

# DPX<sup>3</sup> 630 thermal magnetic circuit breakers DPX<sup>3</sup>-I 630 switch disconnectors

Reference(s) :

422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
015/ 016/ 017/ 018/ 019/ 020/ 021/ 022/ 023/ 024/ 025/ 026/ 027/ 028/ 029/ 030/  
031/ 032/ 033/ 034/ 035/ 036/ 037/ 038/ 039/ 040/ 041/ 042/ 043/ 044/ 045/ 046/  
047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
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## 1. USE

DPX<sup>3</sup> platform, for premium segment, is able to cover extended ranges in terms of breaking capacities and rated currents, make protection suitable for different levels of power involved in installations.

DPX<sup>3</sup> platform provide easy assembly procedures during the phase of installation and mounting of accessories, suitable for professional use.

## 2. RANGE

### Circuit breakers

| DPX <sup>3</sup> 630 |        |        |          |        |        |          |
|----------------------|--------|--------|----------|--------|--------|----------|
| 36 kA                |        |        | 50 kA    |        |        |          |
| I <sub>n</sub> (A)   | 3P     | 4P     | 3P + N/2 | 3P     | 4P     | 3P + N/2 |
| 250                  | 422000 | 422005 | -        | 422014 | 422019 | -        |
| 320                  | 422001 | 422006 | 422010   | 422015 | 422020 | 422024   |
| 400                  | 422002 | 422007 | 422011   | 422016 | 422021 | 422025   |
| 500                  | 422003 | 422008 | 422012   | 422017 | 422022 | 422026   |
| 630                  | 422004 | 422009 | 422013   | 422018 | 422023 | 422027   |
| 70 kA                |        |        | 100 kA   |        |        |          |
| I <sub>n</sub> (A)   | 3P     | 4P     | 3P + N/2 | 3P     | 4P     | 3P + N/2 |
| 250                  | 422028 | 422033 | -        | 422042 | 422047 | -        |
| 320                  | 422029 | 422034 | 422038   | 422043 | 422048 | 422052   |
| 400                  | 422030 | 422035 | 422039   | 422044 | 422049 | 422053   |
| 500                  | 422031 | 422036 | 422040   | 422045 | 422050 | 422054   |
| 630                  | 422032 | 422037 | 422041   | 422046 | 422051 | 422055   |

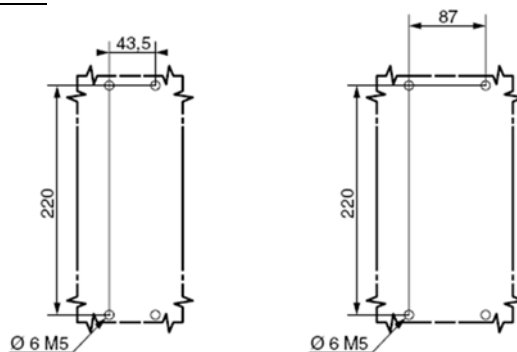
### Switch disconnectors

| DPX <sup>3</sup> -I 630 |        |        |
|-------------------------|--------|--------|
| I <sub>n</sub> (A)      | 3P     | 4P     |
| 400                     | 422216 | 422218 |
| 630                     | 422217 | 422219 |

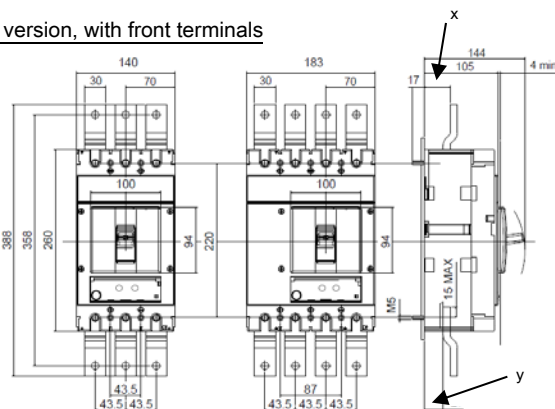
## 3. DIMENSIONS AND WEIGHTS

### 3.1 Dimensions

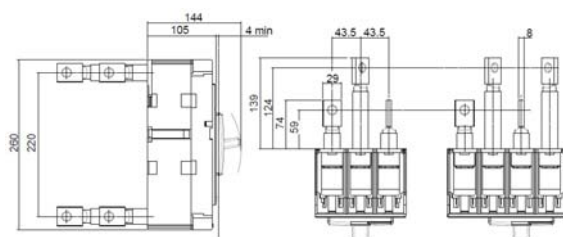
#### Implantation



#### Fixed version, with front terminals



#### Fixed version, with flat rear terminal



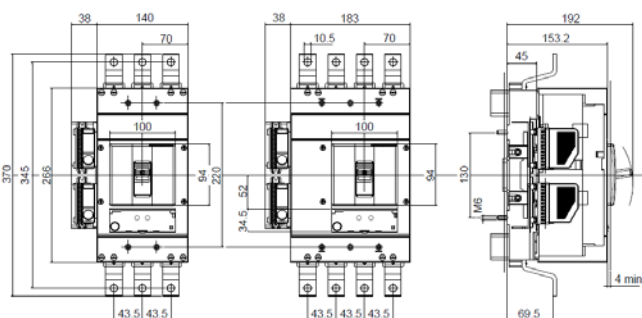
|   | I <sub>n</sub> < 400 | I <sub>n</sub> ≥ 500 A |
|---|----------------------|------------------------|
| x | 37                   | 39                     |
| y | 27                   | 29                     |

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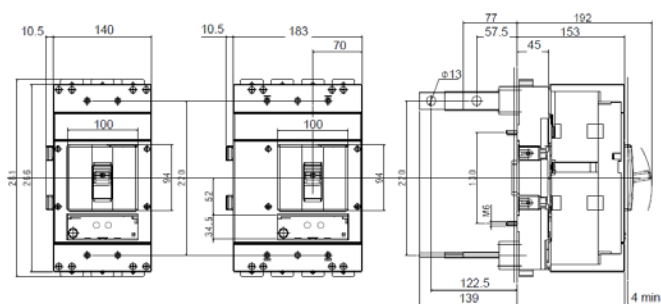
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422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
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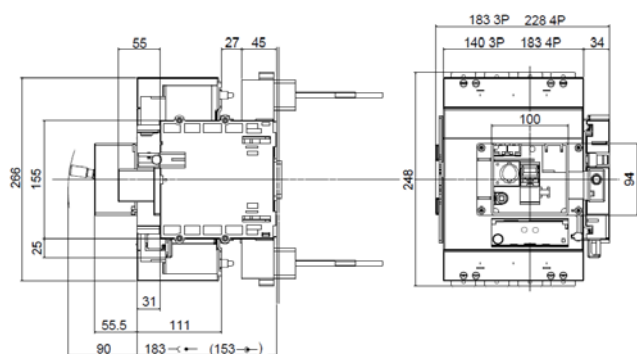
## Plug-in version, with cage terminals



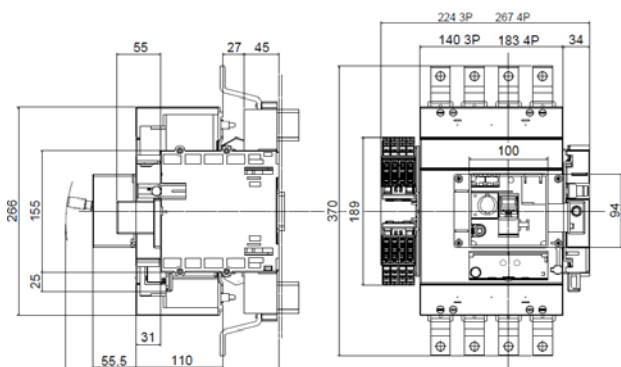
## Plug-in version, without front terminals



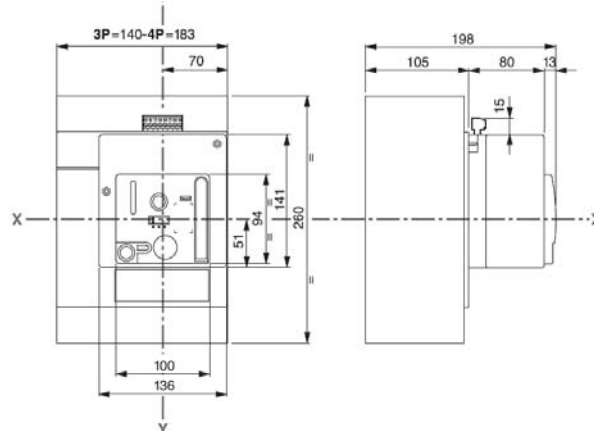
## Draw-out version, flat rear terminals



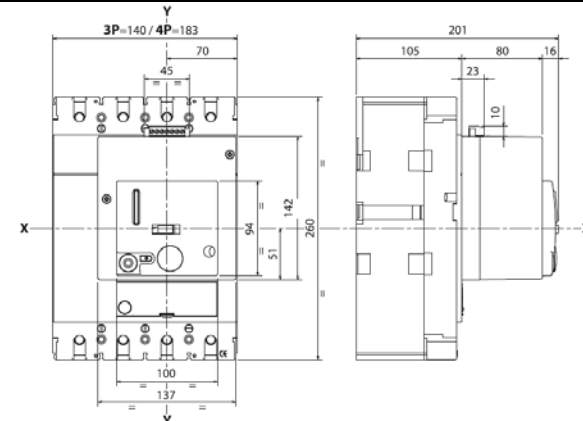
## Draw-out version with sliding auxiliary contacts



## Motor operator for synchronized operations (energy storage type)



## Motor operator for general purpose operations (direct action type)



## 3.2 Weights

| Configuration                       | Weights (Kg)    |                 |                 |                 |
|-------------------------------------|-----------------|-----------------|-----------------|-----------------|
|                                     | 3P              |                 | 4P              |                 |
|                                     | $I_n \leq 400A$ | $I_n \geq 500A$ | $I_n \leq 400A$ | $I_n \geq 500A$ |
| Circuit breaker (fixed version)     | 5.20            | 5.40            | 6.55            | 6.85            |
| Switch disconnector (fixed version) | 5.00            | 5.25            | 6.40            | 6.68            |
| Plug-in (with front terminals)*     | 3.35            | 3.35            | 4.29            | 4.29            |
| Plug-in (with rear terminals)*      | 3.55            | 3.55            | 4.79            | 4.79            |
| Draw-out *                          | 2.3             | 2.3             | 5.5             | 5.5             |

\* to add to fixed version

## 4. OVERVIEW

### 4.1 Supplied with:

- fixing screws (4 for 3P and 4P)
- screws for connections (6 for 3P and 8 for 4P)
- phase insulators (2 for 3P and 3 for 4P)

## 5. ELECTRICAL CONNECTIONS

### 5.1 Mounting possibilities

On plate:

- Vertical
- Horizontal
- Supply inverter type

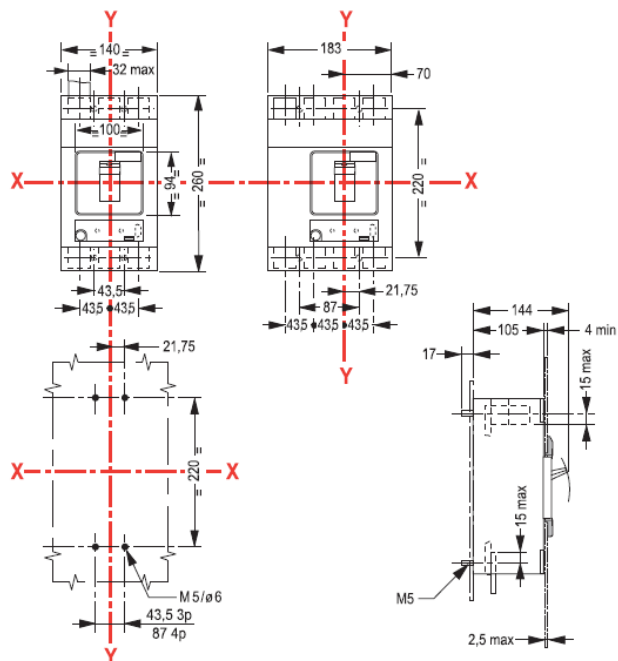
# DPX<sup>3</sup> 630 thermal magnetic circuit breakers DPX<sup>3</sup>-I 630 switch disconnectors

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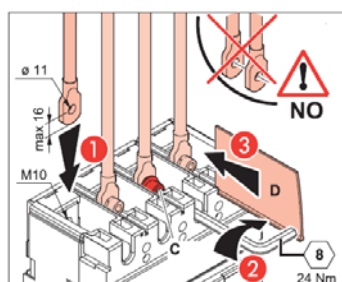
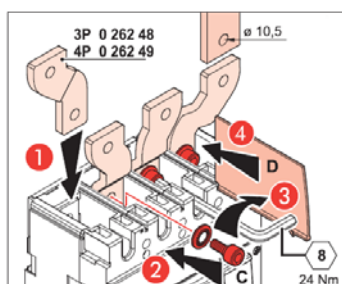
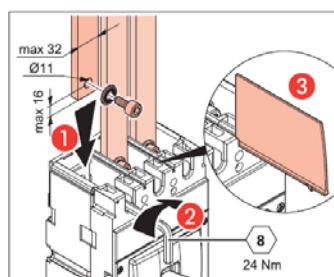
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047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
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## 5.2 Mounting

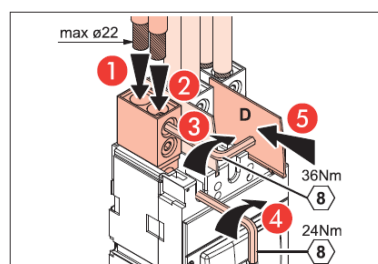
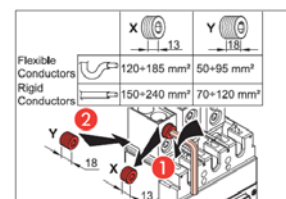
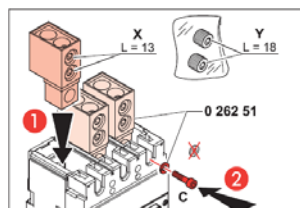
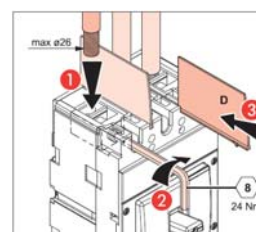
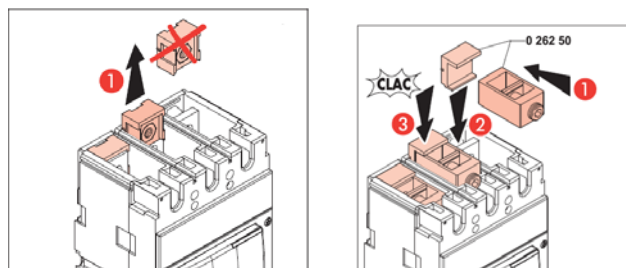
(see instruction sheet for detailed mounting procedures)



### Busbars/cable lugs:



### Cables:



# DPX<sup>3</sup> 630 thermal magnetic circuit breakers DPX<sup>3</sup>-I 630 switch disconnectors

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047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
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## 6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

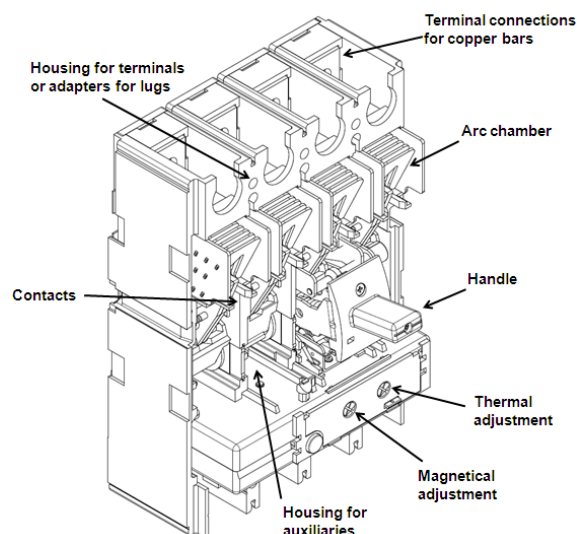
Circuit breaker

| Circuit Breaker                                            | DPX <sup>3</sup> 630 F/N/H/L<br>(36kA, 50kA, 70kA, 100kA)                                                             |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Rated current (A)                                          | 250, 320, 400, 500, 630                                                                                               |
| Poles                                                      | 3 - 4                                                                                                                 |
| Pole pitch (mm)                                            | 42                                                                                                                    |
| Rated insulation voltage (50/60Hz) U <sub>i</sub> (V)      | 800                                                                                                                   |
| Rated operating voltage (50/60Hz) U <sub>o</sub> (V)       | 690                                                                                                                   |
| Rated impulse withstand current U <sub>imp</sub>           | 8                                                                                                                     |
| Rated frequency (Hz)                                       | 50 - 60                                                                                                               |
| Reference ambient temperature(°C)                          | 40 - 50                                                                                                               |
| Operating temperature (°C)                                 | -25 ÷ 70                                                                                                              |
| Mechanical endurance (cycles)                              | 20000                                                                                                                 |
| Mechanical endurance with motor control                    | 10000                                                                                                                 |
| Electrical endurance at I <sub>n</sub> (cycles)            | 4000                                                                                                                  |
| Electrical endurance at 0.5 I <sub>n</sub> (cycles)        | 8000                                                                                                                  |
| Utilization category                                       | A                                                                                                                     |
| Suitable for isolation                                     | Yes                                                                                                                   |
| Type of protection                                         | Thermal-magnetic                                                                                                      |
| Thermal adjustment I <sub>t</sub>                          | (0.8 ÷ 1) × I <sub>n</sub>                                                                                            |
| Magnetic adjustment I <sub>i</sub> (A)                     | (5 ÷ 10) × I <sub>n</sub>                                                                                             |
| Neutral protection for 4P (%I <sub>th</sub> of phase pole) | 100                                                                                                                   |
| Neutral protection for N/2 (A)                             | 200 (I <sub>n</sub> = 320A); 250 (I <sub>n</sub> = 400A);<br>320 (I <sub>n</sub> = 500A); 400 (I <sub>n</sub> = 630A) |
| Dimensions (W x H x D) (mm)                                | 140 x 260 x 105 (3P)<br>183 x 260 x 105 (4P)                                                                          |
| Maximum weight for fixed version (kg)                      | 5.4 (3P)<br>6.85 (4P)                                                                                                 |

Switch disconnectors

| Switch                                                   | DPX <sup>3</sup> -I 630                      |
|----------------------------------------------------------|----------------------------------------------|
| Uninterrupted nominal current I <sub>o</sub> (A)         | 400 - 630                                    |
| Short-time resistive current I <sub>cu</sub> (kA) for 1s | 5 (400A) - 8 (630A)                          |
| Rated short-circuit making capacity I <sub>cm</sub> (kA) | 8(400A) - 14 (630A)                          |
| Rated insulation voltage U <sub>i</sub> (V AC)           | 800                                          |
| Maximum rated operating voltage U <sub>o</sub> (V AC)    | 690                                          |
| Rated impulse withstand voltage U <sub>imp</sub> (kV)    | 8                                            |
| Utilisation category                                     | AC23A (400A) - AC22A (630A)                  |
| Suitable for isolation                                   | Yes                                          |
| Nominal frequency (Hz)                                   | 50-60                                        |
| Operating temperature (°C)                               | -25 ÷ 70                                     |
| Mechanical endurance (cycles)                            | 20000                                        |
| Mechanical endurance with motor control (cycles)         | 10000                                        |
| Electrical endurance at I <sub>n</sub> (cycles)          | 4000                                         |
| Electrical endurance at 0.5 I <sub>n</sub> (cycles)      | 8000                                         |
| Dimensions (W x H x D) (mm)                              | 140 x 260 x 105 (3P)<br>183 x 260 x 105 (4P) |
| Maximum weight for fixed version (kg)                    | 5.25 (3P)<br>6.68 (4P)                       |

## 6.1 Main parts constituting the circuit breaker



## 6.2 Breaking capacity (kA)

|             |                                                           | Breaking capacity (kA) & I <sub>cs</sub> |          |          |           |
|-------------|-----------------------------------------------------------|------------------------------------------|----------|----------|-----------|
|             |                                                           | 3P-4P                                    |          |          |           |
| IEC 60947-2 | U <sub>e</sub> /I <sub>cu</sub> (I <sub>cu</sub> letter)  | 36kA (F)                                 | 50kA (N) | 70kA (H) | 100kA (L) |
|             | 220/240 V AC                                              | 70                                       | 100      | 105      | 150       |
|             | 380/415 V AC                                              | 36                                       | 50       | 70       | 100       |
|             | 440/460 V AC                                              | 30                                       | 40       | 60       | 70        |
|             | 480/500 V AC                                              | 25                                       | 30       | 40       | 50        |
|             | 480/550 V AC                                              | 20                                       | 22       | 25       | 28        |
|             | 600 V AC                                                  | 20                                       | 22       | 25       | 28        |
|             | 690V AC                                                   | 14                                       | 18       | 20       | 22        |
|             | I <sub>cs</sub> (% I <sub>cu</sub> )                      | 100                                      | 100      | 100      | 70        |
|             | Rated making capacity under short circuit I <sub>cm</sub> |                                          |          |          |           |
| NEMA AB-1   | I <sub>cm</sub> (kA) at 415V                              | 76.5                                     | 105      | 154      | 220       |
|             | 220/240 V AC                                              | 70                                       | 100      | 105      | 150       |
|             | 480/500 V AC                                              | 25                                       | 30       | 40       | 50        |
|             | 690 V AC                                                  | 14                                       | 18       | 20       | 22        |

## 6.3 Rated current (I<sub>n</sub>) at 40°C / 50°C

| I <sub>n</sub> (A) | Phases limit trip current |                    |                            |                     |
|--------------------|---------------------------|--------------------|----------------------------|---------------------|
|                    | thermal (I <sub>t</sub> ) |                    | magnetic (I <sub>i</sub> ) |                     |
|                    | 0.8 × I <sub>n</sub>      | 1 × I <sub>n</sub> | 5 × I <sub>n</sub>         | 10 × I <sub>n</sub> |
| 250                | 200                       | 250                | 1250                       | 2500                |
| 320                | 256                       | 320                | 1600                       | 3200                |
| 400                | 320                       | 400                | 2000                       | 4000                |
| 500                | 400                       | 500                | 2500                       | 5000                |
| 630                | 504                       | 630                | 3150                       | 6300                |

\* For neutral adjustment, as explained in technical sheet, please consider the values ratios 100% on set currents.

## 6.3 Load operations

| Force on handle       | I <sub>n</sub> ≤ 400A | I <sub>n</sub> ≥ 500A |
|-----------------------|-----------------------|-----------------------|
| Opening operation (N) | 80                    | 130                   |
| Closing operation (N) | 180                   | 210                   |
| Restore operation (N) | 145                   | 200                   |

# DPX<sup>3</sup> 630 thermal magnetic circuit breakers

## DPX<sup>3</sup>-I 630 switch disconnectors

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### 6.4 Electrodynamic forces

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

| I <sub>cc</sub> (kA) | Maximum Distance (mm) |
|----------------------|-----------------------|
| 36                   | 350                   |
| 50                   | 300                   |
| 70                   | 250                   |
| 100                  | 200                   |

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

### 6.5 Power losses per pole under I<sub>n</sub>

Circuit breaker

|                       | Power losses per pole (W) |         |       |         |       |         |       |         |       |         |
|-----------------------|---------------------------|---------|-------|---------|-------|---------|-------|---------|-------|---------|
|                       | I <sub>n</sub> (A)        |         |       |         |       |         |       |         |       |         |
|                       | 250                       |         | 320   |         | 400   |         | 500   |         | 630   |         |
|                       | Phase                     | Neutral | Phase | Neutral | Phase | Neutral | Phase | Neutral | Phase | Neutral |
| Cage terminals        | 19.2                      | 19.2    | 16.4  | 16.5    | 25.6  | 18.9    | 23.6  | 28.7    | 37.3  | 21.2    |
| Lugs                  | 19.2                      | 19.2    | 16.4  | 16.5    | 25.6  | 18.9    | 23.6  | 28.7    | 37.3  | 21.2    |
| External lugs         | 19.9                      | 19.9    | 17.6  | 16.8    | 27.5  | 19.7    | 26.6  | 30.0    | 42.1  | 23.1    |
| Spreaders             | 20.6                      | 20.6    | 18.8  | 17.1    | 29.3  | 20.4    | 28.2  | 30.6    | 44.7  | 24.1    |
| Rear terminals        | 20.4                      | 20.4    | 18.4  | 17.0    | 28.7  | 20.2    | 28.5  | 30.7    | 45.0  | 24.3    |
| Plugin version        | 26.7                      | 26.7    | 28.8  | 19.6    | 44.9  | 26.5    | 53.9  | 41.1    | 85.3  | 40.5    |
| Circuit breaker + RCD | 22.3                      | 22.3    | 21.5  | 17.7    | 33.6  | 22.1    | 36.1  | 33.8    | 57.2  | 29.2    |

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

Switch disconnectors

|                       | Power losses per pole (W) |         |       |         |
|-----------------------|---------------------------|---------|-------|---------|
|                       | I <sub>n</sub> (A)        |         |       |         |
|                       | 400                       |         | 630   |         |
|                       | Phase                     | Neutral | Phase | Neutral |
| Cage terminals        | 25.6                      | 25.6    | 37.3  | 37.3    |
| Lugs                  | 25.6                      | 25.6    | 37.3  | 37.3    |
| External lugs         | 27.5                      | 27.5    | 42.1  | 42.1    |
| Spreaders             | 29.3                      | 29.3    | 44.7  | 44.7    |
| Rear terminals        | 28.7                      | 28.7    | 45.0  | 45.0    |
| Plugin version        | 44.9                      | 44.9    | 85.3  | 85.3    |
| Circuit breaker + RCD | 33.6                      | 33.6    | 57.2  | 57.2    |

Note: power loss in the table above are referred and measured as described in the standard IEC 60947-3 for switches. Values in the table are referred to a single phase.

### 6.6 DERATINGS

#### 6.6.1 Temperature

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

| I <sub>n</sub> (A) | Temperature Ta (°C) |     |     |     |     |     |     |
|--------------------|---------------------|-----|-----|-----|-----|-----|-----|
|                    | 10                  | 20  | 30  | 40  | 50  | 60  | 70  |
| 250                | 336                 | 307 | 279 | 250 | 250 | 222 | 193 |
| 320                | 416                 | 384 | 352 | 320 | 320 | 288 | 256 |
| 400                | 475                 | 460 | 425 | 400 | 400 | 360 | 320 |
| 500                | 600                 | 550 | 525 | 500 | 500 | 455 | 410 |
| 630                | 700                 | 683 | 650 | 630 | 630 | 580 | 530 |

For derating temperature with other configurations, see table A.

#### 6.6.2 Specific condition use

Climatic conditions

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

Pollution degree

for DPX<sup>3</sup> 630 circuit breakers, degree 3, according to IEC/EN 60947-2

#### 6.6.3 Altitude

Altitude derating for DPX<sup>3</sup> and DPX<sup>3</sup>-I

| Altitude (m)                                    | 2000               | 3000                  | 4000                  | 5000                 |
|-------------------------------------------------|--------------------|-----------------------|-----------------------|----------------------|
| U <sub>e</sub> (V)                              | 690                | 590                   | 520                   | 460                  |
| I <sub>n</sub> (A) (T <sub>a</sub> = 40°C/50°C) | 1 x I <sub>n</sub> | 0.98 x I <sub>n</sub> | 0.93 x I <sub>n</sub> | 0.9 x I <sub>n</sub> |

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## 7. CONFORMITY

DPX<sup>3</sup> range of product concerning circuit-breakers and switch-disconnectors exceed compliance with the IEC/EN standard 60947-2 and 60947-3 respectively. Certification available by IECEE CB-scheme or LOVAG Compliance scheme.

Marks as CCC (China), EAC (Eurasian Federation) or different local certification are available.

DMX<sup>3</sup> are in conformity with the Lloyds Shipping Register, RINA and Bureau Veritas Marine.

DMX<sup>3</sup> respect the European Directives REACH, RoHS, RAEE and Product Environment Product (PEP Ecopassport) are available.

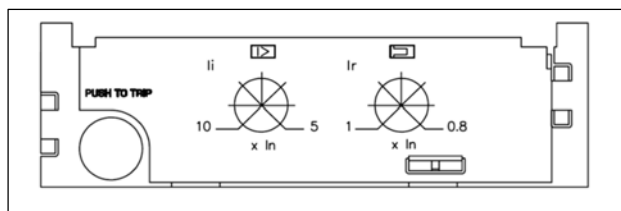
*For specific information, please contact Legrand support.*

### 7.1 Marking

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

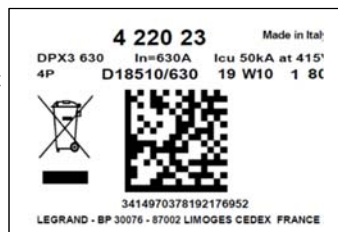
#### Product laser label on front

- Manufacturer responsible
- Denomination, type product, code
- Standard conformity
- Standard characteristics declared
- coloured identification of  $I_{cu}$  at 415V



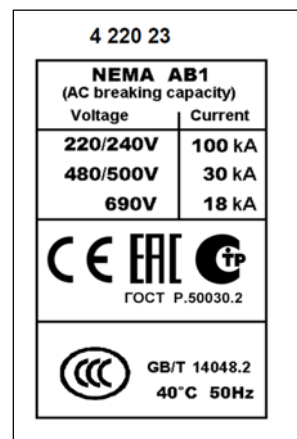
#### Product sticker label on side

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



#### Mark sticker label on side

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



#### Packaging sticker label

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





# DPX<sup>3</sup> 630 thermal magnetic circuit breakers

## DPX<sup>3</sup>-I 630 switch disconnectors

Reference(s) :

422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
015/ 016/ 017/ 018/ 019/ 020/ 021/ 022/ 023/ 024/ 025/ 026/ 027/ 028/ 029/ 030/  
031/ 032/ 033/ 034/ 035/ 036/ 037/ 038/ 039/ 040/ 041/ 042/ 043/ 044/ 045/ 046/  
047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
422 216/ 217/ 218/ 219

## 8. EQUIPMENTS AND ACCESSORIES

### 8.1 Earth leakage modules

| Earth leakage characteristics for DPX <sup>3</sup> 630               |                 |                 |
|----------------------------------------------------------------------|-----------------|-----------------|
|                                                                      | Standard        | with Led        |
| Type                                                                 | A - S           | A - S           |
| Uninterrupted nominal current I <sub>u</sub> (A)                     | up to 630       | up to 630       |
| Rated isolated voltage U <sub>i</sub> (V AC)                         | 500             | 500             |
| Rated operating voltage U <sub>e</sub> (V AC) (50-60Hz)              | 500             | 500             |
| Operating voltage (V AC) (50-60Hz)                                   | 230 ÷ 500       | 110 ÷ 500       |
| Nominal frequency (Hz)                                               | 50 - 60         | 50 - 60         |
| Operating temperature (°C)                                           | -25 ÷ 70        | -25 ÷ 70        |
| Trip                                                                 | electronic      | electronic      |
| Earth leakage time adjustments (s)                                   | 0 - 0.3 - 1 - 3 | 0 - 0.3 - 1 - 3 |
| Earth leakage breaking capacity I <sub>dm</sub> (% I <sub>cu</sub> ) | 60              | 60              |
| Earth leakage protection adjustments I <sub>Δn</sub> (A)             | 0.03 ÷ 3        | 0.03 ÷ 3        |
| Side-by-side mounting                                                | no              | no              |
| Underneath mounting                                                  | yes             | yes             |
| 50% Earth fault detection contact I <sub>Δn</sub>                    | no              | yes             |
| Clip on rail DIN 35                                                  | no              | no              |
| Dimensions (W x H x D) (mm) for 4P                                   | 183 x 152 x 105 | 183 x 152 x 106 |

(Power losses, see par. 5.4)

Standard

I<sub>n</sub> = 400A      3P      *ref. 0 260 60*  
                    4P      *ref. 0 260 61*  
I<sub>n</sub> = 630A      3P      *ref. 0 260 64*  
                    4P      *ref. 0 260 65*

LED version

400A      4P      *ref. 0 260 63*  
630A      4P      *ref. 0 260 67*

### 8.2 Releases (for DPX<sup>3</sup> 630 / DPX<sup>3</sup> 1600)

- shunt releases with voltage:

24 Vac and dc      *ref. 4 222 39*  
48 Vac and dc      *ref. 4 222 40*  
110÷130 Vac and dc      *ref. 4 222 41*  
220÷250 Vac and dc      *ref. 4 222 42*  
380÷440 Vac and dc      *ref. 4 222 43*

| Shunt releases electrical characteristics |                                                       |
|-------------------------------------------|-------------------------------------------------------|
| Rated voltage (U <sub>e</sub> )           | Both ac and dc:<br>24V/48V/110÷130V/220÷250V/380÷440V |
| Voltage range (%U <sub>e</sub> )          | 70 ÷ 110                                              |
| Intervention time (ms)                    | ≤ 50                                                  |
| Power consumption (W/VA)                  | 300                                                   |
| Minimum opening time (ms)                 | 50 ms                                                 |
| Insulation voltage (kV)                   | 2,5                                                   |

- undervoltage releases with voltage:

24 V dc      *ref. 4 222 44*  
24 V ac      *ref. 4 222 45*  
48 V dc      *ref. 4 222 46*  
110 - 125 V ac      *ref. 4 222 47*  
220 - 240 V ac      *ref. 4 222 48*  
380 - 415 V ac      *ref. 4 222 49*

| Undervoltage releases electrical characteristics |                                                   |
|--------------------------------------------------|---------------------------------------------------|
| Rated voltage (U <sub>e</sub> )                  | ac: 24V/110÷125V/220÷240V/380÷415V<br>dc: 24V/48V |
| Voltage range (%U <sub>e</sub> )                 | 85 ÷ 110                                          |
| Minimum opening time (ms)                        | 50                                                |
| Power consumption (W/VA)                         | 1.6 / 5                                           |

- time-lag undervoltage releases (800 ms)

*Time-lag modules with voltage:*

230 V ac      *ref. 0 261 90*  
400 V ac      *ref. 0 261 91*

Universal Release      *ref. 4 226 23*  
(to be equipped with a time-lag module 0 261 90/91)

### 8.3 Auxiliary contacts (for DPX<sup>3</sup> 630 / DPX<sup>3</sup> 1600)

Changeover switch 3A – 250 VAC      *ref. 4 210 11*

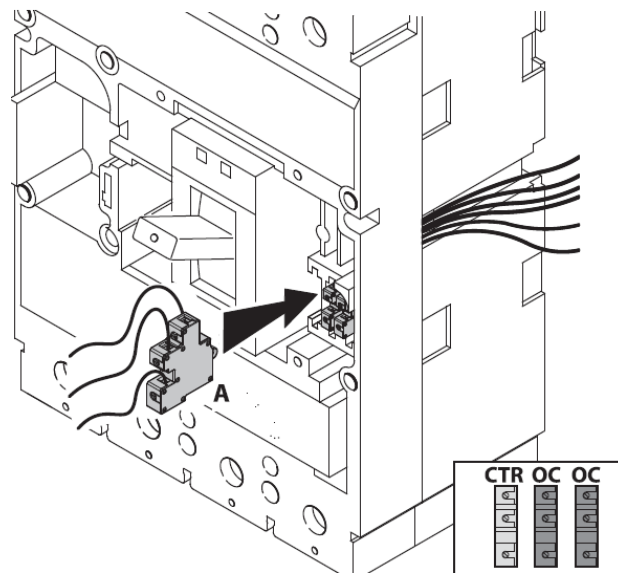
To show the state of the contacts or opening of the DPX<sup>3</sup>/DPX<sup>3</sup>-I on a fault:

- o Auxiliary contact (standard)      **OC**
- o Fault signal      **CTR**

| Auxiliary contact electrical characteristics |              |           |
|----------------------------------------------|--------------|-----------|
| Rated voltage (V <sub>n</sub> )              | V (ac or dc) | 24 to 250 |
| Intensity (A)                                | 24 V dc      | 5         |
|                                              | 48 V dc      | 1.7       |
|                                              | 110 V dc     | 0.5       |
|                                              | 230 V dc     | 0.25      |
|                                              | 110 V ac     | 4         |
|                                              | 230/250 V ac | 3         |

Configurations:

DPX<sup>3</sup> 630 → 2 auxiliary contacts + 1 fault signal + 1 release



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

# DPX<sup>3</sup> 630 thermal magnetic circuit breakers

## DPX<sup>3</sup>-I 630 switch disconnectors

Reference(s) :

422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
015/ 016/ 017/ 018/ 019/ 020/ 021/ 022/ 023/ 024/ 025/ 026/ 027/ 028/ 029/ 030/  
031/ 032/ 033/ 034/ 035/ 036/ 037/ 038/ 039/ 040/ 041/ 042/ 043/ 044/ 045/ 046/  
047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
422 216/ 217/ 218/ 219

### 8.4 Rotary handles

*Direct on DPX<sup>3</sup> (with auxiliary option)*

- Standard (black) *ref. 0 262 41*
- For emergency use (red / yellow)  
adapting on standard handle *ref. 4 222 38*

*Vari-depth handle IP55 (with auxiliary option)*

- Standard (black) *ref. 0 262 81*
- For emergency use (red / yellow)  
adapting on standard handle *ref. 0 262 82*

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

- Key barrel and flat key (cod. ABA90GEL6149) *ref. 0 262 93*
- Key barrel and star key (cod. HBA90GPS6149) *ref. 0 262 94*
- Key barrel and flat key (cod. EL43525) *ref. 4 228 04*
- Key barrel and flat key (cod. EL43363) *ref. 4 228 05*

*Direct on DPX<sup>3</sup> (no auxiliary option and door defeat function)*

- Standard (black) *ref. 4 201 62*
- For emergency use (red / yellow)  
adapting on standard handle *ref. 4 201 65*

*Vari-depth handle IP55 (no auxiliary option and door defeat function)*

- Standard (black) *ref. 4 201 63*
- For emergency use (red / yellow)  
adapting on standard handle *ref. 4 201 76*

### 8.5 Motor operators (front operated)

*For general purpose operations (direct action type):*

- 230 V ac *ref. 4 226 30*

*For synchronized operations (energy storage type):*

- 24 V ac and dc *ref. 0 261 40*
- 48 V ac and dc *ref. 0 261 41*
- 230 V ac *ref. 0 261 42*

|                                                          |                                                        |         |                   |         |
|----------------------------------------------------------|--------------------------------------------------------|---------|-------------------|---------|
|                                                          | LG-4 226 30                                            |         | LG-0 261 40-41-44 |         |
| Type                                                     | Direct drive                                           |         | Energy storage    |         |
| Rated operating voltage (U <sub>e</sub> ) - AC           | 230V AC 50-60 Hz                                       |         | 24 - 48 - 230     |         |
| Rated operating voltage (U <sub>e</sub> ) - DC           | 230V AC 50-60 Hz                                       |         | 24 - 48 - 230     |         |
| Voltage range (%U <sub>c</sub> )                         | 85÷110                                                 |         | 85÷110            |         |
|                                                          | Opening                                                | Closing | Opening           | Closing |
| Pick-up consumption (W / VA)                             | 240                                                    | 200     | 300               | 300     |
| Hold consumption (W / A)                                 | 80                                                     | 120     | 300               | 300     |
| Operating time / complete electric operation (ms)        | 450                                                    | 550     | 2000              | 100     |
| Operating time / main contacts change position (ms)      | 270                                                    | 550     | n/a               | n/a     |
| Mechanical endurance (O-C cycles) @I <sub>n</sub> = 630A | 10000                                                  |         | n/a               |         |
| Electrical endurance (O-C cycles) @I <sub>n</sub> = 630A | 4000                                                   |         | 4000              |         |
| Cycles / minutes                                         | up to 8 automatic<br>open/close operations<br>in a row |         | 10                | 4       |

*Locking accessories:*

- Lock and star key (cod. HBA90GPS6149) *ref. 0 261 58*
- Lock and flat key (cod. ABA90GEL6149) *ref. 0 261 59*

### 8.6 Mechanical accessories

- Padlock (for locking in "OPEN" position) *ref. 0 262 40*
- Insulated shields (phase insulators) *ref. 0 262 30*
- Sealable terminal shields:
  - Set of 2 (for 3P) *ref. 0 262 44*
  - Set of 3 (for 4P) *ref. 0 262 45*
- Terminal covers to guarantee IP20:
  - Set of 2 (for 3P) *ref. 0 262 34*
  - Set of 3 (for 4P) *ref. 0 262 35*

### 8.7 Connection accessories

#### Cage terminals

- Set of 4 terminals for cables 300 mm<sup>2</sup> max (rigid) or 240 mm<sup>2</sup> max (flexible) Cu/Al *ref. 0 262 50*

- Set of 4 high-capacity terminals for cables 2x240 mm<sup>2</sup> max (rigid) or 2x185 mm<sup>2</sup> max (flexible) Cu/Al *ref. 0 262 51*

#### Extended front terminals

- Set of 4 *ref. 0 262 47*

#### Spreaders (incoming or outgoing):

- Set of 2 (for 3P) *ref. 0 262 48*
- Set of 3 (for 4P) *ref. 0 262 49*

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

(used to convert the fixed version with front terminals into the fixed version with rear terminals)

- for 3P *ref. 0 263 52*
- for 4P *ref. 0 263 53*

#### Adaptor for lug

(for connecting bare cables with lugs)

- Set of 4 adaptors + insulated shields *ref. 0 262 46*



# DPX<sup>3</sup> 630 thermal magnetic circuit breakers

## DPX<sup>3</sup>-I 630 switch disconnectors

Reference(s) :

422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
015/ 016/ 017/ 018/ 019/ 020/ 021/ 022/ 023/ 024/ 025/ 026/ 027/ 028/ 029/ 030/  
031/ 032/ 033/ 034/ 035/ 036/ 037/ 038/ 039/ 040/ 041/ 042/ 043/ 044/ 045/ 046/  
047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
422 216/ 217/ 218/ 219

### 8.8 Plug-in version

(A plug-in is a DPX<sup>3</sup> fitted with special terminals and mounted on a plug-in base)

#### **Special terminals for plug-in / draw-out base** (for incoming and outgoing terminals)

- Set of 6 terminals (3P) *ref. 4 222 20*
- Set of 8 terminals (4P) *ref. 4 222 21*

#### **Bases**

(accept DPX<sup>3</sup>/DPX<sup>3</sup>-I fitted with special terminals)

- Front terminal mounting base for 3P *ref. 4 222 22*
- Front terminal mounting base for 4P *ref. 4 222 23*
- Flat rear terminal mounting base for 3P *ref. 4 222 24*
- Flat rear terminal mounting base for 4P *ref. 4 222 25*

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

- Front terminal mounting base for 4P *ref. 4 222 26*
- Flat rear terminal mounting base for 4P *ref. 4 222 27*

#### **Accessories**

- Set of 2 extractor handle *ref. 4 222 28*
- Set of connectors (24-pin) *ref. 4 222 29*

### 8.9 Draw-out version

(A DPX<sup>3</sup> draw-out version is a plug-in DPX<sup>3</sup> fitted with a "Debro-lift" mechanism which can be used to withdraw the DPX<sup>3</sup> while keeping it on its base)

#### **"Debro-lift" mechanism**

(supplied with a rigid slide and handle for drawing-out)

- For base only (3P) *ref. 4 222 31*
- For base only (4P) *ref. 4 222 32*
- For base with earth leakage module (4P) *ref. 4 222 33*

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

(enable locking in draw - out position)

Flat key n°HBA90GPS6149

Star key n°ABA90GEL6149

- One key for breaker only (flat key) *ref. 0 265 76*
- One key for breaker only (star key) *ref. 0 263 48*
- One key for motorized breaker or with rotary handle (flat key) *ref. 0 265 78*
- One key for motorized breaker or with rotary handle (star key) *ref. 0 265 77*

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

- Signalling contact (plugged-in / draw-out) *ref. 0 265 74*
- Handle for drawing - out *ref. 0 265 75*

#### **Auxiliary contacts**

- Automatic auxiliary contacts for draw-out version *ref. 4 222 30*  
(up to 2 contacts by DPX<sup>3</sup>)

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

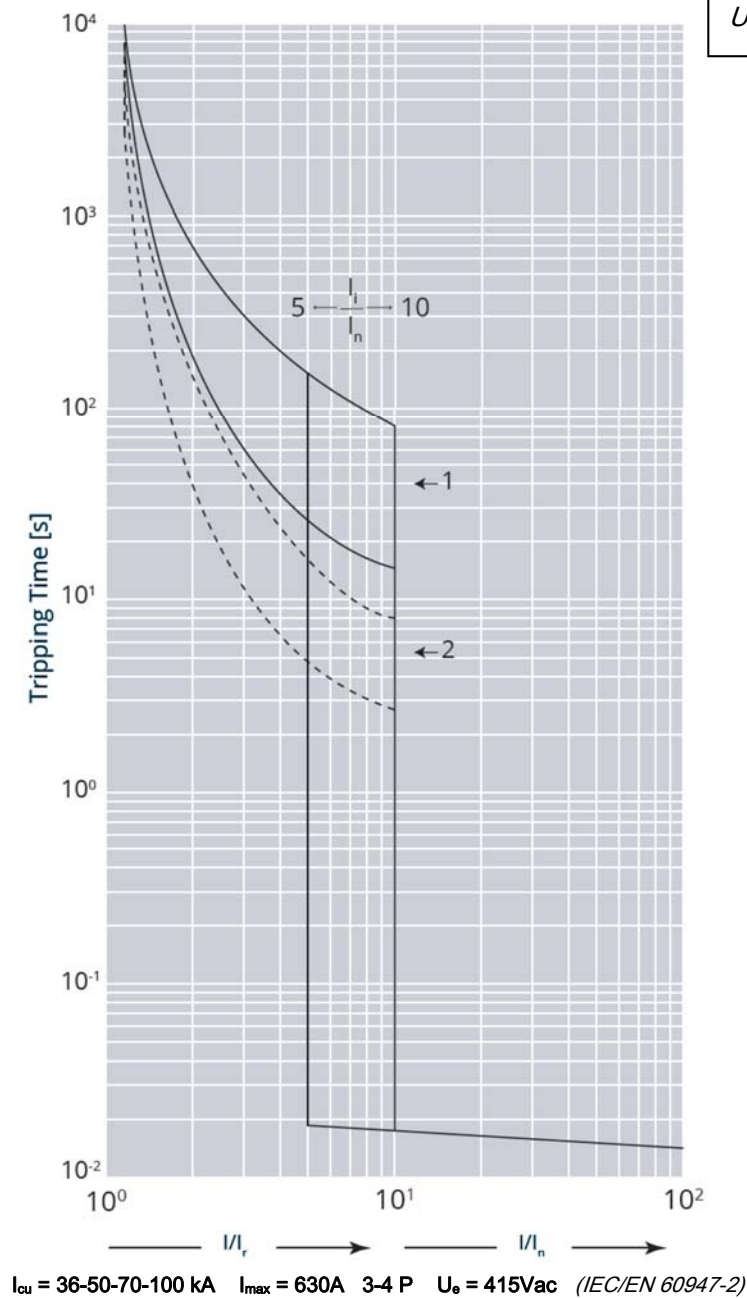
(A transfer switch plate is composed of one plate with interlock for 2 devices)

- Plate for breaker or trip-free switch fixed version *ref. 0 264 09*
- Plate for breaker or trip-free switch plug-in and draw-out version *ref. 0 264 04*

DPX<sup>3</sup> 630 thermal magnetic circuit breakers  
DPX<sup>3</sup>-I 630 switch disconnectors

Reference(s) :  
422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
015/ 016/ 017/ 018/ 019/ 020/ 021/ 022/ 023/ 024/ 025/ 026/ 027/ 028/ 029/ 030/  
031/ 032/ 033/ 034/ 035/ 036/ 037/ 038/ 039/ 040/ 041/ 042/ 043/ 044/ 045/ 046/  
047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
422 216/ 217/ 218/ 219

9. CURVES  
9.1 Thermal magnetic tripping curve



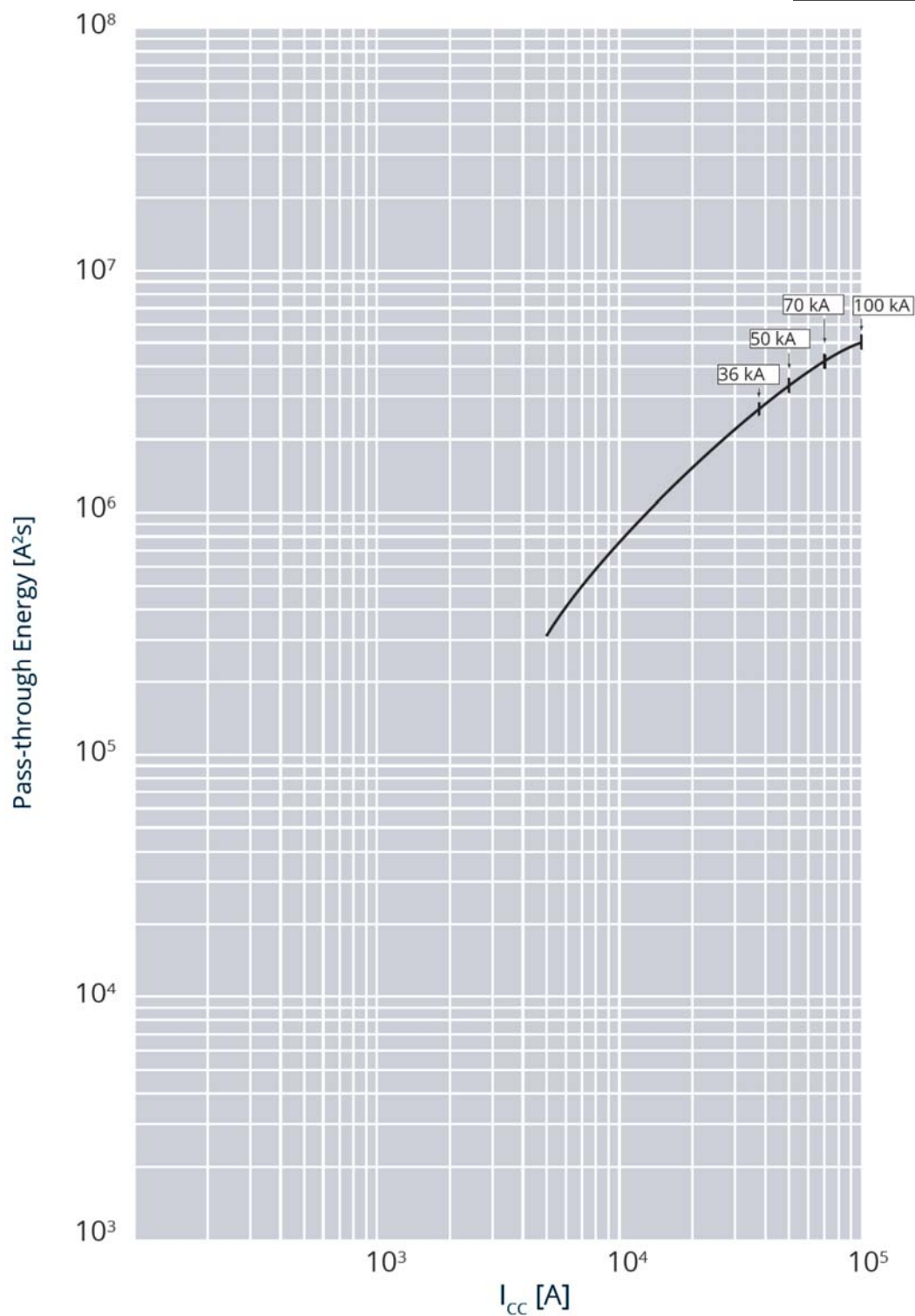
| Value   | Description                    |
|---------|--------------------------------|
| t       | time                           |
| I       | current                        |
| $I_n$   | rated current                  |
| $I_r$   | long time setting current      |
| curve 1 | characteristic with cold start |
| curve 2 | characteristic with hot start  |

DPX<sup>3</sup> 630 thermal magnetic circuit breakers  
DPX<sup>3</sup>-I 630 switch disconnectors

Reference(s) :  
422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
015/ 016/ 017/ 018/ 019/ 020/ 021/ 022/ 023/ 024/ 025/ 026/ 027/ 028/ 029/ 030/  
031/ 032/ 033/ 034/ 035/ 036/ 037/ 038/ 039/ 040/ 041/ 042/ 043/ 044/ 045/ 046/  
047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
422 216/ 217/ 218/ 219

9.2 Pass-through specific energy characteristic curve

Update: 03/07/2018



$I_{cu}$  = 36-50-70-100 kA     $I_{max}$  = 630A    3-4 P     $U_o$  = 415Vac (IEC/EN 60947-2)

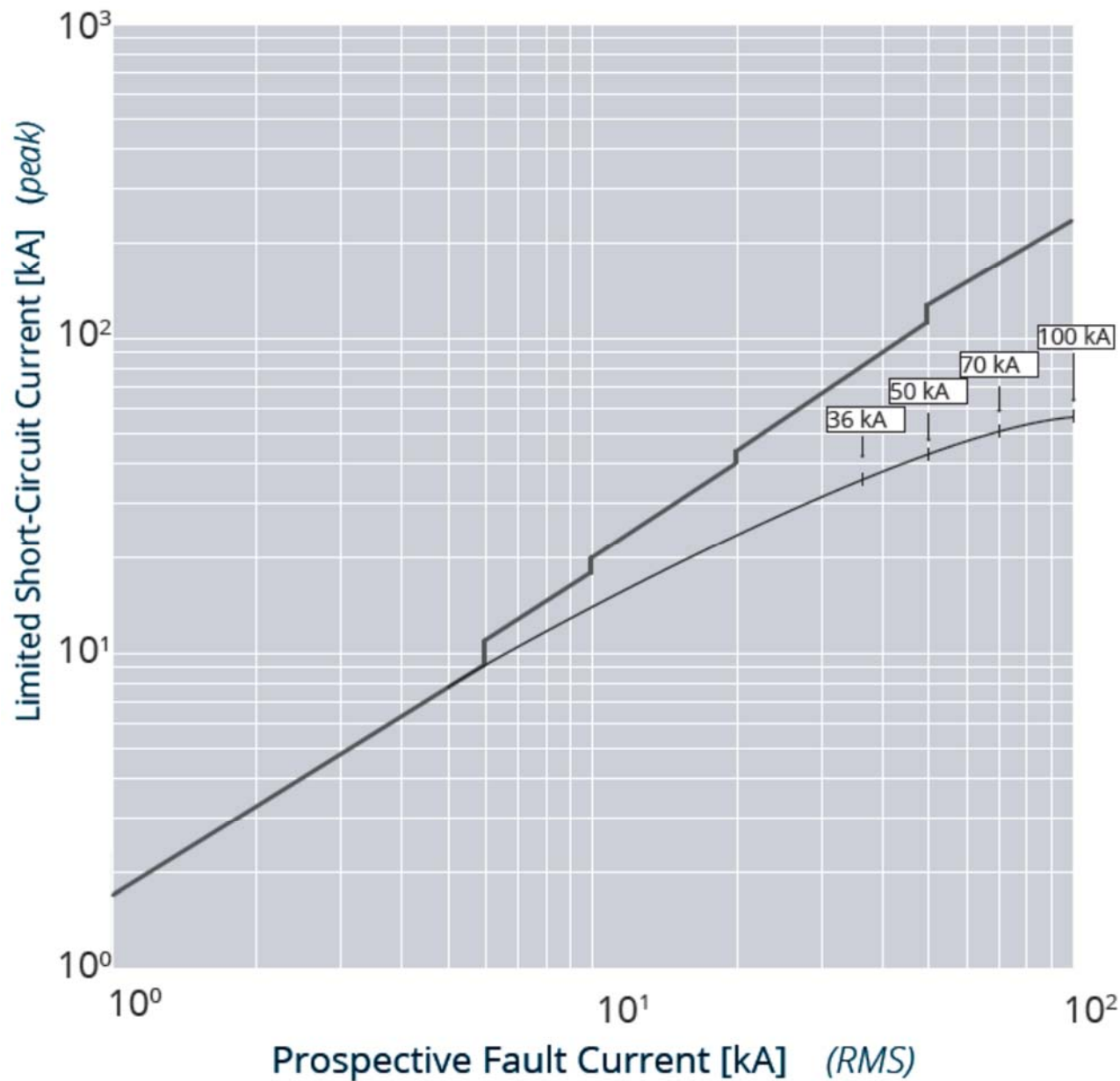
| Value        | Description                  |
|--------------|------------------------------|
| $I_{cc}$     | short circuit current        |
| $I^2t$ (A²s) | pass-through specific energy |

DPX<sup>3</sup> 630 thermal magnetic circuit breakers  
DPX<sup>3</sup>-I 630 switch disconnectors

Reference(s) :  
422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
015/ 016/ 017/ 018/ 019/ 020/ 021/ 022/ 023/ 024/ 025/ 026/ 027/ 028/ 029/ 030/  
031/ 032/ 033/ 034/ 035/ 036/ 037/ 038/ 039/ 040/ 041/ 042/ 043/ 044/ 045/ 046/  
047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;  
422 216/ 217/ 218/ 219

9.3 Cut-off peak current characteristic curve (kA)

Update: 02/07/2018



$I_{cu} = 36-50-70-100 \text{ kA}$   $I_{max} = 630 \text{ A}$  3-4 P  $U_o = 415 \text{ Vac}$  (IEC/EN 60947-2)

| Value    | Description                                                                      |
|----------|----------------------------------------------------------------------------------|
| $I_{cc}$ | estimated short circuit symmetrical current (RMS value)                          |
| $I_p$    | maximum short circuit peak current                                               |
|          | maximum prospective short circuit peak current corresponding at the power factor |
|          | maximum real peak short circuit current                                          |

# DPX<sup>3</sup> 630 thermal magnetic circuit breakers

## DPX<sup>3</sup>-I 630 switch disconnectors

Reference(s) :

422 000/ 001/ 002/ 003/ 004/ 005/ 006/ 007/ 008/ 009/ 010/ 011/ 012/ 013/ 014/  
015/ 016/ 017/ 018/ 019/ 020/ 021/ 022/ 023/ 024/ 025/ 026/ 027/ 028/ 029/ 030/  
031/ 032/ 033/ 034/ 035/ 036/ 037/ 038/ 039/ 040/ 041/ 042/ 043/ 044/ 045/ 046/  
047/ 048/ 049/ 050/ 051/ 052/ 053/ 054/ 055;

### A) Derating Temperature and configurations

|                                     |                                                        | Ambient temperature  |                                 |                      |                                 |                      |                                 |                      |                                 |                      |                                 |                      |                                 |
|-------------------------------------|--------------------------------------------------------|----------------------|---------------------------------|----------------------|---------------------------------|----------------------|---------------------------------|----------------------|---------------------------------|----------------------|---------------------------------|----------------------|---------------------------------|
|                                     |                                                        | 30 °C                |                                 | 40 °C                |                                 | 50 °C                |                                 | 60 °C                |                                 | 65 °C                |                                 | 70 °C                |                                 |
| Fixed version                       |                                                        | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> |
| DPX <sup>3</sup> 630 fixed          | Cage terminals, flexible cable                         | 630                  | 1                               | 630                  | 1                               | 630                  | 1                               | 599                  | 0.95                            | 567                  | 0.9                             | 536                  | 0.85                            |
|                                     | Lugs, flexible cable                                   | 630                  | 1                               | 630                  | 1                               | 630                  | 1                               | 599                  | 0.95                            | 567                  | 0.9                             | 536                  | 0.85                            |
|                                     | Lugs, rigid cable                                      | 630                  | 1                               | 630                  | 1                               | 630                  | 1                               | 599                  | 0.95                            | 567                  | 0.9                             | 536                  | 0.85                            |
|                                     | Spreaders, flexible cable                              | 630                  | 1                               | 630                  | 1                               | 630                  | 1                               | 599                  | 0.95                            | 504                  | 0.8                             | 473                  | 0.75                            |
|                                     | Spreaders, Cu bars                                     | 630                  | 1                               | 630                  | 1                               | 630                  | 1                               | 567                  | 0.9                             | 536                  | 0.85                            | 504                  | 0.8                             |
|                                     | Rear flat staggered terminals, flexible cable          | 630                  | 1                               | 630                  | 1                               | 630                  | 1                               | 599                  | 0.95                            | 504                  | 0.8                             | 473                  | 0.75                            |
|                                     | Rear flat staggered terminals, Cu bars, vertical       | 630                  | 1                               | 630                  | 1                               | 630                  | 1                               | 567                  | 0.9                             | 536                  | 0.85                            | 504                  | 0.8                             |
| DPX <sup>3</sup> 630 fixed + RCD    | Cage terminals, flexible cable + RCD                   | 599                  | 0.95                            | 567                  | 0.9                             | 567                  | 0.9                             | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             |
|                                     | Lugs, flexible cable + RCD                             | 599                  | 0.95                            | 567                  | 0.9                             | 567                  | 0.9                             | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             |
|                                     | Lugs, rigid cable + RCD                                | 599                  | 0.95                            | 567                  | 0.9                             | 567                  | 0.9                             | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             |
|                                     | Spreaders, flexible cable + RCD                        | 536                  | 0.85                            | 536                  | 0.85                            | 536                  | 0.85                            | 473                  | 0.75                            | 410                  | 0.65                            | 378                  | 0.6                             |
|                                     | Spreaders, Cu bars + RCD                               | 567                  | 0.9                             | 536                  | 0.85                            | 536                  | 0.85                            | 504                  | 0.8                             | 441                  | 0.7                             | 378                  | 0.6                             |
|                                     | Rear flat staggered terminals, flexible cable + RCD    | 567                  | 0.9                             | 567                  | 0.9                             | 567                  | 0.9                             | 473                  | 0.75                            | 410                  | 0.65                            | 378                  | 0.6                             |
|                                     | Rear flat staggered terminals, Cu bars, vertical + RCD | 567                  | 0.9                             | 567                  | 0.9                             | 567                  | 0.9                             | 504                  | 0.8                             | 441                  | 0.7                             | 378                  | 0.6                             |
| Draw-out version                    |                                                        | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> | I <sub>max</sub> (A) | I <sub>r</sub> / I <sub>n</sub> |
| DPX <sup>3</sup> 630 draw-out       | Cage terminals, flexible cable                         | 599                  | 0.95                            | 567                  | 0.9                             | 536                  | 0.85                            | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             |
|                                     | Rear flat terminals, flexible cable                    | 599                  | 0.95                            | 567                  | 0.9                             | 536                  | 0.85                            | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             |
|                                     | Rear flat terminals, Cu bars, vertical                 | 599                  | 0.95                            | 567                  | 0.9                             | 536                  | 0.85                            | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             |
| DPX <sup>3</sup> 630 draw-out + RCD | Cage terminals, flexible cable + RCD                   | 536                  | 0.85                            | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             | 410                  | 0.65                            | 378                  | 0.6                             |
|                                     | Cage terminals, Cu bars + RCD                          | 536                  | 0.85                            | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             | 410                  | 0.65                            | 378                  | 0.6                             |
|                                     | Rear flat terminals, flexible cable + RCD              | 536                  | 0.85                            | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             | 410                  | 0.65                            | 378                  | 0.6                             |
|                                     | Rear flat terminals, Cu bars, vertical + RCD           | 536                  | 0.85                            | 504                  | 0.8                             | 473                  | 0.75                            | 441                  | 0.7                             | 410                  | 0.65                            | 378                  | 0.6                             |

For further technical information, please contact Legrand technical support.