

Isolating switch DX³-IS

1/2 module per pole, up to 40A



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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 :

1-pole 250V~

- 16A
- 20A
- 32A



1-pole with indicator light 250V~

- 20A
- 32A



2-poles 400V~

- 16A
- 20A
- 32A



2-poles with indicator light 250V~

- 20A
- 32A
- 40A



3-poles 400V~

- 20A
- 32A

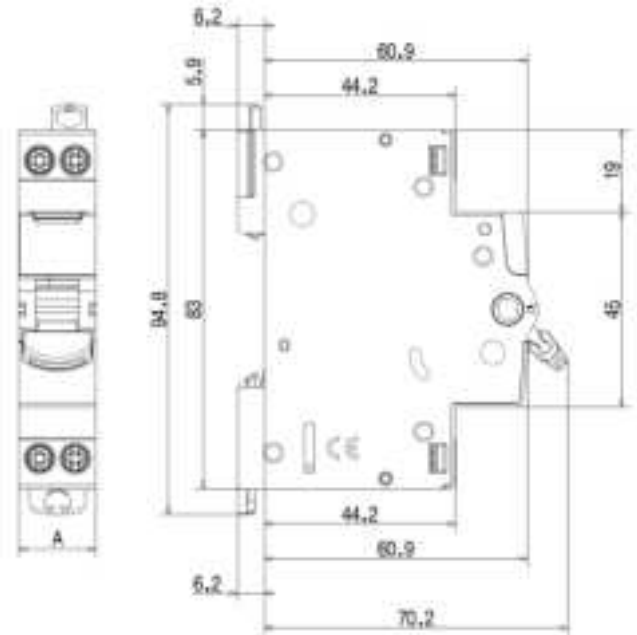


4-poles 400V~

- 20A
- 32A



3. OVERALL DIMENSIONS



	1-pole	2-poles	3-poles	4-poles
A (mm)	17.8	17.8	35.6	35.6

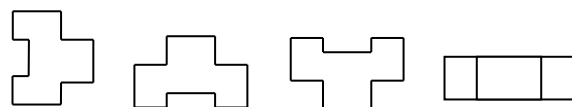
4. PREPARATION - CONNECTION

Mounting :

. On symmetrical EN 60.715 rail or DIN 35 rail.

Operating positions:

. Vertical Horizontal Upside down On the side



Power supply:

. **For devices without indicator light :** Either from the top or the bottom.

. **For devices with indicator light :** From the top.

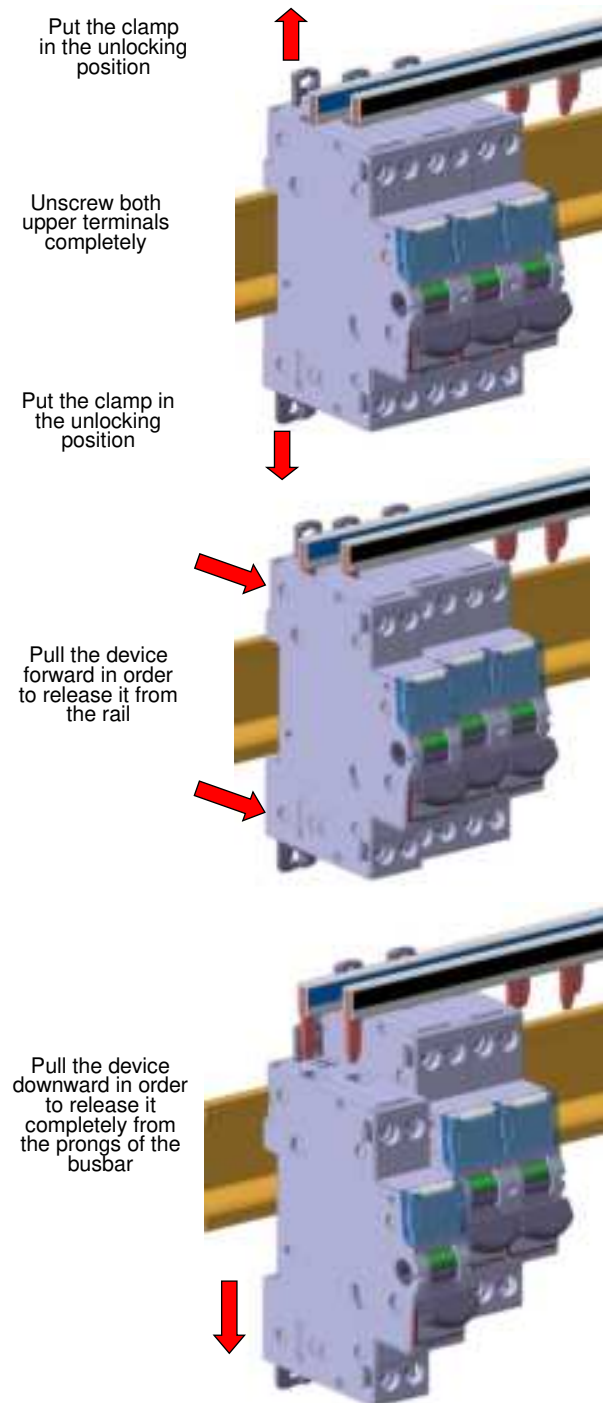
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4. PREPARATION - CONNECTION *(continued)*

Module maintenance:

- . Isolating switches may be replaced in the middle of a row supplied with busbars without disconnecting the other products.
- This method is available for the 1-pole, 2-poles, 3-poles, 4-poles.



Connection:

- . Terminals protected against direct contact IP20, wired device.
- . Cage terminals, with release and captive screws.
- . Terminals fitted with shutters preventing a cable being placed under the terminal, with the terminal partly open or closed.
- . Alignment and spacing of the terminals permitting connection with the other products in the range via prong supply busbars.

4. PREPARATION - CONNECTION *(continued)*

- . Terminal depth: 14 mm.
- . Screw head: mixed, slotted and Pozidriv no. 2.
- . Tightening torques:
 - Min : 1.2 Nm
 - Recommended : 1.6 to 2 Nm
 - Max : 2.8 Nm

Conductor type:

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

	Without ferrule	With ferrule
Rigid cable	1 conductor 1.5 to 16 mm ² 2 conductors 1.5 to 6 mm ²	X
Flexible cable	1 conductor 1.5 to 10 mm ² 2 conductors 1.5 to 4 mm ²	1 conductor 1.5 to 10 mm ²

Recommended tools:

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

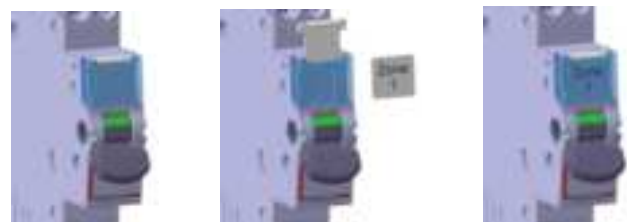
- . Padlocks possible in the open and closed positions with padlock support (Cat. No. 4 063 03) and Ø5 mm padlock (Cat. N°. 4 063 13) or Ø6 mm padlock (Cat. N°. 0 227 97).

Sealing:

- . Possible in the open or closed positions.

Labelling:

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



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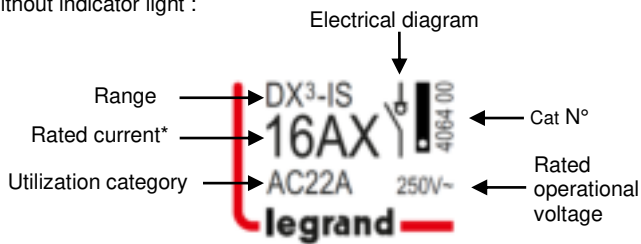
1/2 module per pole, up to 40A

5. GENERAL CHARACTERISTICS

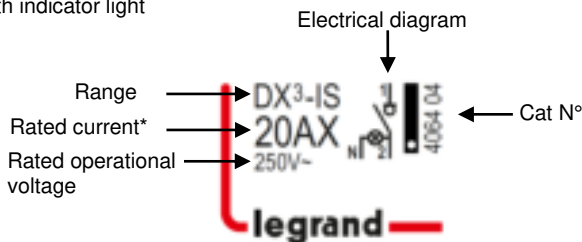
Marking on the front side:

. By permanent ink pad printing.

Without indicator light :



With indicator light



*Rated current with X : Devices tested on fluorescent lamp.

Marking on the upper panel:

. By permanent ink pad printing.

Without indicator light :



With indicator light:



Rated operational voltage:

1-pole with or without indicator light and 2 poles with indicator light:

. U_e = 250 V ~

2-poles without indicator light, 3-poles and 4-poles :

. U_e = 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.

Following IEC/EN 60947-3 :

. I_{cw} = 750 A

. I_{cm} = 1500 A

Following IEC/EN 60669-2-4 :

. I_{nc} = 4500 A with fuse of same rated current.

Insulation voltage:

. U_i = 500 V

Rated impulse withstand voltage:

. U_{imp} = 6 kV

5. GENERAL CHARACTERISTICS (continued)

Direct current utilization :

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

Utilization category:

. AC22 : Mixed load.

. A : Frequent operations.

. AC23 : Inductive load. Complies with IEC/EN 60947-3. Characteristic not marked on product

Degree of pollution:

. 3 in accordance with standard IEC 60664-1.

Power dissipated per pole :

Without indicator light				With indicator light		
16 A	20A	32A	40A	20A	32A	40 A
0,23W	0,36W	0,92W	1,44W	0,45W	1,01W	1,53W

Indicator light (if equipped):

Technology : fluorescent lamp.

Shelf life: 50 000 Hours.

Color: Orange.



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 IEC 60695-2-10 & 60695-2-11.

. Classification V2, in accordance with standard UL94.

Higher heating potential:

. The heat potential is assessed at:

1-pole and 2-poles	3-poles and 4-poles
1.29 MJ	2.56 MJ

Closing and opening effort via the handle:

Handle force	1-pole	2-poles	3-poles	4-poles
To switch Off	4N	7N	10N	14N
To switch On	10N	18N	29N	35N

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5. GENERAL CHARACTERISTICS (continued)

Mechanical endurance:

- . Compliant with standard IEC/EN 60947-3 & IEC/EN 60669-2-4
- . 300 000 operations with no load.

Electrical endurance:

- . Compliant with standard IEC/EN 60947-3 & IEC/EN 60669-2-4
- . 30 000 operations with load AC22A.
- . 1 500 operations with load AC23A.

Vibrations and tremors resistance :

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

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		16A	20A	32A
MCB	DX ³ 4500A/6kA	4,5	4,5	4,5
	DX ³ 6000A/10kA	4,5	4,5	4,5
	DX ³ 10000A/16kA	4,5	4,5	4,5
	DX ³ 25kA	4,5	4,5	4,5
	DX ³ 36kA	4,5	4,5	4,5
	DX ³ 50kA	4,5	4,5	4,5
	DPX ³ 160A 16kA	4,5	4,5	4,5
	DPX ³ 160A 25kA	4,5	4,5	4,5
	DPX ³ 160A 36kA	4,5	4,5	4,5
	DPX ³ 160A 50kA	4,5	4,5	4,5
	DPX ³ 250A 25kA	4,5	4,5	4,5
	DPX ³ 250A 36kA	4,5	4,5	4,5
	DPX ³ 250A 70kA	4,5	4,5	4,5
	Fuse gG / aM	20A	8	8
25A		8	8	
32A		8	8	8
40A		8	8	8
63A		8	8	8
80A		8	8	8
100A		8	8	8
125A		6	6	6

Rated voltage 250V~		Inc (kA)			
Upstream protection		16A	20A	32A	40A
MCB	DNX ³ 4500A/4,5kA	4,5	4,5	4,5	4,5
	DX ³ 4500A/6kA	6	6	6	6
	DX ³ 6000A/10kA	7	7	7	7
	DX ³ 10000A/16kA	7	7	7	7
	DX ³ 25kA	7	7	7	7
	DX ³ 36kA	7	7	7	7
	DX ³ 50kA	7	7	7	7
	DPX ³ 160A 16kA	7	7	7	7
	DPX ³ 160A 25kA	7	7	7	7
	DPX ³ 160A 36kA	7	7	7	7
	DPX ³ 160A 50kA	7	7	7	7
	DPX ³ 250A 25kA	7	7	7	7
	DPX ³ 250A 36kA	7	7	7	7
	DPX ³ 250A 70kA	7	7	7	7
Fuse gG / aM	20A	10	10		
	25A	10	10		
	32A	10	10	10	
	40A	10	10	10	10
	63A	10	10	10	10
	80A	10	10	10	10
	100A	10	10	10	10
	125A	10	10	10	10

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5. GENERAL CHARACTERISTICS *(continued)*

Packaged volume:

	Packaging	Volume (dm ³)
1-pole	Per 10	1.6
2-poles	Per 10	1.6
3-poles	Per 5	1.6
4-poles	Per 5	1.6

Average unit weight:

1-pole	65 g
2-poles	81 g
3-poles	145 g
4-poles	160 g

6. COMPLIANCE AND APPROVALS

In accordance with standards:

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

Usage in special conditions:

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

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:

- . Supply busbar used on 1 pole and 2 poles:
 - HX³ 1-pole universal supply busbar (Cat N°: 4 049 26, 4 049 37).
 - HX³ 4-poles supply busbar «screw» (Cat N°: 4 052 10).
 - HX³ 4-poles supply busbar « head of group » (Cat N°: 4 052 00, 4 052 01, 4 052 02).
- . HX³ connection module plug-in system set (Cat N°: 4 052 23).
- . Connection terminals (Cat N°: 4 049 05, 4 052 08).
- . Sealable screwcover (Cat N°: 4 063 04).

Signalling auxiliaries :

- . Auxiliary contact (0.5 module, Cat N°: 4 062 58).
- . Double Auxiliary contact (1 module, Cat N°: 4 062 66).

Installation software:

- . XL PRO³.