87045 LIMOGES Cedex
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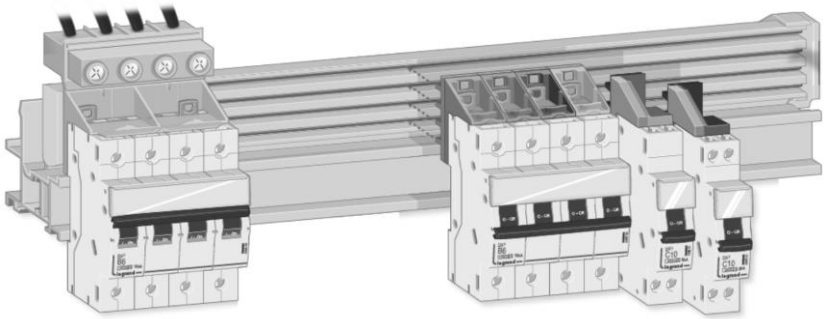
Horizontal distribution busbar HX³ plug 80/125A

Cat. N° (s): 4 052 40/41/42/46/47/48/49/51



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 0 206 01/06/51) 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 47: set of 10 connection modules L1
Cat. n° 4 052 48: set of 10 connection modules L2
Cat. n° 4 052 49: 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 51: 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° 4 050 40) in XL³ 160 enclosure.

Rated Voltages and Frequency

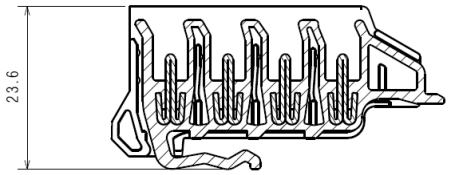
. 230 V ~ / 400 V~ - 50 / 60 Hz with standard tolerances.

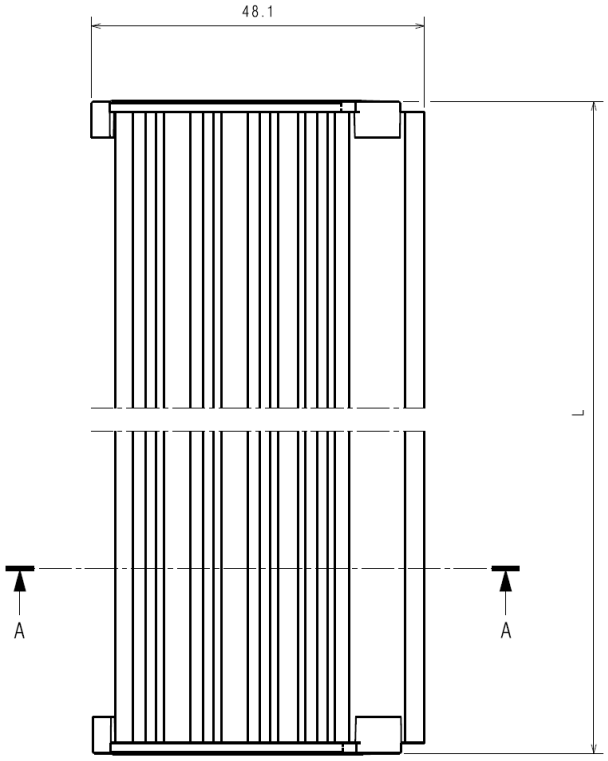
Rated Currents

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

3. OVERALL DIMENSIONS

. Distribution busbar:

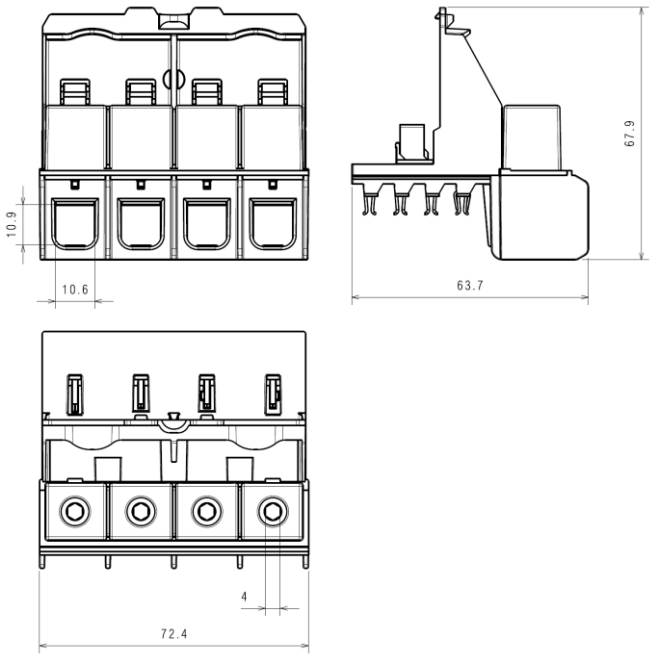




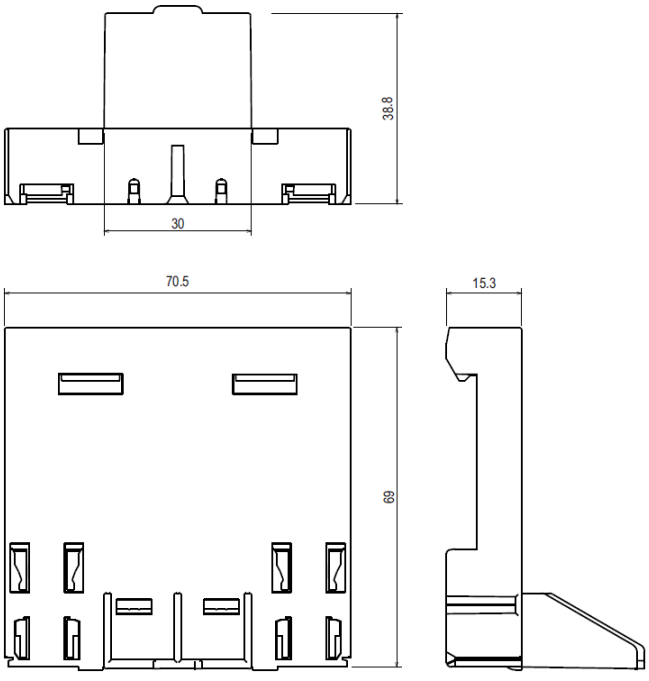
Modules	L (mm)
24	**432**
36	**652**

3. OVERALL DIMENSIONS *(continued)*

. Power supply module, cat n° 4 052 42, Identification of the phases and N with transparent adhesive label (N on the left) :

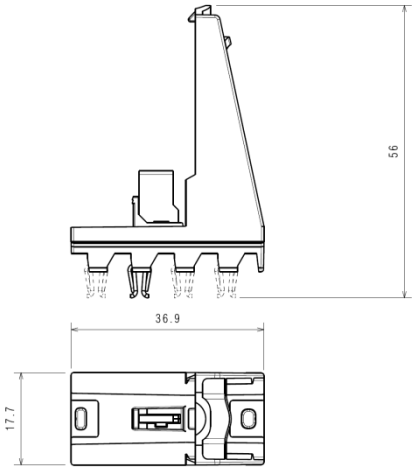


. Power supply security module (delivered with power supply module):

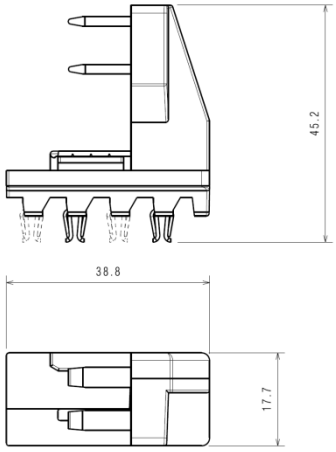


3. OVERALL DIMENSIONS *(continued)*

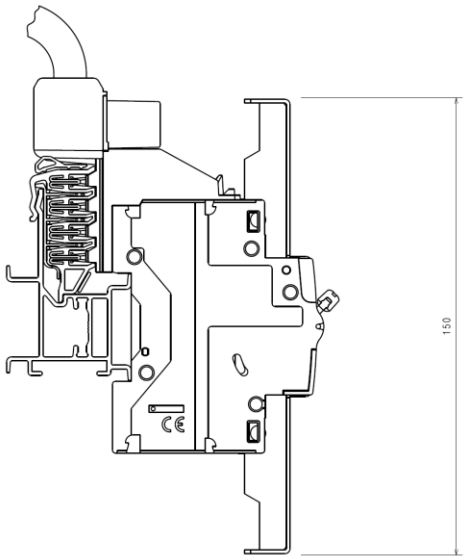
. Connection module 1P, cat n° (s) 4 052 46/47/48/49, Identification of the phases and N with writing in rilief :



. Connection module 1P+N (Cat. no 4 052 51), Identification of the phases and N with pad printing (N on the left):



. Lateral view of the cabled system:



4. PREPARATION - CONNECTION

Fixing:

. On dedicated rail cat. no 4 052 26.

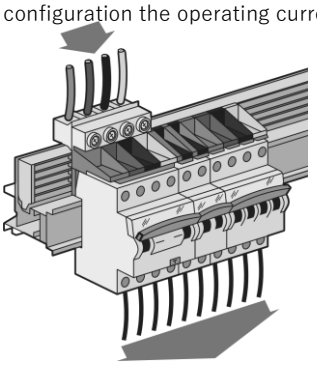
List of modular compatible devices:

DX³ Modular compatible device:	Connection modules
MCBs 1P+N in 1 module, automatic or screws terminals	4 052 51 (L1N, L2N, L3N) neutral on the left
RCBOs 1P+N feeder protection	
RCDs 1P+N feeder protection	
RCDs 2P feeder protection	4 052 47: L1 4 052 48: L2 4 052 49: 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	

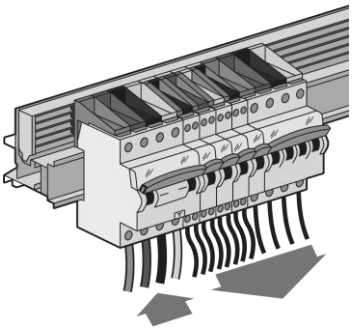
(*)Except products dedicated to four pole Prong busbars HX³

System power supply:

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



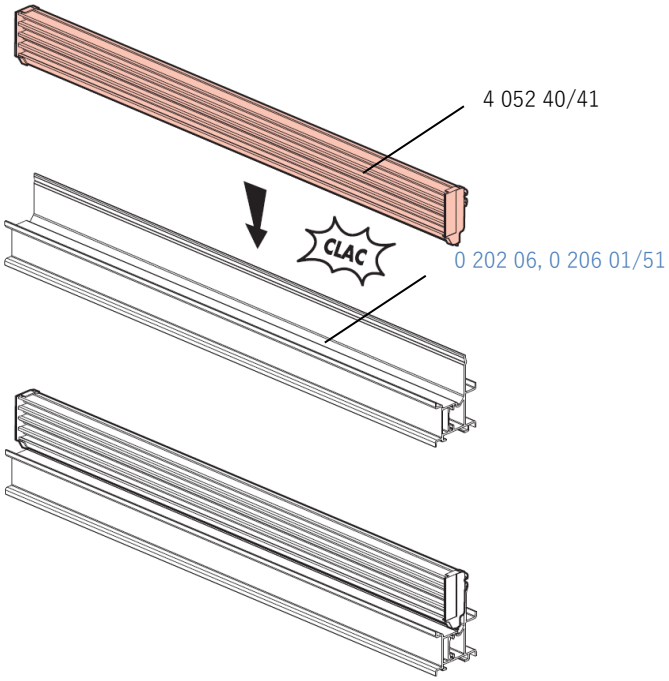
. Indirect power supply via head of row device:
The distribution busbar is protected by the head of group device.
I this configuration the operating current is limited by the rated current of the head device (max. 80A).



4. PREPARATION - CONNECTION *(continued)*

Assembly of the various elements of the system:

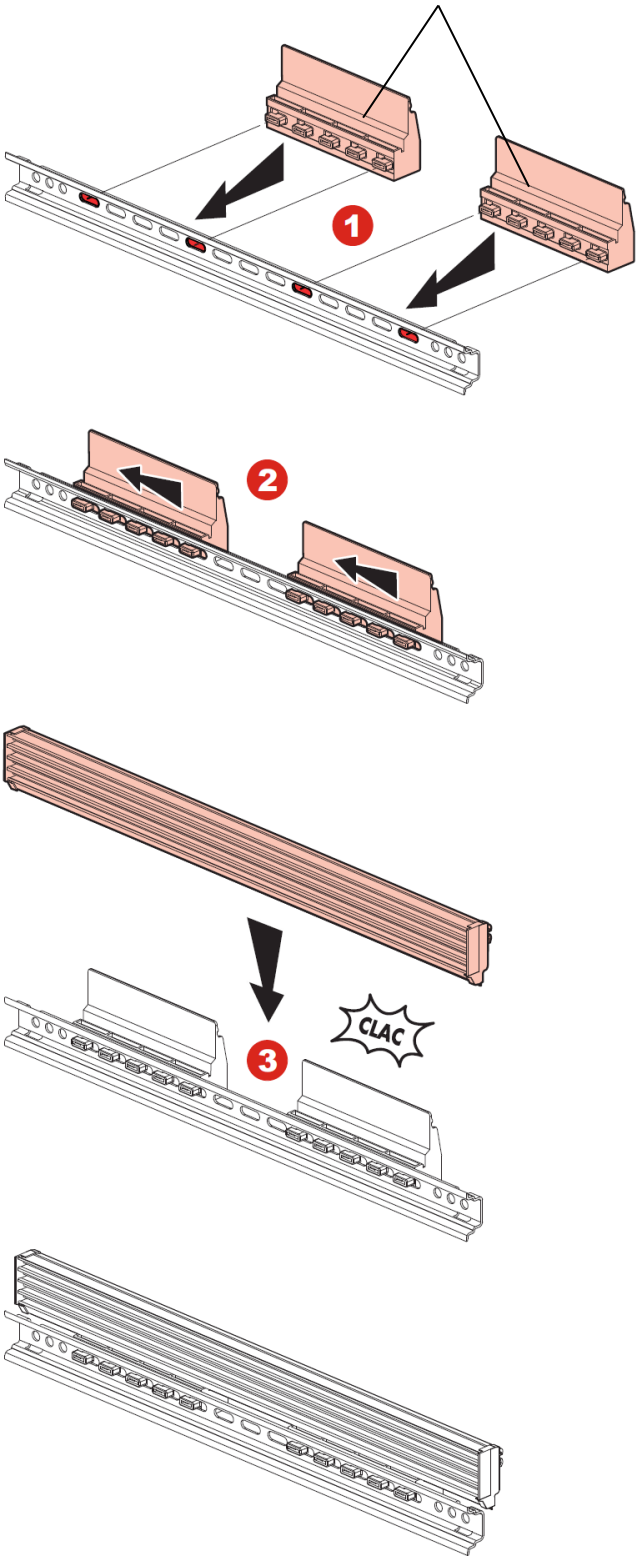
. Horizontal distribution busbar:
XL³ 400, XL³ 800, XL³ 4000 enclosures



4. PREPARATION - CONNECTION *(continued)*

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

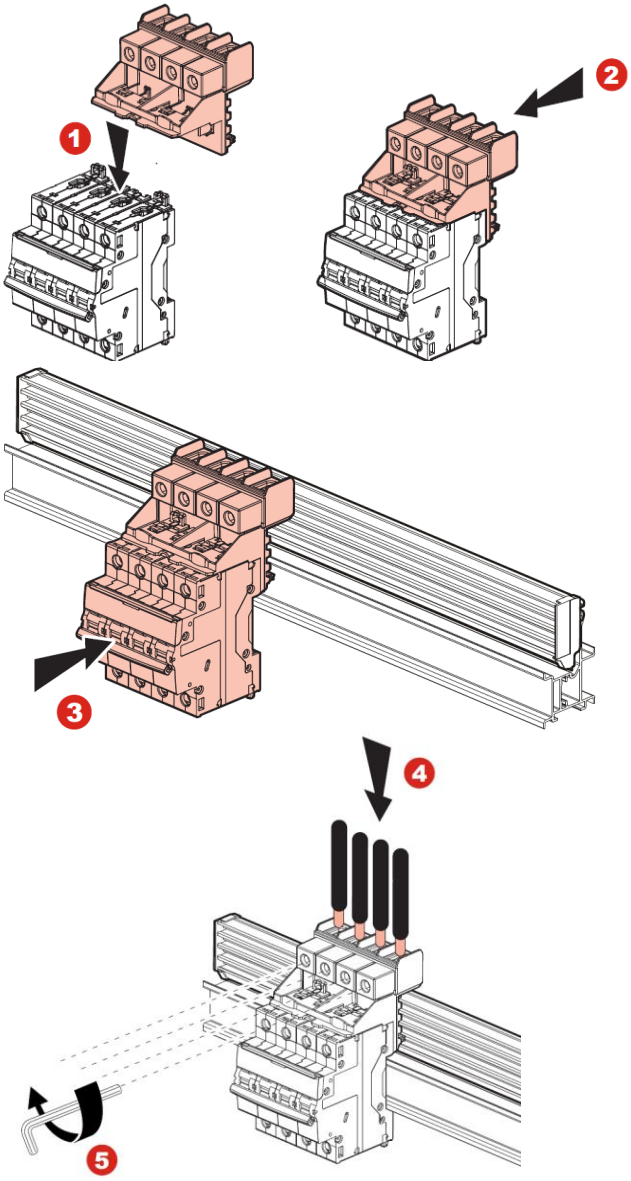
. Horizontal distribution busbar *(continued)*: 4 052 24
XL³ 160 enclosure



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.

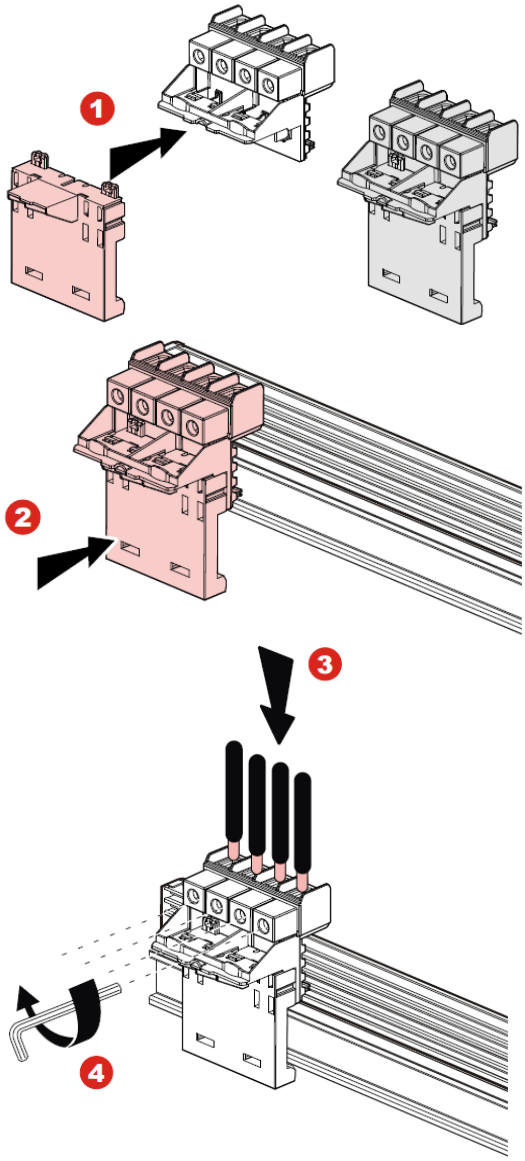
Tools required:
. For the terminals: Allen wrench 4 mm.

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.

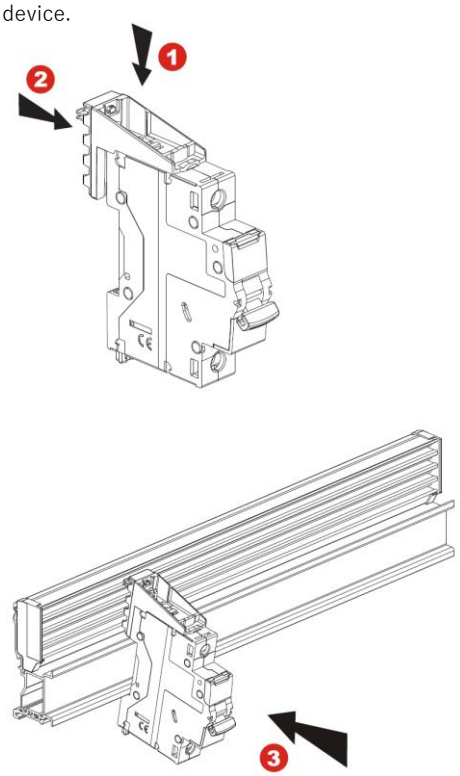
Tools required:
. For the terminals: Allen wrench 4 mm.

4. PREPARATION - CONNECTION *(continued)*

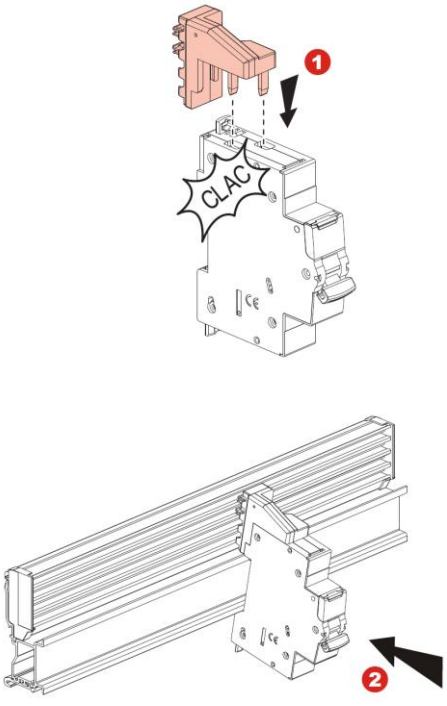
Assembly of the various elements of the system

(continued):

. Connection modules 1P (cat. n° (s) 4 052 46/47/48/49):
No tools required to assembly the connection module to the device.



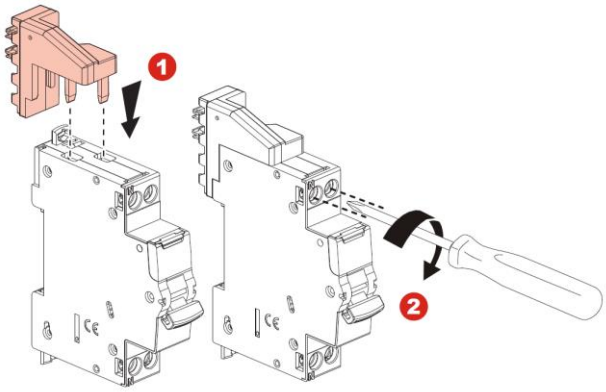
. Connection module 1P+N (cat. n° 4 052 51):
No tools required to assembly the connection module to the MCB 1P+N in 1 module with automatic terminals

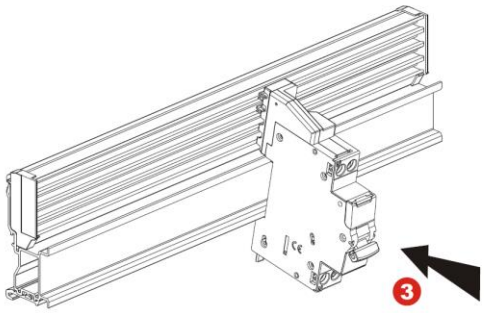


4. PREPARATION - CONNECTION *(continued)*

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

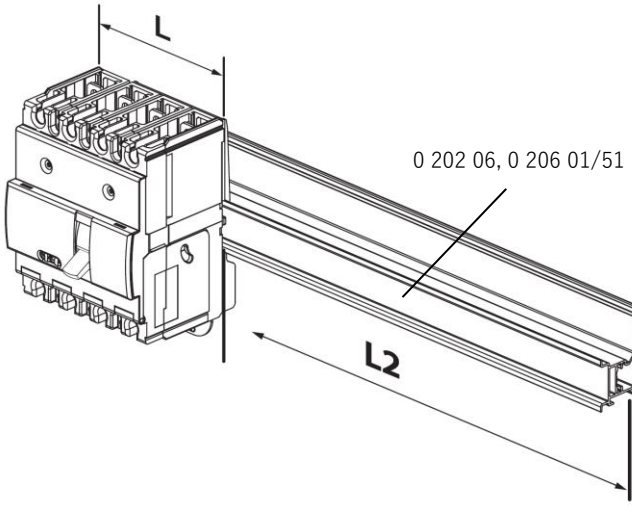
. Connection module 1P+N (cat. n° 4 052 51: neutral on the left):
To assembly the connection module to the device 1P+N in 1 module is necessary a screwdriver Pozidriv n° 2.
Recommended tightening torque: 1,6 to 2 Nm.



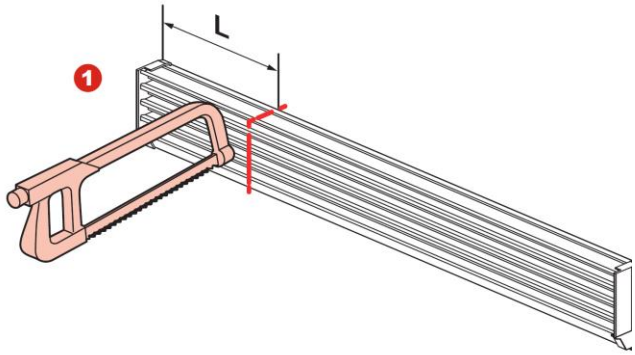


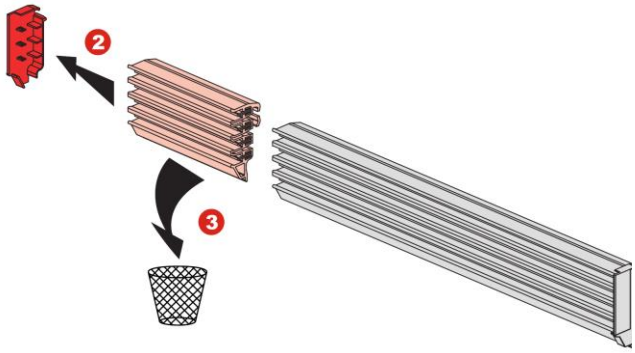
4. PREPARATION - CONNECTION *(continued)*

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



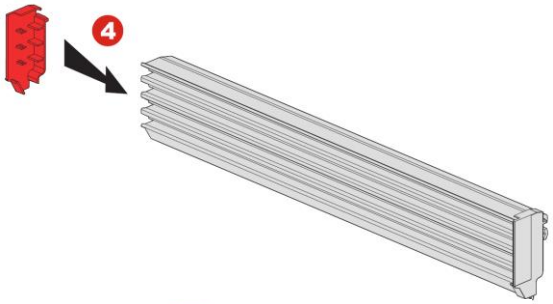
	L (mm)	
DPX³	3P	4P
160	**82**	**108**
250	**105**	**140**

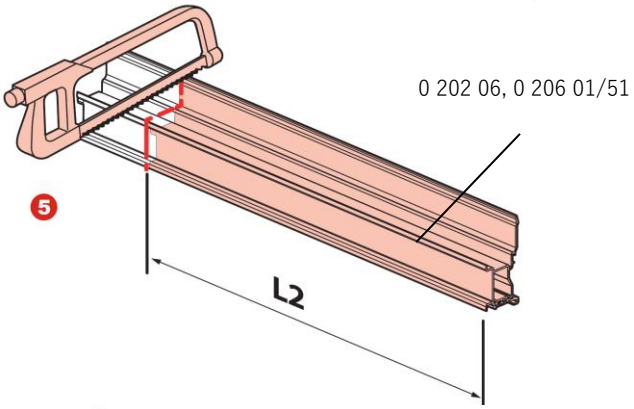


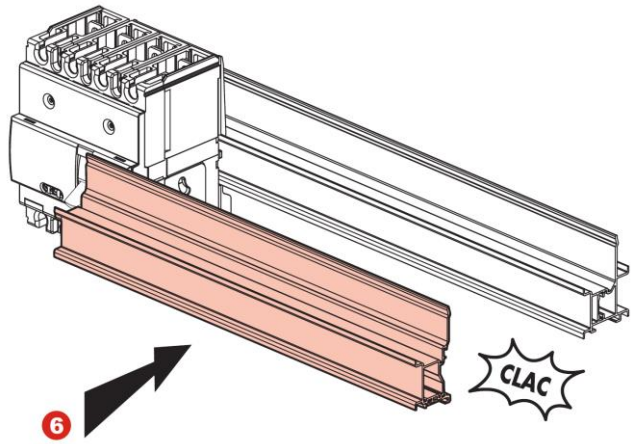


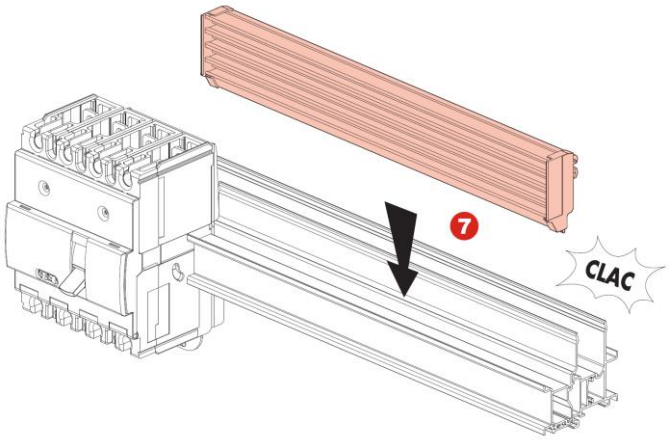
4. PREPARATION - CONNECTION *(continued)*

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



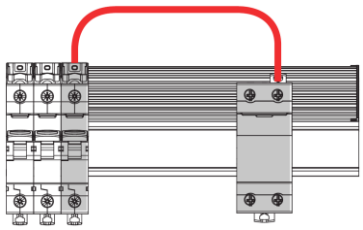




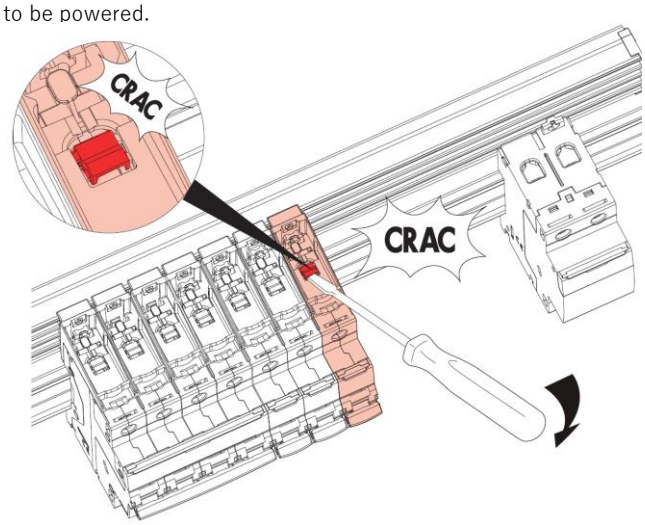


4. PREPARATION - CONNECTION *(continued)*

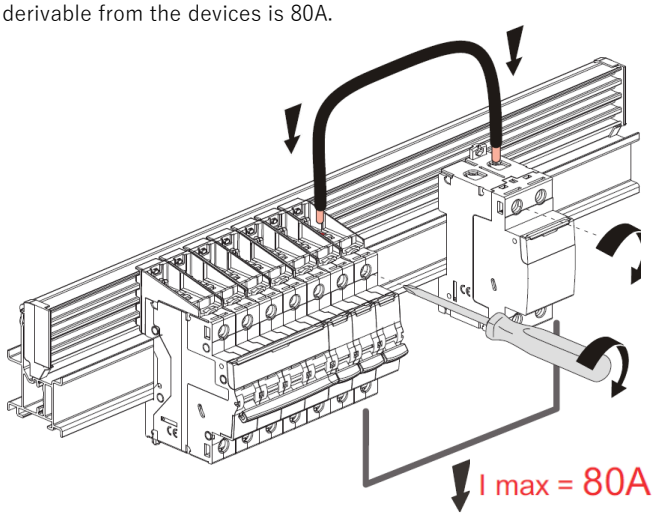
Supply of a device that can't be equipped with the connection modules:



. 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.

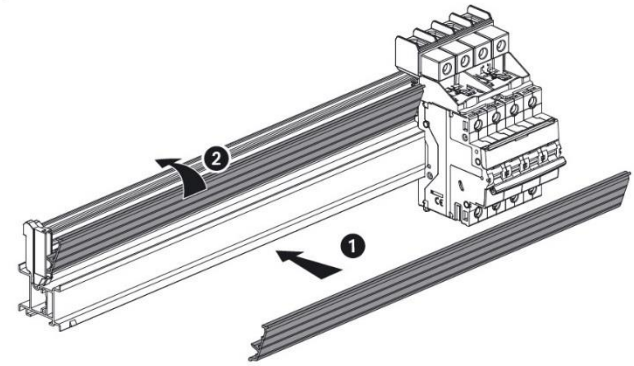


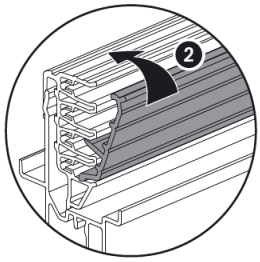
WARNING: In this configuration the maximum current derivable from the devices is 80A.

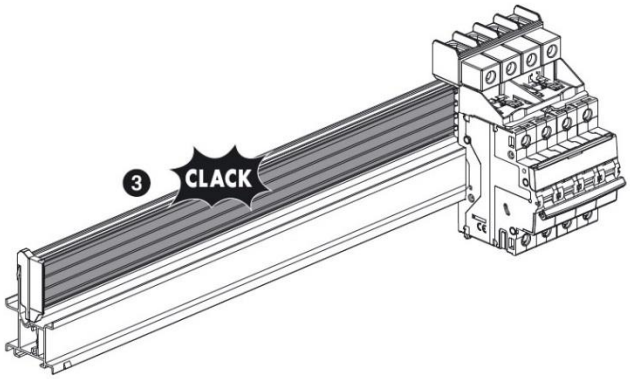


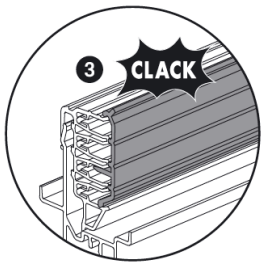
4. PREPARATION - CONNECTION *(continued)*

Use of protection IP40 (LG-405255)



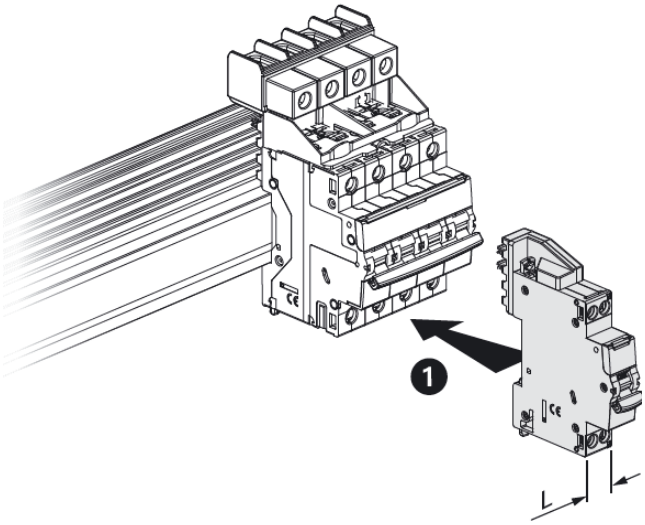


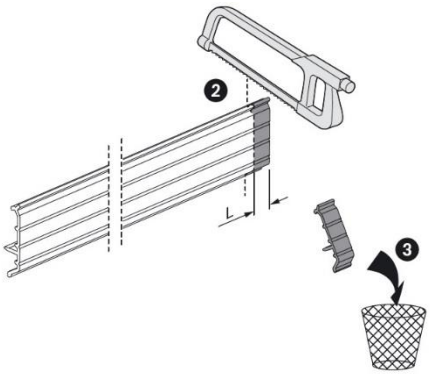


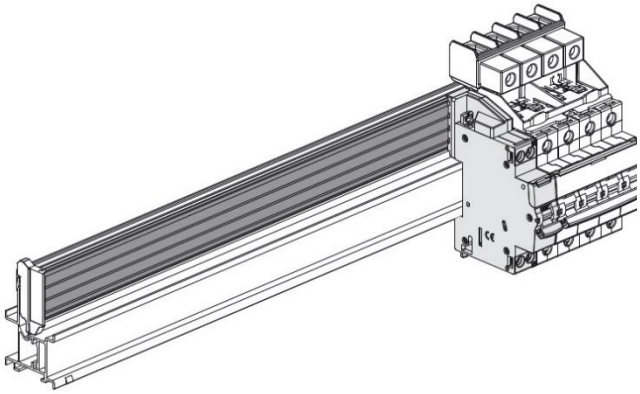


4. PREPARATION - CONNECTION *(continued)*

Use of protection IP40 (LG-405255)



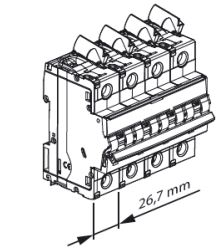


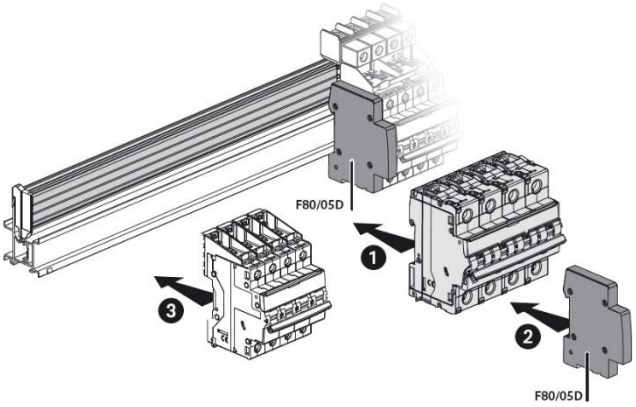


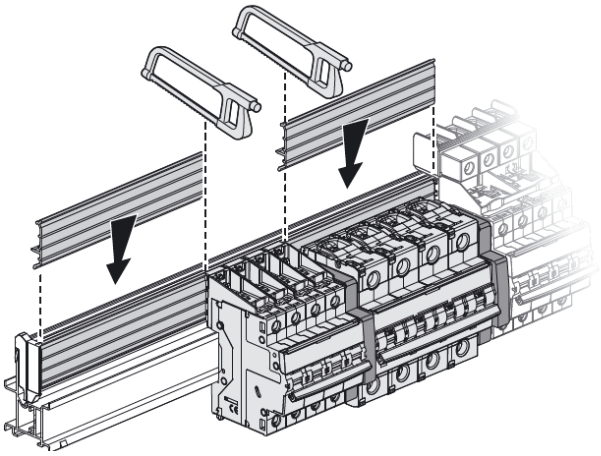
4. PREPARATION - CONNECTION *(continued)*

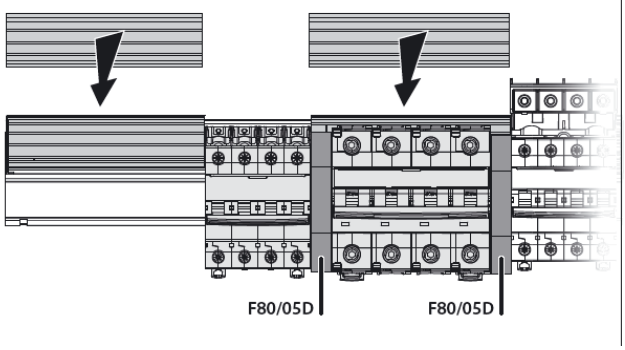
Use of protection IP40 (LG-405255)

Assembly of the different elements of the system in case of use of MCB DX3 HP





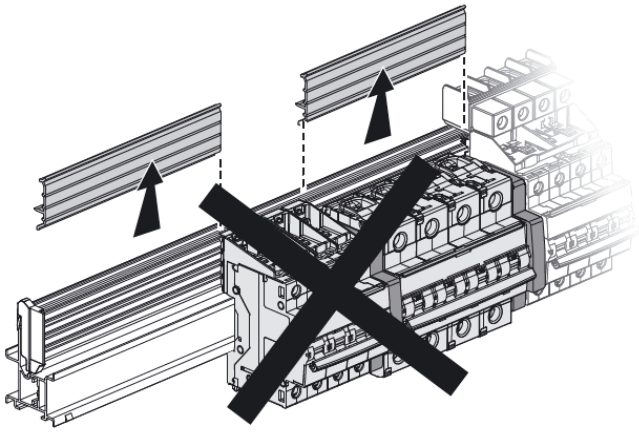


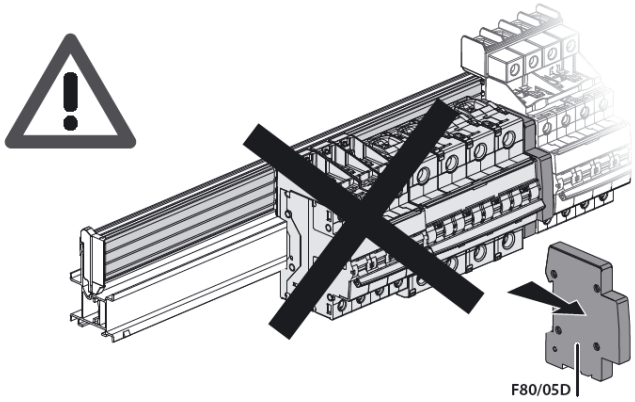


4. PREPARATION - CONNECTION *(continued)*

Use of protection IP40 (LG-405255)

Assembly of the different elements of the system in case of use of MCB DX3 HP





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.

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 avec couvercle de protection : 0,173 kg
. Connection module 1P: 0,010 kg
. Connection module 1P+N: 0,019 kg.
. Protection IP40 :0.046kg

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 2011/65 / EU as amended by Directive 2015/863 (RoHS 2) on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
. Compliance with Decree 94-647 of 27/07/04.
. Compliance with REACH (1907/2006): At the date of publication of this document, no substances included in Annex XIV (updated 27/06/2018) are present in these products.
. DEEE Directive (2019/19 / EU): the marketing of this product is the subject of a contribution to the eco-organisms responsible, for each country of Europe, to control the end of life of the products within the scope of the European Directive on Waste Electrical and Electronic Equipment.

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.