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# Isolating switch DX$^3$-IS
# 1 module per pole, 100A

**Cat N°(s) : 4 064 55, 4 064 75, 4 064 95**

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## 1. DESCRIPTION - USE

Isolating switch ensuring the breaking and the isolation of electrical circuits.

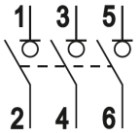
Fully visible breaking indication.

## 2. RANGE

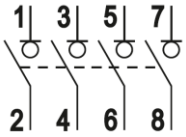
**Polarity and symbols :**

2-poles 400V~ 100A

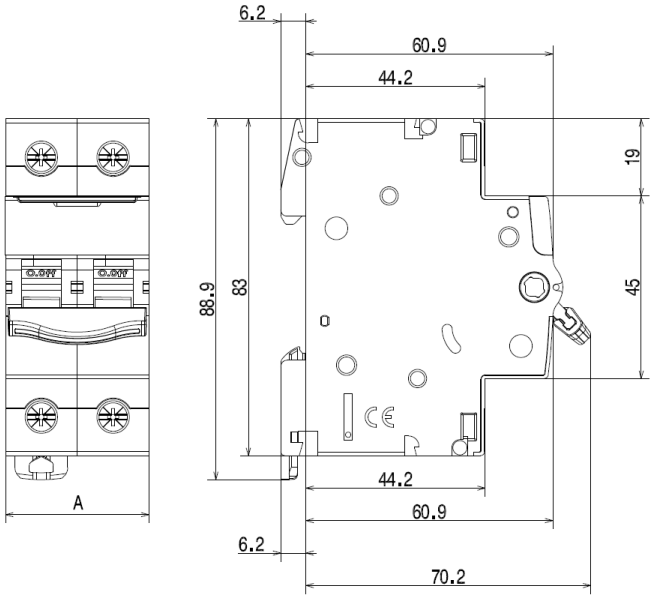
3-poles 400V~ 100A




4-poles 400V~ 100A




## 3. OVERALL DIMENSIONS




| | 2-poles | 3-poles | 4-poles |
|---|---|---|---|
| **A (mm)** | 35.4 | 53.1 | 70.8 |

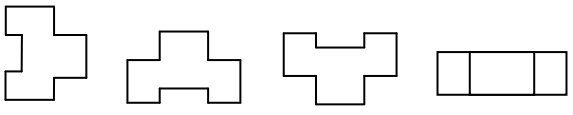
## 4. PREPARATION - CONNECTION

**Mounting :**

. On symmetrical EN 60.715 rail or DIN 35 rail.

**Operating positions:**

.Vertical Horizontal Upside down On the side



**Power supply:**

. Either from the top or the bottom.

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## 4. PREPARATION - CONNECTION *(continued)*

### Connection:

. Terminals protected against direct contact IP20, wired device.
. Cage terminals, with release and captive screws.
. Terminal depth : 19 mm.
. Screw head: mixed, slotted and Pozidriv no. 2.
. Tightening torques:

- Min: 2.5 Nm.
- Recommended: 3 Nm.
- Max: 4 Nm.

### Conductor type:

. Copper cable or supply busbar.
. Cable cross-section:

| | Without ferrule | With ferrule |
|---|---|---|
| **Rigid cable** | 1 conductor 4 to 50 mm$^2$<br>2 conductors 4 to 16 mm$^2$ | |
| **Flexible cable** | 1 conductor 4 to 35 mm$^2$<br>2 conductors 4 to 10 mm$^2$ | 1 conductor 1.5 to 35 mm$^2$ |

### Recommended tools:

. For the terminals:
- Screwdriver with 5.5 to 6.5 mm blade.
- Pozidriv no. 2 screwdriver.

. For attaching or removing the DIN rail:
- Screwdriver with 5.5 to 6 mm blade.
- Pozidriv no. 2 screwdriver.

### Manual actuation of the Isolating switch:

. Ergonomic 2-position handle:
. "O-OFF": Device open.
. "I-ON": Device closed.

### Contact status display:

. By marking of the handle:
- "O-OFF" in white on a green background = contacts open.
- "I-ON" in white on a red background = contacts closed.

### Locking:

. Padlocks possible in the open and closed positions with padlock support (Cat. No. 4 063 03) and Ø5 mm padlock (Cat. N°. 4 063 13) or Ø6 mm padlock (Cat. N°. 0 227 97).

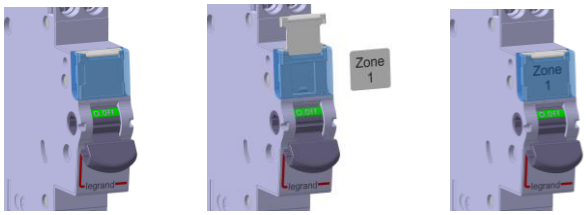
### Sealing:

. Possible in the open or closed positions.

## 4. PREPARATION - CONNECTION *(continued)*

### Labelling:

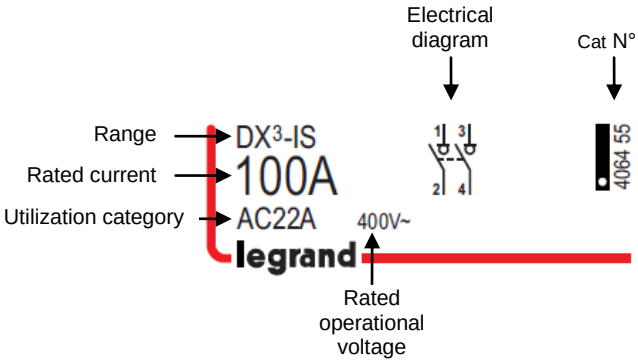
. Circuit identification by way of a label inserted in the label holder situated on the front of the product.




## 5. GENERAL CHARACTERISTICS

### Marking on the front side:

. By permanent ink pad printing.




### Marking on the upper panel:

. By permanent ink pad printing

Approvals → BS 60669-2-4

### Rated operational voltage :

. Ue = 400 V ~

### Rated frequency :

. 50/60 Hz with standard tolerances.

### Short circuit withstand:

. Rated conditional short-circuit current in combination: see coordination table on page 4.
. Maximum capacity switching on short-circuit : 5000 A

Following IEC/EN 60947-3 :
. Icw = 2500 A
. Icm = 3700 A
Following IEC/EN 60669-2-4 :
. Inc =4500 A with fuse of same rated current.

### Insulation voltage:

. Ui = 500 V

### Rated impulse withstand voltage:

. Uimp = 6 kV

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**5. GENERAL CHARACTERISTICS** *(continued)*

**Direct current utilization :**

. 48V (110V with 2 poles serial cabling).

**Utilization category:**

. AC22 : Mixed load.

. A : Frequent operations.

**Degree of pollution:**

. 3 in accordance with standard CEI 60664-1.

**Power dissipated per pole :**

3.70W

**Degree or class of protection:**

. Terminals protected against direct contact, Class of protection against solid objects and liquids (wired device): IP20 in accordance with standards IEC 529 – EN 60529 and NF 20-010.

. Class II in relation to metallic conductive parts.

. Class of protection against mechanical impacts IK04 in accordance with standard EN 62262.

**Plastic materials:**

. Polyamide, PBT and PC

**Enclosure heat and fire resistance:**

. Resistance to glow wire tests at 960°C, in accordance with standard CEI 60695-2-10 & 60695-2-11.

. Classification V2, in accordance with standard UL94.

**Higher heating potential:**

. The heat potential is assessed at:

| 2-poles | 3-poles | 4-poles |
|---|---|---|
| 2.39 MJ | 3.59 MJ | 4.77 MJ |

**Closing and opening effort via the handle:**

| Handle force | 2-poles | 3-poles | 4-poles |
|---|---|---|---|
| **To switch Off** | 13N | 18N | 25N |
| **To switch On** | 34N | 50N | 66N |

**Mechanical endurance:**

. Compliant with standard IEC/EN 60947-3 & IEC/EN 60669-2-4

. 100 000 operations with no load.

**Electrical endurance:**

. Compliant with standard IEC/EN 60947-3 & IEC/EN 60669-2-4

. 5 000 operations with load AC22A (in accordance with IEC/EN 60947-3).

**Vibrations and tremors resistance :**

. Compliant with appendix Q catégory F of standard IEC/EN 60947-1.

**5. GENERAL CHARACTERISTICS** *(continued)*

**Ambient temperatures:**

. Operation: from - 25 °C to + 70 °C.

. Storage: from - 40 °C to + 70 °C.

**Short-circuit behavior in coordination with upstream protection:**

. Tests performed according to the protocol of IEC/EN 60669-2-4 : The device remains fully functional and meets the switch tests after suffering two short circuit established in coordination with the DPCC of the following table.

- The first short circuit being set at an angle of 45 °.
- The second being provided by the switching on of the isolator switch on the short-circuit.

| **Rated voltage 400V~** | | **Inc (kA)** |
|---|---|---|
| **Upstream protection** | | **100A** |
| **MCB** | DX³ 6000A/10kA | 10 |
| | DX³ 10000A/16kA | 10 |
| | DX³ 25kA | 10 |
| | DX³ 36kA | 10 |
| | DX³ 50kA | 10 |
| | DPX³ 160A 16kA | 10 |
| | DPX³ 160A 25kA | 10 |
| | DPX³ 160A 36kA | 10 |
| | DPX³ 160A 50kA | 10 |
| | DPX³ 250A 25kA | 10 |
| | DPX³ 250A 36kA | 10 |
| | DPX³ 250A 70kA | 10 |
| **Fuse gG / aM** | 100A | 16 |
| | 125A | 16 |

**Packaged volume:**

| | Packaging | Volume (dm³) |
|---|---|---|
| **2-poles** | Per 5 | 1.6 |
| **3-poles** | Per 1 | 0.5 |
| **4-poles** | Per 1 | 0.7 |

**Average unit weight:**

| | |
|---|---|
| **2-poles** | 181 g |
| **3-poles** | 272 g |
| **4-poles** | 361 g |

**6. COMPLIANCE AND APPROVALS**

**In accordance with standards:**

. IEC/EN 60947-3 and IEC/EN 60669-2-4.

**Usage in special conditions:**

. Compliant with appendix Q catégory F of standard IEC/EN 60947-1.

**6. COMPLIANCE AND APPROVALS** *(continued)*

**Respect for the environment – Compliance with European Union Directives:**

. Compliance with Directive 2002/95/EC of 27/01/03 known as "RoHS" which provides for a restriction on the use of dangerous substances such as lead, mercury, cadmium, hexavalent chromium and polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) brominated flame retardants from 1st July 2006.

. Compliance with the Directive 91/338/EEC of 18/06/91 and decree 94-647 of 27/07/04.

**Plastic materials:**

. Halogen free plastic materials.

. Labelling of parts compliant with ISO 11469 and ISO 1043.

**Packaging:**

. Design and manufacture of packaging compliant with decree 98-638 of 20/07/98 and Directive 94/62/EC.

**Approvals obtained:**

. See list of approvals available.

**7. AUXILIARIES AND ACCESSORIES**

**Wiring accessories:**

. Sealable screwcover (Cat N°: 4 063 04).

. Insulating shield (Cat N°: 4 063 05).

**Signalling auxiliaries (No busbar):**

. Auxiliary contact (0.5 module, Cat N°: 4 062 58).

. Double Auxiliary contact (1 module, Cat N°: 4 062 66).

**Installation software:**

. XL PRO$^3$.