

Push- buttons and Control switches CX³

Cat N°(s) : 4 129 08, 4 129 09, 4 129 10, 4 129 11, 4 129 12, 4 129 13, 4 129 14, 4 129 15, 4 129 16, 4 129 18, 4 129 19, 4 129 20, 4 129 40



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1. DESCRIPTION - USE

Push-buttons and Control switches to control an electrical circuit.
Control switches with connectable Led indicator.

2. RANGE

Functions, symbols, cat n°

Single function push-buttons:

1 NO 20AX - 250V~		4 129 08
1 NC 20AX - 250V~		4 129 09

Single function control switches :

2 NO 20AX - 250V~		4 129 10
1 NO + NC 20AX - 250V~		4 129 11

Dual functions push-buttons with indicator :

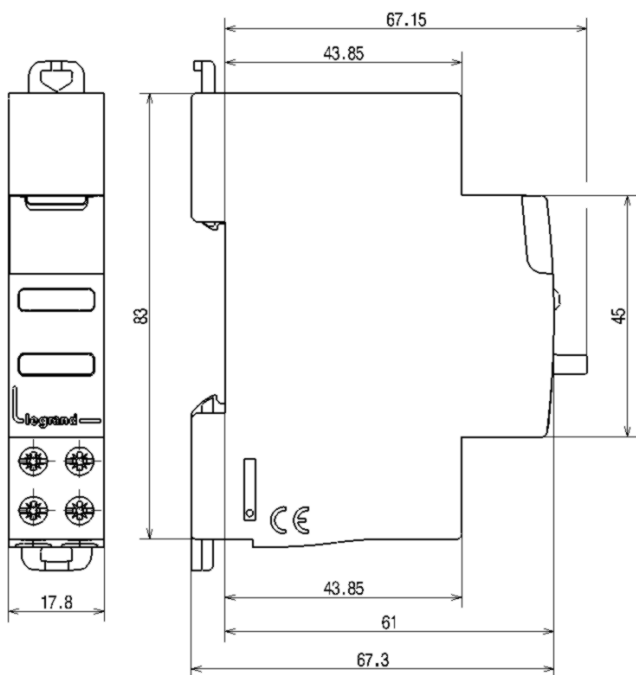
1 NO 20AX - 250V~ + Green LED indicator 12/48 V ~ / ---		4 129 18
1 NC 20AX - 250V~ + Red LED indicator 12/48 V ~ / ---		4 129 19
1 NO 20AX - 250V~ + Green LED indicator 110/400 V~		4 129 20
1 NC 20AX - 250V~ + Red LED indicator 110/400 V~		4 129 40

2. RANGE (continued)

Dual functions control switches with indicator :

1 NO 20AX - 250V~ + Green LED indicator 12/48 V ~ / ---		4 129 12
1 NC 20AX - 250V~ + Red LED indicator 12/48 V ~ / ---		4 129 13
1 NO 20AX - 250V~ + Green LED indicator 110/400 V~		4 129 14
1 NC 20AX - 250V~ + Red LED indicator 110/400 V~		4 129 15
Dual functions push-buttons:		
1 NO (Green) 20AX - 250V~		4 129 16
1 NC (Red) 20AX - 250V~		

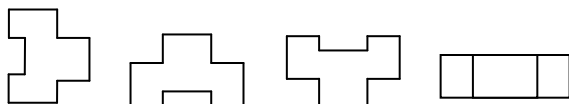
3. OVERALL DIMENSIONS



4. PREPARATION - CONNECTION

Operating positions :

.Vertical Horizontal Upside down On the side



Mounting :

On symmetrical EN 60.715 rail or DIN 35 rail.

Power supply :

By the lower side.

Recommended tools :

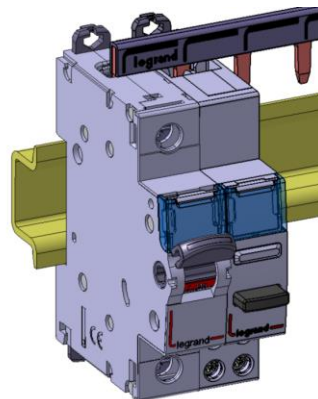
. For the terminals screw : Screwdriver isolated or not with 4 mm blade or Pozidriv no. 1 screwdriver.

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

4. PREPARATION - CONNECTION (continued)

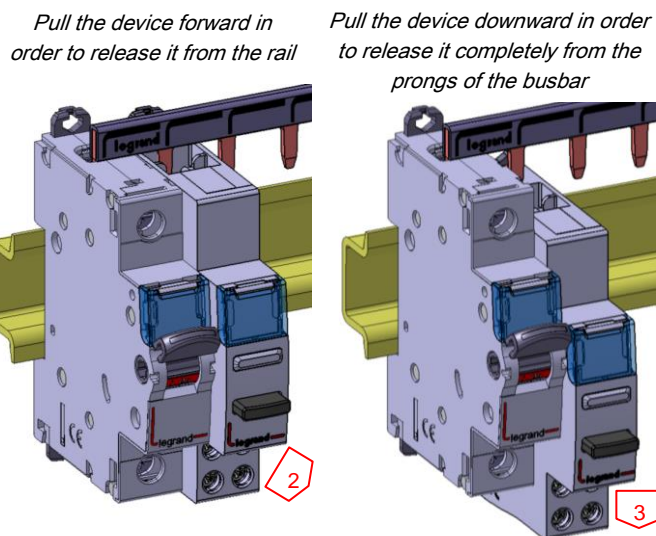
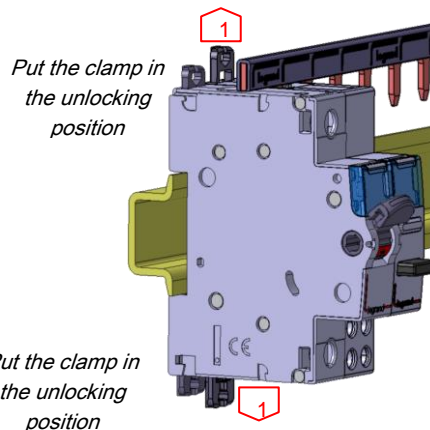
Position in a row :

. The product profile and the position of the terminals at the downstream allow the insertion of the prong-busbar by the upstream. In this way the position of the Push-button or Control switch in a row can be freely chosen.



Module maintenance :

. A Push-button or Control switch may be replaced in the middle of a row supplied with prong-busbar without disconnecting the other devices.



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4. PREPARATION - CONNECTION (continued)

Connection :

- . Screw terminals:
 - Type of terminal: caged
 - Terminal depth: 10 mm
 - Capacity (h x w): 4.7 x 4.7 mm

Connectable section (copper cables) :

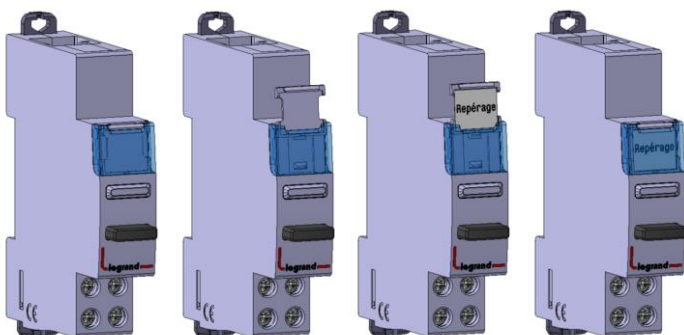
- Rigid : 1 x (0,75 à 4 mm²) ou 2 x (0,75 à 2,5 mm²)
- Flexible wire without ferrule: 1 x (0,75 à 4 mm²) or 2 x (0,75 à 2.5 mm²)
- Flexible wire with ferrule: 1 x (0,75 à 4 mm²)
- Flexible wire with double ferrule: 2 x (0,75 à 2.5 mm²)
- Screw head : mixed M3.5 , slotted 4mm and pozidriv n°1
- Tightening torques : mini 0.8Nm; maxi 1.8Nm ; recommended 1.4Nm

Manual actuation of the device :

- . Ergonomic button with 1 or 2 positions in accordance with the cat. N°

Labelling :

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



5. GENERAL CHARACTERISTICS

Marking :

- . By permanent ink pad printing



*Rated current with X : devices able to switch fluorescent lamps

Operating voltage :

1 pole without indicator light :

- . Ue = 250 V ~

1 pole with indicator light :

- . Ue switch button = 250 V ~
- .Ue indicator in accordance with cat.N° 12/48 V ~ / --- ; 110/400 V~

Rated frequency :

- . 50/60 Hz with standard tolerances.

Insulation voltage :

- . Ui = 500 V

5. GENERAL CHARACTERISTICS (continued)

Rated impulse withstand voltage :

- . Uimp = 4 kV

Utilization category :

- . AC12 : mixed load according to IEC 60947-5.1

Degree of pollution:

- . 2 in accordance with standard EN/IEC 60898-1

Indicator light :

Technology : non replaceable LED lamps

Power dissipated per Led :

U (v)	Led: 12/48 V		U (v)	Led: 110/400 V	
	P(w)			P(w)	
	AC	DC		AC	DC
12	0.006	0.008	110	0.04	0.06
24	0.03	0.04	230	0.17	0.24
48	0.12	0.17	400	0.52	0.72

Life time 100 000 hours without maintenance.

Color of the translucent plastic window: red, green, yellow, blue, white (in accordance with the cat. N°)

The ergonomic design of the translucent plastic window allows an homogeneous projection of the light.

Dissipated power for control switches devices :

Type	1 NC	1 NO	2 NO
Power (W)	0.8	0.6	1.4

Protection class:

- .Terminal protection when the product was connected : IP2X according to IEC 529 – EN 60529 et NF C 20-010.
- .Index Protection against solid and liquid body (wired device) IP40 according to IEC 529 – EN 60529 et NF C 20-010.
- . Protection against shocks: IK04 according to EN 62262.
- . Class II, front panel with faceplate.

Plastic materials :

- . Polyamide, PC

Enclosure heat and fire resistance:

- . Resistance to glow wire tests at 960°C / 30 s, according to standard CEI 60695-2-10 & 60695-2-11.

Mechanical endurance :

- . 150 000 operations without electrical load.

Electrical endurance :

- . In accordance with standard IEC/EN 60669-1
- . 30 000 operations with normal electrical load.
- . 30 000 operations with fluorescent electrical lamp according to IEC 60947-5.1.
- . 30 000 operations with load AC12 (following IEC 60947-5.1).

5. GENERAL CHARACTERISTICS *(continued)*

Vibrations and tremors resistance :

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

Ambient temperatures :

. Operating: 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 circuits established in coordination with the DPCC (*Device for Protection against short circuits*) of the following table.

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

Upstream protection:	Characteristics
Range	DX ³ MCB
Breaking capacity	4500/6KA
Rated current	20A
Operating voltage	250V~

Volume when packed:

	Packaging	Volume (dm ³)
1 module	by 10	1.6

Average unit weight:

Cat N°	Weight (grams)
4 129 08 - 09	50.2 g
4 129 10 - 11	58.7 g
4 129 12 - 13 - 14 - 15	
4 129 16	61.7 g
4 129 18 - 19 - 20 -40	58.4 g

6. CONFORMITY AND APPROVALS

Compliant to standard :

. IEC/EN 60669-1

Use in particular conditions :

. Compliant to category F according to classification defined in appendix Q of standard IEC/EN 60947-1.

Environment respect – Compliance with CEE 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.
. Compliant with regulation REACH

Plastic materials :

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

Packaging :

. Design and manufacture of packaging compliant to decree 98-638 of the 20/07/98 and also to directive 94/62/CE.

Environnemental profile :

. PEP document available

Approvals obtained :

. See list of approvals available.

Installation software :

. XL PRO³.