

**DX³ direct current IS ≤ 63A,
1000V (1,5 modules per pole)**

Cat. N°(s) : 4 142 44 / 46

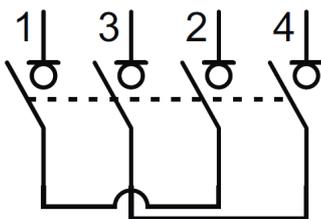


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1. DESCRIPTION - USE

. Modular isolating switch for the control and isolation of electrical circuits supplied in DC current. This isolating switch can be used for photovoltaic applications.

Symbol:



2. RANGE

N° of poles:

- . 2P in 6 modules.
- . 3 modules per pole (3 x 17,7 mm = 53.4 mm).

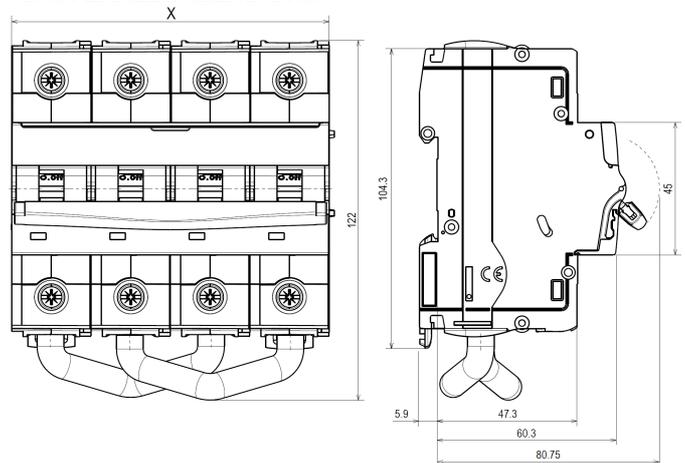
Rated currents::

- . 32 A and 63 A.

Rated Voltage:

- . 1000 V d.c. (direct current).

3. OVERALL DIMENSIONS



N° of poles	"X" (mm)
2P	106.8 mm

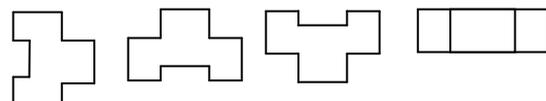
4. PREPARATION - CONNECTION

Fixation :

- . On symmetric rail EN/IEC 60715 or DIN 35.

Operating positions:

- . Vertical, horizontal, upside down, on the side



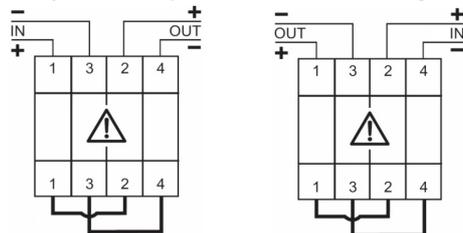
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4. PREPARATION CONNECTION *(continued)*:

Supply:

. Only from the top as shown in the following wiring diagram:



Link cable:

- . The IS is delivered with the link cables wired.
- . Semi-rigid copper cable, 16mm²
- . **Despite the precaution taken, the screws may have come loose during shipping. Please check them. Thank you.**

Terminal depth:

- . 19 mm.
- . **It is mandatory to separate the terminals with the insulating shields integrated to the switch.**

Stripping length recommended:

- . 17 mm.

Screw head:

- . Mixed, slotted and Pozidriv 2.

Tightening torque:

- . Recommended: 3 Nm.
- . Mini : 2,5 Nm. Maxi : 3,5 Nm.

Tools required:

- . For the terminals: Pozidriv n°2 or flat screwdriver 5,5 mm (6 mm maximum).
- . For fixing: flat screwdriver 5,5 mm (6 mm maximum).

Connectable section:

	Copper cables	
	Without ferrule	Without ferrule
Rigid cable	1 x 1,5 mm ² to 50 mm ² 2 x 1,5 mm ² to 16 mm ²	-
Flexible cable	1 x 1,5 mm ² to 32 mm ² 2 x 1,5 mm ² to 10 mm ²	1 x 1,5 mm ² to 35 mm ²

Actuation of the circuit-breaker:

- . By the 2-position ergonomic handle:
 - 1 / ON: Closed circuit.
 - 0 / OFF: Opened circuit.

Display of contact state:

- . By handle mark:
 - “O-Off” white on a red background = contacts opened.
 - “1-On” white on a red background = contacts closed.
- . By mechanical indicator on front face:
 - Green = contacts opened.
 - Red = contacts closed.

4. PREPARATION CONNECTION *(continued)*:

Consignment:

- . Only in “Open” mode (OFF) with, for example, a 2,4mm wide coloring.

Sealing:

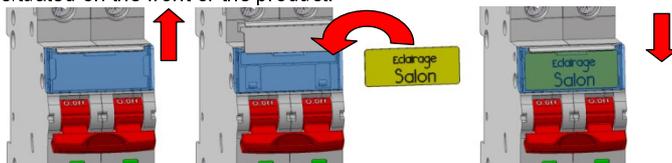
- . Possible in “Open” position (OFF) or “Close” position (ON).

Lockout:

- . By 5 mm padlock (cat. N° 4 063 13) with padlock support (cat. N° 4 063 03) in open position.

Labelling:

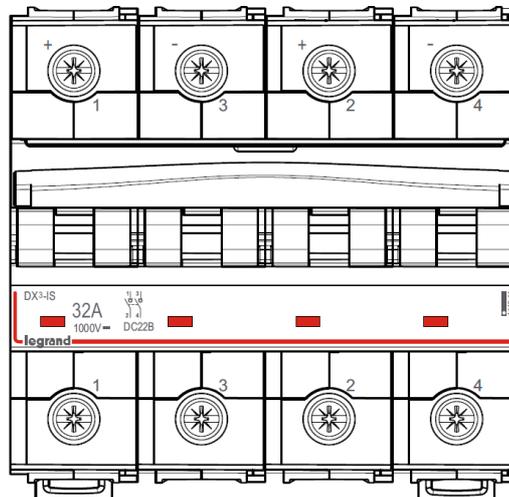
- . Circuit identification by way of a label inserted in the label holder situated on the front of the product.



5. GENERAL CHARACTERISTICS:

Front face marking:

- . By permanent pad printing
 - Trade name : DX³-IS
 - Rated current (in A)
 - Rated operational voltage (in V)
 - Electric diagram
 - Utilization category
 - Legrand reference code and Logo
 - Mark: Legrand.



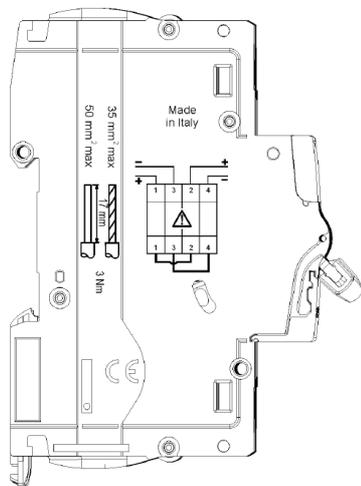
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5. GENERAL CHARACTERISTICS (continued):

Left side marking :

- . By laser:
- wiring diagram.



Minimum operating voltage:

- . 12 V d.c. per pole.

Maximum operating voltage:

- . 1000 V d.c.

Rated short-time withstand current:

- . I_{cw} = 1000 A for 1s according to IEC/EN 60947-3
- . I_{cw} = 1500 A for 0,5s according to IEC/EN 60947-3

Utilization category:

- . B : infrequent operations
- . DC22B: Switching of mixed resistive and inductive loads, including moderate overloads (according to IEC/EN 60947-3)
- . DC21B: Switching of resistive loads including moderate overloads (according to IEC/EN 60947-3)

Dielectric strength:

- . 2500V.

Insulation rated voltage:

- . U_i = 1000 V

Pollution degree:

- . 3.

Pulse rated voltage:

- . U_{imp} = 8 kV

Isolating distance:

- . The distance between the contacts is greater than 12mm with the handle in the open position
- . The DC Isolating switch DX³-IS is appropriate for the isolation according to IEC / EN 60947-3

Load to close and to open an IS by the handle:

- . 0,17 Nm per pole to close.
- . 0,09 Nm per pole to open.

5. GENERAL CHARACTERISTICS (continued):

Protection class:

- . Protection index of terminals against solid and liquid bodies: IP 20 (according to IEC 529, EN 60529 et NF C 20-010).
- . Protection index of the box against solid and liquid bodies: IP 40 (according to IEC 529, EN 60529 et NF C 20-010).
- . Protection index against mechanical shocks: IK 02 (according to EN 50102 et NF C 20-015).

Enclosure material:

- . Polyester.
- . Characteristics of this material: self extinguishing, heat and fire resistant according to EN 60898-1, glow-wire test at 960°C for external parts made of insulating material necessary to retain in position current-carrying parts and parts of protective circuit (650°C for all other external parts made of insulating material).

Mechanical endurance:

- . Complies with the IEC 60947-3 standard
- . Higher than 10000 operations

Electrical endurance:

- . Complies with the IEC 60947-3 standard
- . Tested at 1500 operations in DC22 (under In)
- . Tested at 1500 operations in DC21 (under In)

Resistance to wet heat and salt spray:

- . Complies with IEC / EN 60947-1 Annex Q Class F

Resistance to vibration and shock:

- . Complies with IEC / EN 60947-1 Annex Q Class F

Ambient operating temperature:

- . Min. = -25°C. Max. = +70°C

Ambient storage temperature:

- . Min. = -40°C. Max. = +70°C

Average weight per device:

- . 0,83 kg.

Volume when packed:

	Volume (dm ³)
Double pole	1,14 dm ³

Power dissipated per pole (W) :

In	32 A	63 A
2P	2,3	9

- . Impedance per pole (Ω) = $\frac{P \text{ dissipated}}{I_n^2}$

6. COMPLIANCE AND APPROVALS

Compliance to standards:

- . Standard: IEC/EN 60947-3.

Use in specific conditions:

- . Complies with Class F according to the classification set out in Annex Q of the standard IEC / EN 60947-1.

Respect of the environment – Compliance with CEE directives:

- . Compliance with Directive 2002/95/EC of 27/01/03 called "RoHS" which provides for the banning of hazardous substances such as lead, mercury, cadmium, hexavalent chromium, brominated flame retardants polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) from 1st July 2006
- . Compliance with Directive 91/338/CEE of 18/06/91 and Decree 94-647 of 27/07/04
- . Compliance with Directives 83/336/CEE, 92/31/EEC and 93/68/EEC (EMC).

Plastic materials :

- . Halogen-free plastic materials.
- . Marking of parts according to ISO 11469 and ISO 1043.

Packaging:

- . Design and manufacture of packaging in accordance with Decree 98-638 of 07.20.98 and Directive 94/62/EC

7. AUXILIARIES AND ACCESSORIES

Wiring accessories:

- . Sealable screw cover (cat n° 4 063 06).
- . Sealable terminal cover (cat n° 4 063 12).

Signal auxiliaries:

- . Auxiliary contact + fault signalling switch - can be modified to 2 auxiliary contacts (1 module - cat n° 4 062 66).

Control auxiliaries:

- . Shunt releases (1 module - cat n° 4 062 76 / 78).
- . Under voltage release (1 module - cat n° 4 062 80 / 82).
- . Autonomous shunt trip for NC push-button (1 module - cat n° 4 062 84).
- . POP

Possible combinations of m.c.b and auxiliaries:

- . Auxiliaries are dipped on the left of the IS
- . Maximum number of auxiliaries for one IS: 3.
- . Two signalling auxiliaries max. (cat. n° 4 062 66).
- . Only one control auxiliary (cat. n° 4 062 76 / 78 / 80 / 82 / 84).
- . If signalling and control auxiliaries are associated on the same device, the command auxiliary must be placed to the left of the signal auxiliary (ref. 4 062 66).

Sealing:

- . Possible in "Open" position (OFF) or "Close" position (ON).

Lockout:

- . By 5 mm padlock (cat. N° 4 063 13) with padlock support (cat. N° 4 063 03) in open position.

Installation software:

- . XL PRO³