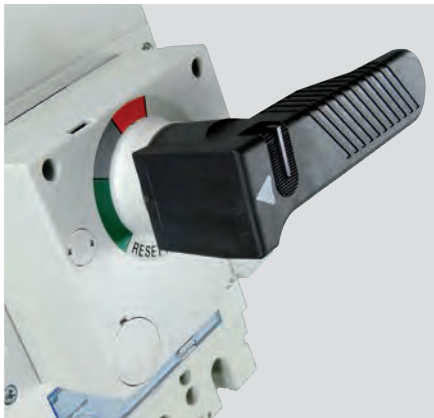
- Set up the frame (part E - instruction sheet) on the circuit breaker according to the photo and check that the frame is perfectly flush.



- Mount the mechanism on the circuit breaker, respecting the direction and then screw the whole with the screws provided, making sure that the protective tab is released (safety of opening - faceplate).



- Fix the handle in accordance with the locating pins and perform opening and closing operations, the tab must follow the movement (output in position "I" and entered in position "0").



**i** With the key marked F in the instruction sheet, it is possible to open the faceplate while the device is closed (the key allows to fit the tab).



Locking :

- In the open position, you can use a maximum of 3 padlocks (diameter 5 mm maximum).



**7 ROTARY HANDLE FOR VARI-DEPTH (CAT.NO 0 262 81) OR EMERGENCY USE (CAT.NO 02 62 82)**

Composition of the Cat.no 0 262 81 :



Determine the length of the axis to be cut according to the information mentioned in the instruction sheet including the drilling to be carried out on the door :

- Total axis length = 290 mm, 8 mm x 8 mm square.

Padlock locking :

- In the open position, you can use a maximum of 3 padlocks (diameter 5 mm maximum).

**8 LOCKING FOR ROTARY HANDLE CAT.NO 0 262 25**

This accessory allows the DPX<sup>3</sup> to be locked in the open position → perform a consignment operation.

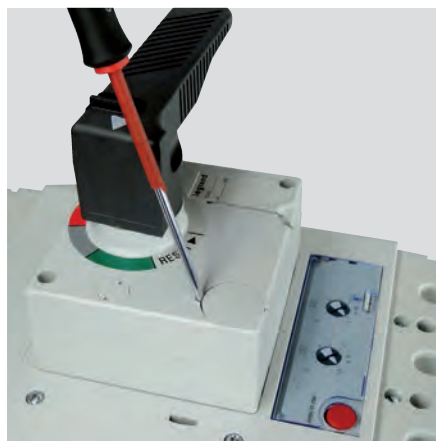
Composition of the Cat.no 0 262 25 :





### ■ Mounting

- Handle in the "0" position before installation.
- Remove the plastic cover.



- Insert the Eurolock barrel in accordance with the following points :

- Place the wrench in the mechanism and position the whole 30 ° vertically.
- Lift the plate for the padlock slot with a screwdriver and insert the Eurolock barrel.



Handle in position "0": the key can be removed.



Handle in position "I": the key cannot be removed.



### 9 LOCKING ACCESSORY AND STAR KEY. 0 262 93/FLAT KEY CAT.NO 0 262 94 OR EUROLOCK KEY CAT.NO 0 262 92 OR CAT.NO 4 228 04/05

This accessory allows the DPX<sup>3</sup> to be locked in the open position → perform a consignment operation.

Composition of the Cat.no 0 262 93



Proceed to the mounting as shown in the instruction sheet and check the correct operation of the whole: the key can be removed with the lever in position "0", it cannot work with the lever in position "I".



This lock can be combined with padlock (3 maximum from 5 mm to 8 mm).

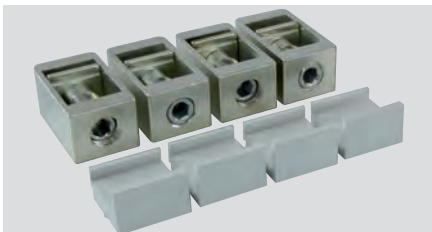
Picture of the set mounted with the handle on "0" and the key removed :



### ■ Summary

- 0 262 93 : each reference comes with 1 single star key
- 0 262 94 : each reference includes 1 single flat key
- 4 228 04 : each reference includes 1 flat key EL 43525 common to all Cat.no 4 228 04
- 4 228 05 : each reference includes 1 flat key EL 43363 common to all Cat.no 4 228 05

**10 CAGE TERMINALS (X4)**  
CAT.NO 0 262 50



- Position the plastic part on the terminal as shown below.



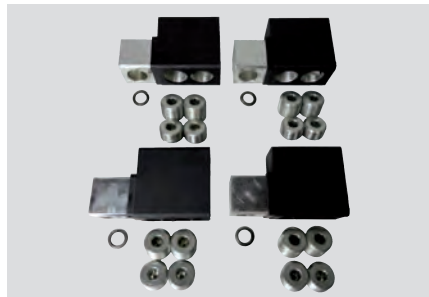
- Insert the whole into the product.



- Repeat these operations for the other terminals.

The maximum diameter. of the cable to be used without its insulation is 26 mm, the tightening torque of the cable in the cage terminal is 24 N.m. The Maxi section. permissible by the cage terminal is 300 mm<sup>2</sup> (rigid cable) or 240 mm<sup>2</sup> (flexible cable).

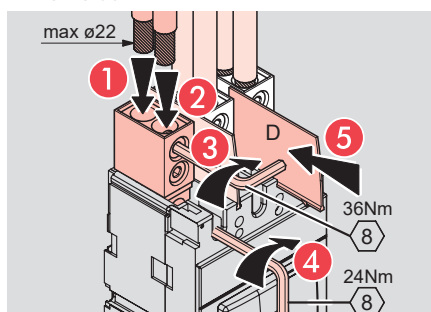
**11 CAGE TERMINALS (X4)**  
CAT.NO 0 262 51



This terminal is commonly referred to as a large capacity cage terminal. The Cat. no is supplied with 4 non-head screws – BTR type (length: 2x13 mm + 2x18 mm). The length of the screw to be used is different according to the section of the cable and the fact that it is rigid or flexible, see table below:

|                     | X                       | Y                      |
|---------------------|-------------------------|------------------------|
| Flexible Conductors | 120-185 mm <sup>2</sup> | 50-95 mm <sup>2</sup>  |
| Rigid Conductors    | 150-240 mm <sup>2</sup> | 70-120 mm <sup>2</sup> |

The maximum diameter. of the cable to be used without its insulation is 22 mm, the tightening torque of the cage terminal in the DPX<sup>3</sup> is 24 N. m, the tightening torque of the cable in the large capacity cage terminal is 36 N.m.



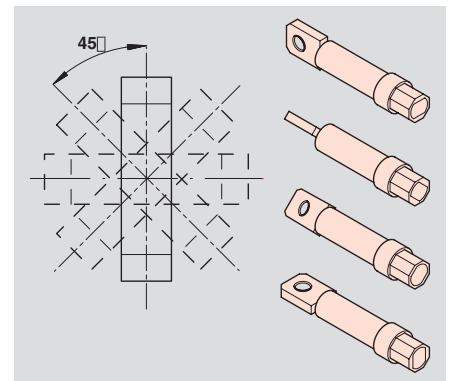
**12 REAR TERMINALS CAT.NO**  
0 263 52 (3P) & 0 263 53 (4P)

This Cat.no makes it possible to turn a DPX<sup>3</sup> front terminal into a rear terminal. It makes the connection easier.

Composition of the Cat.no 0 263 53



These terminals are adjustable by angle of 45°.

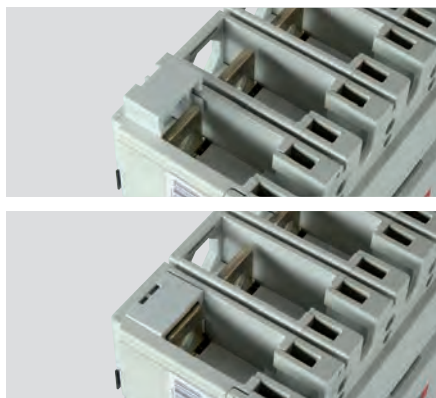


Setting up :

- Remove the nut holder + the breaker nut and then insert the brackets according below photos.



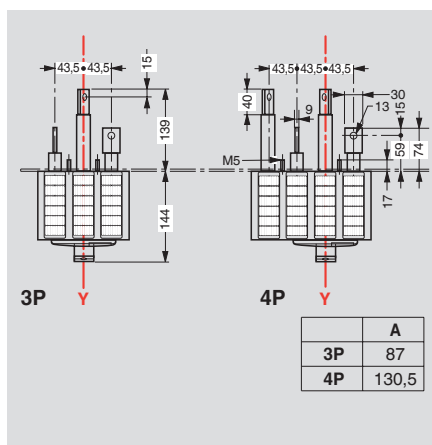
- After installing all the rear terminals (6 or 8), put the terminal cover, a sealing of it is possible.



- Turn the adjustable terminal to the desired angle and then tighten (25 N.m) the rear terminal using the product screw (8 mm Allen key).



- Here are the different dimensions of the rear terminals as well as the permissible lengths and diameters of the connection ranges :

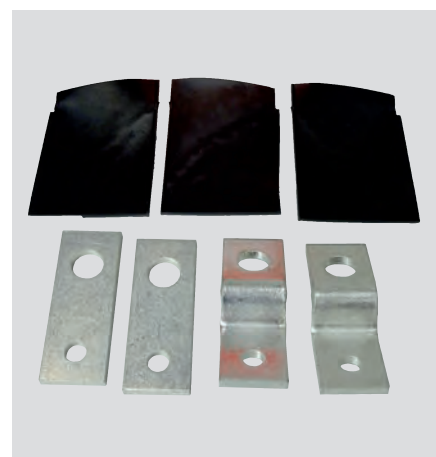


### 13 ADAPTOR FOR LUG CAT.NO 0 262 46

This accessory can be connected on one side to a cage terminal and on the other on lugs. It is not possible to install a terminal cover.

The material of these adaptors is silver coated copper.

Composition of the Cat.no :



### 14 EXTENDED FRONT TERMINALS CAT.NO 0 262 47

This accessory facilitates the connection of cables with lug (2 Maxi).

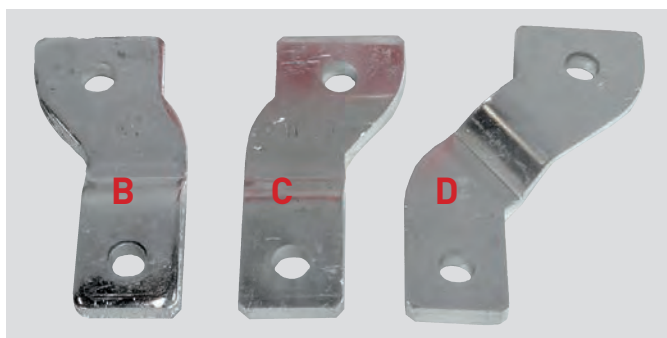
The material of these extended front terminals is silver coated copper.

Composition of the Cat.no :



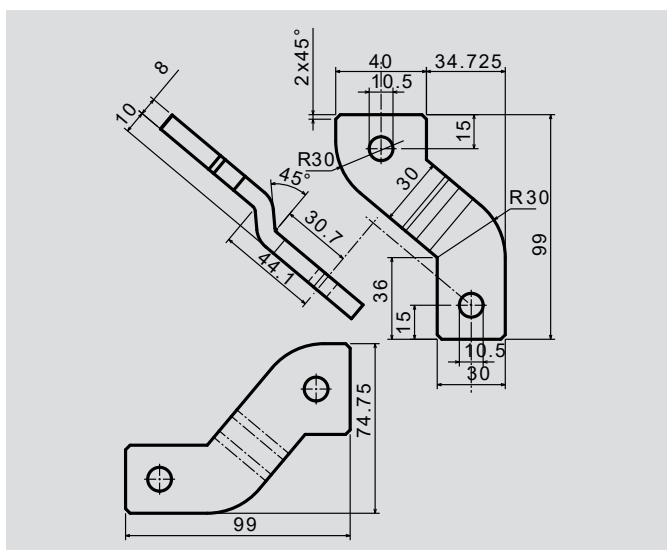
**15 SET OF 3 (CAT.NO 0 262 48) OR 4 (CAT.NO 0 262 49) INCOMING OR OUTGOING SPREADERS**

This accessory is used to facilitate cable connection.  
Composition of the Cat.no 0 262 48 :

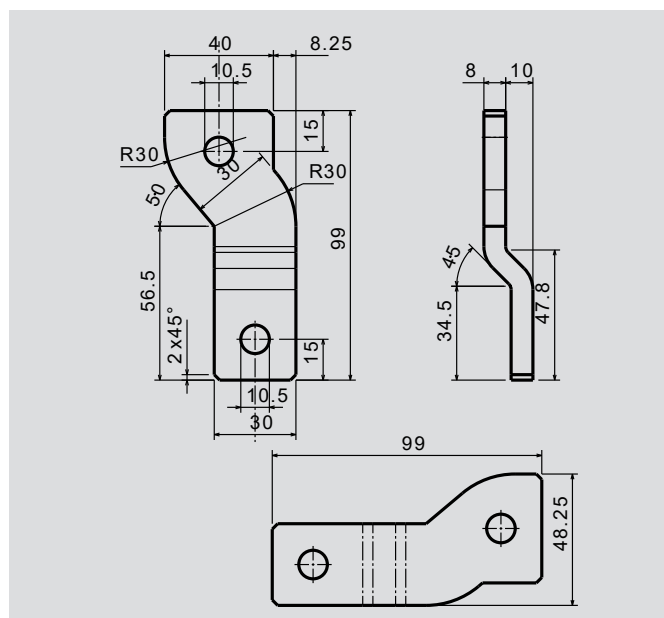


**i** In the case of use of spreaders, it is possible to use insulated shields but no terminal cover.

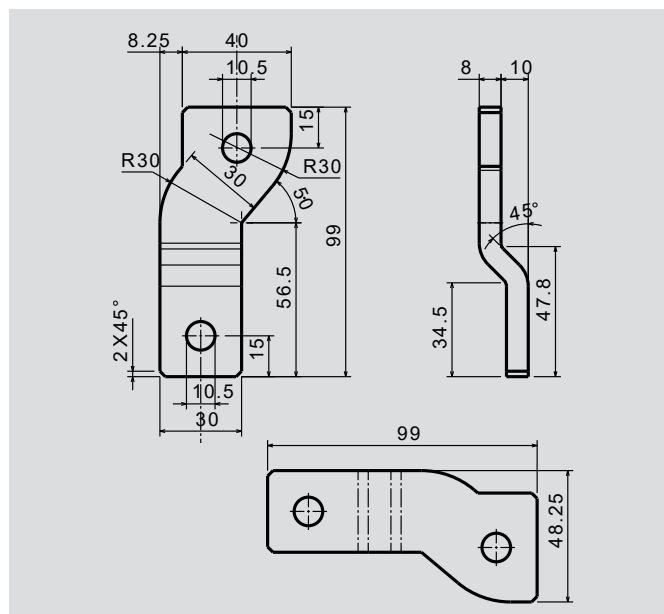
Dimensions of the part A (not shown on the picture, corresponding to the neutral for a 4P product) :



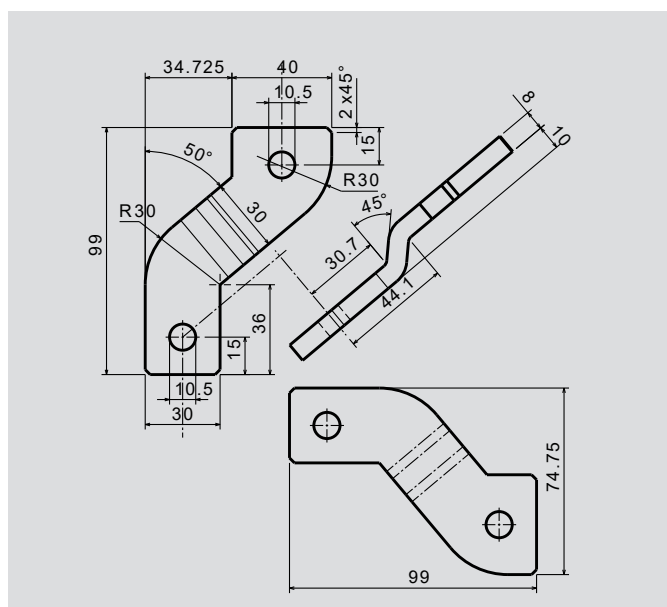
Dimensions of the part B (L1) :



Dimensions of the part C (L2) :



Dimensions of the part D (L3) :



### 16 SET OF 3 INSULATED SHIELDS CAT.NO 0 262 30

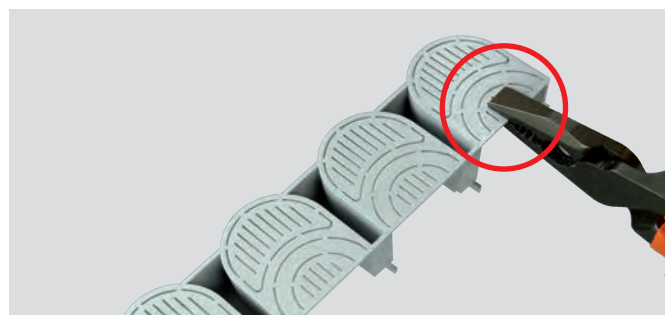
Their role is to avoid the propagation of an electric arc in the event of a short circuit.

Composition of the Cat.no :



### 17 SEALABLE TERMINAL SHIELDS CAT.NO 0 262 44 (3P) OR 0 262 45 (4P) → UPSTREAM AND DOWNSTREAM

Pre-cut cuts are present. They allow to adapt the passage of the cables in the terminal cover.



Here is the setting up of a cable with the 2 pre-cut parts on both sides as well as the mounted terminal cover :

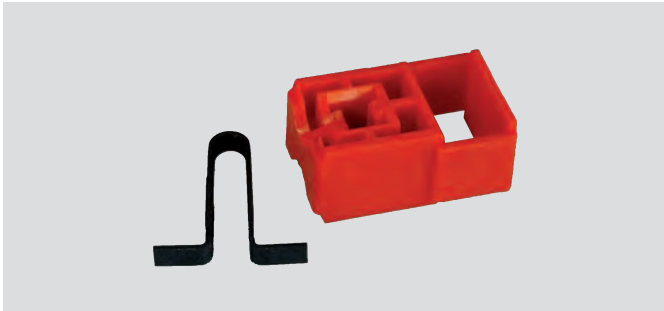


A sealing is also possible and supplied with the Cat.no (X4).

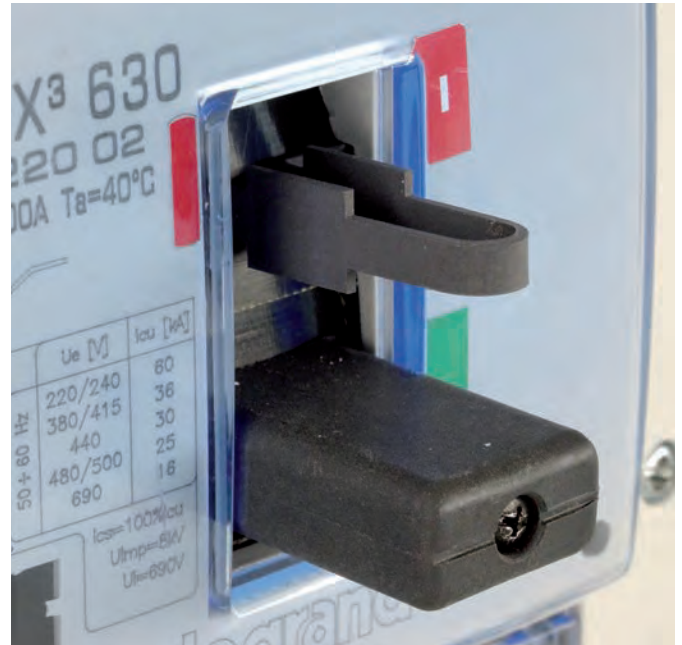


**18 PADLOCK FOR LOCKING IN OPEN POSITION (CAT.NO 0 262 40)**

Composition of the Cat.no :



In order to set up, the handle of the MCCB on position "0" and then insert the part in the form of Omega ( $\Omega$  form part) in the intended housing :



Place the red plastic part in position and insert a padlock with a diameter of 4 mm to 6 mm max. :



Padlock 6 mm diameter Cat.no 0 227 97.

**19 IP20 TERMINAL COVER - 3P CAT.NO 4 222 34 (3P) OR 4 222 35 (4P)**

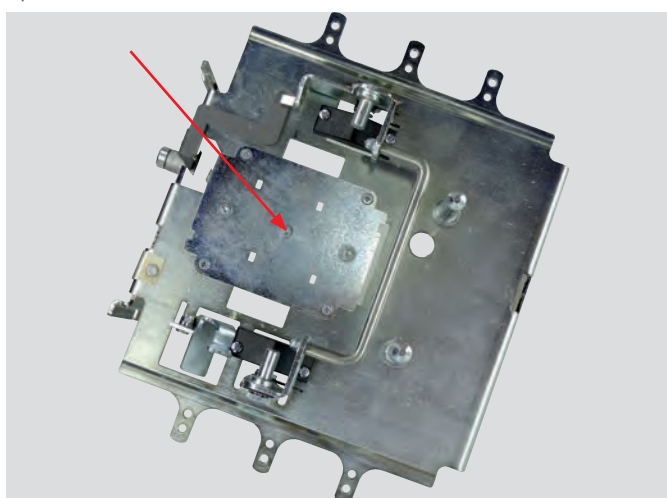
The clipwise is on the front side of the screw holes.

Composition of the Cat.no 4 222 35 :



**20 PLATE FOR DRAW-OUT VERSION CAT.NO 4 222 36**

This plate is required when you want to install the contacts Cat. no 0 263 99 or 0 098 19 on the back of a DPX<sup>3</sup>. It comes with 4 fixing screws. Here is a picture illustrating this plate once set up behind the debro-lift mechanism:



For mounting details, see paragraph 2 in the section "mechanical accessories" as well as the instructions sheet for the debro-lift Cat.no 4 222 31 or 4 222 32 or 4 222 33.

**21 RETROFIT KIT FOR DPX TO DPX<sup>3</sup> CAT.NO 4 222 37**

This kit is required when you have a DPX<sup>3</sup> 630 and you want to install it in an plug-in version. This kit is also required when replacing a DPX 630 with a DPX<sup>3</sup> 630 in plugged-in, draw-out or motor drive version.



The installation of the screws, the metal tab, the shaft and the positioning of the inserts are shown on the instruction sheets. A further installation of the metal tab and the shaft is also available in paragraph 6 "electrical accessories" (pages 78 and 79).

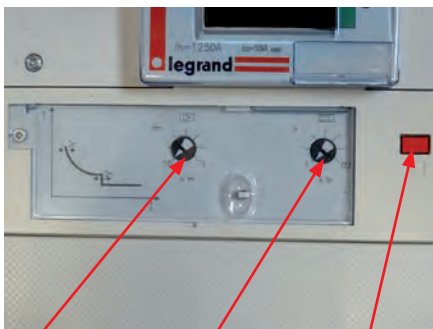
# DPX<sup>3</sup> 1600

## Product description

### 1 FRONT FACE OF THE CIRCUIT BREAKER



Example of setting a thermal magnetic circuit breaker :



Magnetic protection adjustment

Thermal protection adjustment

Test button



The settings are sealable using Cat.no 4 210 95. (1 also comes with each circuit breaker).

### 2 FRONT FACE OF THE SWITCH

Like all DPX<sup>3</sup> trip-free switches, the switches have a gray color handle.



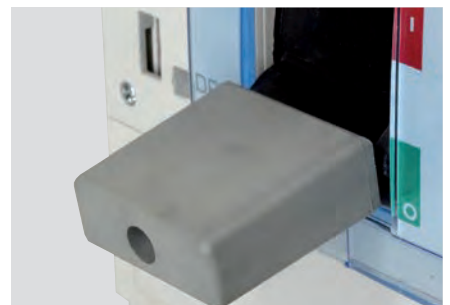
### 3 POSITION OF THE HANDLE



Closed (ON).



Tripped.



Open (OFF).



#### 4 SETTINGS

|                         | Overloads thermal protection                 |   | Short-circuits magnetic protection  |  | Earth fault protection   |   | Adjustment of the neutral                   |
|-------------------------|--|---|---|--|--|---|---|
| <b>Thermal magnetic</b> | Ir adjustable<br>0.8-1 x In                  | -   | Ii adjustable<br>5-10 x In  | -  | -  | -   | -   |
| <b>Electronic S1</b>    | Ir adjustable<br>0.4 à 1 x In                | Permanent =<br>5s (MEM ON)  | I <sub>sd</sub> adjustable<br>1.5 - 2 - 2.5 -<br>3 - 4 - 5 - 6 - 7<br>- 8 - 10 x I <sub>r</sub>     | Permanent =<br>100ms   | -  | -   | OFF - 0.5 - 1<br>x In                       |
| <b>Electronic S2</b>    | Ir adjustable<br>(1A by 1A)<br>0.4 to 1 x In | tr adjustable<br>(MEM ON or<br>MEM OFF)<br>3 - 5 - 10 -<br>15 - 20 - 25<br>- 30 s | I <sub>sd</sub> adjustable<br>1.5 - 2 - 2.5 -<br>3 - 4 - 5 - 6 - 7<br>- 8 - 9 - 10 x I <sub>r</sub> | tsd adjustable<br>(I <sup>2</sup> t=k or t = k)<br>0 - 0.1 - 0.2<br>- 0.3 - 0.4 -<br>0.5 s   | -  | -   | OFF - 0.5 - 1 -<br>1.5 - 2 x I <sub>r</sub> |
| <b>Electronic Sg</b>    | Ir adjustable<br>(1A by 1A)<br>0.4 to 1 x In | tr adjustable<br>(MEM ON or<br>MEM OFF)<br>3 - 5 - 10 -<br>15 - 20 - 25<br>- 30 s | I <sub>sd</sub> adjustable<br>1.5 - 2 - 2.5 -<br>3 - 4 - 5 - 6 - 7<br>- 8 - 9 - 10 x I <sub>r</sub> | tsd adjustable<br>(I <sup>2</sup> t=k or t = k)<br>0 or 0.1 or<br>0.2 - 0.3 - 0.4<br>- 0.5 s | I <sub>g</sub> adjustable<br>0.2 - 0.3 - 0.4<br>- 0.5 - 0.6 -<br>0.7 - 0.8 - 0.9<br>- 1 x In | tg adjustable<br>0 or 0.1 or 0.2<br>- 0.5 - 1 s | OFF - 0.5 - 1 -<br>1.5 - 2 x I <sub>r</sub> |
| <b>Magnetic</b>         | -  | -   | I <sub>sd</sub> adjustable<br>5-10 x In   | -  | -  | -   | -   |

#### ■ Thermal magnetic settings :

For thermal magnetic circuit breakers, only the settings corresponding to the marking positions have been tested. The other setting values are given as an indication.

### Electronic card consumptions :

- Electronic DPX<sup>3</sup>: 50 mA
- Electronic DPX<sup>3</sup> with measurement: 62.5 mA
- DPX<sup>3</sup> electronic residual current protection: 50 mA
- DPX<sup>3</sup> electronic residual current protection with measurement: 62.5 mA

## DPX<sup>3</sup> 1600 MT

| Thermal : Ir |                       |      | Current (A) |     |     |      |      |
|--------------|-----------------------|------|-------------|-----|-----|------|------|
| Catch        | Ir multiplying factor | Mark | 500         | 630 | 800 | 1000 | 1250 |
| 1            | 0.80                  | 0.8  | 400         | 504 | 640 | 800  | 1000 |
| 2            | 0.83                  |      | 415         | 523 | 664 | 830  | 1038 |
| 3            | 0.87                  |      | 435         | 548 | 696 | 870  | 1088 |
| 4            | 0.90                  |      | 450         | 567 | 720 | 900  | 1125 |
| 5            | 0.93                  |      | 465         | 586 | 744 | 930  | 1163 |
| 6            | 0.96                  |      | 480         | 605 | 768 | 960  | 1200 |
| 7            | 1.00                  | 1    | 500         | 630 | 800 | 1000 | 1250 |

| Magnetic ≤ 1000 A |                       |      | Current (A) |      |      |       | Magnetic 1250 A |                       |      |       |
|-------------------|-----------------------|------|-------------|------|------|-------|-----------------|-----------------------|------|-------|
| Catch             | In multiplying factor | Mark | 500         | 630  | 800  | 1000  | Catch           | In multiplying factor | Mark | 1250  |
| 1                 | 5.0                   | 5    | 2500        | 3150 | 4000 | 5000  | 1               | 5.0                   | 5    | 6250  |
| 2                 | 5.8                   |      | 2900        | 3654 | 4640 | 5800  | 2               | 5.8                   |      | 7250  |
| 3                 | 6.7                   |      | 3350        | 4221 | 5360 | 6700  | 3               | 6.7                   |      | 8375  |
| 4                 | 7.5                   |      | 3750        | 4725 | 6000 | 7500  | 4               | 7.5                   |      | 9375  |
| 5                 | 8.3                   |      | 4150        | 5229 | 6640 | 8300  | 5               | 8.3                   |      | 10375 |
| 6                 | 9.2                   |      | 4600        | 5796 | 7360 | 9200  | 6               | 9.2                   |      | 11500 |
| 7                 | 10.0                  | 10   | 5000        | 6300 | 8000 | 10000 | 7               | 10.0                  | 10   | 12500 |

Values li at +/-20% in amps.

### DPX<sup>3</sup> 1600 Electronic S1

| Thermal : Ir |                       |       | Current (A) |      |      |       |       |       |
|--------------|-----------------------|-------|-------------|------|------|-------|-------|-------|
| Catch        | Ir multiplying factor | Mark  | 500         | 630  | 800  | 1000  | 1250  | 1600  |
| 1            | 0.40                  | 0.40* | 200*        | 252* | 320* | 400 * | 500*  | 640*  |
| 2            | 0.45                  | 0.45* | 225*        | 284* | 360* | 450 * | 563*  | 720*  |
| 3            | 0.50                  | 0.50* | 250*        | 315* | 400* | 500 * | 625*  | 800*  |
| 4            | 0.55                  | 0.55* | 275*        | 347* | 440* | 550 * | 688*  | 880*  |
| 5            | 0.60                  | 0.60* | 300*        | 378* | 480* | 600 * | 750*  | 960*  |
| 6            | 0.65                  | 0.65* | 325*        | 410* | 520* | 650 * | 813*  | 1040* |
| 7            | 0.70                  | 0.70* | 350*        | 441* | 560* | 700 * | 875*  | 1120* |
| 8            | 0.75                  | 0.75* | 375*        | 473* | 600* | 750 * | 938*  | 1200* |
| 9            | 0.85                  | 0.85* | 425*        | 536* | 680* | 850 * | 1063* | 1360* |
| 10           | 0.95                  | 0.95* | 475*        | 599* | 760* | 950 * | 1188* | 1520* |
|              | 1.00                  |       | 500         | 630  | 800  | 1000  | 1250  | 1600  |

\* adjustable at 0 - 0.005 - 0.01 - 0.015 - 0.02 - 0.025 - 0.03 - 0.035 - 0.04 - 0.05

| Magnetic : Isd |                       |      | Current (A)  |              |              |               |               |               |
|----------------|-----------------------|------|--------------|--------------|--------------|---------------|---------------|---------------|
| Catch          | Ir multiplying factor | Mark | 500          | 630          | 800          | 1000          | 1250          | 1600          |
| 1              | 1.5                   | 1.5  | 300 to 750   | 378 to 945   | 480 to 1200  | 600 to 1500   | 750 to 1875   | 960 to 2400   |
| 2              | 2.0                   | 2.0  | 400 to 1000  | 504 to 1260  | 640 to 1600  | 800 to 2000   | 1000 to 2500  | 1280 to 3200  |
| 3              | 2.5                   | 2.5  | 500 to 1250  | 630 to 1575  | 800 to 2000  | 1000 to 2500  | 1250 to 3125  | 1600 to 4000  |
| 4              | 3.0                   | 3.0  | 600 to 1500  | 756 to 1890  | 960 to 2400  | 1200 to 3000  | 1500 to 3750  | 1920 to 4800  |
| 5              | 4.0                   | 4.0  | 800 to 2000  | 1008 to 2520 | 1280 to 3200 | 1600 to 4000  | 2000 to 5000  | 2560 to 6400  |
| 6              | 5.0                   | 5.0  | 1000 to 2500 | 1260 to 3150 | 1600 to 4000 | 2000 to 5000  | 2500 to 6250  | 3200 to 8000  |
| 7              | 6.0                   | 6.0  | 1200 to 3000 | 1512 to 3780 | 1920 to 4800 | 2400 to 6000  | 3000 to 7500  | 3840 to 9600  |
| 8              | 7.0                   | 7.0  | 1400 to 3500 | 1764 to 4410 | 2240 to 5600 | 2800 to 7000  | 3500 to 8750  | 4480 to 11200 |
| 9              | 8.0                   | 8.0  | 1600 to 4000 | 2016 to 5040 | 2560 to 6400 | 3200 to 8000  | 4000 to 10000 | 5120 to 12800 |
| 10             | 10.0                  | 10.0 | 2000 to 5000 | 2520 to 6300 | 3200 to 8000 | 4000 to 10000 | 5000 to 12500 | 6400 to 16000 |

Ir and Isd values at +/-10% in amps.

For S1, the tr is fixed to 5 seconds. Tsd = 100ms

**DPX<sup>3</sup> 1600 Electronic S2**

| Thermal : I <sub>r</sub> |                                   |          | Current (A) |            |            |             |             |             |
|--------------------------|-----------------------------------|----------|-------------|------------|------------|-------------|-------------|-------------|
| LCD                      | I <sub>r</sub> multiplying factor | Mark     | 500         | 630        | 800        | 1000        | 1250        | 1600        |
|                          | 0.4 to 1                          | 1A by 1A | 200 to 500  | 252 to 630 | 320 to 800 | 400 to 1000 | 500 to 1520 | 640 to 1600 |

| Magnetic : I <sub>sd</sub> |                                   |      | Current (A)  |              |              |               |               |               |
|----------------------------|-----------------------------------|------|--------------|--------------|--------------|---------------|---------------|---------------|
| LCD                        | I <sub>r</sub> multiplying factor | Mark | 500          | 630          | 800          | 1000          | 1250          | 1600          |
|                            | 1.5                               | 1.5  | 300 to 750   | 378 to 945   | 480 to 1200  | 600 to 1500   | 750 to 1875   | 960 to 2400   |
|                            | 2.0                               |      | 375 to 1000  | 504 to 1260  | 620 to 1600  | 800 to 2000   | 1000 to 2500  | 1280 to 3200  |
|                            | 2.5                               |      | 500 to 1250  | 630 to 1575  | 800 to 2000  | 1000 to 2500  | 1250 to 3125  | 1600 to 4000  |
|                            | 3.0                               |      | 600 to 1500  | 756 to 1890  | 960 to 2400  | 1200 to 3000  | 1500 to 3750  | 1920 to 4800  |
|                            | 4.0                               |      | 800 to 2000  | 1008 to 2520 | 1280 to 3200 | 1600 to 4000  | 2000 to 5000  | 2560 to 6400  |
|                            | 5.0                               |      | 1000 to 2500 | 1260 to 3150 | 1600 to 4000 | 2000 to 5000  | 2500 to 6250  | 3200 to 8000  |
|                            | 6.0                               |      | 1200 to 3000 | 1512 to 3780 | 1920 to 4800 | 2400 to 6000  | 3000 to 7500  | 3840 to 9600  |
|                            | 8.0                               |      | 1600 to 4000 | 2016 to 5040 | 2560 to 6400 | 3200 to 8000  | 4000 to 10000 | 5120 to 12800 |
|                            | 9.0                               |      | 1800 to 4500 | 2268 to 5670 | 2880 to 7200 | 3600 to 9000  | 4500 to 11250 | 5760 to 14400 |
|                            | 10.0                              | 10   | 2000 to 5000 | 2520 to 6300 | 3200 to 8000 | 4000 to 10000 | 5000 to 12500 | 6400 to 16000 |

tsd = 0 – 100 – 200 – 300 – 400 – 500 ms (t = K)  
 tsd = 0 – 100 – 200 – 300 – 400 – 500 ms (I<sup>2</sup>t = k) (\*\*)  
 (\*\*) @ 12 I<sub>r</sub>  
 I<sub>sd</sub> values at +/- 10% amps.

### DPX<sup>3</sup> 1600 Electronic Sg

| Thermal : I <sub>r</sub> |                                   |          | Current (A) |            |            |             |             |             |
|--------------------------|-----------------------------------|----------|-------------|------------|------------|-------------|-------------|-------------|
| LCD                      | I <sub>r</sub> multiplying factor | Mark     | 500         | 630        | 800        | 1000        | 1250        | 1600        |
|                          | 0.4 to 1                          | 1A by 1A | 200 to 500  | 252 to 630 | 320 to 800 | 400 to 1000 | 500 to 1250 | 640 to 1600 |

| Magnetic : I <sub>sd</sub> |                                   |      | Current (A)  |              |              |               |               |               |
|----------------------------|-----------------------------------|------|--------------|--------------|--------------|---------------|---------------|---------------|
| LCD                        | I <sub>r</sub> multiplying factor | Mark | 500          | 630          | 800          | 1000          | 1250          | 1600          |
|                            | 1.5                               | 1.5  | 300 to 750   | 378 to 945   | 480 to 1200  | 600 to 1500   | 750 to 1875   | 960 to 2400   |
|                            | 2.0                               | 2    | 375 to 1000  | 504 to 1260  | 620 to 1600  | 800 to 2000   | 1000 to 2500  | 1280 to 3200  |
|                            | 2.5                               | 2.5  | 500 to 1250  | 630 to 1575  | 800 to 2000  | 1000 to 2500  | 1250 to 3125  | 1600 to 4000  |
|                            | 3.0                               | 3    | 600 to 1500  | 756 to 1890  | 960 to 2400  | 1200 to 3000  | 1500 to 3750  | 1920 to 4800  |
|                            | 4.0                               | 4    | 800 to 2000  | 1008 to 2520 | 1280 to 3200 | 1600 to 4000  | 2000 to 5000  | 2560 to 6400  |
|                            | 5.0                               | 5    | 1000 to 2500 | 1260 to 3150 | 1600 to 4000 | 2000 to 5000  | 2500 to 6250  | 3200 to 8000  |
|                            | 6.0                               | 6    | 1200 to 3000 | 1512 to 3780 | 1920 to 4800 | 2400 to 6000  | 3000 to 7500  | 3840 to 9600  |
|                            | 8.0                               | 8    | 1600 to 4000 | 2016 to 5040 | 2560 to 6400 | 3200 to 8000  | 4000 to 10000 | 5120 to 12800 |
|                            | 9.0                               | 9    | 1800 to 4500 | 2268 to 5670 | 2880 to 7200 | 3600 to 9000  | 4500 to 11250 | 5760 to 14400 |
|                            | 10.0                              | 10   | 2000 to 5000 | 2520 to 6300 | 3200 to 8000 | 4000 to 10000 | 5000 to 12500 | 6400 to 16000 |

| I <sub>g</sub> earth fault protection |                                   |      | Current (A) |     |     |      |      |      |
|---------------------------------------|-----------------------------------|------|-------------|-----|-----|------|------|------|
| LCD                                   | I <sub>r</sub> multiplying factor | Mark | 500         | 630 | 800 | 1000 | 1250 | 1600 |
|                                       | 0.2                               | 0.2  | 100         | 126 | 160 | 200  | 250  | 320  |
|                                       | 0.3                               | 0.3  | 150         | 189 | 240 | 300  | 375  | 480  |
|                                       | 0.4                               | 0.4  | 200         | 252 | 320 | 400  | 500  | 640  |
|                                       | 0.5                               | 0.5  | 250         | 315 | 400 | 500  | 625  | 800  |
|                                       | 0.6                               | 0.6  | 300         | 378 | 480 | 600  | 750  | 960  |
|                                       | 0.7                               | 0.7  | 350         | 441 | 560 | 700  | 875  | 1120 |
|                                       | 0.8                               | 0.8  | 400         | 504 | 640 | 800  | 1000 | 1280 |
|                                       | 0.9                               | 0.9  | 450         | 567 | 720 | 900  | 1125 | 1440 |
|                                       | 1.0                               | 1    | 500         | 630 | 800 | 1000 | 1250 | 1600 |
|                                       | OFF                               | OFF  | S2          | S2  | S2  | S2   | S2   | S2   |

tsd = 0 - 100 - 200 - 300 - 400 - 500 ms (t = K)

tsd = 0 - 100 - 200 - 300 - 400 - 500 ms (I<sup>2</sup>t = k) (\*\*)

(\*\*) @ 12 I<sub>r</sub>

tg : 0.1 - 0.2 - 0.3 - 0.4 - 0.5 - 1 s

I<sub>sd</sub> values at +/- 10% amps.

# DPX<sup>3</sup> 1600 electrical accessories

■ **Auxiliary contact/ fault signalling contact**

- 4 210 11

■ **Shunt releases**

- 4 222 39 24V AC/DC  
 - 4 222 40 48V AC/DC  
 - 4 222 41 110V AC/DC  
 - 4 222 42 230V AC/DC  
 - 4 222 43 400V AC/DC

■ **Undervoltage releases**

- 4 222 44 24V DC  
 - 4 222 45 24V AC  
 - 4 222 46 48V DC  
 - 4 222 47 110V AC  
 - 4 222 48 230V AC  
 - 4 222 49 400V AC  
 (power supply included)

■ **Time-lag modules**

- 0 261 90 230V AC  
 - 0 261 91 400V AC  
 - 4 226 23 Time-lag modules release

■ **Motor-driven handle (front installation)**

- 0 261 19 24V AC/DC  $I_n \leq 1600A$   
 - 0 261 23 230V AC/DC  $I_n \leq 1250A$   
 - 0 261 24 24V AC/DC  $I_n \leq 1250A$   
 - 0 261 25 48V AC/DC  $I_n \leq 1250A$   
 - 0 261 26 110V AC/DC  $I_n \leq 1250A$   
 - 0 26127 230V AC/DC  $I_n \leq 1600A$   
 - 0 26128 48C AC/DC  $I_n \leq 1600A$   
 - 0 261 29 110V AC/DC  $I_n \leq 1600A$   
 - 0 261 50 24V AC/DC  
 (factory mounting : motor + DPX<sup>3</sup>/DPX<sup>3</sup> - I)  
 - 0 261 51 48V AC/DC  
 (factory mounting : motor + DPX<sup>3</sup>/DPX<sup>3</sup> - I)  
 - 0 261 54 230V AC  
 (factory mounting : motor + DPX<sup>3</sup>/DPX<sup>3</sup> - I)

■ **Locking accessory for motor-driven handle**

- 0 261 58 star key  
 - 0 261 59 flat key

■ **Set of connectors - 8 contacts (rear installation)**

- 0 263 99 debro-lift version

■ **Set of connectors - 6 contacts (rear installation)**

- 0 098 19 debro-lift version

■ **Set of connectors - 24 contacts (side installation)**

- 4 222 29

■ **Signalling contact**

- 0 265 74 draw-in/draw-out

■ **Set of contacts (12) (side installation)**

- 4 222 30 for draw-out version

■ **External neutral**

- 4 225 92

■ **Plate for signalling contact**

- 4 225 95 draw-out version

### 1 AUXILIARY CONTACT/FAULT SIGNALLING (OC/CTR CAT.NO 4 210 11)



All DPX<sup>3</sup> circuit breakers and switches can be equipped with electrical auxiliaries to ensure control functions.

The auxiliary contact Cat.no 4 210 11 is common to the entire DPX<sup>3</sup> range.

Depending on its insertion position in the DPX<sup>3</sup> case, the contact acts either as an auxiliary contact or as a fault signalling contact.

The auxiliary contact OC allows the signalling of the position of the main contacts of the circuit breaker or the switch (open or closed).

It is neither anticipated nor delayed.

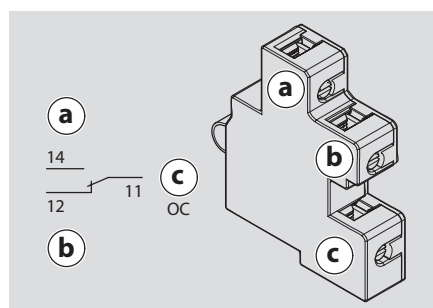
The fault signalling contact (CTR) indicates that the circuit breaker has opened on default, per action of a trigger, by a draw-out operation or by mechanical action on the red "test" button.

These contacts are of the changeover type (NO-NC) with dry contact (potential free).

#### Electrical characteristics (OC & CTR)

| VOLTAGE | CURRENT (A)    |                |
|---------|----------------|----------------|
|         | RESISTIVE LOAD | INDUCTIVE LOAD |
| 24 Vdc  | 10             | 5              |
| 48 Vdc  | 1,3            | 0,7            |
| 110 Vdc | 0,4            | 0,3            |
| 230 Vdc | 0,3            | 0,2            |
| 110 Vac | 10             | 4              |
| 230 Vac | 6              | 2              |

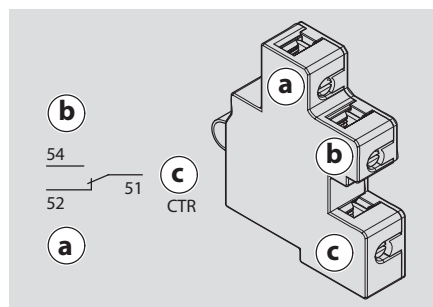
#### OC contact :



#### OC contact position :

|           | OC | 12 - 11 | 14 - 11 |
|-----------|----|---------|---------|
| OFF       |    |         |         |
| Triggered |    |         |         |
| ON        |    |         |         |

#### CTR contact :



#### CTR contact position :

|           | CTR | 52 - 51 | 54 - 51 |
|-----------|-----|---------|---------|
| OFF       |     |         |         |
| Triggered |     |         |         |
| ON        |     |         |         |

#### Setting up OC/CTR contacts:

- Press the red "test" button to trigger the product and have the handle in the intermediate position (triggered).

- Remove the 4 screws from the cover



- Remove the transparent cover by removing the screw.

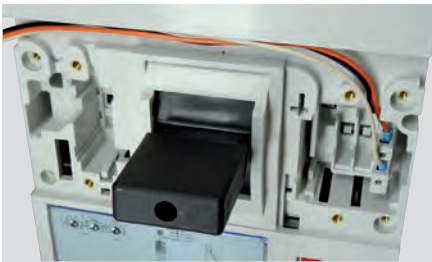


- Insert the OC contacts

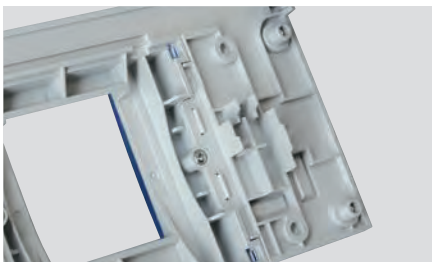
It is possible to install a maximum of 3 OC contacts.




Cable exit can be from the back, the right or left side of the MCCB :



For the lateral output, the pre-cut of the front cover must be broken in order to clear the passage :




- Set up the CTR contact

 Its location is dedicated, only one location is possible.



Cable exit can be from the back or right side :

 The CTR contact is 180 ° in the housing in relation to an OC contact: the wires go down (see pictures below).



The permissible section of the cables extends from 0.35 mm<sup>2</sup> to 1.5 mm<sup>2</sup>. In the case where several OC and CTR are present, the recommended section is 0.50 mm<sup>2</sup>.

To replace the transparent cover, make sure that the 2 tabs (before setting the screw) are correctly placed on the bottom in their housing :





## 2 SHUNT RELEASES (EXAMPLE CAT.NO 4 222 42)



Shunt releases allow the instantaneous opening ( $\leq 50\text{ms}$ ) of the device by the power of their coil: external contact control NO.

The contact incorporated into the shunt release shuts off the power supply during an opening control (e.g., emergency stop to snap), thus avoiding the heating problem. The permanent supply of the shunt release is possible, preventing DPX<sup>3</sup> contacts to close.

### Electrical characteristics

|                                    |   |
|------------------------------------|---|
| <b>OPERATING VOLTAGE</b>           | AC : 24V/110V/<br>230V/400V<br>DC : 24V/48V |
| <b>Operating range IEC 60947-2</b> | 70 à 110% Un                                |
| <b>Response time</b>               | $\leq 50\text{ms}$                          |
| <b>Inrush power</b>                | 300VA/W                                     |
| <b>Request time</b>                | $>50\text{ms}$                              |
| <b>Isolation voltage</b>           | 2,5kV                                       |

#### ■ Setting up :

A single location is provided for mounting regardless of the product of the DPX<sup>3</sup> 1600 range.

These shunt releases are mounted on the left of the product (front view). Only one cable output is possible: side output.

## 3 UNDERVOLTAGE RELEASES (EXAMPLE CAT.NO 4 222 48)



Undervoltage releases allow the instantaneous opening ( $\leq 50\text{ms}$ ) of the device by switching off the power supply ( $< 85\%$  UN) of the coil: positive safety (e.g. emergency stop by external contact NF).

Undervoltage releases must be pre-energized before putting the associated DPX<sup>3</sup> in the reset position (OFF) to reset the product.

### Electrical characteristics

|                                    |   |
|------------------------------------|---|
| <b>OPERATING VOLTAGE</b>           | AC : 24V/110V/<br>230V/400V<br>DC : 24V/48V |
| <b>Operating range IEC 60947-2</b> | 85 to 110% Un                               |
| <b>Response time</b>               | $< 50\text{ms}$                             |
| <b>Holding power</b>               | 1,6W/5VA                                    |

#### ■ Setting up :

A single location is provided for mounting regardless of the product of the DPX<sup>3</sup> 1600 range.

These undervoltage releases are mounted on the left of the product (front view).

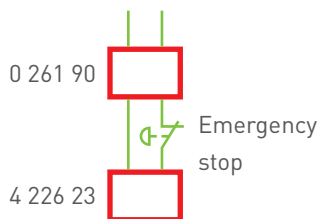
Wiring and cable passage are identical to shunt releases.

## 4 800 ms TIME-LAG MODULES

- 0 261 90 : Voltage 230 VAC (2 terminal covers + 1 rail)
- 0 261 91 : Voltage 400 VAC (2 terminal covers + 1 rail)
- 4 226 23 : time-lag module release to join with Cat.no 0 261 90 or 0 261 91.

The wiring is done in parallel.

**Example :**



## 5 MOTOR DRIVE (FRONT INSTALLATION)

### 5.1. Principle

The DPX<sup>3</sup> 1600 engine offers a significant advantage in all commercial building installations, allowing to close or open a remote switch or circuit breaker. If used as a transfer switch, its control is autonomous using the automatic transfer switch control units Cat.nos 4 226 80-4 226 82-4 226 83.

Two motor ranges are available for the DPX<sup>3</sup> 1600, a standard range and a factory-configured range only.

**Configured :** the front panel has a controller to charge the spring, a spring status indicator "loaded-unloaded", a multifunction selector (auto-man-lock), a close button, an opening button and a locking device.

**Standard :** the front panel has a controller for charging the spring, an operation

indicator, an operation selector, a multi-function selector (AUTO – MAN – lock), a closing button, an opening button and a device for lock.

Available in several voltages, either continuously or alternatively: 24 – 48 VDC, 24 – 48 – 110 – 230 VAC. There are also two possibilities of electric controls, either by impulse or maintained.

**In automatic mode,** the motorized control allows to open, close or remotely rearman a DPX<sup>3</sup>.

**In manual mode,** electrical orders are not taken into account. The front handle allows you to manually load the spring, then close the associated device, to open the unit, simply press the red button.

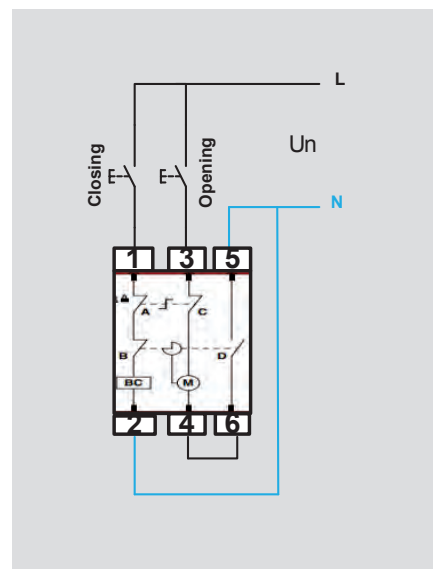
**In locked mode,** it is not possible to control the motor electrically or manually. This mode is only possible when the DPX<sup>3</sup> handle is in the "0" (open) position. It is possible to equip them with a lock by key (Cat.no 0 261 58/59) or padlock (3 Maxi. – diameter 6 mm max), thus prohibiting the closure of the DPX<sup>3</sup> and the cancellation of all electrical orders.

For the safety of persons and equipment, when the motor cover is removed, a safety contact makes it ineffective to operate any electrical operation of the motor.

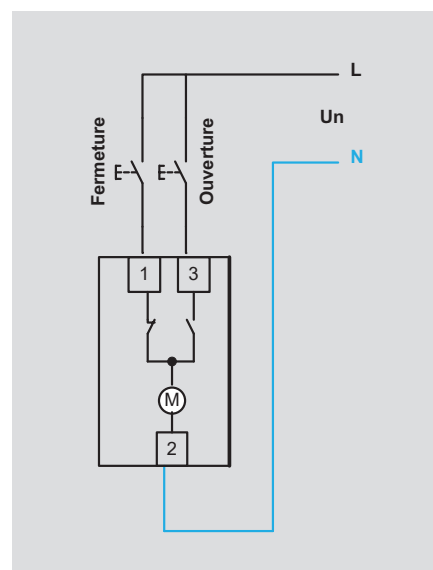
In the case of a transfer switch use, the switching time between the main line and the backup line (time between the opening of the main line and the closure of the backup line) is greater than or equal to 6s.

### 5.2. Diagrams

Configured motor



Standard motor



### ■ 5.3. Electrical characteristics

#### Configured motor:

| Voltages – Un (V) | Power absorbed (VA/W) |                    | Opening + rearming | Closing |
|-------------------|-----------------------|--------------------|--------------------|---------|
|                   | Inrush power          | Steady state power |                    |         |
| 24 Vdc            | 460                   | 160                | 6s                 | ≤ 100ms |
| 48 Vdc            | 460                   | 160                | 6s                 | ≤ 100ms |
| 24 Vac            | 460                   | 160                | 6s                 | ≤ 100ms |
| 48 Vac            | 460                   | 160                | 6s                 | ≤ 100ms |
| 110 Vac           | 460                   | 160                | 6s                 | ≤ 100ms |
| 230 Vac           | 460                   | 160                | 6s                 | ≤ 100ms |

#### Standard motor :

| Voltages – Un (V) | Power absorbed (VA/W) |                    | Closing | Opening |
|-------------------|-----------------------|--------------------|---------|---------|
|                   | Inrush power          | Steady state power |         |         |
| 24 Vdc            | 460                   | 110                | 4s      | 8s      |
| 48 Vdc            | 460                   | 110                | 4s      | 8s      |
| 24 Vac            | 460                   | 110                | 4s      | 8s      |
| 48 Vac            | 460                   | 110                | 4s      | 8s      |
| 110 Vac           | 460                   | 110                | 4s      | 8s      |
| 230 Vac           | 460                   | 110                | 4s      | 8s      |

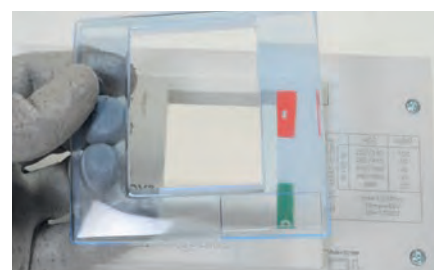
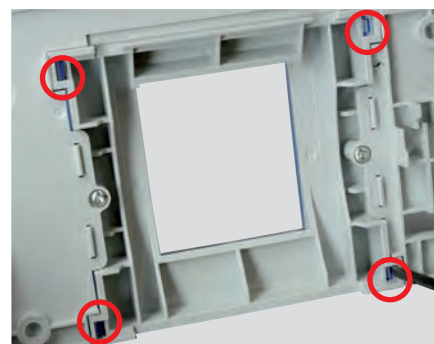
### ■ 5.4. Mounting

(example Cat.no 0 261 27)

Composition of the Cat.no :



- Trigger the product by pressing the red test button, the handle is then in the intermediate position.
- Remove the 4 screws and pull out the circuit breaker cover.
- Remove the transparent plastic cover.



- Drill a 5 mm diameter hole and make the cuts for the information reports (button OFF – status report).



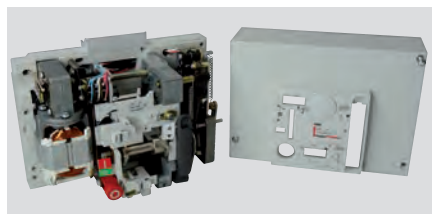
- Retrieve the blank label present in the product hole on the front, write on the label the reference of the associated device and then stick it to the front of the motor in the intended location.
- Put the frame back in place using the 4 screws.
- Assemble the tab and its axis on the support and fasten the whole to the product.



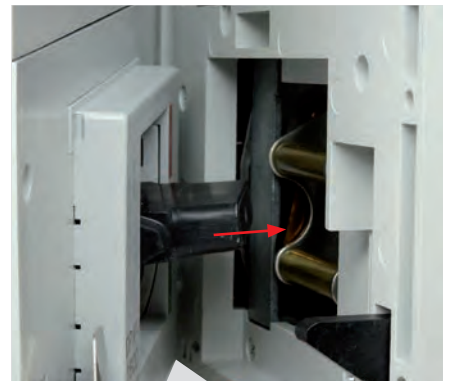
- Remove the protective screw from the handle.



- Set the motor drive slider to "MAN" and remove its cover.



- Reload the spring of the motor drive with the handle.
- Insert the control into the product making sure that the handle is correctly positioned in the intended housing.



- Then fasten the motor with the 4 screws supplied (tightening torque of 2 N.m.), the screw at the bottom right is different from the other 3 :



- Fasten the motor cover with the screws supplied (tightening torque of 1 N.m. Maxi).
- Perform some closing and opening operations in order to verify the proper functioning of the whole.

- It is possible to perform a lockout in the open position. To do this, press the button 0 of the motor drive, press and hold the cursor to "lock" to remove the tab :



- We can then insert a maximum of 3 padlocks with a diameter of 5 mm minimum to 6 mm maximum.

Example with a lock Cat.no 0 227 97 :



### 6 LOCKING ACCESSORY FOR MOTOR DRIVE (0 261 58/59)

Mounting is identical to the DPX<sup>3</sup> 630 except the cam to be put in place at the rear (see pages 80 and 81) :



DPX<sup>3</sup> 630

DPX<sup>3</sup> 1600

### 7 SET OF CONNECTORS - 8 CONTACTS (REAR INSTALLATION - 0 263 99)

Composition of the Cat.no :



Connection by Faston terminals. See Chapter 13 (mounting plate Cat.no 4 225 95, see pages 118 and 119).

### 8 SET OF CONNECTORS - 6 CONTACTS (REAR INSTALLATION - 0 098 19)

Composition of the Cat.no :



Terminal connection.

See Chapter 13 (mounting plate Cat.no 4 225 95, see pages 120 and 121).

### 9 SET OF CONNECTORS - 24 CONTACTS (SIDE INSTALLATION - 4 222 29)

This reference consists of 2 male/female connectors of 12 terminals each (24 terminals in total) allowing the connection of the accessories (OC - CTR - motor drive - coils).

It is only available in the international catalog.



The use of this product for a DPX<sup>3</sup> 1600 will only be useful for the fixed version. In the draw-out version we will use the catalogue numbers :

- 0 263 99 or 0 098 19 for rear contacts
- 4 222 30 for lateral contacts

In a fixed installation, we will use the 2 supplied rails which are fixed either on the plate or on the uprights but close to the product so that it is easily disconnected.

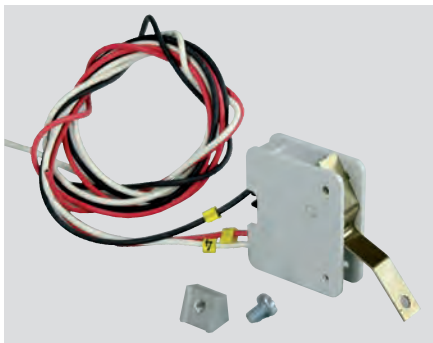
Cabling and tracking will be identical to DPX<sup>3</sup> 630 (see page 82).

The different cable sections as well as the location recommendations of the wires are indicated on the installation instructions according to the accessories present.

**10** SIGNALLING CONTACT  
(CAT.NO 0 265 74)

It allows to send visual information about the state the debro-lift mechanism: connected or disconnected.

Composition of the Cat.no. :



For mounting, we will not use the screw and the metal plate.



Pass the contact wires through the intended hole of the base and then insert the contact in the dedicated location respecting the direction :



**11** SET OF CONTACTS (12)  
(SIDE INSTALLATION - 4 222 30)

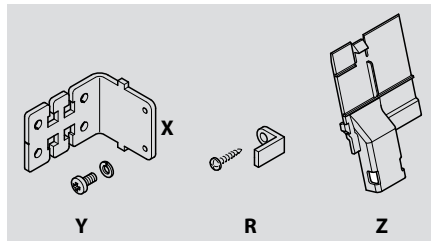
This reference is composed of 4 contacts of 3 terminals each. We can install up to 8 contacts per DPX<sup>3</sup> (2 Cat.nos to order). These contacts are positioned on the side of the associated product. They can be installed on a product alone but also on 2 products mounted in source inversion.

Composition of the Cat.no :



In addition to the parts present in this catalogue number, others are necessary for a complete mounting. They are in the catalogue number of the debro-lift mechanism :

Necessary parts in the debro-lift mechanism (Cat.nos 4 225 93/94) :



The mounting is detailed in the instructions of the base or of the debro-lift mechanism: common notice.

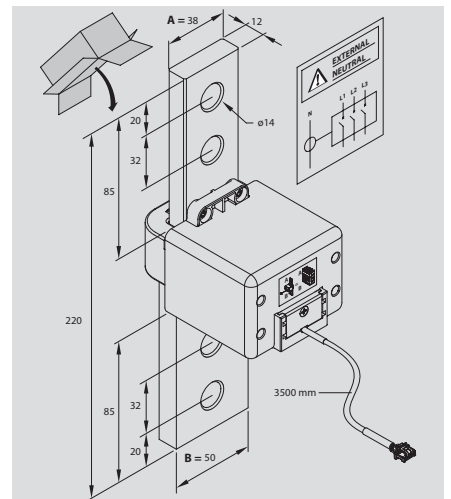
The different cable sections as well as the location recommendations of the wires are indicated on the instructions according to the accessories present.

**12** EXTERNAL NEUTRAL (4 225 92)



The external neutral comes with a 3.5 m length cable equipped at its end with a connector. By its very simple and fast implementation, it allows to switch from a DPX<sup>3</sup>-3P to a DPX<sup>3</sup>-3P + N (neutral) without replacing the circuit breaker. It is compatible with all DPX<sup>3</sup> 1600 – 3P – type S2 and SG trigger manufactured from date 15W50 (technical version revision 1).

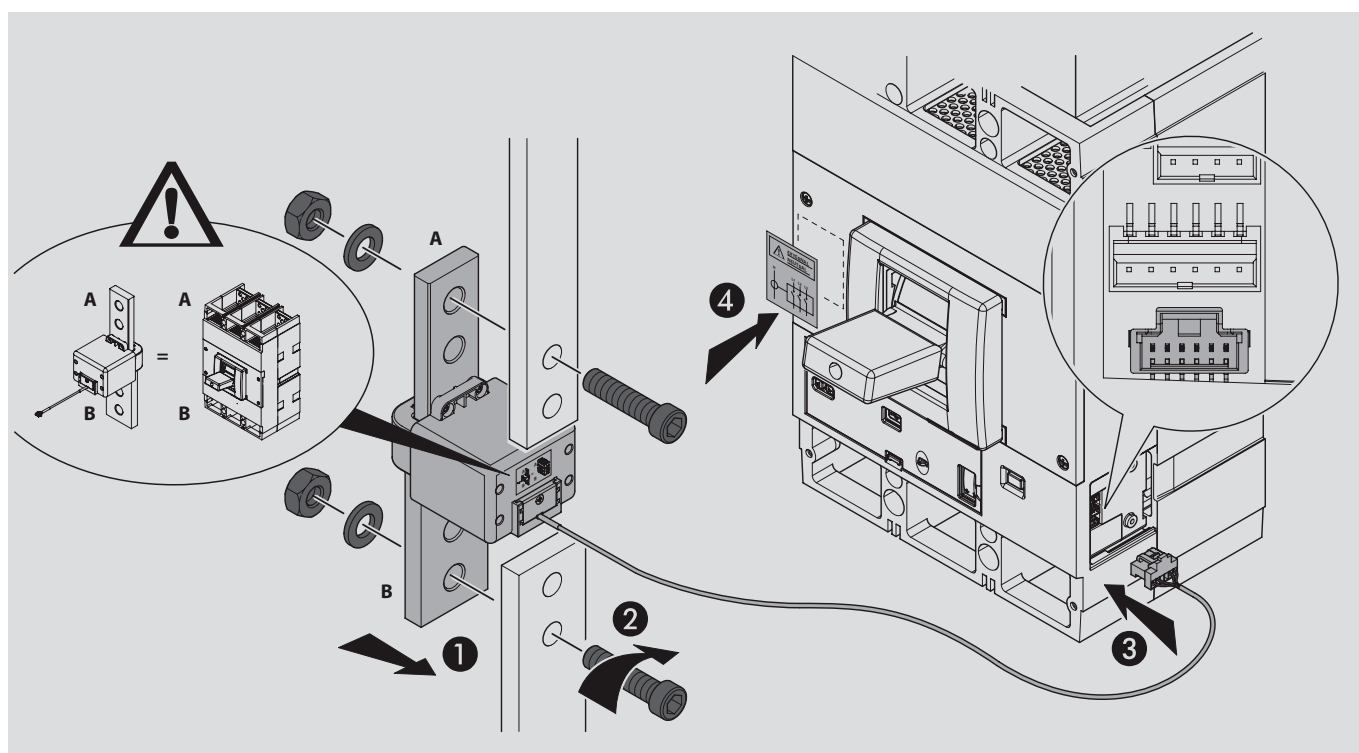
It is mandatory to have the DPX<sup>3</sup> in the open position (OFF) before plugging/unplugging the connector from the external neutral.



**!** Observe the direction of installation according to the direction of flow of the load current.

| Compatibility with external neutral                                      | Thermal magnetic trigger | Electronic trigger - type S1 | Electronic trigger - type S2 | Electronic trigger - type Sg | S2 and Sg trigger with measurement |
|--|--------------------------|------------------------------|------------------------------|------------------------------|------------------------------------|
| DPX <sup>3</sup> 1600 - 3P - revision 0 - manufacturing prior to 15 W 50 | X                        | X                            | X                            | X                            | X                                  |
| DPX <sup>3</sup> 1600 - 3P - revision 1 - manufacturing after 15 W 50    | X                        | X                            | X                            | X                            | X                                  |
| DPX <sup>3</sup> 1600 - 4P all versions                                  | X                        | X                            | X                            | X                            | X                                  |

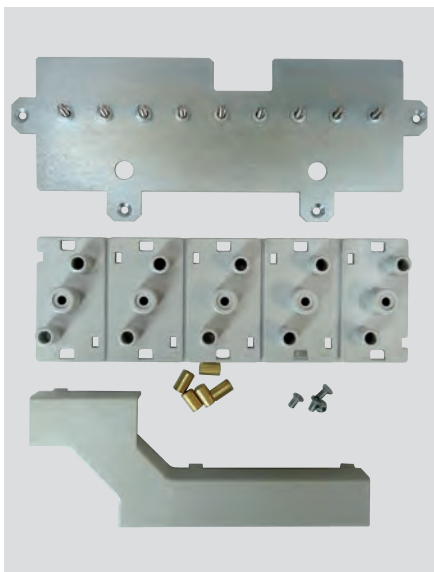
■ Connection :



## 13 PLATE (CAT.NO 4 225 95)

This plate is necessary for the mounting of the signalling contacts Cat.no 0 263 99 or 0 098 19 in the case of a DPX<sup>3</sup> in a draw-out version.

Composition of the Cat.no :

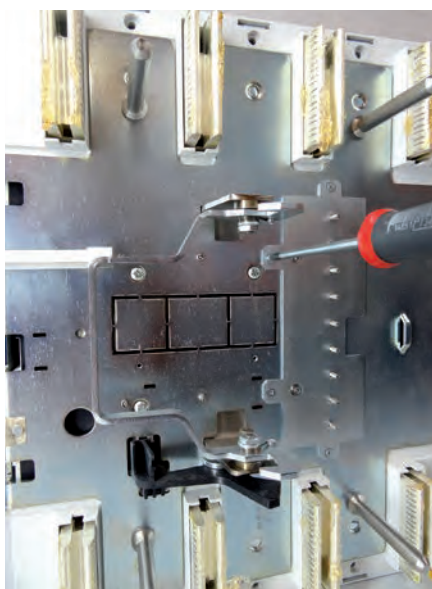
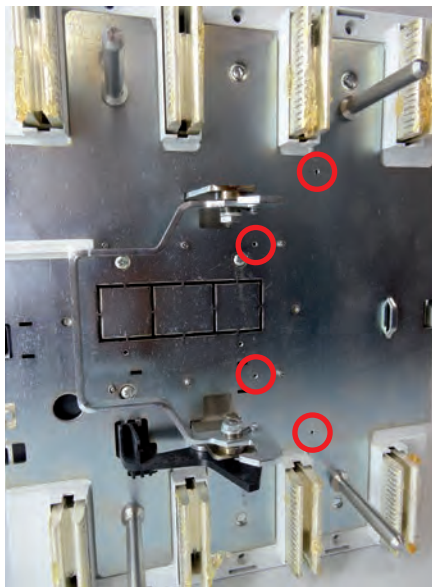


### ■ Mounting :

- In case of mounting on a DPX<sup>3</sup> 3P, one of the 5 parts of the supplied plastic part must be broken :



- Fasten the metal plate using the 4 screws provided at the intended locations of the debro-lift mechanism (Philips footprint n° 1, tightening torque of 1 N.m.) :



- Fix the plastic part on the metal plate using the 5 brass nuts supplied (screwing with 4 mm flat screwdriver, 1 N.m. tightening torque) :



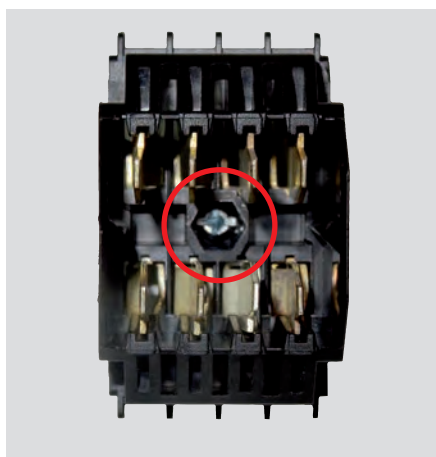
With the set of connectors Cat.no 0 263 99 .

Composition of the Cat.no :





- Take the screw provided and insert it in the center of the male part in the hole provided and fasten the whole with a screwdriver Pozidriv No. 1 to the torque of 0.5 N.m.



- Repeat these steps according to the number of connectors desired (5 maximum).

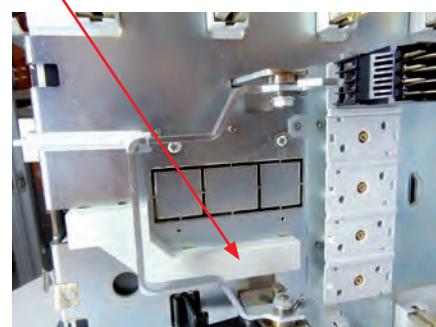
- For the female part of the connector, it is necessary to first remove the corresponding plastic part from the draw-out base :



- Clip the female part of the contact into the removable base (from the front of the base) :



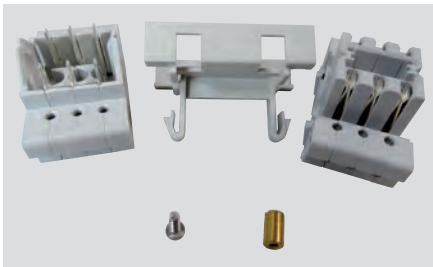
- After having wired all the cables of the accessories, auxiliary contacts, etc..., set up the clip-on cable ducting supplied with the Cat.no 4 225 95 in order to conceal all the wires located to the right of the DPX<sup>3</sup> (front view) :



Location of wires (according to mounted accessories) detailed on page 20 of the installation instructions of the debró-lift mechanism Cat.no 4 225 93/94.

## ■ Set of connectors Cat.no 0 098 19

Composition of the Cat.no :



- Take the screw provided and insert it in the center of the male part in the hole provided and fasten the whole with a 4 mm flat screwdriver to the torque of 0.5 N.m. :



- Repeat these steps according to the number of connectors desired (5 maximum).

- For the female part of the connector, it is necessary to first remove the corresponding plastic part from the draw-out base :



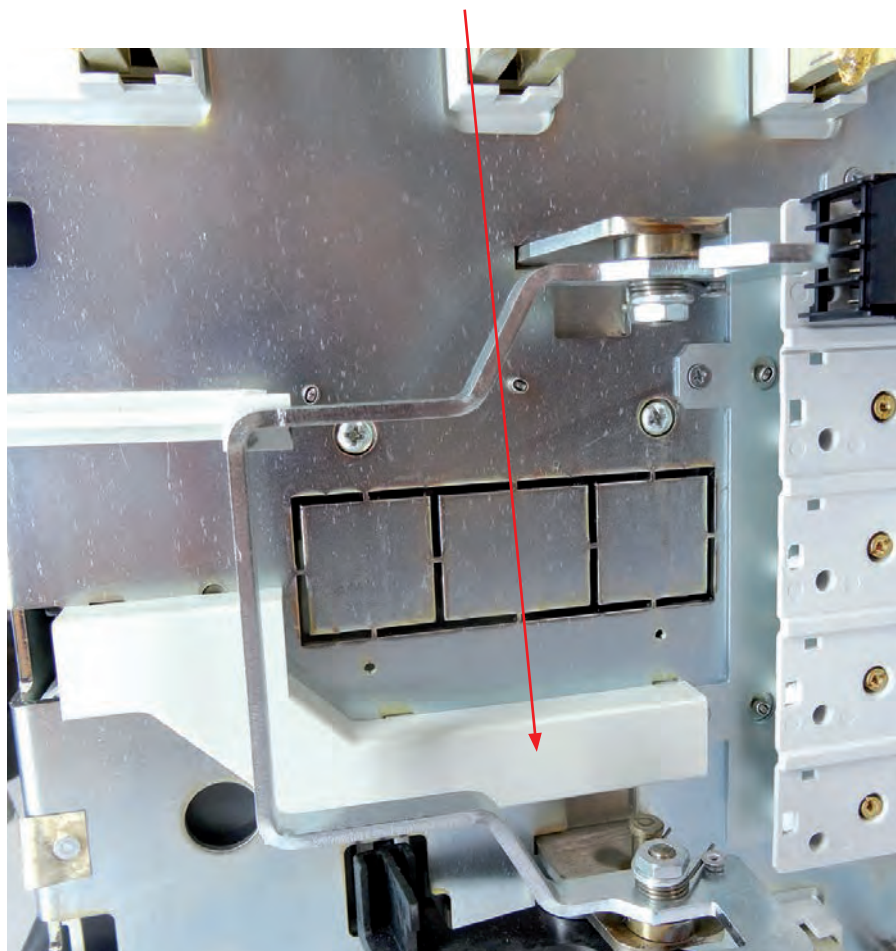
- Clip the female part of the contact into the supplied plastic frame :



- Clip the whole into the base (from the front of the base) :



- After having wired all the cables ( $\varnothing$  0.35 mm<sup>2</sup> mini, 1.5 mm<sup>2</sup> Maxi) of the accessories, auxiliary contacts, etc..., set up the clip-on cable ducting supplied with the Cat.no 4 225 95 in order to conceal all the wires located to the right of the DPX<sup>3</sup> :



Location of wires (according to mounted accessories) detailed on page 21 of the manual of the debro-lift mechanism Cat.no 4 225 93/94.

# DPX<sup>3</sup> 1600 mechanical accessories

## ■ Terminals DPX<sup>3</sup> 1600 draw-out version

- 4 225 86 front terminals 3P
- 4 225 87 front terminals 4P
- 4 225 88 rear terminals 3P
- 4 225 89 rear terminals 4P

## ■ Debro-lift mechanism

- 4 225 93 DPX<sup>3</sup> 3P
- 4 225 94 DPX<sup>3</sup> 4P

## ■ Drawing-out insulated handle for DPX 250 to 1600 debro-lift mechanism

- 0 265 75

## ■ Keylockfor Debro-lift mechanism

- 0 265 76 flat key
- 0 263 48 star key

## ■ Rotary handle direct on DPX

- 0 262 61 standard (black)

## ■ Key-lock in draw-out position for motorised DPX<sup>3</sup> or with rotary handle

- 0 265 79 star key
- 0 265 80 flat key

## ■ Rotary handle - vari-depth IP55

- 0 262 83 standard (black)
- 0 262 84 emergency (red/yellow)

## ■ Key-lock for rotary handle – vari-depth

- 0 262 92 Eurolock key
- 0 262 93 star key
- 0 262 94 flat key
- 4 228 04 flat key
- 4 228 05 flat key

## ■ Eurolock for rotary handle

- 0 262 25

## ■ Cage terminal (x1)

- 0 262 69 rigid cable 2x240 mm<sup>2</sup> / 2x185 mm<sup>2</sup> flexible
- 0 262 70 4x240<sup>2</sup> rigid cable 4x240 mm<sup>2</sup> / 4x185 mm<sup>2</sup> flexible

## ■ Extended front terminals

- 0 262 67 up to 1250A
- 0 262 68 1600A

## ■ Spreaders - rear terminals incoming/outgoing

- 0 262 73 3P
- 0 262 74 4P

## ■ Insulated shields (x3)

- 0 262 66

## ■ Sealable terminal shields

- 0 262 64 3P
- 0 262 65 4P

## ■ Set of 2 terminal covers - IP20

- 4 225 90 pour 3P
- 4 225 91 pour 4P

## ■ Padlock for locking in "open" position

- 0 262 60

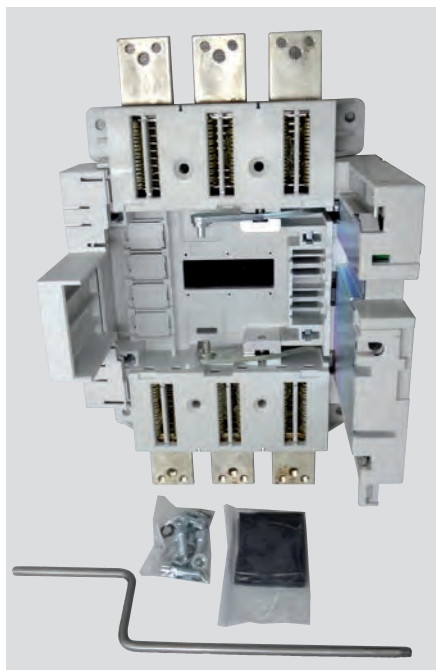
## ■ Set of rear terminals (6) - incoming or outgoing

- 0 263 80 short 3P
- 0 263 81 long 3P
- 0 263 82 short 4P
- 0 263 83 long 4P

## 1 DPX<sup>3</sup> BASE - DRAW-OUT VERSION

This product is required in the case of mounting the DPX<sup>3</sup> in a draw-out version. It is fixed on the plate; the inversion of sources is possible. It can be installed in vertical or horizontal position, front or rear terminals, 3 poles or 4 poles.

### ■ Example of a base – front terminals 3P



## 2 DEBRO-LIFT CAT.NO 4 225 93 (3P) /4 225 94 (4P)

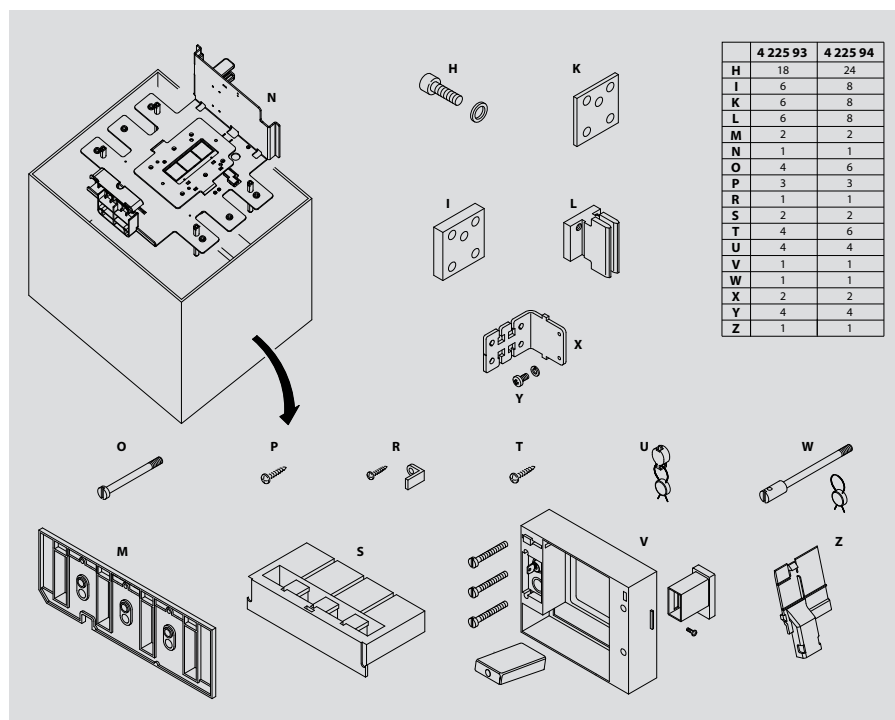
The Debro-lift mechanism allows the operation of drawing-in / drawing-out without removing the faceplate and holding the circuit breaker or switch in its base.

A DPX<sup>3</sup> is a DPX<sup>3</sup> with a debro-lift mechanism + a base.

Composition of the Cat.no 4 225 94 :



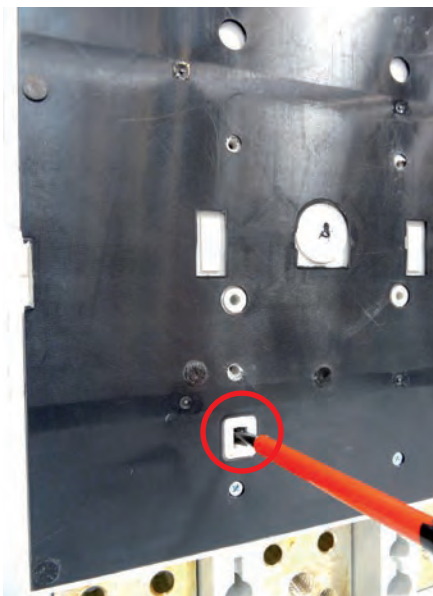
View of all the parts included in the Cat.no :



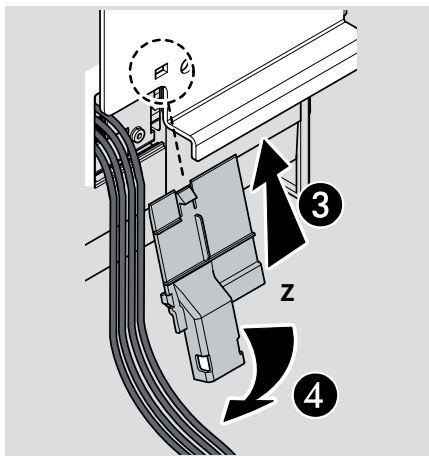
- It is necessary to equip the product with the rear connections supplied with the debro-lift mechanism (Mark L). We will use the 2 shims (K and I markers) for one in < 1000A and one shim (K) for an in ≥ 1000A. The tightening torque of the screws is 14 N.m.

- Then put the 2 plastic covers on the back (Mark M).

- Pull the tab out at the back so that the product is triggered in case of unintentional extraction with a closed circuit breaker. The internal safety mechanism opens the unit at the first disconnection operation. This device prevents the circuit breaker from being disconnected. The handle must be in the triggered position (intermediate).



- Fix the DPX<sup>3</sup> on the debro-lift mechanism with the screws of the product (tightening torque of 3 N.m.).  
 - After having set up the contacts and/or trigger inside the DPX<sup>3</sup> and in case of wires passing on the side of the product, put the protective plastic cover of the wires (Mark Z) :



- Place the metal tab (R-mark) in the intended location and fasten it with the screw to the 2 N.m. torque: this part is used to prevent the locking in the connected position.

- Remove the handle cover, remove the 4 screws from the front cover for the 3P. For the 4P, leave the 2 fastening screws.

- Fasten the frame for the debro-lift using the screws provided. The screw marked W is placed on the top right.

- Set up the new handle cover and tighten the screw to 0.5 N.m.

- Fix the terminal shields at the rear of the screws marked T to the torque of 1 N.m.

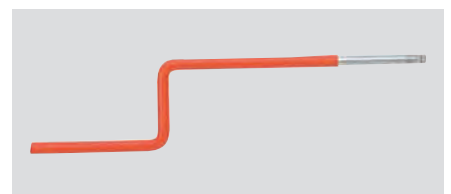
- It is possible to seal them (mark U).

- With the help of the handle, turn the mechanism of the base to the maximum counter clockwise.

- Insert the product equipped with its debro-lift mechanism.

- Perform a full cycle of drawing-in/drawing-out and check that the visual positions are correct: Green → disconnected, yellow → test, red → connected.

### 3 ISOLATED HANDLE FOR DRAW-OUT FO DEBRO-LIFT DPX<sup>3</sup> (CAT.NO 0 265 75)



### 4 KEY-LOCK FOR DEBRO-LIFT CAT.NO 0 265 76 (FLAT KEY) / 0 263 48 (STAR KEY)

The mounting is identical to the DPX<sup>3</sup> 630 (see page 92). Be careful however to take the right cam at the back, it is different :

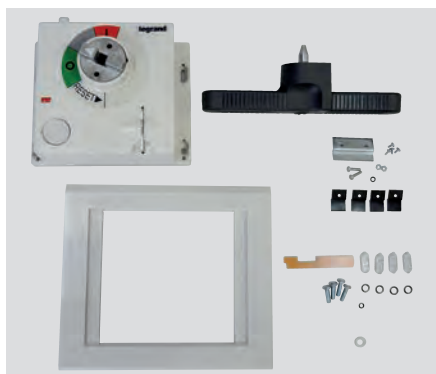


DPX<sup>3</sup> 1600

DPX<sup>3</sup> 630

## 5 ROTARY HANDLE DIRECT ON DPX<sup>3</sup> (CAT.NO 0 262 61)

Composition of the Cat.no :

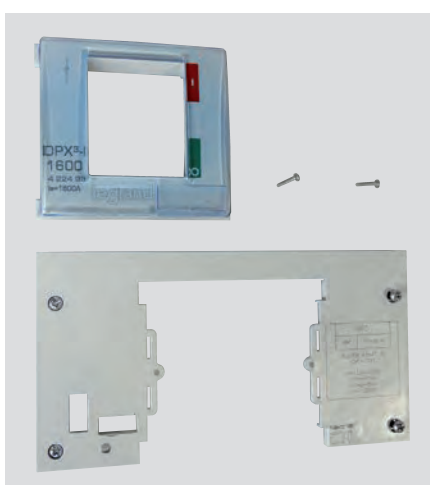
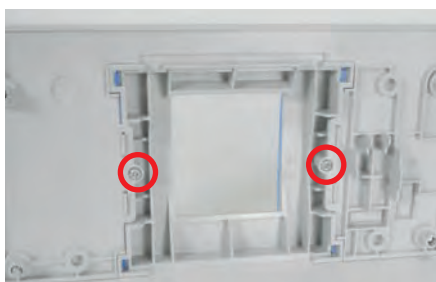


### ■ Mounting

- Position the DPX<sup>3</sup> in the open position (OFF) :



- Remove the 4 screws (3P) or 6 screws (4P) from the front panel.
- Remove the 2 retaining screws from the identification frame (Torx T10) and remove it :

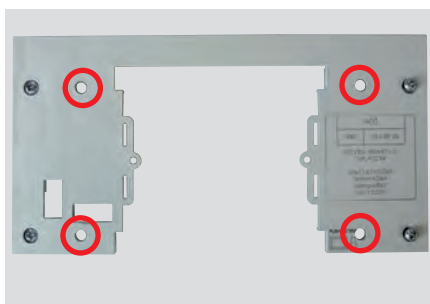


- Drill 4 holes using a 5 mm drill bit as shown in the instructions :

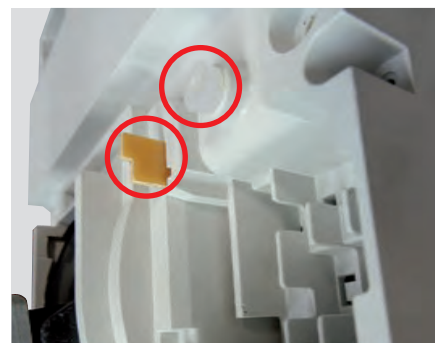
Back view



Front view



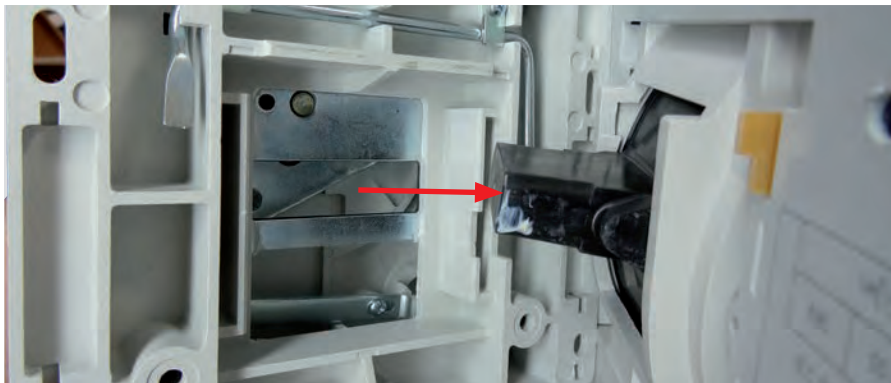
- Position the yellow tab and the plastic spacer in the indicated places :



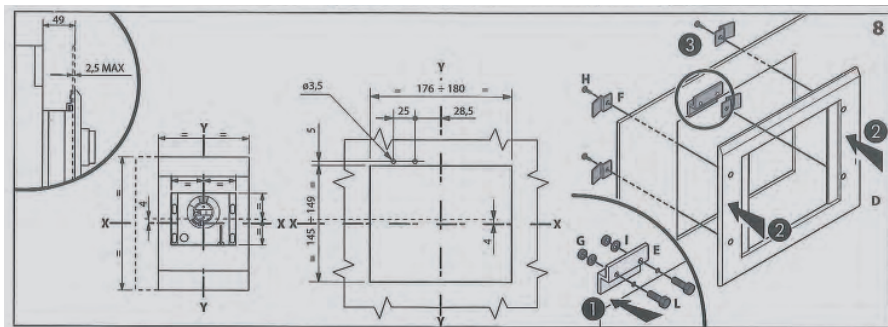
- Replace the front panel and fasten it.
- Remove the handle retaining screw and then the handle.
- Take the mechanism of the rotary handle and position it so that the metal tab is out :



- Press the Red "test" button on the DPX<sup>3</sup> (product position: triggered).
- Set up the rotary handle mechanism and secure it with the supplied screws by placing the handle correctly :



- Place the plastic frame on the faceplate as well as the retaining tabs :



- Set up the screw covers.
- Check the correct operation of the whole as well as the tab :



Position "I": impossible to open the faceplate  
 Test position (triggered): impossible to open the faceplate  
 Position "0": possible to open the faceplate

**6 DPX<sup>3</sup> KEY-LOCK-DRAW-OUT POSITION (MOTORISED OR WITH ROTARY HANDLE CAT.NO 0 265 79/0 265 80)**

This accessory allows you to lock the product (motorized or with rotary handle) in the disconnected position → perform a consignment operation.

The product comes with a unique key.

**i** It is possible to have the key number customizable with the company STI Montreuil (<http://www.servtrayvou.com/web/contact>) by giving the profile number: flat key N ° ABA90GEL6149 or star N ° HBA-90GPS6149.

The mounting is detailed in the instructions of the debro-lift mechanism (Cat.no 4 225 93/94). See also paragraph 5.2 of the "mechanical accessories" for DPX<sup>3</sup> 630 (see pages 92 and 93).

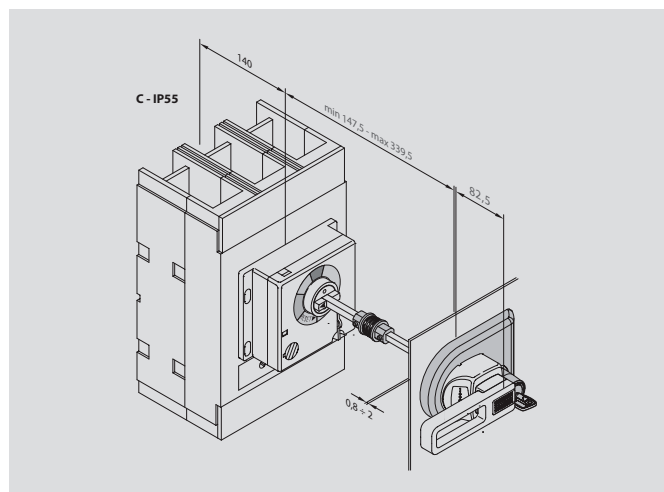
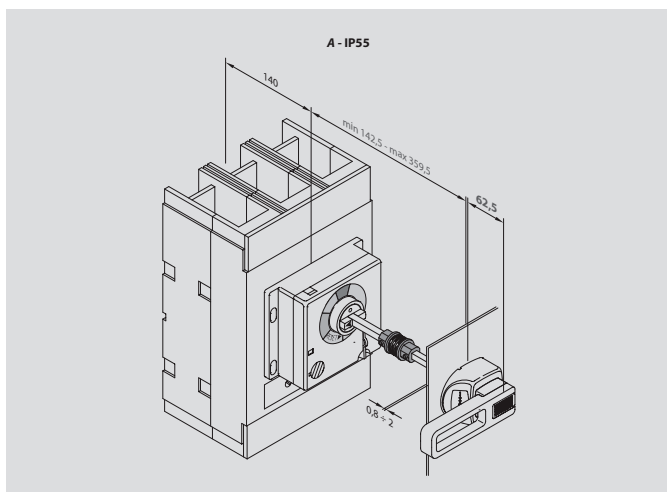


## 7 IP 55 VARI DEPTH HANDLE CAT.NOS 0 262 83 (STANDARD) OR 0 262 84 (EMERGENCY)

First perform the same operations as the rotary handle direct and then define the need for the IP and the presence of a lock or not :

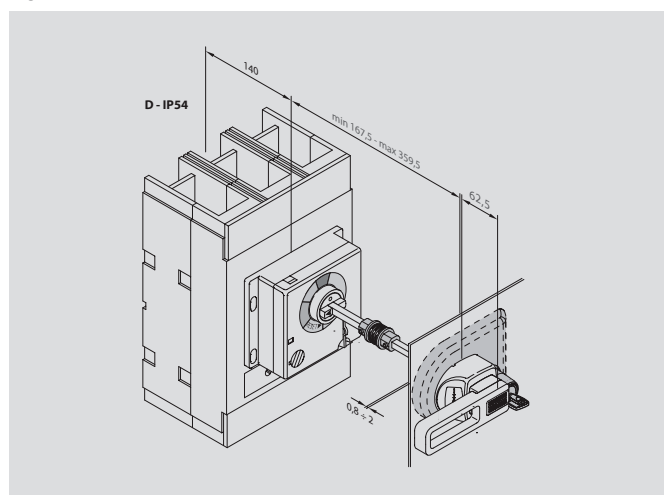
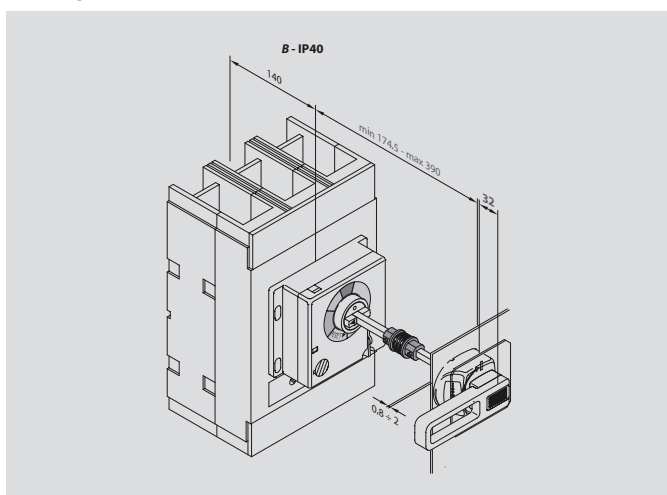
- **IP55 without locking**, follow steps **A** of the instructions (see configuration below) :

- **IP55 with locking**, follow steps **C** of the instructions (see configuration below) :

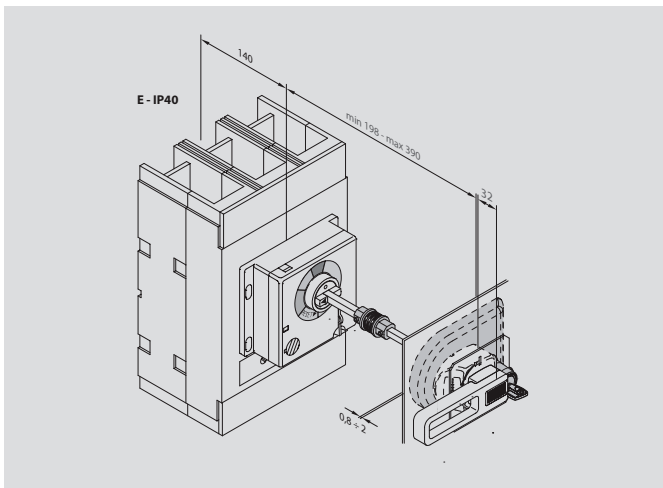


- **IP40 without locking**, follow steps **B** of the instructions (see configuration below) :

- **IP54 with locking**, follow steps **D** of the instructions (see configuration below) :

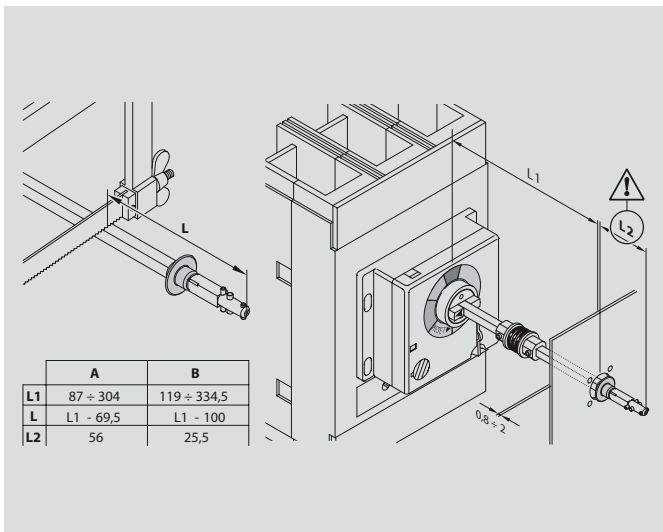


- **IP40 with locking**, follow steps **E** of the instructions (see configuration below) :

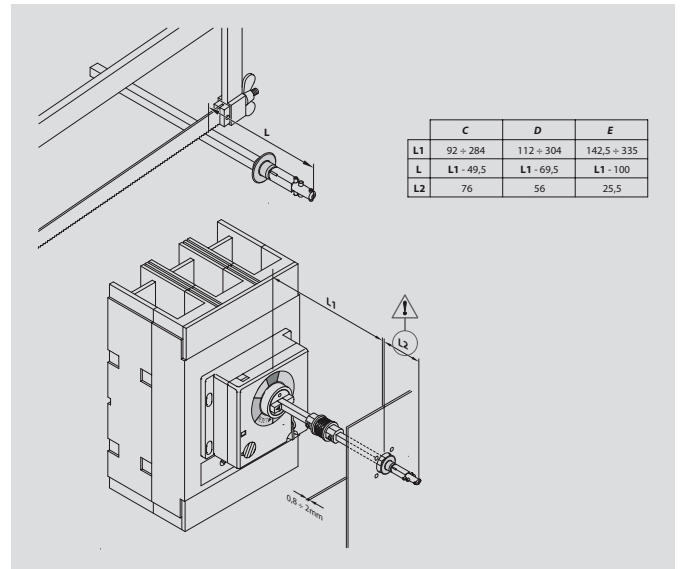


- It is then necessary to define the length of the axis according to the configuration: A, B, C, D or E :

**Configuration A & B:**



**Configuration C, D & E:**



- Once the axis has been cut, carry out the mounting (depending on the IP) of the handle following the instructions.

**Example of the installation in IP55 without locking :**



**!** The opening of the door or the faceplate is only possible with the handle of the DPX<sup>3</sup> in position "0" (OFF).

**8 KEYLOCKFOR VARI-DEPTH ROTARY HANDLE - (STAR KEY CAT.NO 0 262 93/FLAT KEY CAT.NO 0 262 94 OR EUROLOCK KEY CAT.NO 0 262 92 OR 4 228 04/805**

This accessory allows the DPX<sup>3</sup> to be locked in the open position → perform a consignment operation.

Composition of the Cat.no 0 262 93 :



Make the mounting as shown in the instructions and check the correct operation of the whole: the key can be removed with the handle in position "0", it cannot be with the handle in position "I".



This lock can receive padlocks (3 maximum from 5mm to 8 mm).

Picture of the set mounted with the handle on "0" and the key removed :



■ **Summary :**

- 0 262 93 : each reference comes with 1 single star key
- 0 262 94 : each reference includes 1 single flat key
- 4 228 04 : each reference includes 1 flat key EL 43525 common to all Cat.no 4 228 04
- 4 228 05 : each reference includes 1 flat key EL 43363 common to all Cat.no 4 228 05

**9 LOCKING FOR ROTARY HANDLE (CAT.NO 0 262 25)**

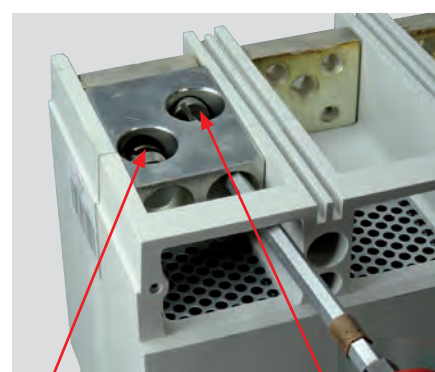
Mounting identical to DPX<sup>3</sup> 630 (see pages 94 and 95).

**10 CAGE TERMINAL (X1) CAT.NO 0 262 69/70**

Composition of the Cat.no 0 262 69:



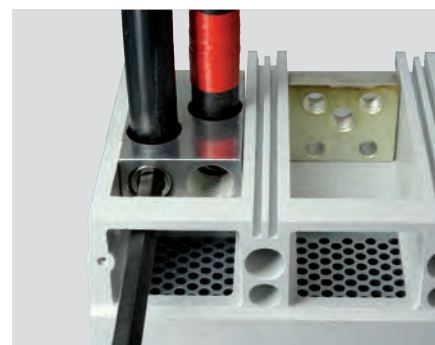
- Insert the 2 screws respecting the 2 different lengths and tighten the cage terminal on the product to the torque of 14 N.m. :



Location of the large screw

Location of the small screw

- Put the cables in place and tighten the screws to the torque of 36 N.m. (10 mm Allen key).



■ **Cable characteristics :**

- Stripping length → 25 mm
- Maximum cable Ø → 22 mm
- Maximum copper/aluminium section :
  - 2 x 240 mm<sup>2</sup> rigid
  - 2 x 185 mm<sup>2</sup> flexible
- Copper/aluminium minimum section :
  - 2 x 120 mm<sup>2</sup> rigid
  - 2 x 95 mm<sup>2</sup> flexible

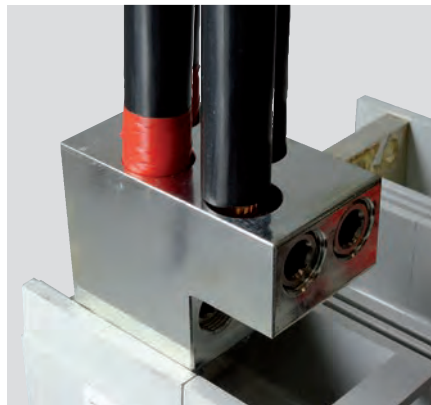
■ **Cat.no 0 262 70**



- Insert the 2 screws into the cage terminal and tighten it on the product using an Allen key of 8 mm to the torque of 14 N.m. :



- Put the cables in place and tighten the screws to the torque of 36 N.m. (10 mm Allen key).




■ **Cable characteristics**

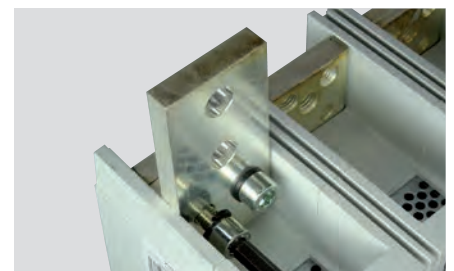
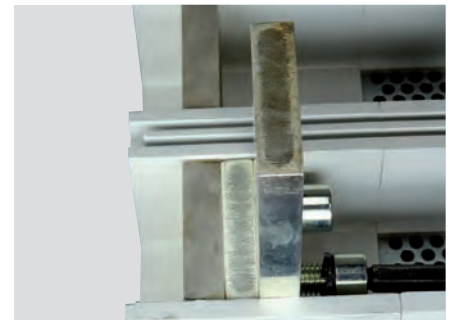
- Stripping length
  - 58 mm for the 2 terminals of the bottom
  - 30 mm for the 2 front terminals
- Maximum cable Ø
  - 22 mm
- Maximum copper/aluminium section :
  - 4 x 240 mm<sup>2</sup> rigid
  - 4 x 185 mm<sup>2</sup> flexible
- Copper/aluminium minimum section :
  - 4 x 120 mm<sup>2</sup> rigid
  - 4 x 95 mm<sup>2</sup> flexible


**11 EXTENDED FRONT TERMINALS (CAT.NOS 0 262 67/68)**

■ **Cat.no 0 262 67 (up to 1250 A)**  
for flat bars or lugs.


 The Cat.no includes only one piece, to be ordered by the required number.

- Flat bars → 50 mm maximum (width) x 10 mm (thickness) maximum Ø 14 mm hole drilling
- Terminals → 50 mm maximum (width) Ø 14 mm hole drilling
- Install the spacer (2 holes) and then the extension cord and fasten the whole with the screws provided (8 mm Allen key, 14 N.m. tightening torque).



 Forbidden to position 2 terminals side by side, they must be placed on either side of the extended front terminals.



 The mounting bolts of the bars or terminals on the extended front terminals are not provided.

■ Cat.no 0 262 68 (1600 A) : for flat bars

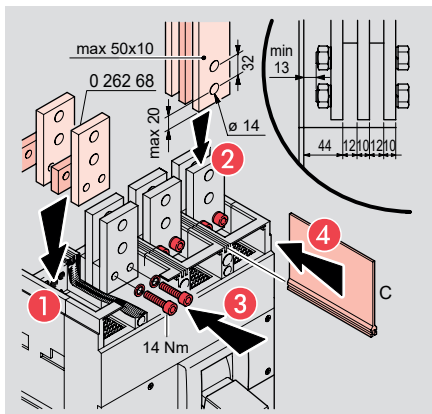


The flat bars must have a width of 50 mm maximum.

**!** The thickness of the bars must be 10 mm. The catalogue number includes only one range, to be multiplied by the desired number.

The diameter of the drilling hole must be 14 mm.

- Start by putting a spacer, an extended front terminal, the other spacer and the second extended front terminal.
- Insert the 2 screws into the extended front terminal and the DPX<sup>3</sup> terminal without tightening.
- Set up the flat bars (2 or 3) equipped with the bolts (not supplied).
- After blocking the bolts, finish tightening the terminal screws using an Allen key of 8 mm to the torque of 14 N.m.



**12** INCOMING AND OUTGOING SPREADERS CAT.NO 0 262 73 (3P) / 0 262 74 (4P)

Composition of the Cat.no 0 262 73 :

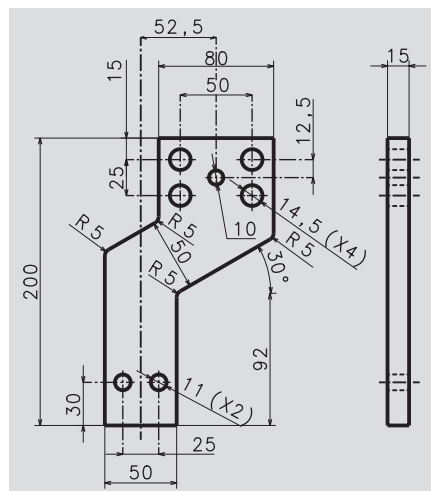


- Put in place the extended front terminals and tighten the fastening screws (2/ extended front terminals) using an Allen key of 8 mm to the torque of 14 N.m.

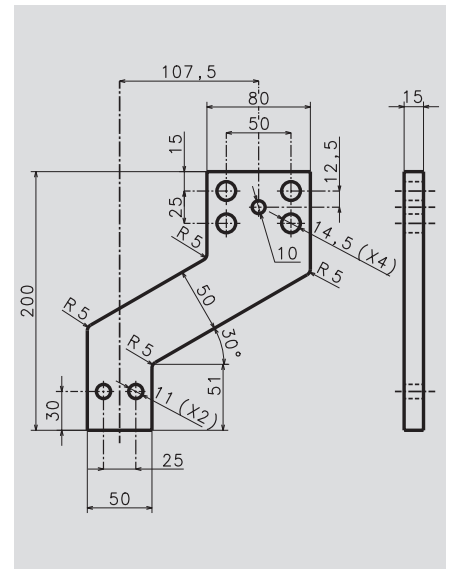
**!** For the 3P (Cat.no 0 262 73), there are 2 small (identical) and 1 large.

For the 4P (Cat.no 0 262 74), there are 2 small (identical in the middle) and 2 large (located at the ends).

Dimensions L1 & L2 :



Dimensions L3 & Neutral if 4 poles :

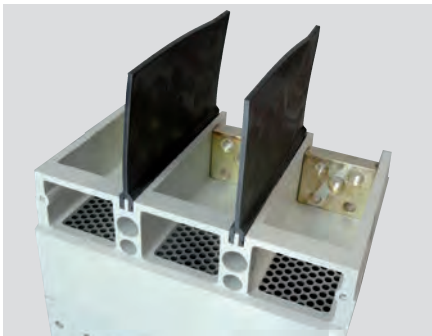
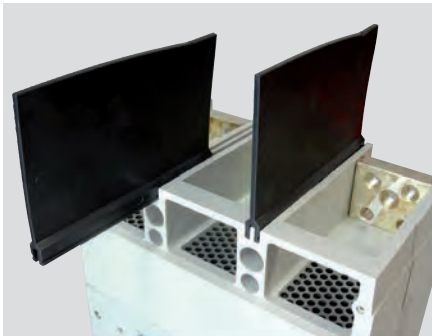


Example of mounting Cat.no 0 262 73 :



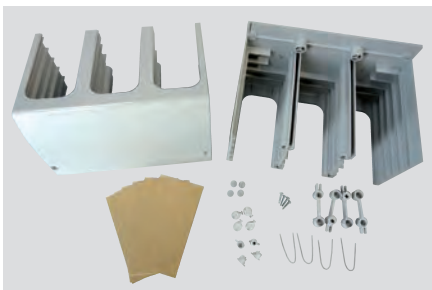
**13 SET OF 3 INSULATED SHIELDS (CAT.NO 0 262 66)**

Their role is to avoid the propagation of an electric arc in the event of a short circuit. We only need 2 insulated shields downstream (or upstream) for a DPX<sup>3</sup> 3P.

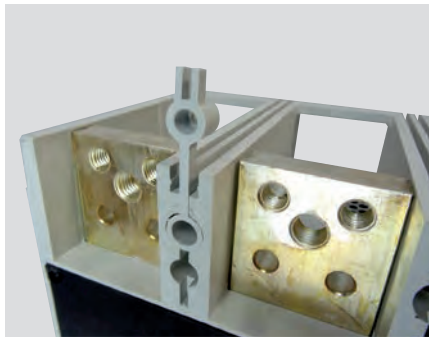


**14 SET OF 2 SEALABLE TERMINAL SHIELDS CAT.NO 0 262 64 (3P) / 0 262 65 (4P)**

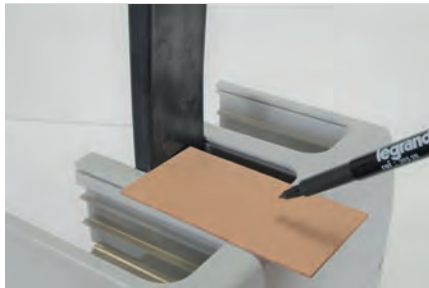
Composition of the Cat.no 0 262 64 :



- Set up the guide-stoppers in the intended housing :

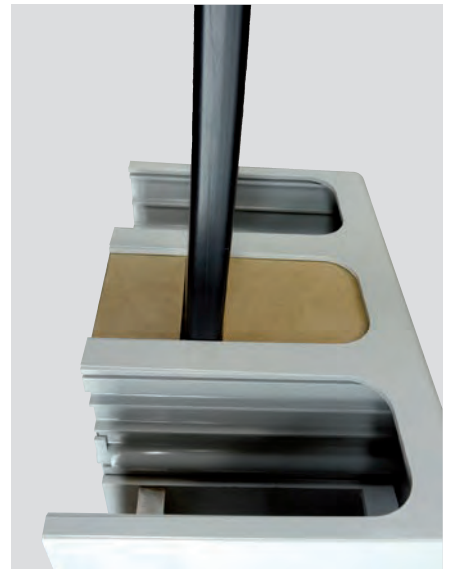


- Fix a bar (without tightening) to the connection range of the DPX<sup>3</sup>, position the sealable terminal shields and place the protection on it so as to make the marking for the cutting :



- Perform the same for the rear part of the bar.

- Remove the bar, insert the first part of the protection then the bar (with a definitive tightening) then the second part of the protection :



- Repeat these operations for all connection ranges.

- Perform the sealing(s) of the sealable terminal shields if necessary :

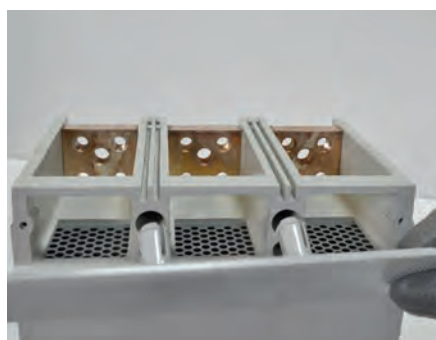


**i** In case of cable installation, make the cuts of the protections using a file according to the section.

**15 SET OF TERMINAL COVERS - IP20 (FLAT) CAT.NO 4 225 90 (3P) / 4 225 91 (4P)**

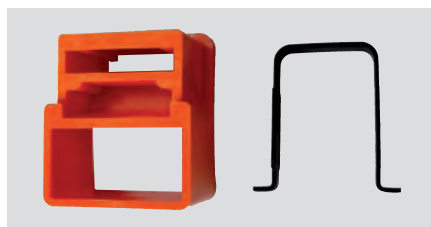
■ **Example of terminal cover 3P mouting :**

- Insert the terminal cover into the holes provided in the DPX<sup>3</sup> to the clip :



**16 PADLOCK FOR LOCKING IN "OPEN" POSITION (CAT.NO 0 262 60)**

Composition of the Cat.no :



- Position the product in the open position (OFF).

- Insert the part in the form of Omega ( $\Omega$ ) in the lateral openings of the DPX<sup>3</sup> at the position 1 :



- Place the orange plastic piece on the handle and the Omega-shaped part ( $\Omega$ ) :



- Insert the padlock(s). It is possible to put 4 maximum padlocks with a diameter of 6 mm minimum to 8 mm maximum. Example with 1 padlock Cat.no 0 227 97 :



**17 REAR TERMINALS (UPSTREAM AND DOWNSTREAM)**

Composition: long connections for DPX<sup>3</sup> 3 poles.

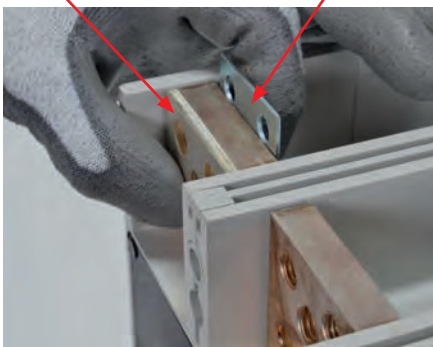


Mounting :

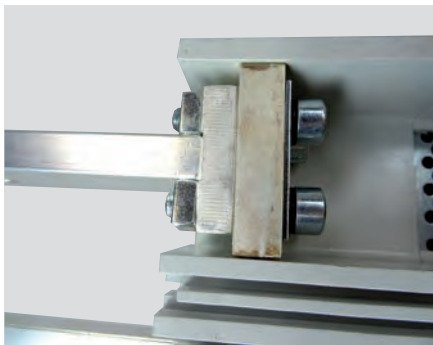
- Adapt the installation of the shims according to the intensity :
  - $I \leq 800A \rightarrow$  spacer 1.5 mm thick + spacer 4 mm
  - $I \geq 1000A \rightarrow I \geq 1000A \rightarrow$  spacer 1.5 mm thick


Example with the mounting of the 2 spacers :

4 mm spacer behind the connection area  
 1.5 mm spacer in front of the connection area

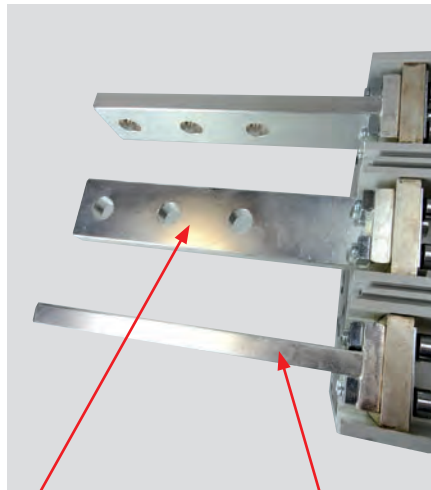


- Set up a rear terminal with 4 square nuts, the 4 Spring lock washers and the 4 CHC screws.
- Tighten the 4 screws to the torque of 15 N.m. (6 mm Allen key).



 It is possible to position the rear terminals (horizontal) or in vertical position (90°), the fixing holes of the terminals or bars are therefore on the top or on the side.

Example of the 2 mountings :

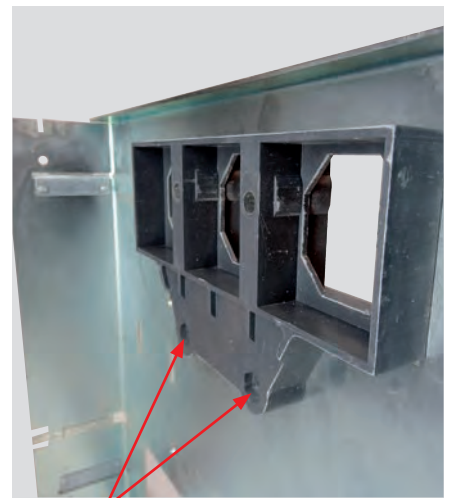


Horizontal

Vertical



- Repeat these operations for all rear terminals (6 or 8).
- Set up the 2 grey plastic fixing frames and fix them to the plate using the hexagon head screws (M8), flat washers, spring washers and nuts.



Location for inserting screws (front part)



Rear part



- Place the guide-stoppers in the places indicated on the DPX<sup>3</sup> as well as the insulated shields on the plastic frames :

Guide-stoppers



Insulated shields



- Fix the DPX<sup>3</sup> in the inserts of the plastic frame using the screws supplied with the circuit breaker (or switch) :

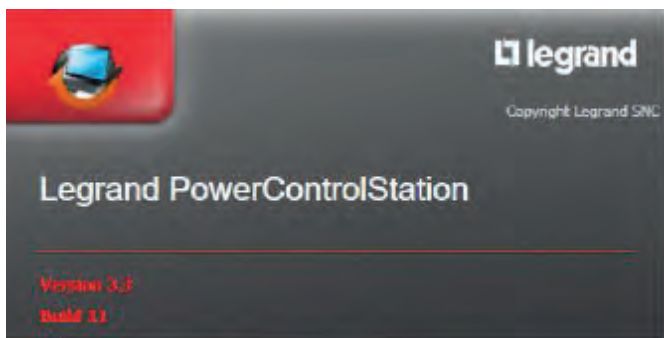


- Set up the 2 sealable terminal shields as well as the seal(s) if necessary :



# PCS SOFTWARE

Legrand power control station is intuitive and easy to use. It is a tool for consulting and testing the proper functioning of the electronic card that equips our electronic devices of the DMX<sup>3</sup> range (except DMX<sup>3</sup> 1600)-all electronic and thermal magnetic with integrated fault current protection DX<sup>3</sup> add-on modules with integrated measurement-CX<sup>3</sup> EMS. It is very useful for the maintenance service, to check the shape of the adjustment curve, to visualize the fault history and to check the different parameters directly on the device without touching the device. The software is available in 13 languages.



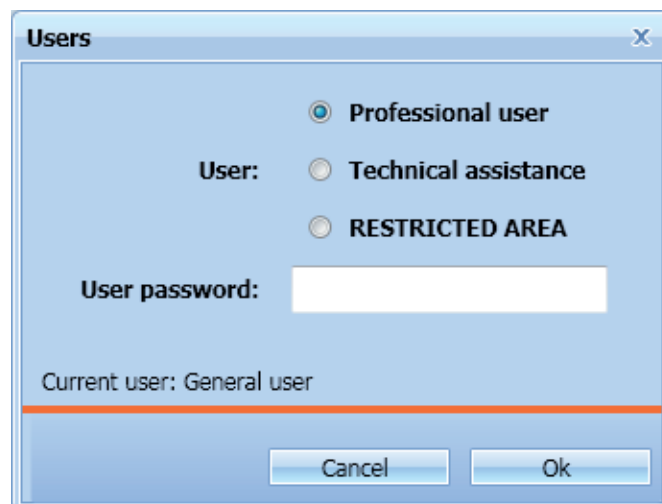
## THE MINIMUM REQUIREMENTS OF THE COMPUTER TO RUN THE SOFTWARE :

- PC with Pentium III class processor
- Minimum RAM memory required 1GB, recommended 2GB
- Resolution 1024 x 768
- Colors 32 bit
- Pre-requisite mouse software
- Windows 7 or higher
- Microsoft.NET 4.0 or upgrade

### ■ Mini USB cable type B



The different access levels are available for each user category:



- Standard user → no password
- Business user → password 0000
- Legrand technical support → confidential
- Reserved area → confidential

### COMPATIBILITY TABLE WITH VERSION 3.3 PCS :

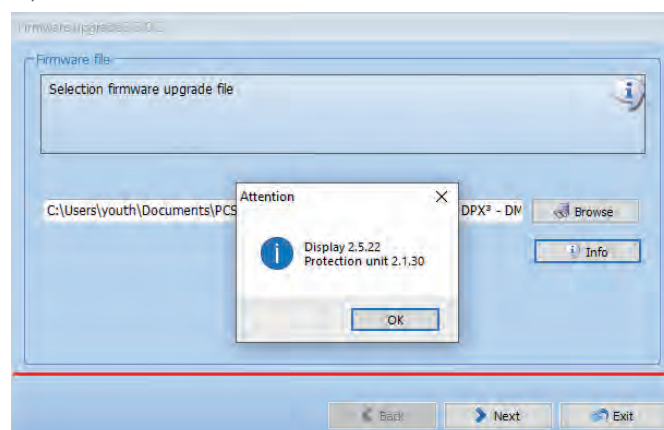
| Product          | Version | Range          | Minimum compatible version |
|------------------|---------|----------------|----------------------------|
| DMX <sup>3</sup> | MP4     | 2500-4000-6300 | Screen software 2.5.5.X    |
|                  | MP6     | 2500-4000-6300 | Screen software 3.2.X      |

| Product          | Version | Range  | Minimum compatible version |
|------------------|---------|--|----------------------------|
| DPX <sup>3</sup> | 160     | Thermal magnetic with earth fault protection | rev. 5 (*half 2016)        |
|                  |         | Only earth fault protection                  | rev. 5 (*half 2016)        |
|                  | 250     | Thermal magnetic with earth fault protection | rev. 5 (*half 2016)        |
|                  |         | Only earth fault protection                  | rev. 5 (*half 2016)        |
|                  |         | Electronic                                   | rev. 4                     |
|                  |         | Electronic with earth fault protection       | rev. 4                     |
|                  | 630     | Electronic                                   | rev. 4                     |
|                  | 1600    | Electronic                                   | rev. 2                     |

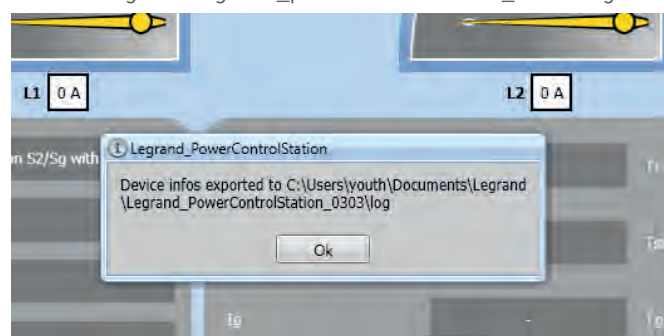
The installation procedure and connection to the software, please refer to the instructions LE08865AB.

The different functions of the software :

- Firmware update: run the device firmware update feature. This operation is reserved exclusively for Legrand qualified personnel.



- Print on the file: create a complete file containing all the data read by the software and present on the device. ("... \Documents\legrand\legrand\_powercontrolstation\_03xx \ log").



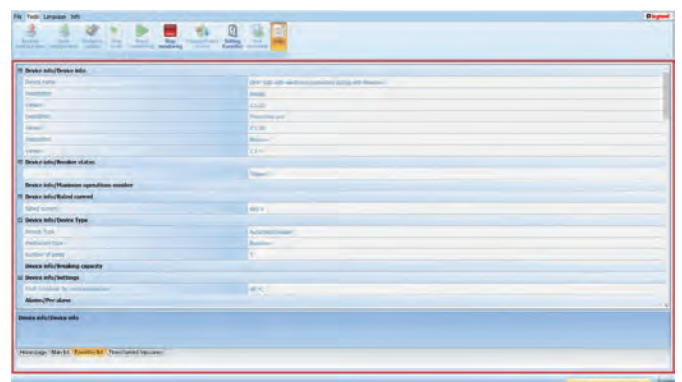
- Start monitoring: read the device information (versions – parameters – fault histories, etc.). The different pages of readings :

The yellow/white bar at the bottom of the page on the right is activated.

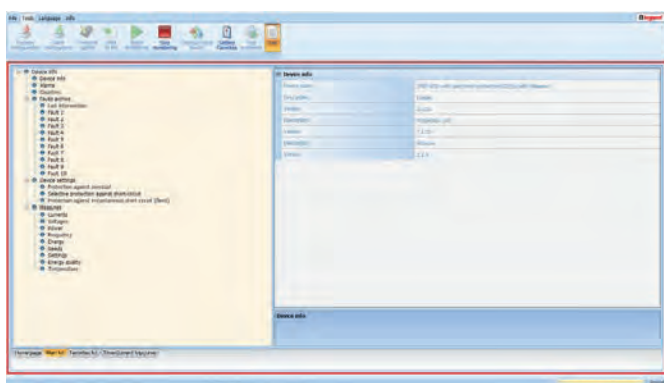
### ■ Home page



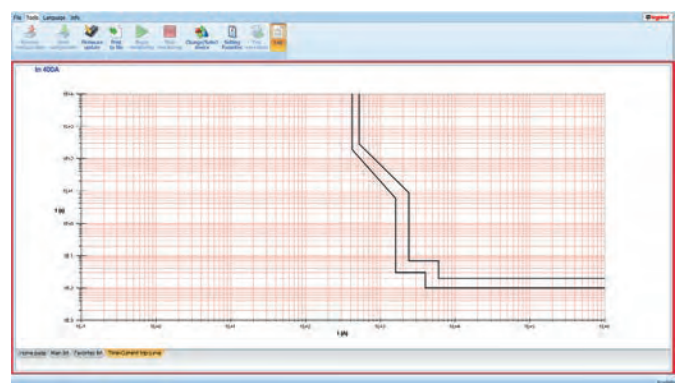
### ■ Favorites list



### ■ General list



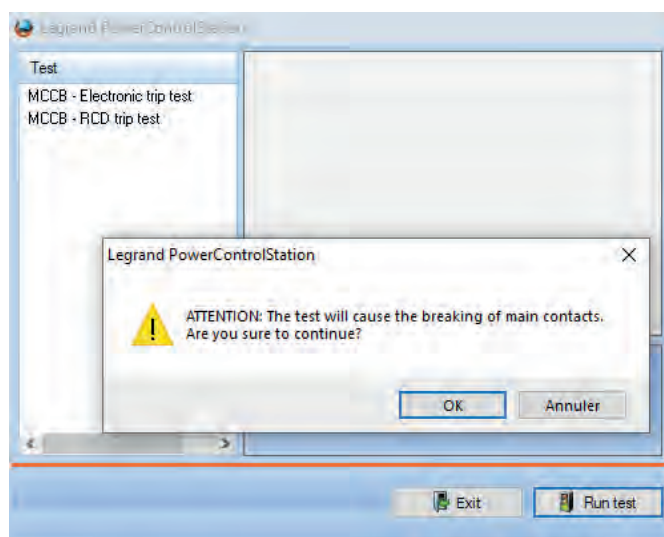
### ■ Tripping curves



- Stop monitoring: stop playback of the device (the yellow/white bar at the bottom of the page on the right is no longer active).



- Change/select device: in case of a prolonged shutdown, click on this tab to refresh the connection with the connected device.
- Favorite setting: in this tab, you can find all the information gathered on a single tab, version of the device, its settings, defect histories, etc...
- Test run: allow the device to be checked for proper operation. Attention, to ensure proper operation of this test, it is imperative to check that the device is properly powered (external power supply for electronic circuit breaker and mains supply for differential circuit breaker).



- Log: create and save the different steps of communication with the device (for all operations of the firmware update, think about clicking "Log").

# SPECIFIC FUNCTIONS

## Integrated measurement

With the new electronic DPX<sup>3</sup> circuit breakers with integrated measurement, it is very easy to monitor the parameters of the different circuits of the installation without any external device, without current transformer or additional voltage socket.

The measured data can also be consulted remotely on a computer equipped with a supervision software, via the communication interface Cat.no 0 046 89.

The integrated measurement is available on the DPX<sup>3</sup>, making sure that the DPX<sup>3</sup> electronic card is powered by the external power supply Cat.no 4 210 83 or by the communication interface MODBUS Cat.no 4 210 75.

The measured values are displayed directly on the LCD screen in front of the devices, or available on the MODBUS network.

The measurement part of the electronic card remains independent of the proper operation of the protection part of the DPX<sup>3</sup>.


Internal batteries, accessible from the front of the product, allow the consultation and adjustment of the different protection parameters without main voltage source.

The integrated measurement function is available in the DMX<sup>3</sup>, DPX<sup>3</sup> and DX<sup>3</sup> ranges.

The touch screen Cat.no 0 261 56 installed on the door of the cabinets is an innovative solution that allows to visualize information from 8 devices: DX<sup>3</sup>, DPX<sup>3</sup>, DMX<sup>3</sup> or EMDX<sup>3</sup> measuring units.

Legrand also offers a complete range of meters, measuring units and current transformers for installations equipped with devices without integrated measurement.



 The technical guide: energy management in an electric board is available for download on <http://www.export.legrand.com/>.

**THE MEASUREMENT INTEGRATED IN DPX<sup>3</sup> 630-1600 ALLOWS A READING OF THE FOLLOWING QUANTITIES, IN THE ORDER OF DISPLAY :**

- I1: current phase 1-A (1).
- I2: current phase 2-A (1).
- I3: current phase 3-A (1).
- In: neutral current (for DPX<sup>3</sup> 4P)-A (1).
- IG: Earth current (for SG version)-A (1).
- U12: compound voltage between phases 1 and 2 (for DPX<sup>3</sup> 3P/4P)-V.
- U23: compound voltage between phases 2 and 3 (for DPX<sup>3</sup> 3P/4P)-V.
- U31: compound voltage between phases 3 and 1 (for DPX<sup>3</sup> 3P/4P)-V.
- U1N: single voltage between neutral and phase 1 (for DPX<sup>3</sup> 4P)-V.
- U2N: single voltage between neutral and phase 2 (for DPX<sup>3</sup> 4P)-V.
- U3N: single voltage between neutral and phase 3 (for DPX<sup>3</sup> 4P)-V.
- Freq: frequency-Hz.
- PTOT: active power-kW.
- Qtot: reactive power-kvar.
- PF: power factor.
- Ep ↓ : active energy meter consumed or returned, with a direction of passage from the top terminals to the bottom-kWh terminals.
- Ep ↑ : active energy meter consumed or returned, with a direction of passage from the bottom terminals to the top-kWh terminals.
- Eq ↓ : reactive energy meter consumed or returned, with a direction of passage from the top terminals to the bottom-kvarh terminals.
- Eq ↑ : reactive energy meter consumed or returned, with a direction of passage from the bottom terminals to the top-kvarh terminals.
- THDU12 : Harmonic rate of the compound voltage between phases 1 and 2 (for DPX<sup>3</sup> 3P/4P)-%.
- THDU23 : Harmonic rate of the compound voltage between phases 2 and 3 (for DPX<sup>3</sup> 3P/4P)-%.
- THDU31 : Harmonic rate of the compound voltage between phases 1 and 3 (for DPX<sup>3</sup> 3P/4P)-%.
- THDU1N : Harmonic rate of the single voltage between neutral and phase 1 (for DPX<sup>3</sup> 4P)-%.
- THDU2N : Harmonic rate of the single voltage between neutral and phase 2 (for DPX<sup>3</sup> 4P)-%.
- THDU3N : Harmonic rate of the single voltage between neutral and phase 3 (for DPX<sup>3</sup> 4P)-%.
- THDI1 : phase 1-% current harmonic rate.
- THDI2 : phase 2-% current harmonic rate.
- THDI3 : phase 3-% current harmonic rate.

<sup>(1)</sup>Also accessible on electronic DPX<sup>3</sup> without measuring unit..



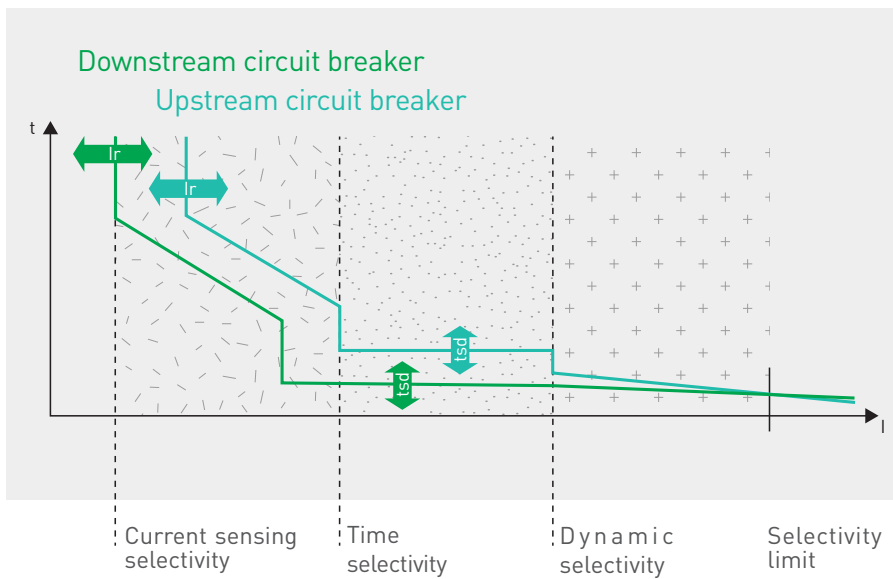
**To navigate from one value to another, you have to press "▶". Going back is impossible, you have to take a whole tour.**

# SPECIFIC FUNCTIONS

## SELECTIVITY

Several techniques are used to achieve selectivity :

- Current sensing selectivity, used for final circuits with low short-circuit levels,
- Time selectivity, ensured by a delay in triggering the upstream circuit breaker,
- Dynamic selectivity, optimally using the characteristics of Legrand devices in the energy zone,
- Logical selectivity, taking advantage of the possibilities of communication between devices in the energy zone.



### ■ The current sensing selectivity

This technique is based on the intensity of the upstream and downstream circuit breaker tripping curves. It is checked by comparing these curves making sure that they do not overlap. It applies to the overload area and the short circuit area and the further apart the ratings of the devices, the better the selectivity:

- On overloads :

To have selectivity in the overload area, the ratio of the adjustment currents ( $I_r$ ) must be at least equal to 2.

- On short-circuits :

For selectivity in the short-circuit area, the ratio of the magnetic adjustment currents ( $I_{sd}$ ) must be at least equal to 1.5.

The ampere-metric selectivity is well suited for final circuits where short circuit levels are relatively low.



### ■ Time selectivity

This technique is based on the time lag of series circuit breaker tripping curves. It is checked by comparison of curves and applies for selectivity in the area of short circuits. It is used in addition to the current sensing selectivity in order to obtain a selectivity beyond the magnetic adjustment current of the upstream circuit breaker.

It is then necessary that :

- it must be possible to set a time delay on
- the upstream circuit breaker is capable of withstanding the short circuit current and its effects for the duration of the delay
- the trunking through which travelled by this current passes can withstand the thermal stresses ( $I^2t$ ).

The non-triggering time of the upstream unit shall be longer than the breaking time (including a possible delay) of the downstream device. DPX<sup>3</sup> circuit breakers have several adjustment positions for their time-out in order to achieve multi-stage selectivity.

### ■ Dynamic selectivity

The electronic triggers of the DPX<sup>3</sup> circuit breakers have an additional 2-level setting to reinforce their selectivity for achievements for which the requested selectivity level is maximum.

- "low" for a normal selectivity level.
- "high" for a high selectivity level.

This technique allows to take advantage of the performance of the Legrand devices in compliance with the installation. When there is no particular selectivity requirement or if the device protects a terminal circuit, the activation of this function is not necessary.

These two settings appear in the drop-down menu of the electronic DPX<sup>3</sup>.

### ■ Logical selectivity

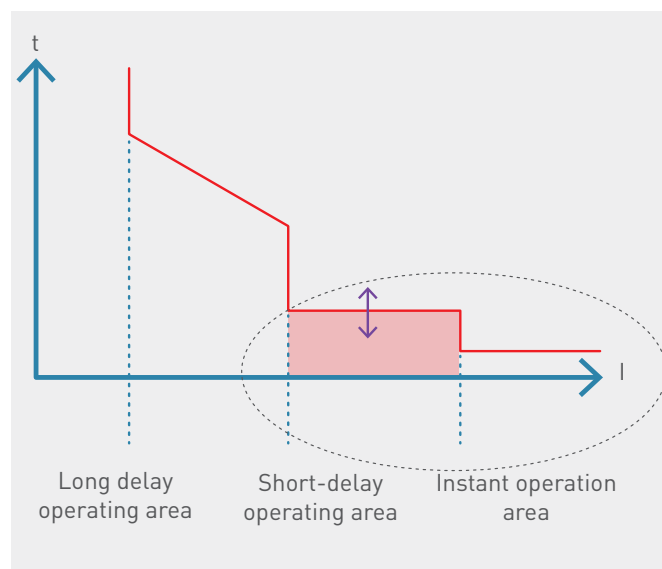
Logical selectivity is a "smart" selectivity that is achieved by communicating between the interconnected DPX<sup>3</sup>/DMX<sup>3</sup> electronic circuit breakers through an external wired connection.

The logical selectivity intervenes on the short-delay and instantaneous operating areas of the tripping curve.

It concerns short-circuits of medium and high intensity (energy part).

It does not act on the long delay part of the curve (current sensing selectivity) dealing with overloads.

### Electronic release



# Residual current relay Cat.no 0 260 88

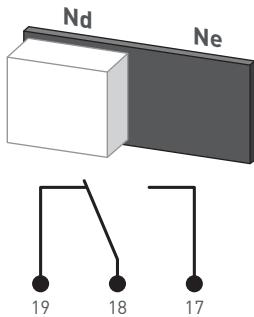
**PRINCIPLE**

Residual current relays make it possible to transform DPX<sup>3</sup> circuit breakers and switches into differential, which are not originally foreseen, but must be equipped with a trigger.

**DIAGRAMS**

With the use of a coil with a lack of tension, it is necessary to reset the DPX<sup>3</sup>.

■ Positive safety position slider in Nd

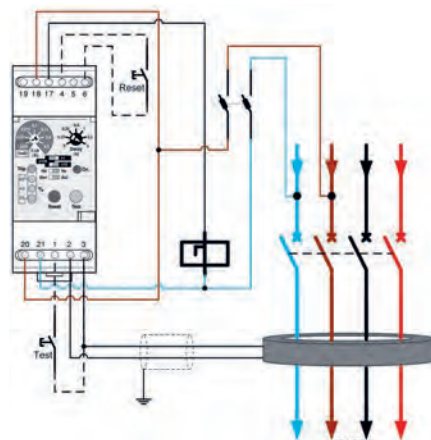


Position of contacts in powered device condition.

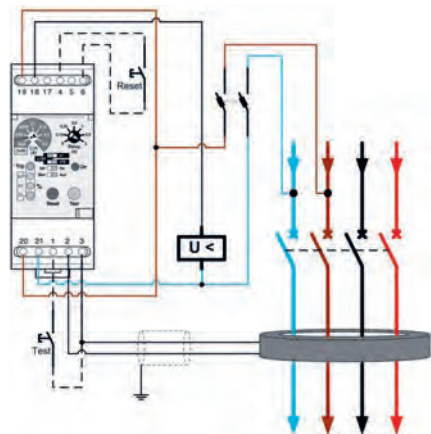
Warning: in case of fault of the connection coil-relay, the contact closes between terminals 17 and 18 irrespective of the position programmed on the selector.

In addition, in case of no voltage, the contact closes between 17 and 18 (opening of the associated circuit breaker).

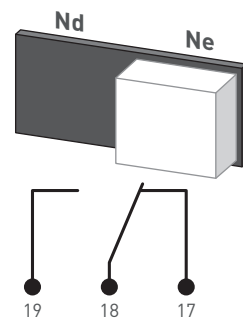
With a shunt release :



With an undervoltage coil :



■ Standard safety position slider in Ne



Position of contacts in powered device condition.

Warning: in case of fault of the connection coil-relay, the contact closes between terminals 18 and 19 irrespective of the position programmed on the selector.

**i** All active conductors must pass through the coil for proper operation of the relay, this excludes PE and PEN diagrams.

## FRONT FACE

- 1- setting the  $I\Delta n$ .
- 2- test button.
- 3- reset button.
- 4- power indicator light (green).
- 5- indicator of the triggering of the residual current relay (red)/interruption relay-torus connection (flashing red).
- 6- timer setting.
- 7- selection of the multiple of the  $I\Delta n$  calibre.
- 8- reset mode selection.
- 9- selecting the status of the output relay.
- 10- fault current indication in%  $I\Delta n$ .

## SETTINGS

### ■ Sensitivity setting $I\Delta n$

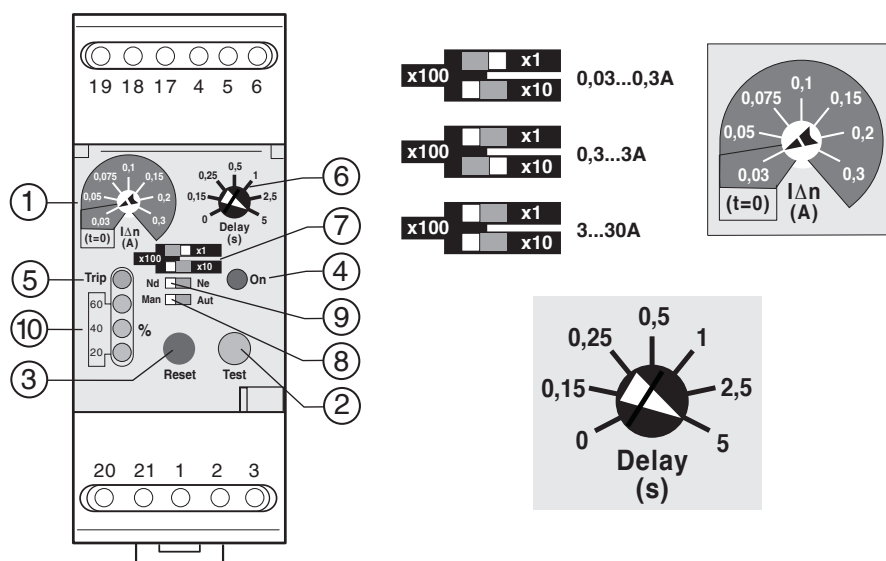
The sensitivity of the residual current relay is obtained by a first combination of switch 7 used to determine the multiple of the rotary slider 1 refining the setting of the  $I\Delta n$ .

Depending on the torus used, the mini sensitivity may vary. If the set value of the  $I\Delta n$  is less than its mini value, it is the latter that will be taken into account.

## Time-lag

Time-lag allows the trigger of the associated DPX<sup>3</sup> to be delayed if the defect is maintained during this period.

With a setting of  $I\Delta n$  at 0.03 A, regardless of the time delay recorded, the trigger will be instantaneous.



The residual current relay must be adjusted according to the need for differential selectivity in time and sensitivity.

# SPECIFIC FUNCTIONS

## COIL CHARACTERISTICS

| Cat.no                                    | 0 260 92 | 0 260 93 | 0 260 94 | 0 260 95 | 0 260 96 | 0 260 97 | 0 260 98 |
|---|----------|----------|----------|----------|----------|----------|----------|
| Diame-<br>ter<br>(mm)                     | 35       | 80       | 110      | 140      | 210      | 150      | 310      |
| IΔn –<br>mini<br>(mA)                     | 30       | 30       | 100      | 300      | 300      | 500      | 1000     |
| I <sub>n</sub> (A)                        | 70       | 170      | 250      | 250      | 400      | 250      | 630      |
| I <sub>max</sub> =<br>(6×I <sub>n</sub> ) | 420      | 1020     | 1500     | 1500     | 2400     | 1500     | 3780     |

### ■ Choice and recommendation :

This depends on the minimum residual current to be detected and the inner diameter of the coil to pass all active conductors. For a high transient current application, the standard requires on the manufacturer a maximum test threshold at 6 x in (immunization with false homopolar currents according to EN/IEC 60947-2 Annex M).

**Example 1** : an installation consisting of ventilation systems with a nominal current of 150A.

According to EN/IEC 60947-2 Annex M, the coil to be selected is Cat.no 0 260 93: I<sub>n</sub> = 170 A

6 x I<sub>n</sub> = 1020 A

For a low transient current application less than 6 x in, this formula can be applied 6 x in (see table above).

I<sub>n</sub> (nominal current of the unit).

**Example 2** : for the coil Cat.no 0 260 93 with a device I<sub>n</sub> 150 = 6,8

1020

150

The maximum permissible overload is 6,8 x I<sub>n</sub>

**IΔn mini** : minimum threshold to be set on the differential relay depending on the size of the coil to avoid inadvertent triggering.

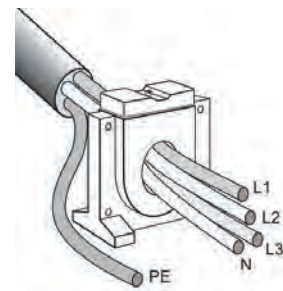
**I<sub>n</sub>** : nominal current of the unit.

**I<sub>max</sub>** : see choice and recommendation.

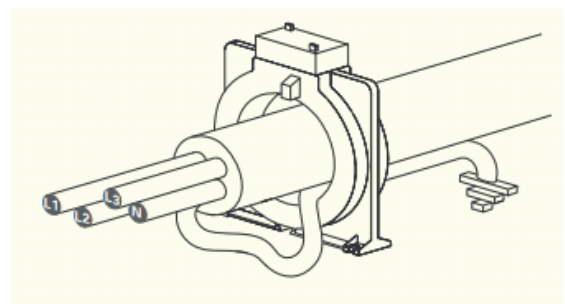
To ensure proper operation of the residual current relay, please follow the recommendations below :

- Reduce the distance between the coil and the residual current relay to a minimum.
- Use shielded or twisted cables.
- Do not put the connection cables of the coil and the residual current relay in parallel to the power conductors or close to electromagnetic fields (e.g. high voltage transformer).
- To achieve optimum accuracy, conductors must be centered in the coil.
- Different implementation options :

Case 1-flexible or conductive bars must be ensured that the 4 active conductors are inside the coil and centered :



Case 2-by 5G cable for example, in case the PE passes through the coil, then this conductor must be put back in the opposite direction to regularize the field as the image below.



# Notes

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# ACCESSORIES & SPARE PARTS

The DPX<sup>3</sup> and the accessories of the range have dedicated spare parts.

| PRODUCT              | CAT.NO   | DESIGNATION                           | CONTENT  |   |
|----------------------|----------|---------------------------------------|--|---|
| DPX <sup>3</sup> 630 | 0 262 30 | Insulated shields                     |     | x 3   |
|                      | 0 263 50 | Incoming or outgoing swivel terminals |     | Upstream and downstream 3P  |
|                      | 0 263 51 | Incoming or outgoing swivel terminals |   | Upstream and downstream 4P  |
|                      | 9 802 56 | Kit for DPX <sup>3</sup> 630          |   | 3 insulated shields, 8 M8 screws, 8 washers, 4 fixing screws, 4 insulators, 4 nuts, 4 flat washers & 4 Grower lock washers                        |
|                      | 9 802 64 | Connection terminal                   |   | 1 plastic insulator & 1 nut   |
|                      | 9 802 68 | Spare draw-out                        |   | 1 plastic guide & 1 screw   |
|                      | 9 802 69 | Motor spare parts                     |  | 1 connector 8 wires, 1 plastic protection, 4 metric screws, 2 fixing screws for plastic protection, 1 motor fault lever + 1 axis, & 1 plastic tab |
|                      | 9 802 97 | Interlock fork                        |   | x 1   |
|                      | 9 812 40 | Kit spare handle                      |   | 7 black handles for circuit breaker, 3 grey handles for switch & 10 fixing screws   |
|                      | 9 812 41 | Draw-out kit handle                   |   | 3 black handles + 3 fixing screws   |
|                      | 9 812 42 | Draw-out front cover                  |  | 1 handle + 1 front cover  |
|                      | 9 803 86 | Plugging internal wiring clip         |   | x 12  |

| PRODUCT               | CAT.NO   | DESIGNATION                   | CONTENT  |
|-----------------------|----------|-------------------------------|--|
| DPX <sup>3</sup> 1600 | 9 802 71 | Spare draw-out 3P             |  2 covers + 4 screws  |
|                       | 9 802 72 | Spare draw-out 4P             |  2 covers + 6 screws  |
|                       | 9 802 57 | Kit for DPX <sup>3</sup> 1600 |  3 insulated shields, 2 screw covers 4P, 2 screw covers 3P, 8 M8 screws x 60mm + 8 flat washers + 8 Grower lock washers, 24 M10 screws + 24 Grower lock washers |
|                       | 9 802 70 | Motor spare parts             |  1 connector 8 wires, 1 connector 7 wires, 1 fault motor lever, 1 screw kit, 2 toothed washers 1 axis & 1 plastic cap   |
|                       | 9 802 98 | Interlock fork kit            |  2 plastic forks, 2 mouting plastic parts, 2 finger lever, 4 metric screws & 4 insert-nuts   |
|                       | 9 812 50 | Kit spare handle              |  7 black handles for circuit breaker, 3 grey handles for switch & 10 fixing screws  |
|                       | 9 812 51 | Draw-out kit handle           |  3 black handles + 3 fixing screws  |
|                       | 9 812 52 | Draw-out front cover          |  1 handle + 1 front cover, 1 handle guide + 1 screw, fixing screw kit   |
|                       | 9 802 73 | Spare draw-out                |  1 plastic guide & 1 screw  |
|                       | 9 803 85 | Auxiliary transparent cover   |  1 transparent plastic cover + 1 screw (x5)   |

# SPARE PARTS AND ACCESSORIES

| PRODUCT                      | CAT.NO   | DESIGNATION                                 | CONTENT   |   |
|------------------------------|----------|---|---|---|
| DPX <sup>3</sup><br>630/1600 | 0 290 52 | Contact terminal                            |    | x 1   |
|                              | 4 210 82 | Batteries kit                               |   | 1 drawer for DPX <sup>3</sup> 160/250<br>1 drawer for DPX <sup>3</sup> 630/1600<br>2 CR1616 batteries DPX <sup>3</sup> 630/1600 |
|                              | 4 210 89 | Mini-usb cover                              |  | x 20  |
|                              | 4 210 92 | DPX <sup>3</sup> supply cables              |  | x 20  |
|                              | 4 210 95 | Sealing kit                                 |  | x 4   |
|                              | 4 222 37 | Retrofit kit DPX 630 - DPX <sup>3</sup> 630 |  | 1 lever, 4 countersunk screws,<br>4 flat head screws, 1 axis<br>& 4 insert-nuts   |



To know more,

check [export.legrand.com](http://export.legrand.com)

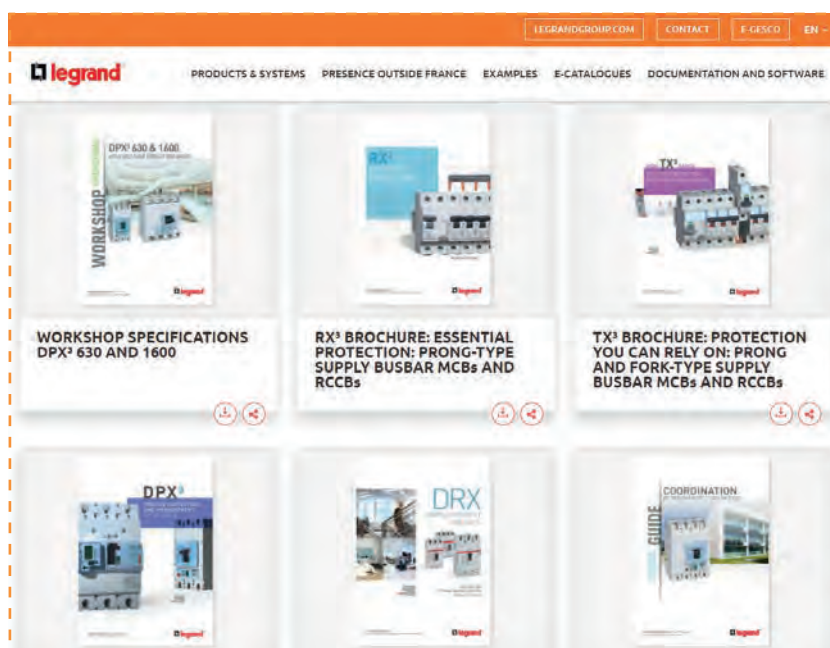


All technical data of the products inside this workshop specifications book are available on : [www.legrand.com/ecatalogue/](http://www.legrand.com/ecatalogue/)

>Click on >LIBRARY OF DOCUMENTS



>Documentation





# Notes

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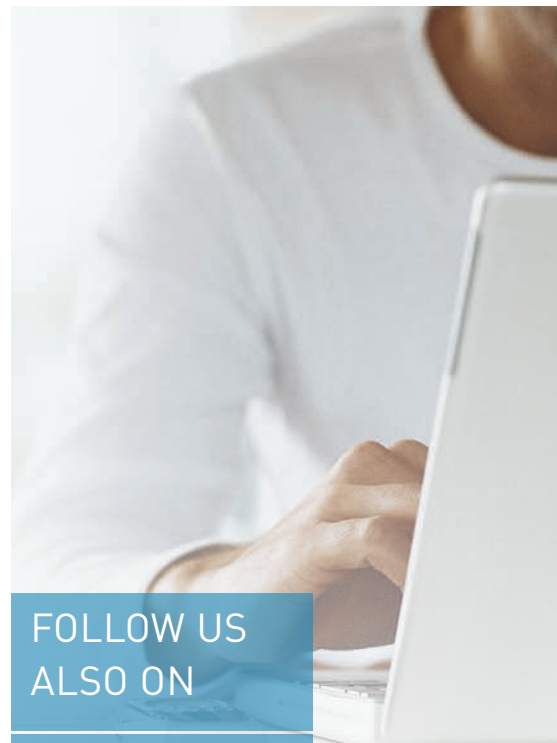
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**Head office**  
and International Department  
87045 Limoges Cedex - France  
Tel: + 33 (0) 5 55 06 87 87  
Fax: + 33 (0) 5 55 06 74 55