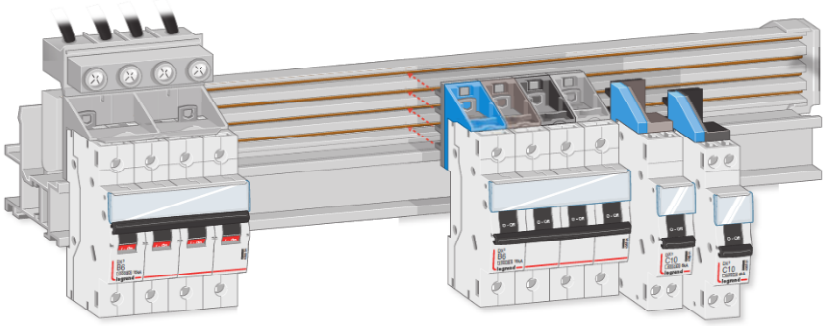
87045 LIMOGES Cedex
Telephone: +33 5 55 06 87 87 – FAX: +33 5 55 06 88 88

Horizontal distribution busbar HX³ 80/125 A plug-in

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



CONTENTS Pages

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:

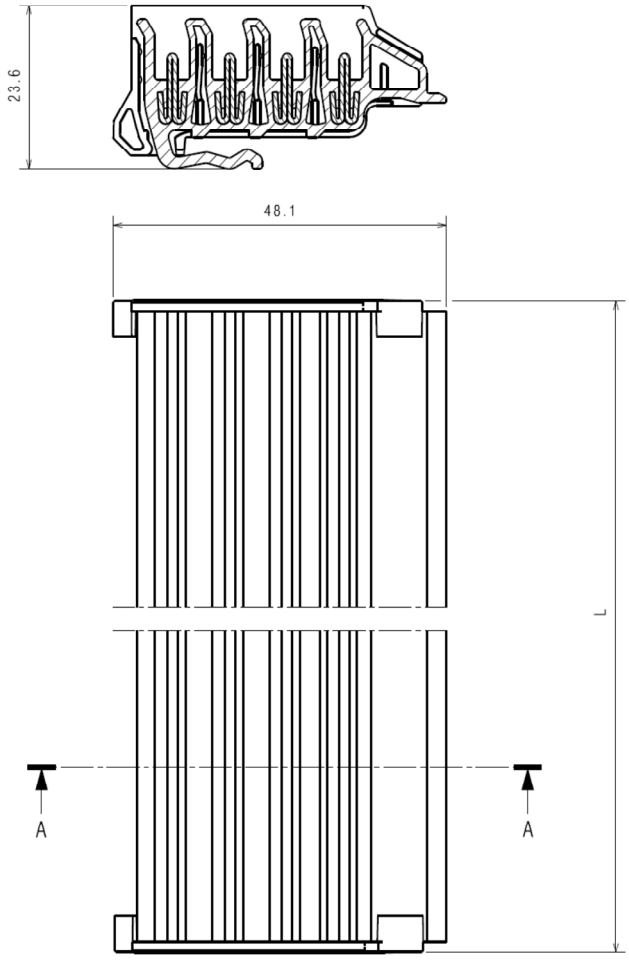
. 230 V ~ / 400 V~ - 50 / 60 Hz with standard tolerances.

Rated Currents:

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

3. OVERALL DIMENSIONS

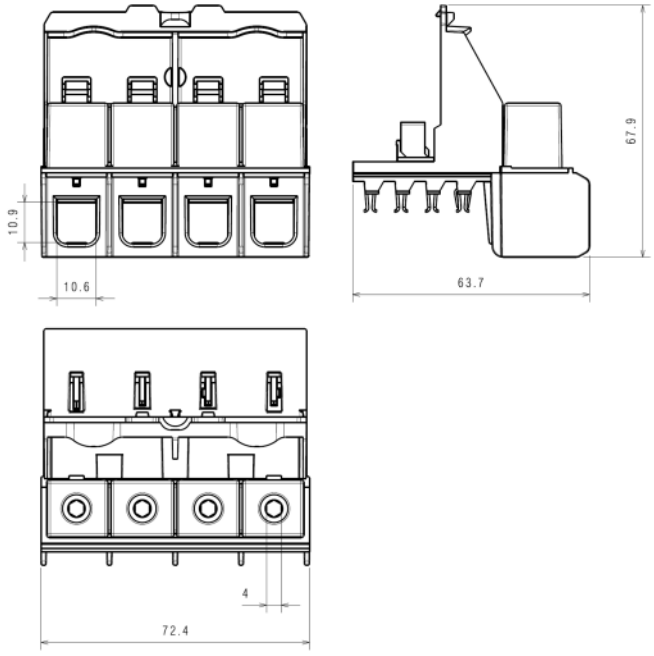
. Distribution busbar:



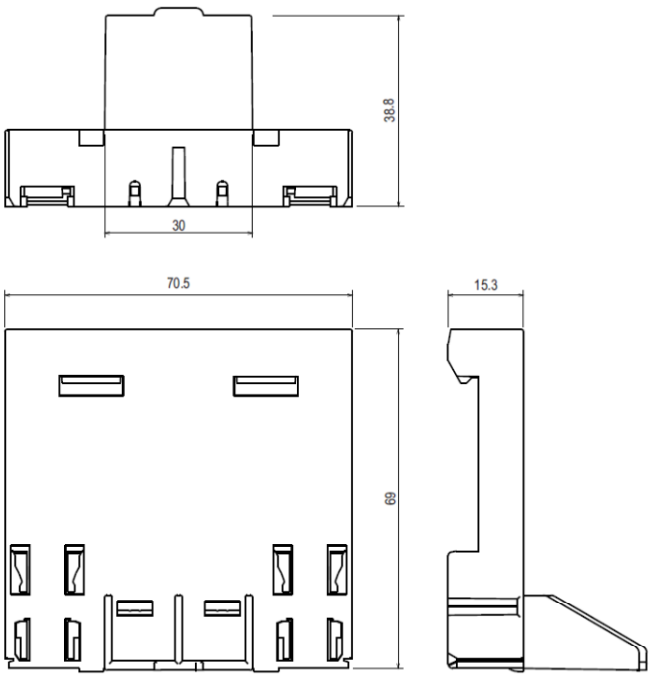
Modules	L (mm)
24	**432**
36	**652**

3. OVERALL DIMENSIONS *(continued)*

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

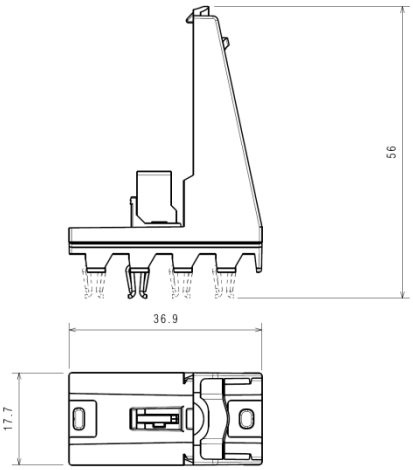


. Power supply security module (delivered with power supply module):

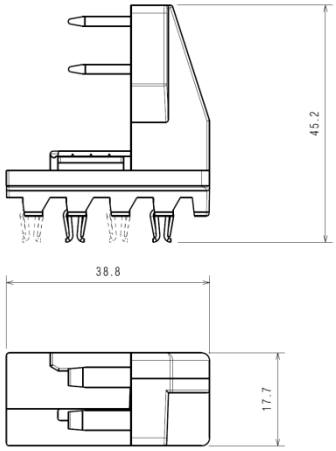


3. OVERALL DIMENSIONS *(continued)*

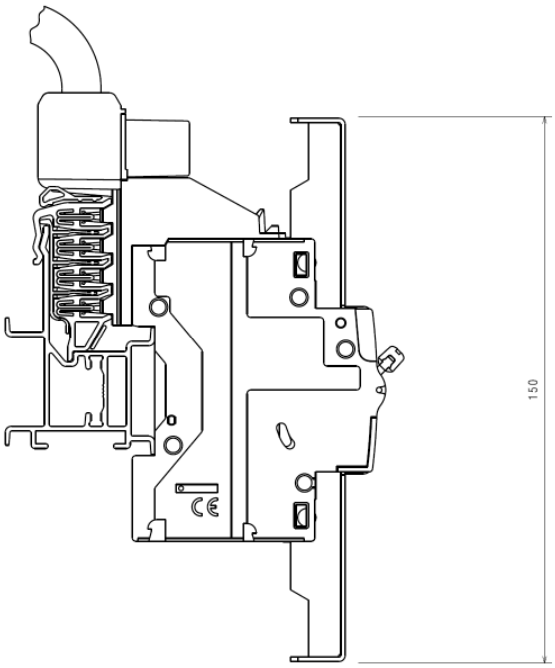
. Connection module 1P, cat n°(s) 4 052 43/44/45/46:



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



. Lateral view of the cabled system:



4. PREPARATION - CONNECTION

Fixing:

. On dedicated rail cat. no 4 052 26.

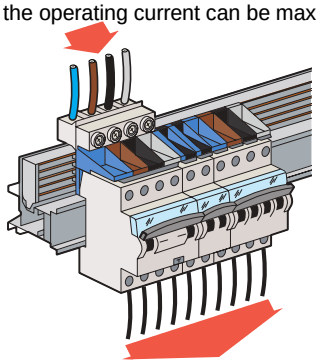
List of modular compatible devices:

DX³ 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	

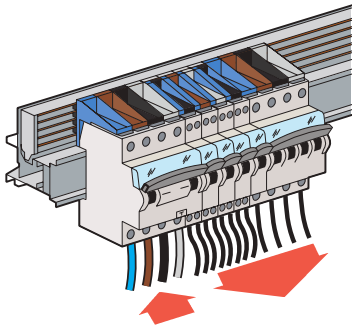
(*)Except products dedicated to four pole Prong busbars HX³

System power supply:

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



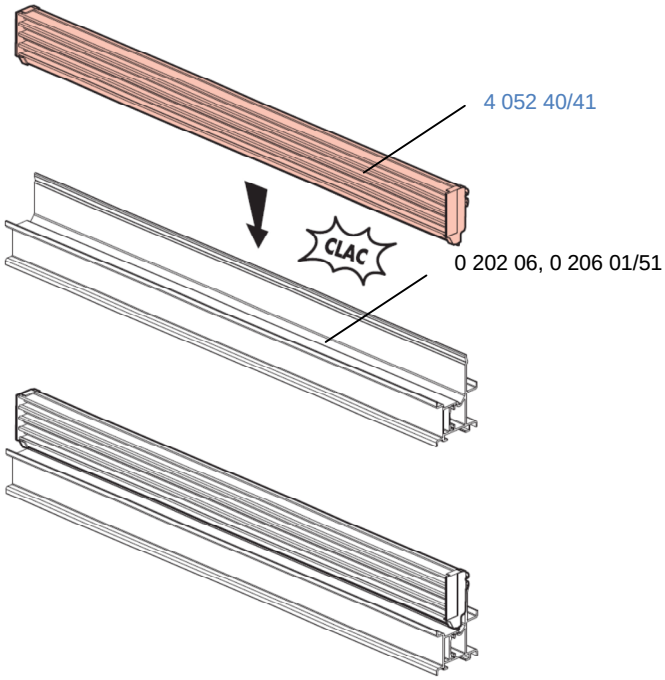
. Indirect power supply via head of row device:
The distribution busbar is protected by the head of group device.
I this configuration the operating current is limited by the rated current of the head device (max. 80A).



4. PREPARATION - CONNECTION *(continued)*

Assembly of the various elements of the system:

. Horizontal distribution busbar:
XL³ 400, XL³ 800, XL³ 4000 enclosures

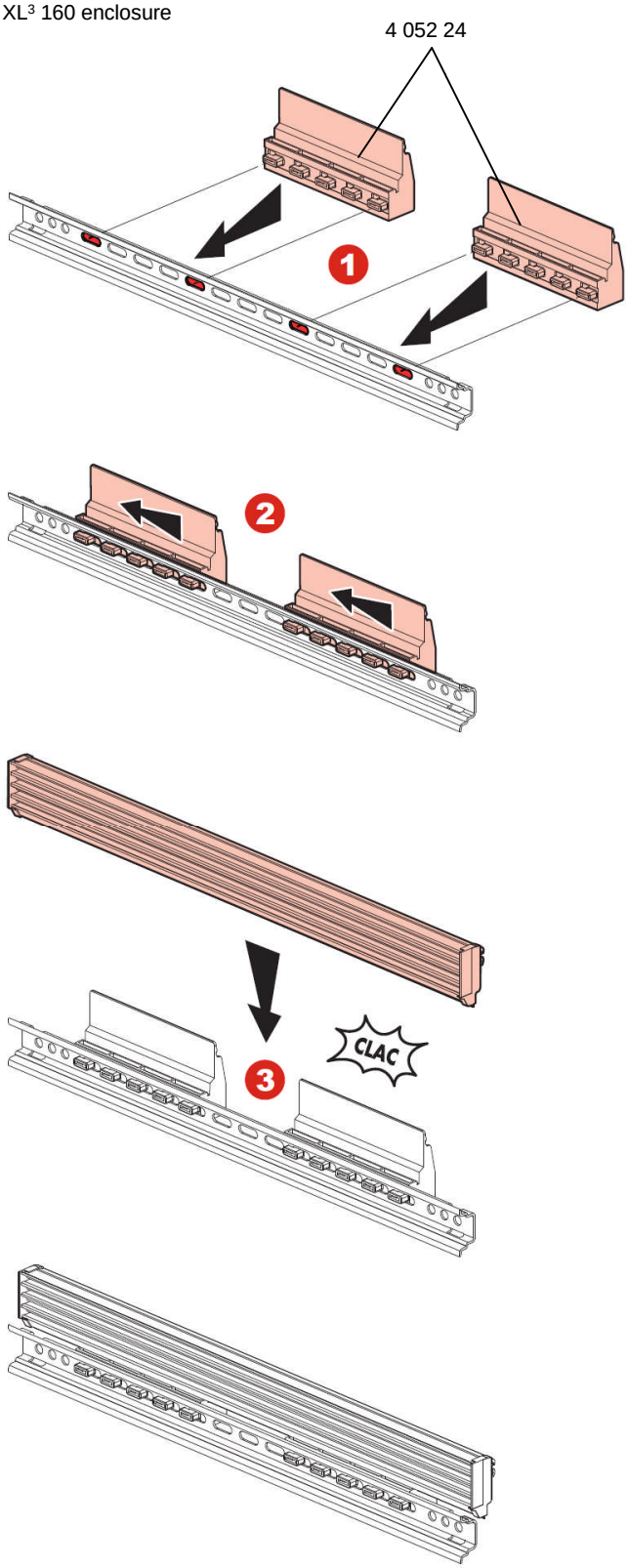


4. PREPARATION - CONNECTION *(continued)*

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

. Horizontal distribution busbar *(continued)*:

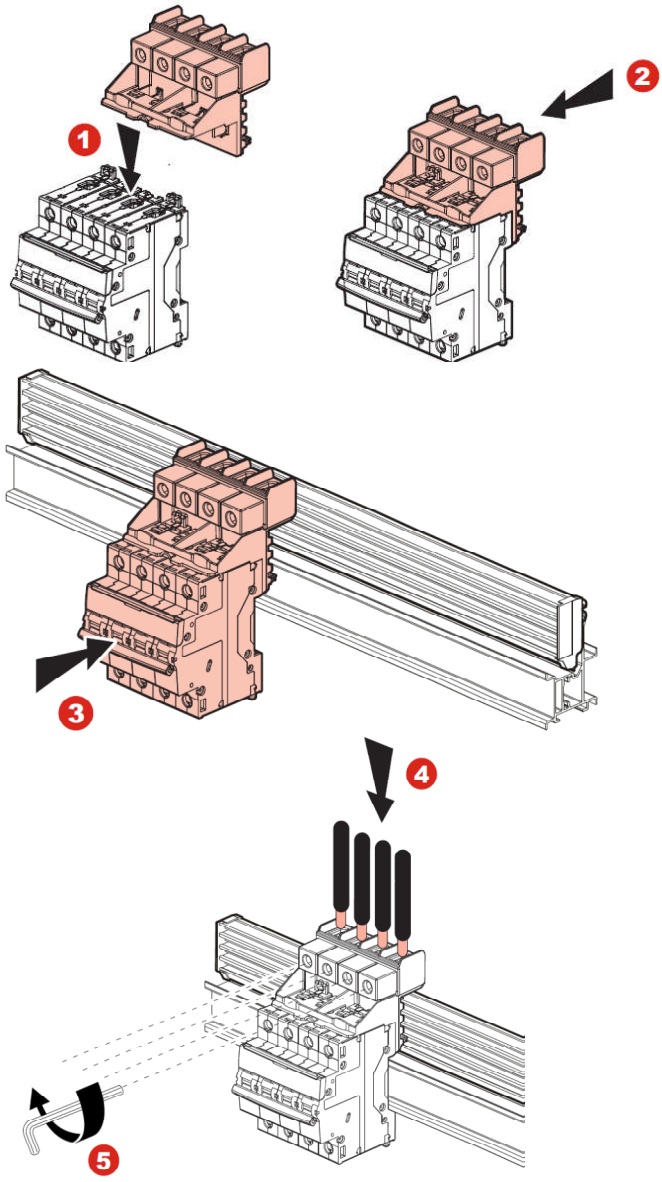
XL³ 160 enclosure



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 mm² à 50 mm²**	-
Flexible cable	**6 mm² à 35 mm²**	**6 mm² à 35 mm²**

Tightening torque:

. Recommended: 4Nm.

. Min: 3 Nm. Max: 5 Nm.

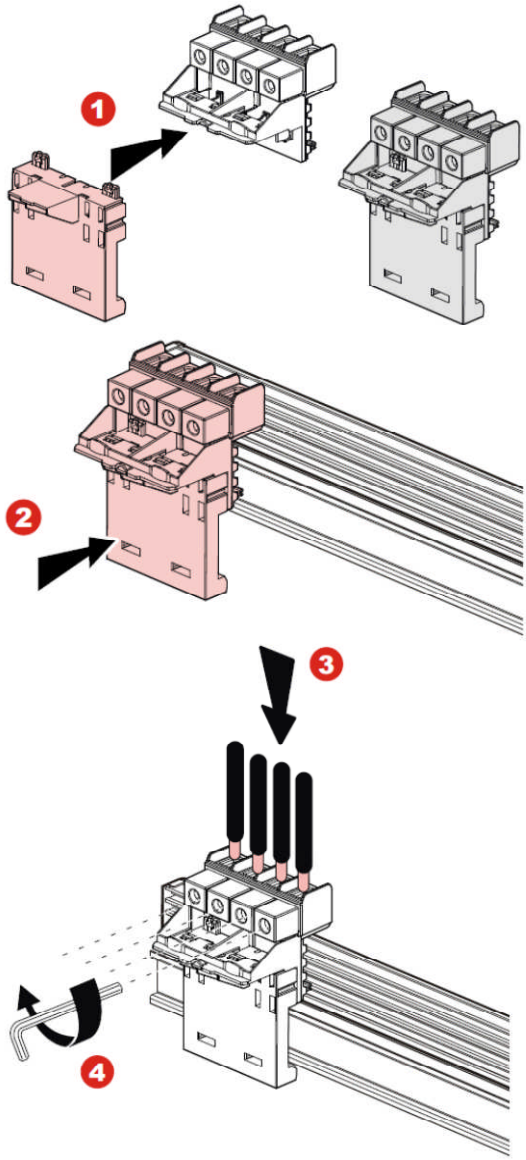
Tools required:

. For the terminals: Allen wrench 4 mm.

4. PREPARATION - CONNECTION *(continued)*

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

. 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 mm² a 50 mm²**	**-**
Flexible cable	**6 mm² a 35 mm²**	**6 mm² a 35 mm²**

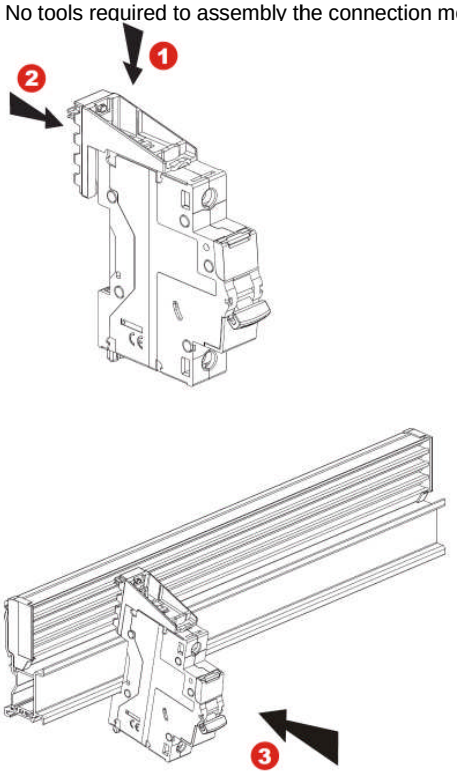
Tightening torque:
. Recommended: 4Nm.
. Min: 3 Nm. Max: 5 Nm.

Tools required:
. For the terminals: Allen wrench 4 mm.

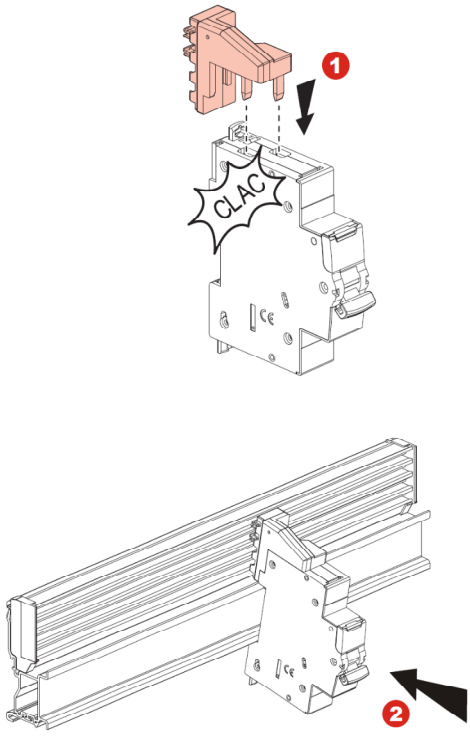
4. PREPARATION - CONNECTION *(continued)*

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.



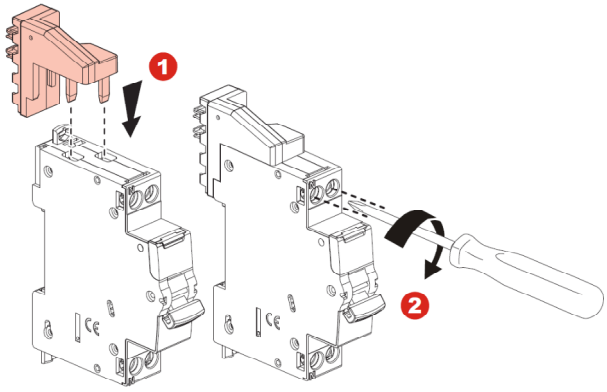
. Connection module 1P+N (cat. n° 4 052 23):
No tools required to assembly the connection module to the MCB 1P+N in 1 module with automatic terminals

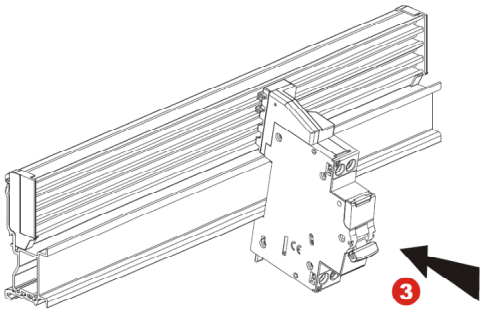


4. PREPARATION - CONNECTION *(continued)*

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

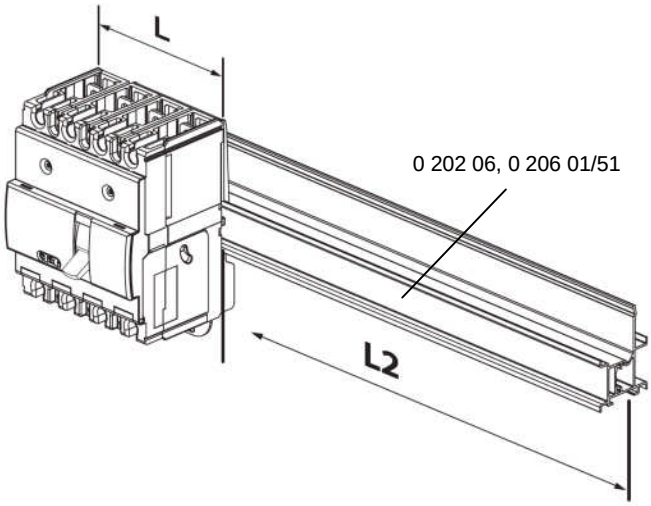
. Connection module 1P+N (cat. n° 4 052 23: neutral on the left):
To assembly the connection module to the device 1P+N in 1 module is necessary a screwdriver Pozidriv n° 2.
Recommended tightening torque: 1,6 to 2 Nm.



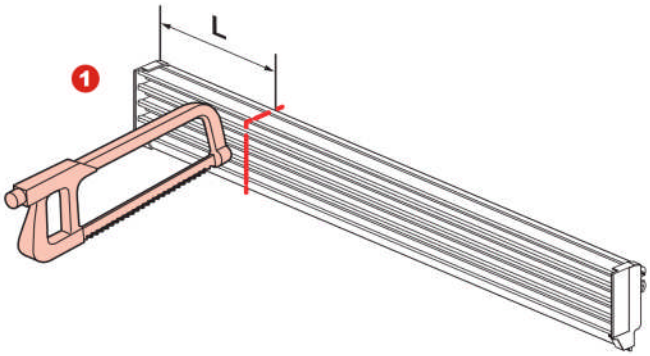


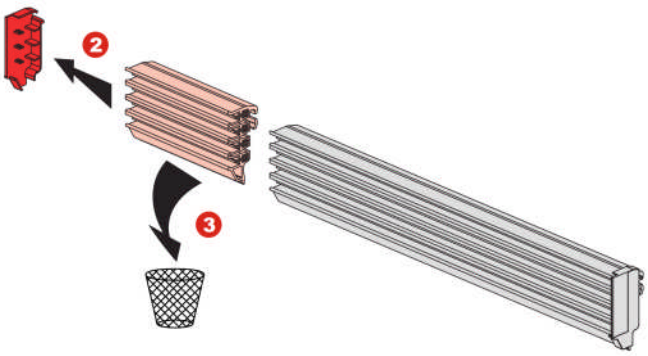
4. PREPARATION - CONNECTION *(continued)*

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



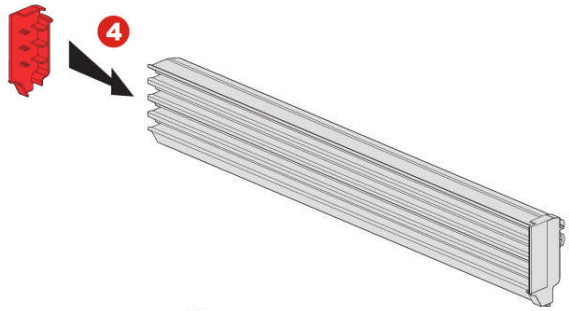
	L (mm)	
DPX³	3P	4P
160	**82**	**108**
250	**105**	**140**

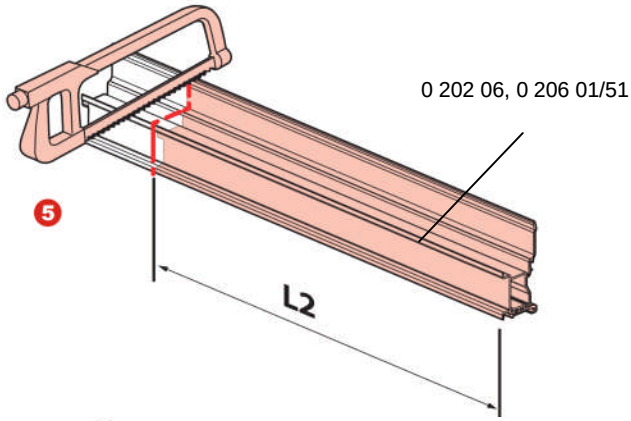


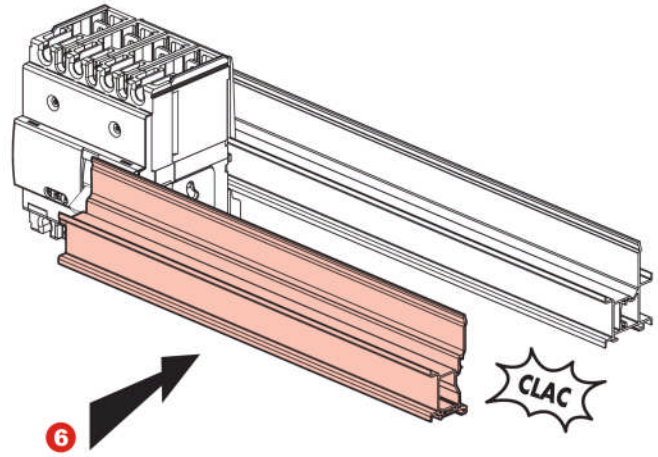


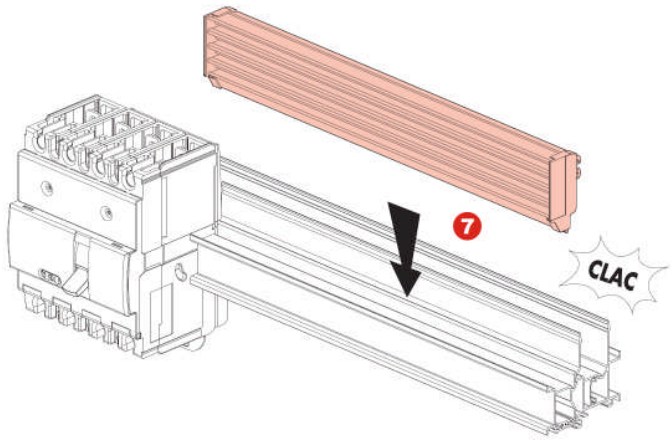
4. PREPARATION - CONNECTION *(continued)*

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



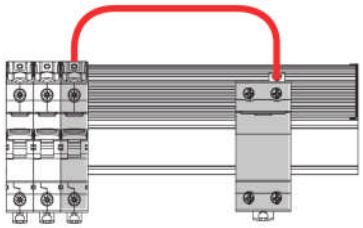




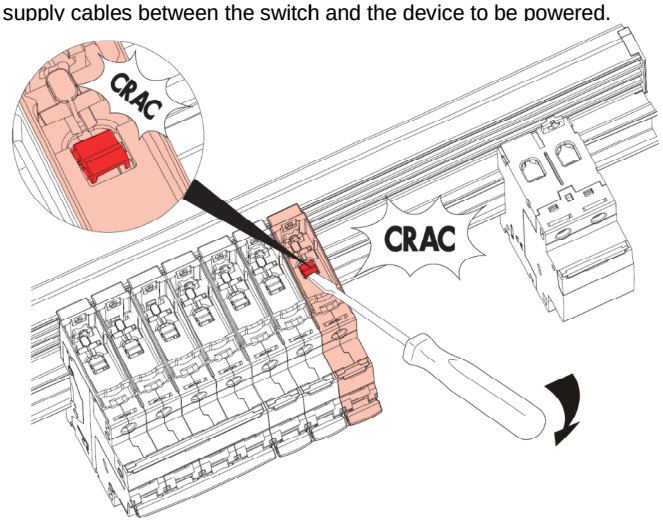


4. PREPARATION - CONNECTION *(continued)*

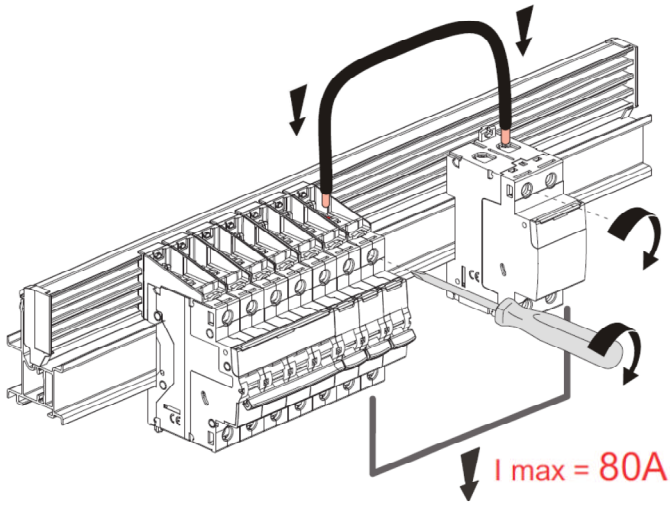
Supply of a device that can't be equipped with the connection modules:



. 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.



5 GENERAL CHARACTERISTICS

Rated peak withstand current (Ipk):
. 25kA at 400V

Rated short-time current (Icw):
. 6 kA per 0,1 s
. 2,5 kA per 0,3 s
. 2 kA per 1 s

Rated impulse withstand voltage:
. Uimp = 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:
. Ui = 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 (dm³)
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 XL³ 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.