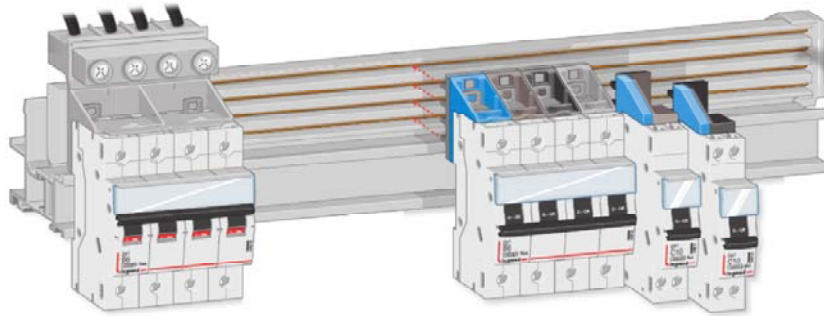


Horizontal distribution busbar HX³ 80/125 A plug-in

Cat. N° (s): 4 052 23/40/41/42/43/44/45/46



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1. DESCRIPTION

1. DESCRIPTION - USE

Plug-in horizontal distribution system: used for 3-phase distribution without wiring of modular devices up to 125 A on a single row. Automatic connection and disconnection of equipment totally safely, even when the distribution busbar is powered-up, thanks to the IP XXB insulation and the integral connection modules in the devices. Total freedom to install and combine devices: 1P+N, 2P, 3P, 4P, add-on modules, auxiliaries, control devices, etc. Selection of the phase to be connected by selecting the connection module.

For mounting in XL³ 400/800/4000 enclosures with 2-position aluminium rail (Cat.nos 0 202 06, 0 206 01/51) and in XL³ 160 enclosures with the mounting accessory (Cat. no 4 052 24). It can be used in panel h = 150mm.

2. RANGE

Automatic distribution blocks

. Fixed directly onto DIN rails Cat nos 0 202 06, 0 206 01/51. Delivered with a supply module and a phase security cover of the distribution busbar

Cat. no 4 052 40: 24 modules
Cat. no 4 052 41: 36 modules

Connection modules:

. Used for automatic connection and disconnection of modular devices on the horizontal distribution busbar.

Cat. n° 4 052 43: set of 10 connection modules L1
Cat. n° 4 052 44: set of 10 connection modules L2
Cat. n° 4 052 45: set of 10 connection modules L3
Cat. n° 4 052 46: set of 10 connection modules N for devices 1 module per pole.

Cat. n° 4 052 23: set of 3 connection modules L1N, L2N, L3N for devices 1P+N in 1 module screws or automatic terminals.

Accessories for mounting in XL³ 160 enclosure

Cat. n° 4 052 24: used for mounting the 80/125 A horizontal busbar 24 modules (cat. n° 4 052 40) in XL³ 160 enclosure.

Rated Voltages and Frequency:

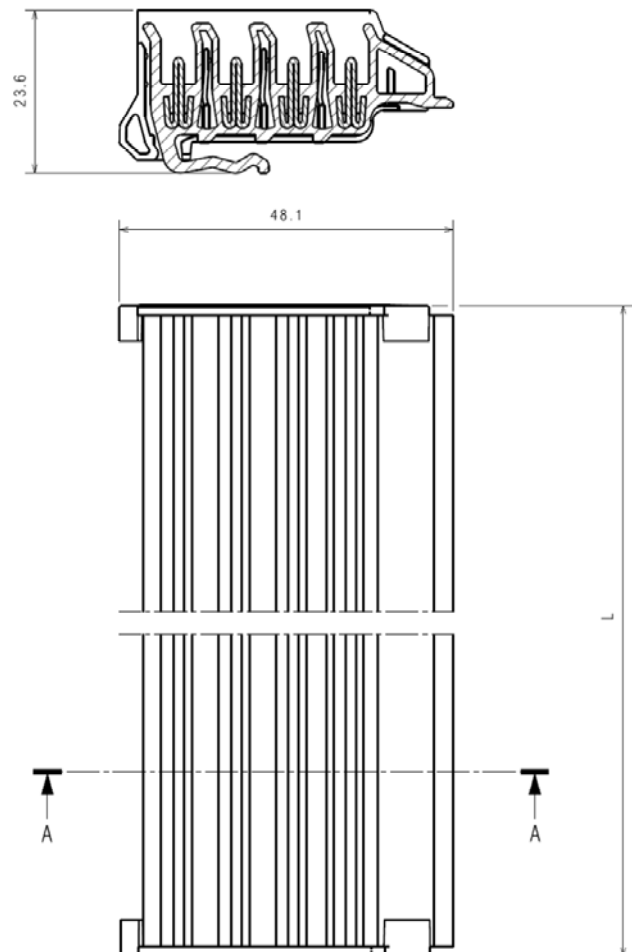
. 230 V ~ / 400 V ~ - 50 / 60 Hz with standard tolerances.

Rated Currents:

. Max.125 A (with the power supply module).
. Max.80 A (without the power supply module).

3. OVERALL DIMENSIONS

. Distribution busbar:



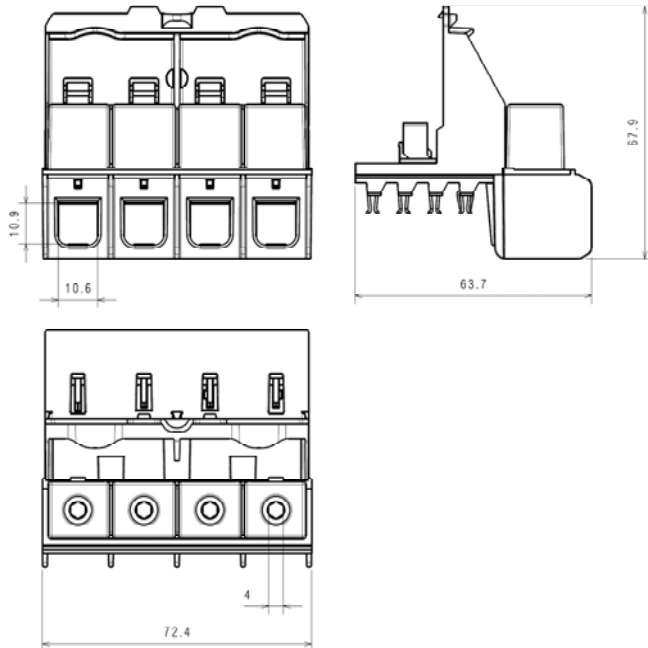
Modules	L (mm)
24	432
36	652

Horizontal distribution busbar HX³ 80/125 A plug-in

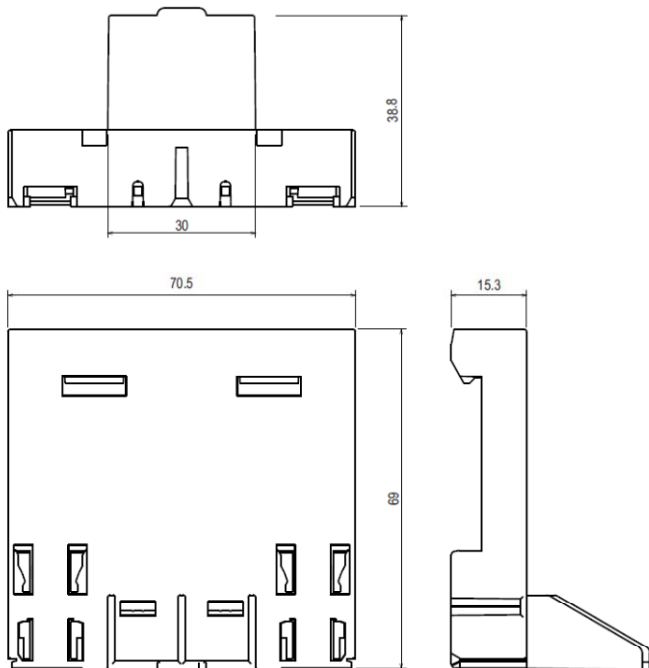
Cat. N° (s): 4 052 23/40/41/42/43/44/45/46

3. OVERALL DIMENSIONS (continued)

. Power supply module, cat n° 4 052 42:

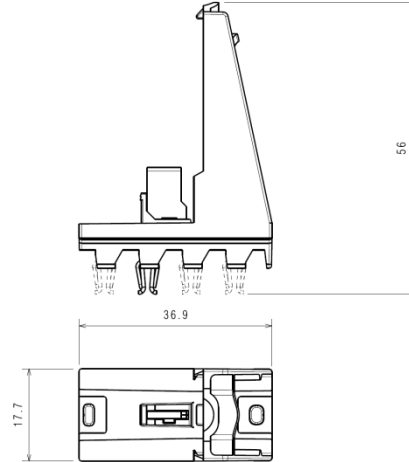


. Power supply security module (delivered with power supply module):

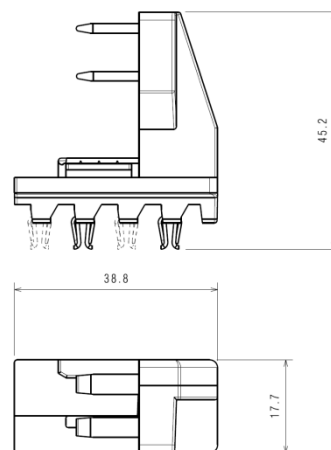


3. OVERALL DIMENSIONS (continued)

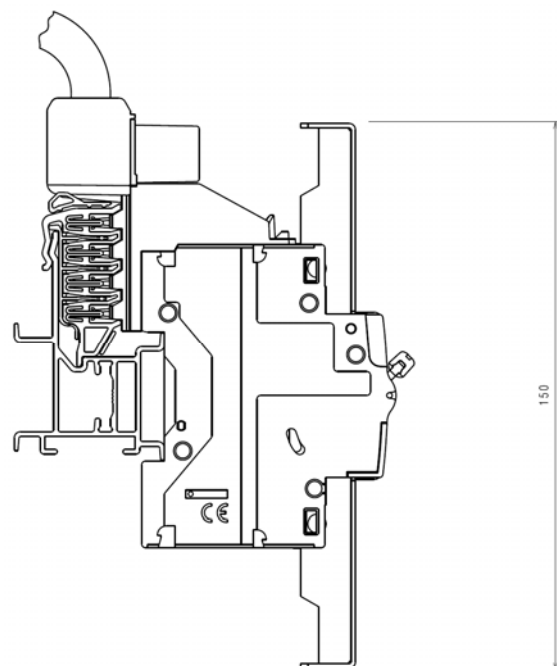
. Connection module 1P, cat n°(s) 4 052 43/44/45/46:



. Connection module 1P+N (Cat. no 4 052 23):



. Lateral view of the cabled system:



Horizontal distribution busbar HX³ 80/125 A plug-in

Cat. N° (s): 4 052 23/40/41/42/43/44/45/46

4. PREPARATION - CONNECTION

Fixing:

. On dedicated rail cat. no 4 052 26.

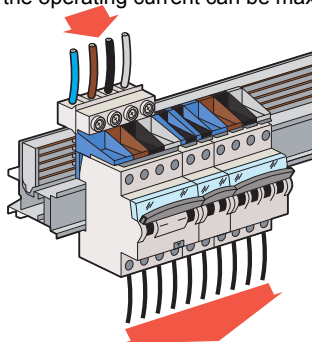
List of modular compatible devices:

DX ³ Modular compatible device:	Connection modules
MCBs 1P+N in 1 module, automatic or screws terminals	4 052 23 (L1N, L2N, L3N) neutral on the left
RCBOs 1P+N feeder protection	
RCDs 1P+N feeder protection	
RCDs 2P feeder protection	4 052 43: L1 4 052 44: L2 4 052 45: L3 4 052 46: N
RCDs 4P feeder protection	
RCBOs 2P feeder protection	
RCBOs 4P feeder protection	
MCBs 1P, 2P, 3P, 4P 1module/pole (*)	
MCBs 2p and 4P associated to RCD add-on modules	
IS	

(*)Except products dedicated to four pole Prong busbars HX³

System power supply:

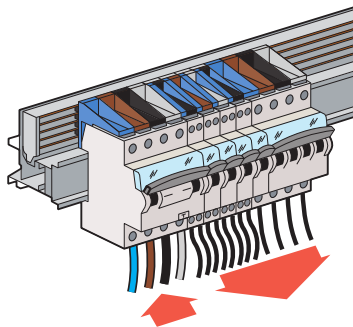
. Direct power supply via the power supply module. In this configuration the operating current can be max 125A.



. Indirect power supply via head of row device:

The distribution busbar is protected by the head of group device.

In this configuration the operating current is limited by the rated current of the head device (max. 80A).

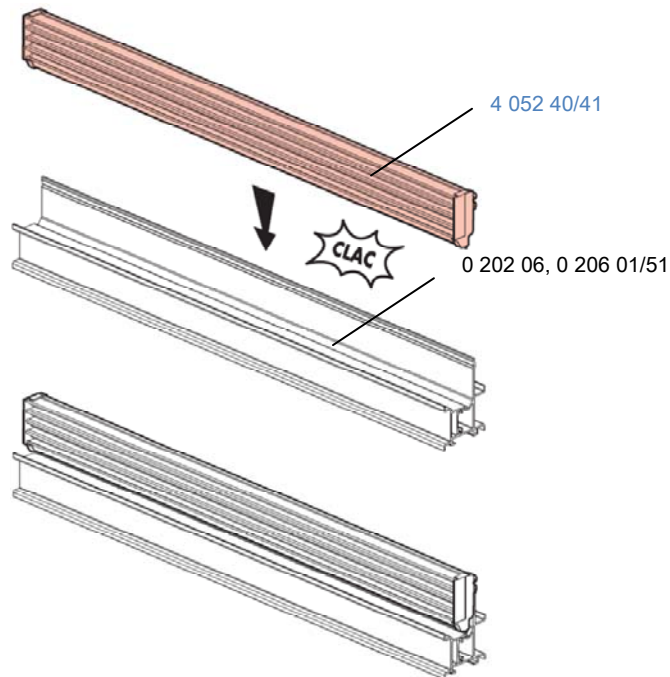


4. PREPARATION - CONNECTION (continued)

Assembly of the various elements of the system:

. Horizontal distribution busbar:

XL³ 400, XL³ 800, XL³ 4000 enclosures



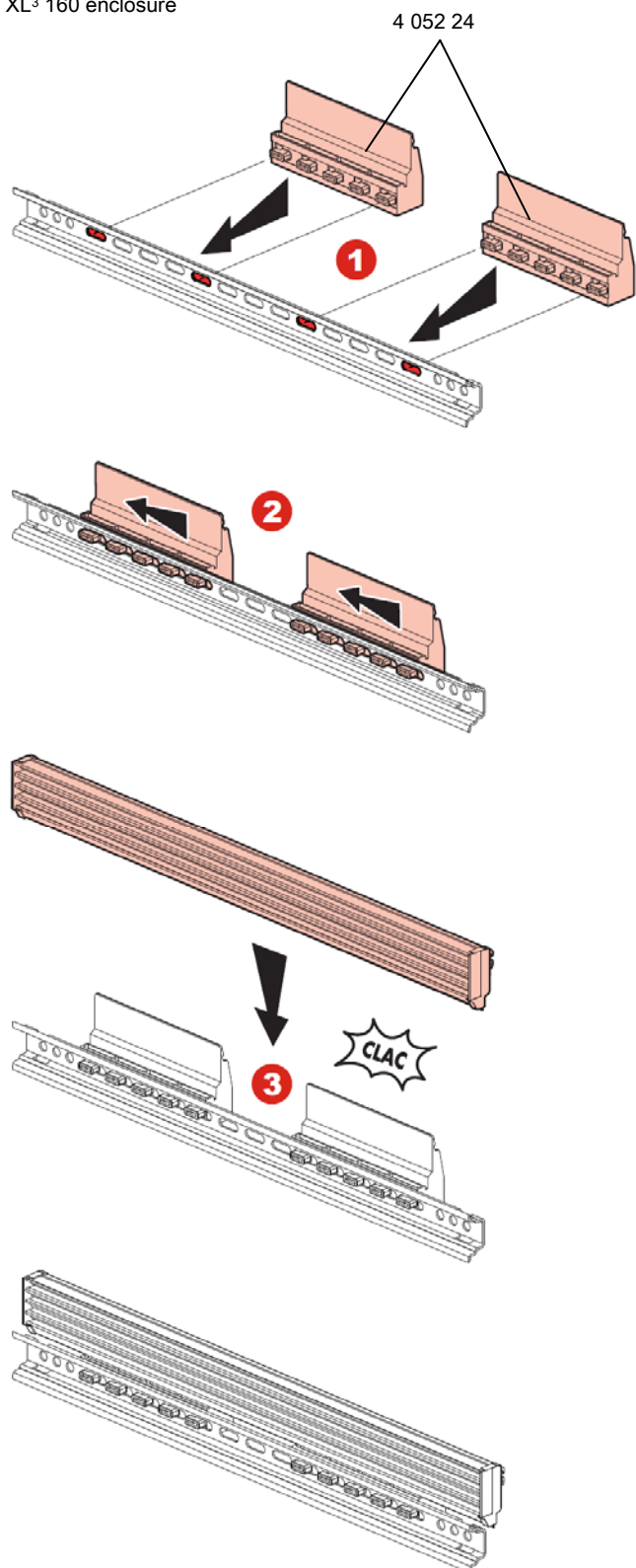
Horizontal distribution busbar HX³ 80/125 A plug-in

Cat. N° (s): 4 052 23/40/41/42/43/44/45/46

4. PREPARATION - CONNECTION (continued)

Assembly of the various elements of the system (continued):

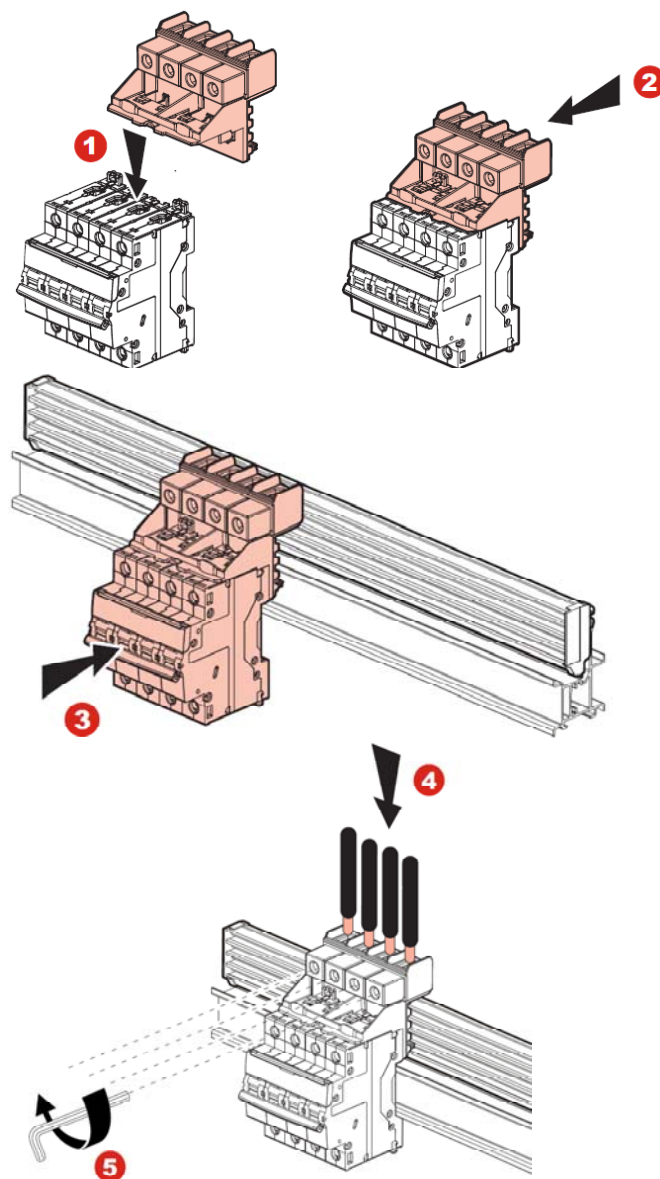
- . Horizontal distribution busbar (continued):
- XL³ 160 enclosure



4. PREPARATION - CONNECTION (continued)

Assembly of the various elements of the system (continued):

- . Supply module associated to an MCB:



Supply module - Terminal capacity:

	Copper cables	
	Without ferrule	Without ferrule
Rigid cable	6 mm ² à 50 mm ²	-
Flexible cable	6 mm ² à 35 mm ²	6 mm ² à 35 mm ²

Tightening torque:

- . Recommended: 4Nm.
- . Min: 3 Nm. Max: 5 Nm.

Tools required:

- . For the terminals: Allen wrench 4 mm.

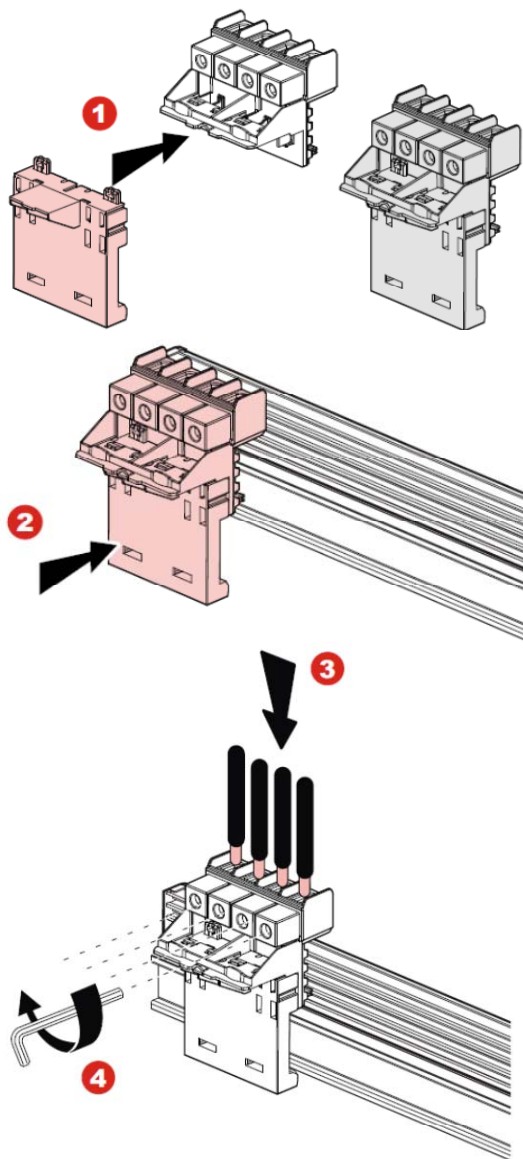
Horizontal distribution busbar HX³ 80/125 A plug-in

Cat. N° (s): 4 052 23/40/41/42/43/44/45/46

4. PREPARATION - CONNECTION (continued)

Assembly of the various elements of the system (continued):

. Supply module (cat n° 4 052 42) associated to the power supply security module: used to supply directly the busbar.



Supply module - Terminal capacity:

	Copper cables	
	Without ferrule	With ferrule
Rigid cable	6 mm ² a 50 mm ²	-
Flexible cable	6 mm ² a 35 mm ²	6 mm ² a 35 mm ²

Tightening torque:

. Recommended: 4Nm.
. Min: 3 Nm. Max: 5 Nm.

Tools required:

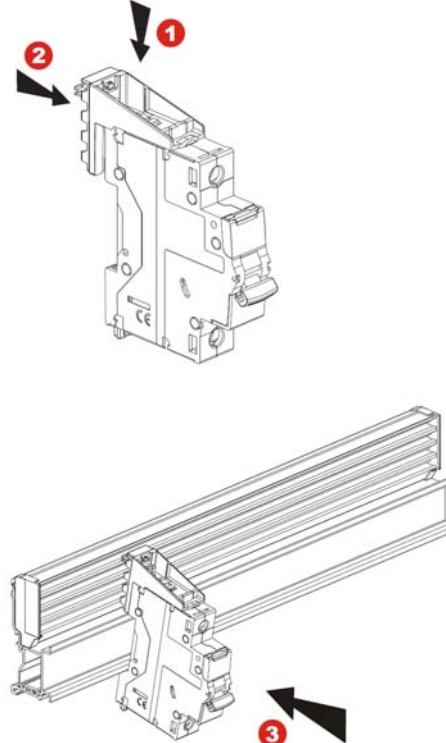
. For the terminals: Allen wrench 4 mm.

4. PREPARATION - CONNECTION (continued)

Assembly of the various elements of the system (continued):

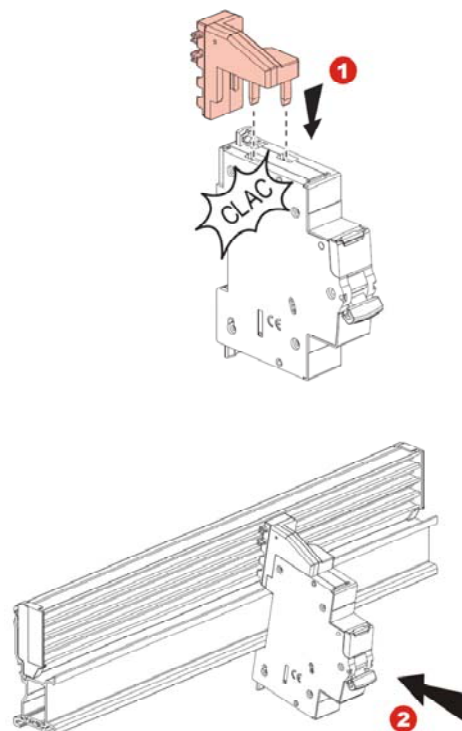
. Connection modules 1P (cat. n°(s) 4 052 43/44/45/46):

No tools required to assembly the connection module to the device.



. Connection module 1P+N (cat. n° 4 052 23):

No tools required to assembly the connection module to the MCB 1P+N in 1 module with automatic terminals



Horizontal distribution busbar HX³ 80/125 A plug-in

Cat. N° (s): 4 052 23/40/41/42/43/44/45/46

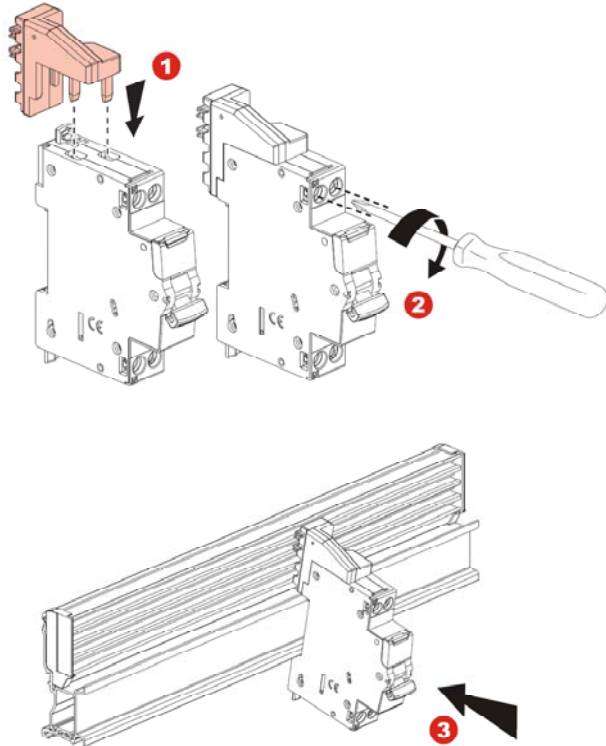
4. PREPARATION - CONNECTION *(continued)*

Assembly of the various elements of the system *(continued)*:

. Connection module 1P+N (cat. n° 4 052 23: neutral on the left):

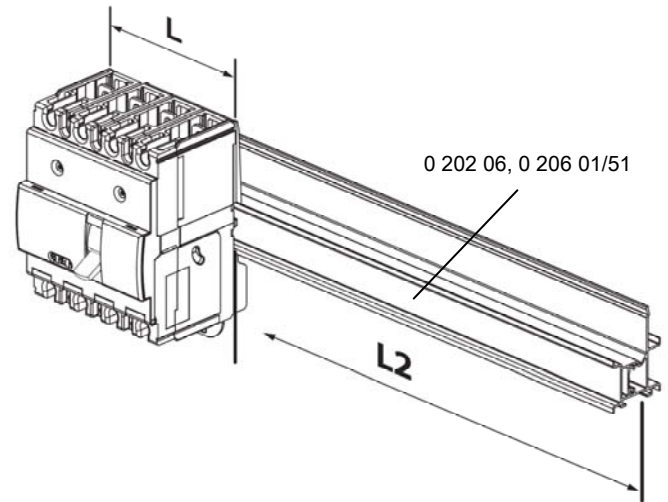
To assembly the connection module to the device 1P+N in 1 module is necessary a screwdriver Pozidriv n° 2.

Recommended tightening torque: 1.6 to 2 Nm.

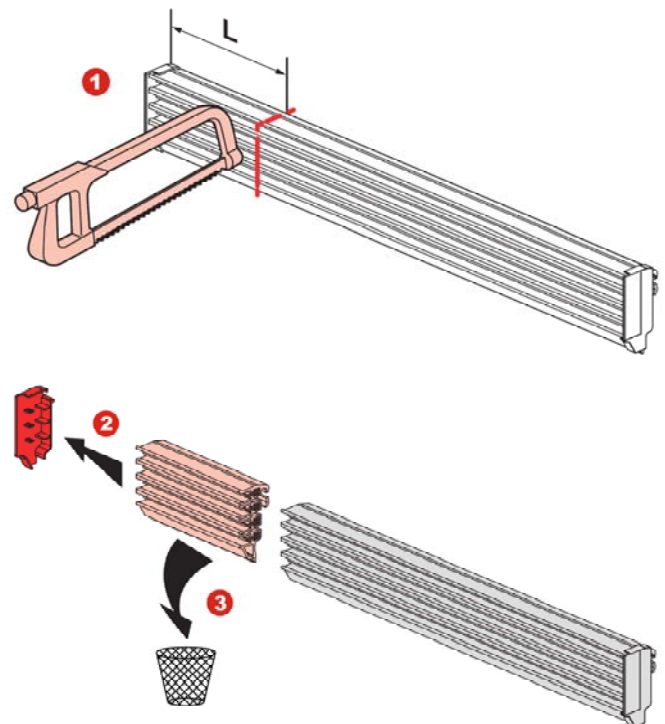


4. PREPARATION - CONNECTION *(continued)*

Assembly of the various elements of the system in case of use of a MCCB:



	L (mm)	
DPX ³	3P	4P
160	82	108
250	105	140

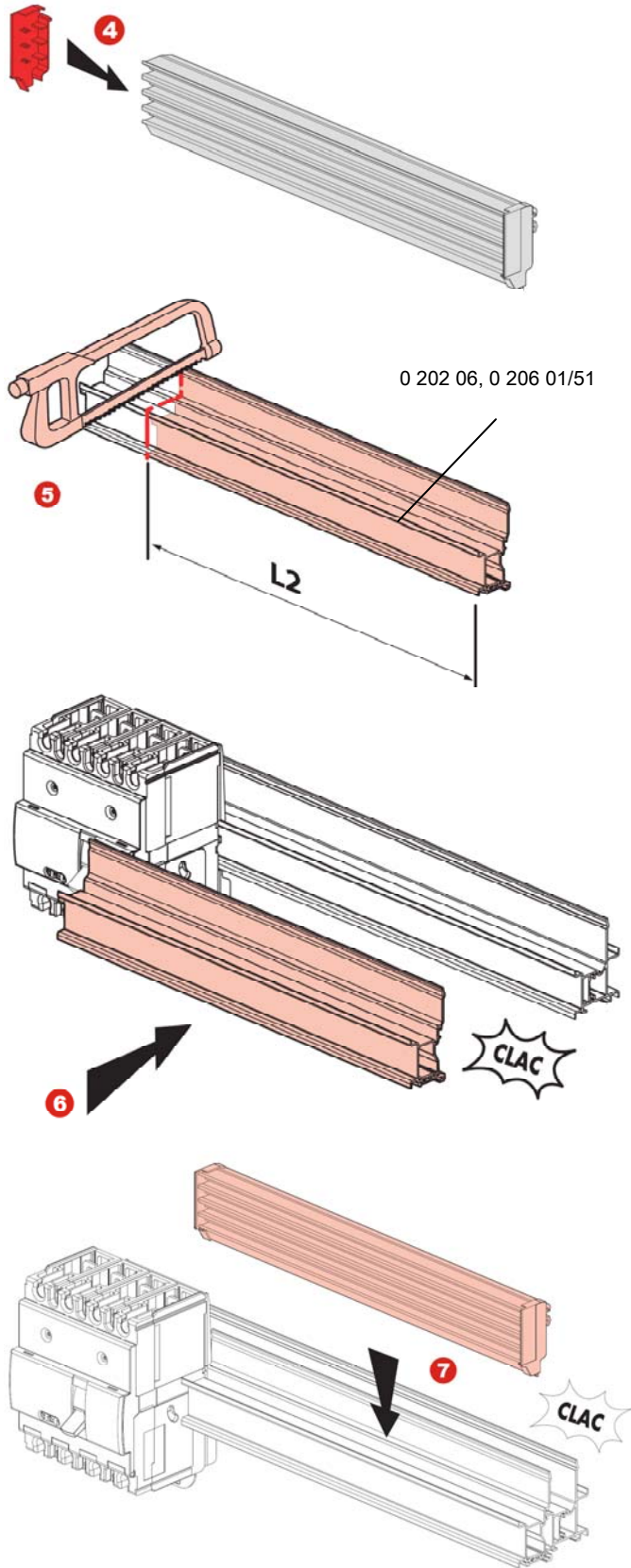


Horizontal distribution busbar HX³ 80/125 A plug-in

Cat. N° (s): 4 052 23/40/41/42/43/44/45/46

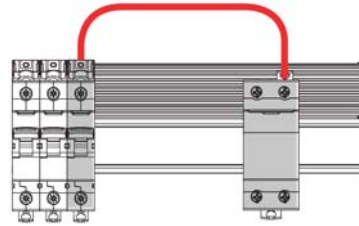
4. PREPARATION - CONNECTION *(continued)*

Assembly of the various elements of the system in case of use of a MCCB:

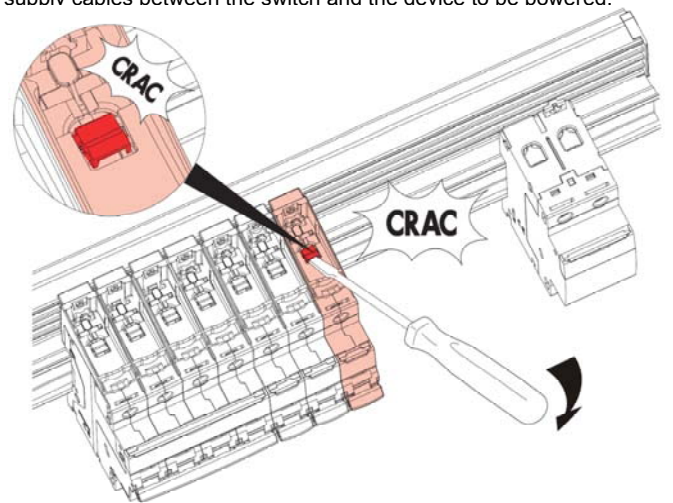


4. PREPARATION - CONNECTION *(continued)*

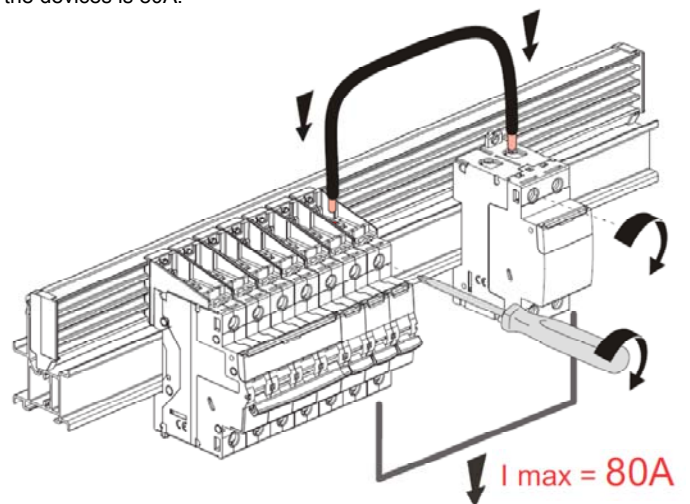
Supply of a device that can't be equipped with the connection modules:



- . This operation is possible with the connection modules 1P.
- . Fix the device to be powered on the DIN rail Cat nos 0 202 06, 0 206 01/51.
- . Break the pre-fracture on the connection module and connect the supply cables between the switch and the device to be powered.



WARNING: In this configuration the maximum current derivable from the devices is 80A.



Horizontal distribution busbar HX³ 80/125 A plug-in

Cat. N° (s): 4 052 23/40/41/42/43/44/45/46

5 GENERAL CHARACTERISTICS

Rated peak withstand current (I_{pk}):

. 25kA at 400V

Rated short-time current (I_{sw}):

. 6 kA per 0,1 s
. 2,5 kA per 0,3 s
. 2 kA per 1 s

Rated impulse withstand voltage:

. U_{imp} = 4kV according to IEC 61439-2, 61439-3

Maximum power loss at 125 A (W):

. 17,4 W for the distribution busbar 24 modules (cat. n° 4 052 40).
. 26,4 W for the distribution busbar 36 modules (cat. n° 4 052 41)

Maximum power loss at 80 A (W):

. 7,1 W for the distribution busbar 24 modules (cat. n° 4 052 40).
. 10,8 W for the distribution busbar 36 modules (cat. n° 4 052 41)

Rated insulation voltage:

. U_i = 500 V according to IEC 60493-1

Pollution degree:

. 2.

Plastic materials:

. All insulating parts (distribution busbar, supply module, connection modules 1P+N, 1P) comply with the glow-wire test (IEC/EN 60695-2-11).

Horizontal distribution busbar is made of self-extinguishing materials in accordance with the standard IEC/EN 60695-11-10.

Higher calorific value (HCV):

. Distribution busbar 24 modules: 3,112 MJ
. Distribution busbar 36 modules: 4,738 MJ
. Connection module (1P and 1P+N): 0,159 MJ
. Power supply module: 0,636 MJ
. Power supply security module: 0,154 MJ

Protection index:

. Protection index against solid and liquid bodies: IP 20 (IEC 529, EN 60529 et NF C 20-010).

Resistance to sinusoidal vibrations:

. According to IEC 60068-2-35.
. Axis: x, y, z.
. Frequency range: 5÷100 Hz; duration 90 minutes
. Displacement (5÷13,2 Hz): 1mm.
. Acceleration (13,2÷100 Hz): 0,7g (g=9,81 m/s²)

Average weight of each element of the system:

. Distribution busbar 24 modules: 0,501 kg
. Distribution busbar 36 modules: 0,675 kg
. Power supply module: 0,136 kg
. Connection module 1P: 0,010 kg
. Connection module 1P+N: 0,019 kg.
. Power supply security module: 0,033kg

5 GENERAL CHARACTERISTICS (continued)

Volume when packed:

	Volume (dm ³)
Distribution busbar 24 modules (pack per 5)	3,3
Distribution busbar 24 modules (pack per 5)	4,8
Supply module + Power supply security module (pack. per 1)	0,75
Connection module 1P (pack. per 10)	0,75
Connection module 1P+N, in bag of 3 pieces (pack. per 5 bags)	0,995
Accessory for mounting in XL ³ 160 enclosure	3,675

Ambient operating temperature:

. Min. = -25°C. Max. = +70°C

Ambient storage temperature:

. Min. = -40°C. Max. = +70°C

6. COMPLIANCE AND APPROVALS

Compliance to standards:

- . Reference standard: IEC 61439

Environment respect – Compliance with CEE directives:

- . Compliance with Directive 2002/95/EC of 27.1.2003 called "RoHS" provides the banishment of hazardous substances such as lead, mercury, cadmium, hexavalent chromium, brominated flame retardants polybrominated biphenyls (PBB) and polybrominated diphenylethers (PBDE) from 1 July 2006
- . Compliance with Directives 91/338/CEE of 18/06/91 and decree 94-647 of 27/07/04.
- . Compliance with Directives 73/23/CEE and 93/68/CEE (DBT).
- . Compliance with Directives 83/336/CEE, 92/31/CEE and 93/68/CEE (CEM)

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 20.07.1998 and Directive 94/62/EC.