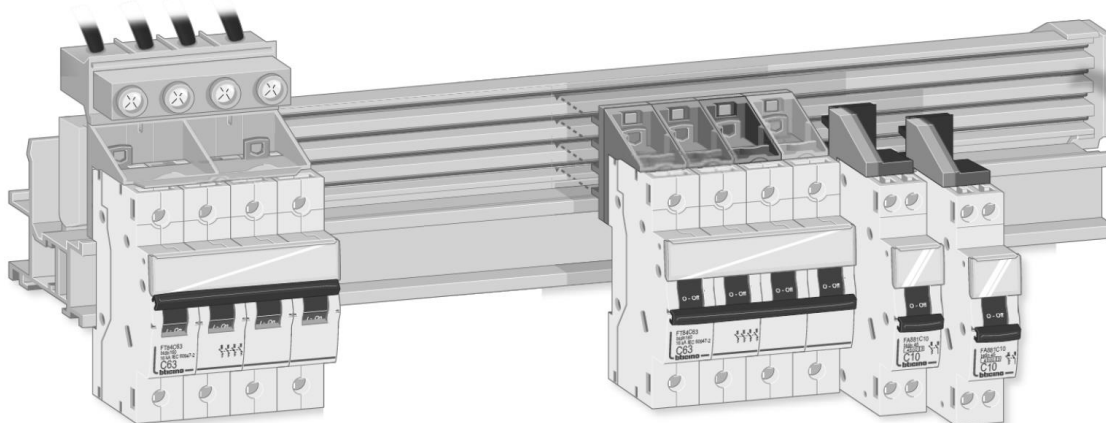


**EASY TIFAST system 125A****Cat. nos:**

FEN24MOD - FEN36MOD - FENALM - FEP - FENAL1 -  
FENAL2 - FENAL3 - FENAN - FENA4P - FEN2L1N -  
FEN2L2N - FEN2L3N

***Contents******Pages***

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## 1. DESCRIPTION - USE

Plug-in horizontal distribution system: used for 3-phase distribution without wiring of modular devices up to 125A 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 MAS 400/800/4000 enclosures with 2-position aluminium rail (Cat.Nos 93600N, 93800N, 93600NC, 93800NC) and in MAS 160 enclosures with the mounting accessory (Cat.No 94000SNR2).

It can be used in panel h = 150mm.

## 2. RANGE

### Horizontal distribution busbar:

. Fixed directly onto DIN rails (cat. nos 93600N, 93800N, 93600NC, 93800NC).

Cat. n° FEN24MOD: 24 modules

Cat. n° FEN36MOD : 36 modules

### Power supply module:

. Cat n° FENALM: used to supply the distribution busbar.

### Power supply security module:

. Cat n° FEP: security cover of the distribution busbar.

### Connection modules:

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

Cat. n° FENA4P: connection module L1-L2-L3-N for devices 4P, 1 module per pole.

Cat. n° FENAL1, FENAL2, FENAL3, FENAN connection modules L1, L2, L3, N, for devices 1 module per pole.

Cat. n° FEN2L1N, FEN2L2N, FEN2L3N connection modules L1N, L2N, L3N for devices 1P+N in 1 module screw terminals.

### Protection IP40

- Cat. n°FP36IP40

### Accessories for mounting in MAS 160 enclosure

Cat. n° 94000SNR2: used for mounting the horizontal busbar 24 modules (cat. n° FEN24MOD) in MAS 160 enclosure.

### Rated Voltages and Frequency:

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

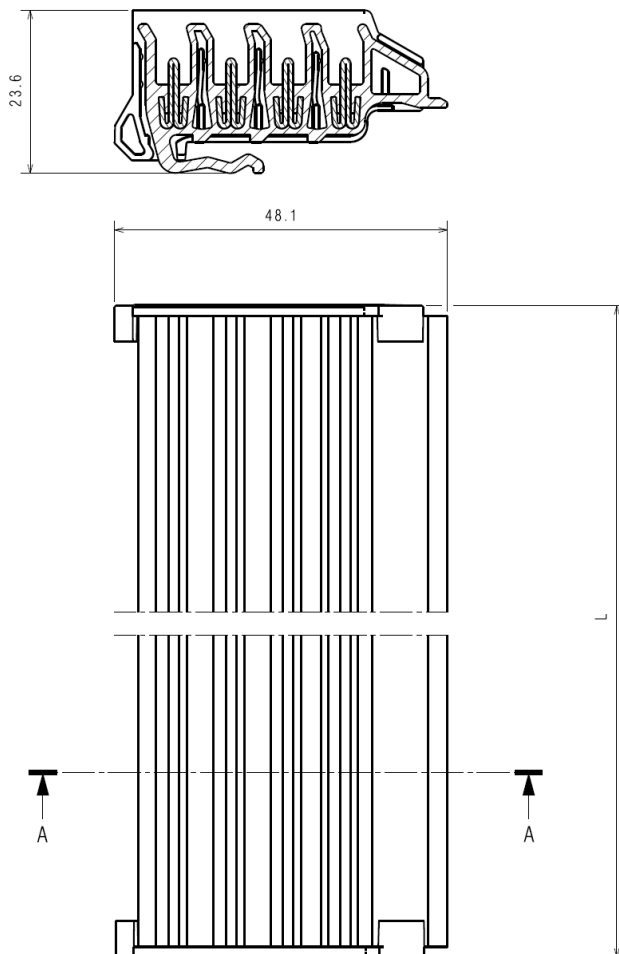
### Rated Currents:

. Max.125 A (with the power supply module).

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

## 3. OVERALL DIMENSIONS

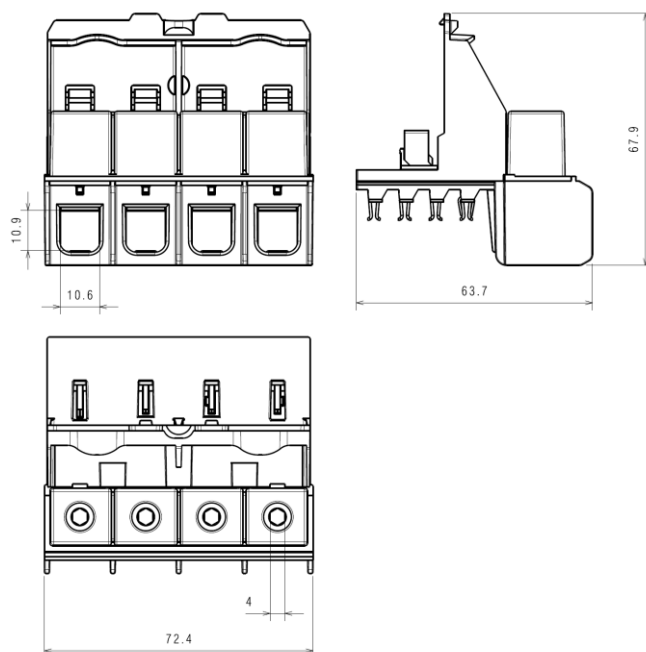
. Distribution busbar:



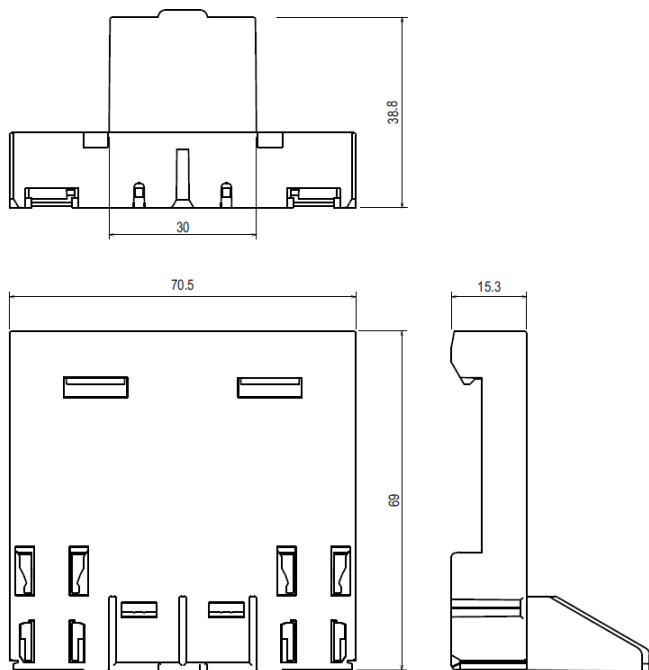
| Modules | L (mm) |
|---------|--------|
| 24      | 432    |
| 36      | 652    |

## 3. OVERALL DIMENSIONS *(continued)*

Power supply module (cat. n° FENALM), identification of the phases and N with coloured adhesive label (N on the right):

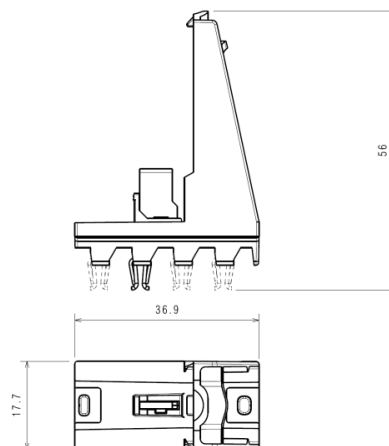


Power supply security module (cat. n° FEP):

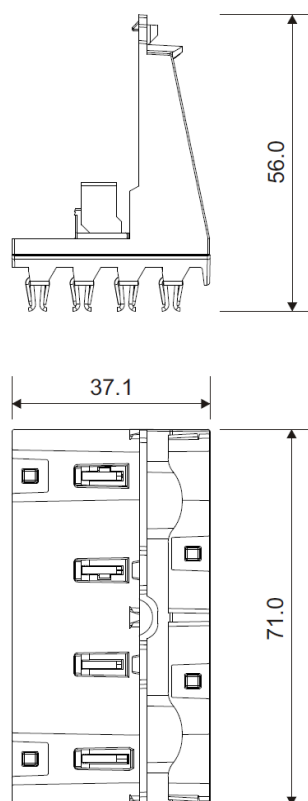


## OVERALL DIMENSIONS *(continued)*

Connection module 1P (cat. nos FENAL1, FENAL2, FENAL3, FENAN), identification of the phases and N by embossed writing and colour of the modules:

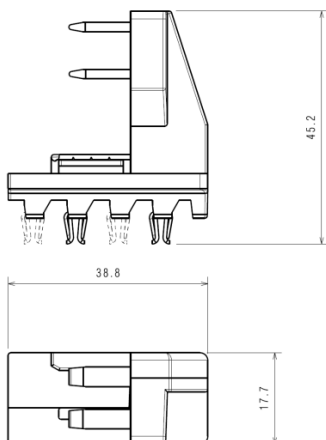


Connection module 4P (cat. n° FENA4P), identification of the phases and N by embossed writing (N on the right):

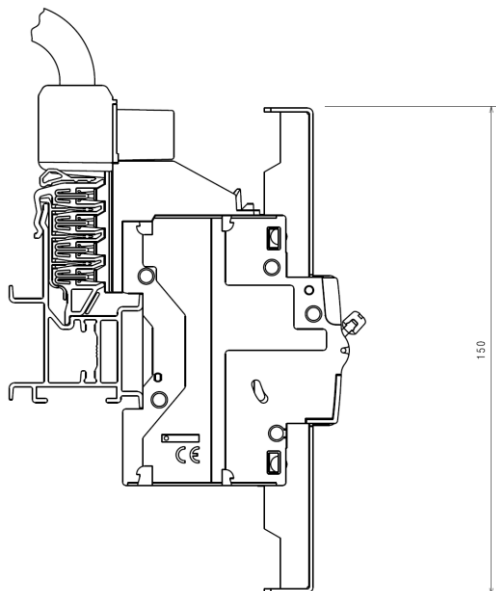


## . OVERALL DIMENSIONS *(continued)*

. Connection module 1P+N (cat. nos FEN2L1N, FEN2L2N, FEN2L3N), identification of the phases and N by colour of the modules (N on the right):



. Lateral view of the cabled system:



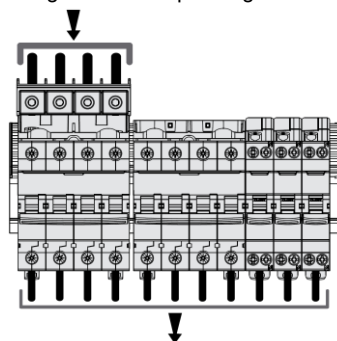
## 4. PREPARATION - CONNECTION

### List of modular compatible devices:

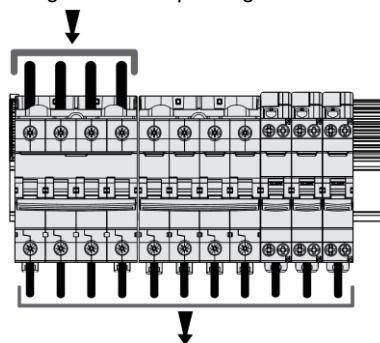
| Compatible device                           | Connection modules                                  |
|---------------------------------------------|-----------------------------------------------------|
| MCBs 1P+N in 1 module                       | FEN2L1N, FEN2L2N,<br>FEN2L3N<br>(L1N, L2N, L3N)     |
| IS 1P+N in 1 module                         |                                                     |
| RCDs 2P                                     | FENAL1, FENAL2,<br>FENAL3, FENAN<br>(L1, L2, L3, N) |
| RCBOs 2P                                    |                                                     |
| MCBs 1P, 2P, 3P, 1 module/pole              |                                                     |
| MCBs 2P associated to RCD<br>add-on modules |                                                     |
| IS 1P, 2P, 3P                               | FENA4P<br>(L1+L2+L3+N)                              |
| RCDs 4P                                     |                                                     |
| MCBs 4P, 1 module/pole                      |                                                     |
| RCBOs 4P                                    |                                                     |
| MCBs 4P associated to RCD<br>add-on modules |                                                     |
| IS 4P                                       |                                                     |

### System power supply:

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



. Direct power supply via the connection module 4P. In this configuration the operating current can be max 80A.



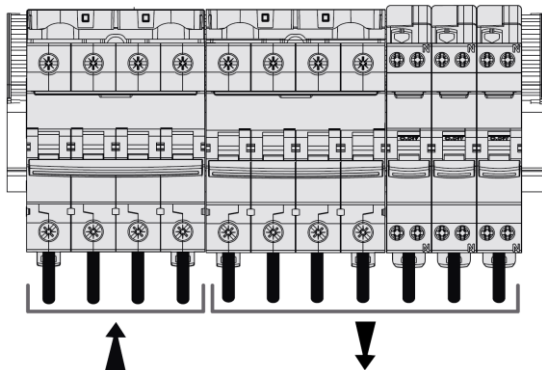
## 4. PREPARATION - CONNECTION *(continued)*

### System power supply *(continued)*:

. Indirect power supply via head of row device:

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

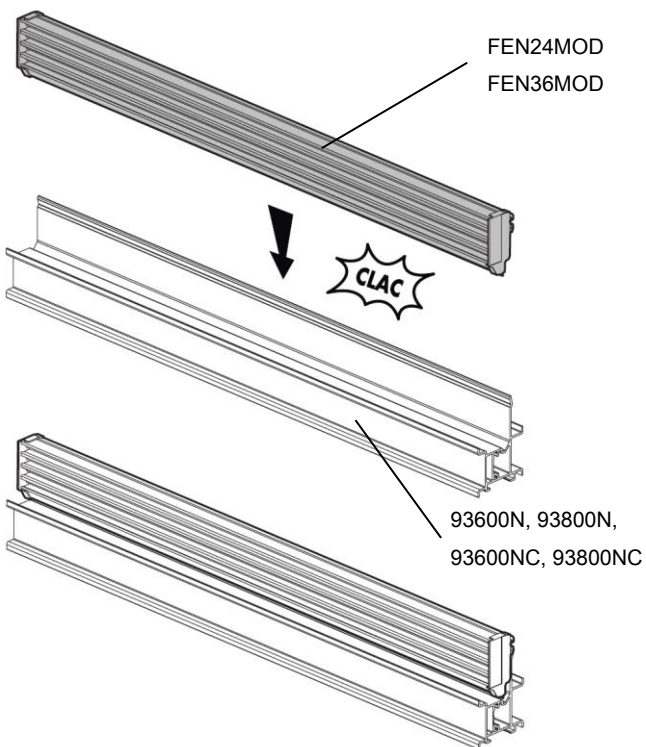
In this configuration the operating current is limited by the rated current of the head device (max. 80A).



### Assembly of the various elements of the system:

. Horizontal distribution busbar:

MAS 400, MAS 800, MAS 4000 enclosures

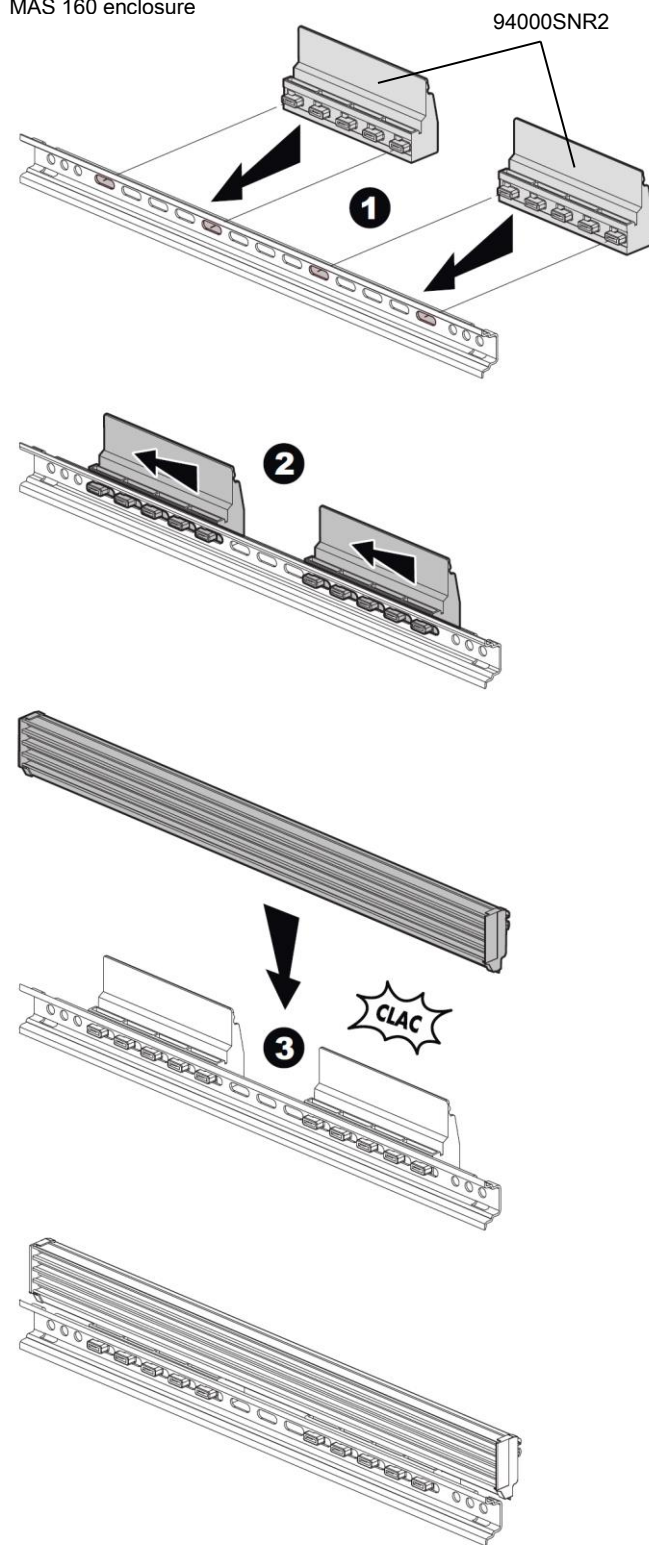


## 4. PREPARATION - CONNECTION *(continued)*

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

. Horizontal distribution busbar *(continued)*:

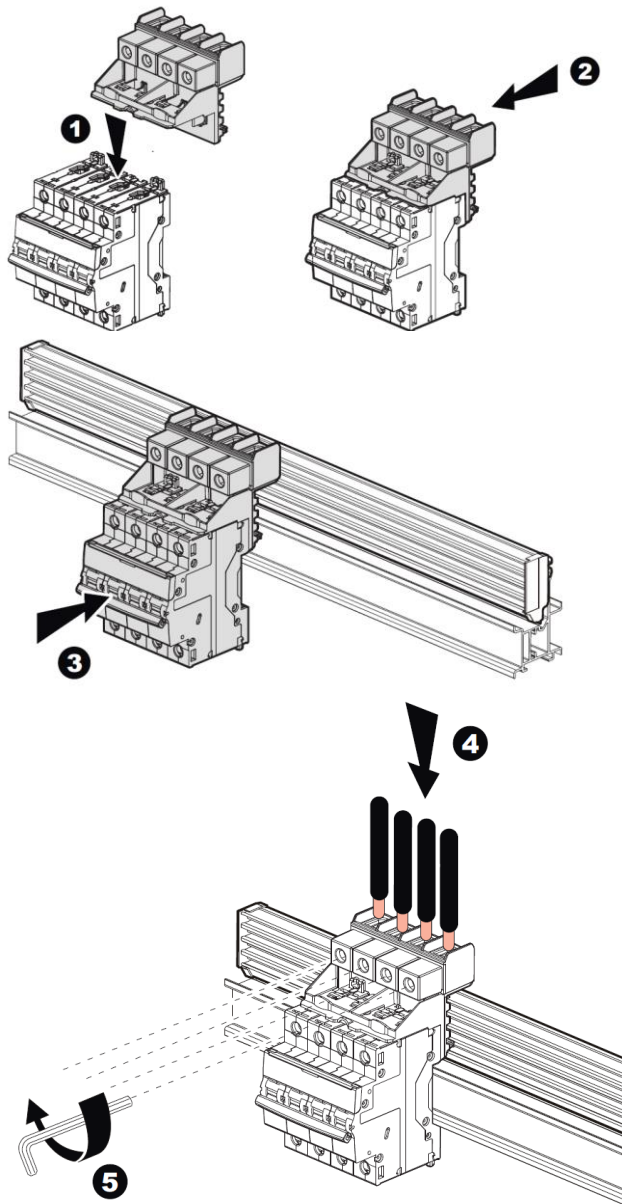
MAS 160 enclosure



4. PREPARATION - CONNECTION (continued)

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

. Supply module:



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.

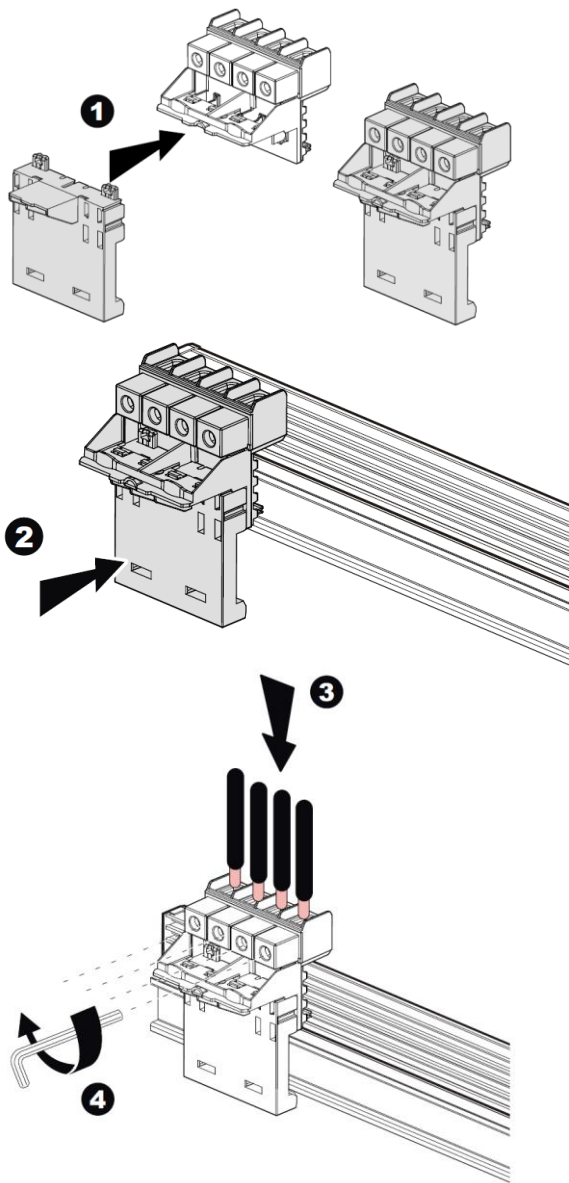
Tools required:

. For the terminals: Allen wrench 4 mm.

4. PREPARATION - CONNECTION (continued)

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

. Supply module 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:

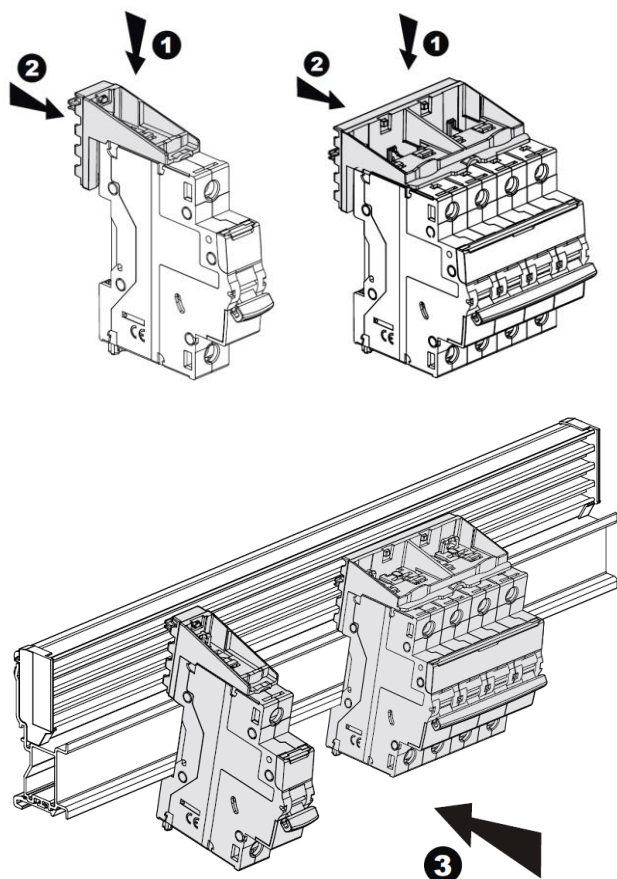
. For the terminals: Allen wrench 4 mm.

## 4. PREPARATION - CONNECTION *(continued)*

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

. Connection module 1P (cat. n° FENAL1, FENAL2, FENAL3, FENAN) e 4P (FENA4P):

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



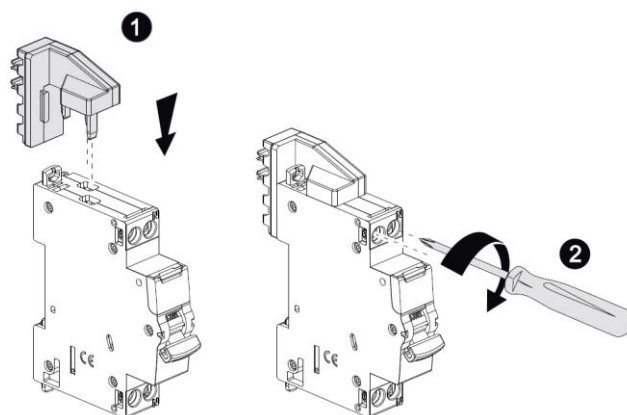
## 4. PREPARATION - CONNECTION *(continued)*

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

. Connection module 1P+N (cat. n° FEN2L1N, FEN2L2N, FEN2L3N):

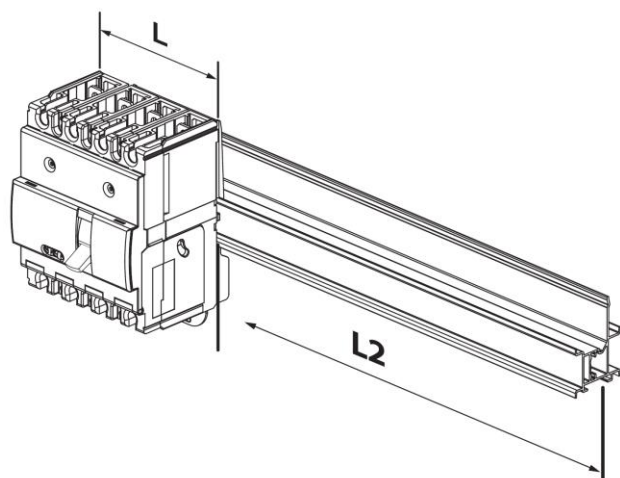
To assembly the connection module to the device 1P+N in 1 module is necessary a screwdriver Pozidriv n° 2.

Recommended tightening torque: 1,6 to 2 Nm.

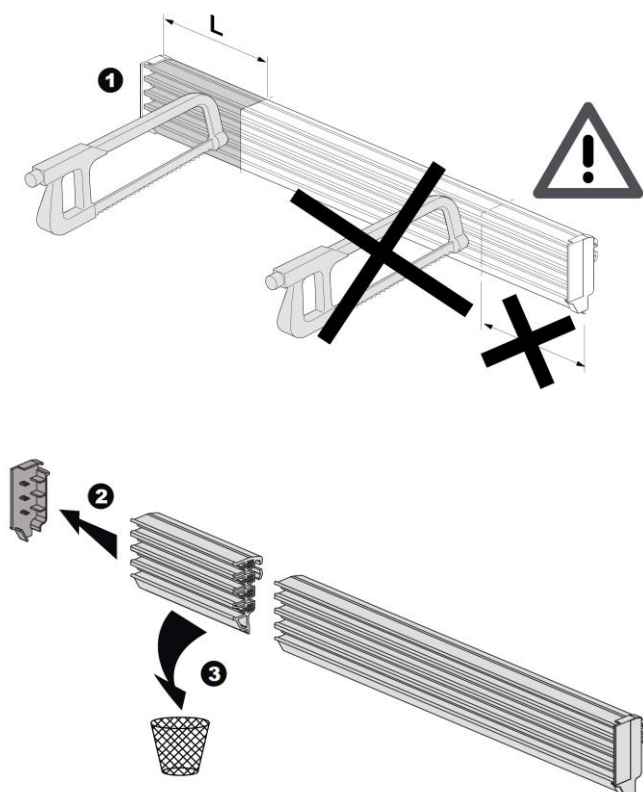


## 4. PREPARATION - CONNECTION *(continued)*

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

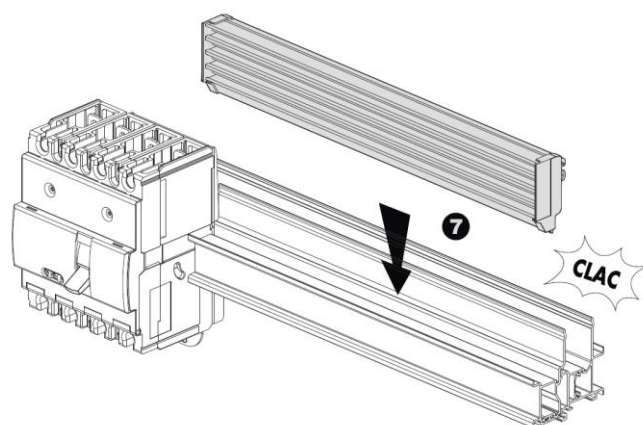
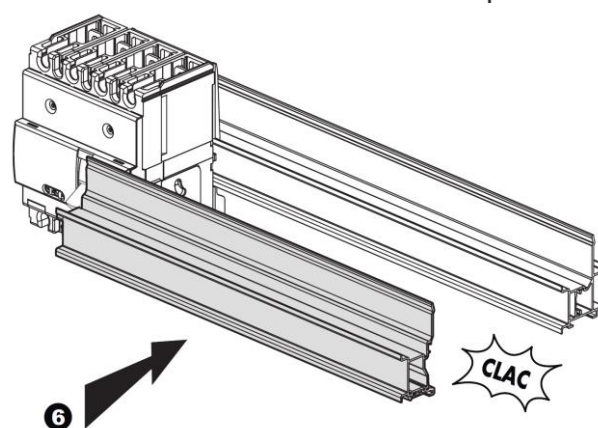
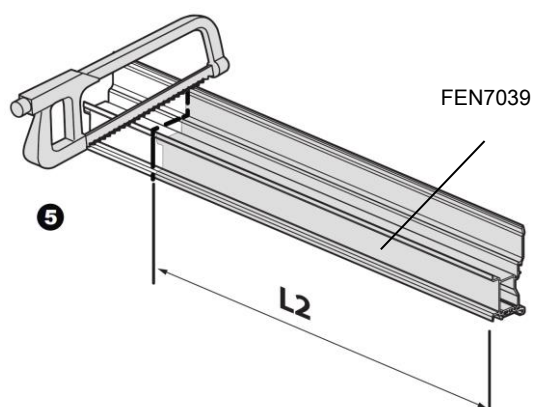
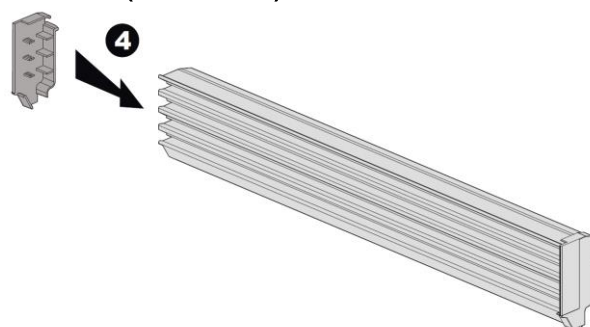


|                  | L (mm) |     |
|------------------|--------|-----|
|                  | 3P     | 4P  |
| MEGATIKER M1 160 | 82     | 108 |
| MEGATIKER M2 250 | 105    | 140 |



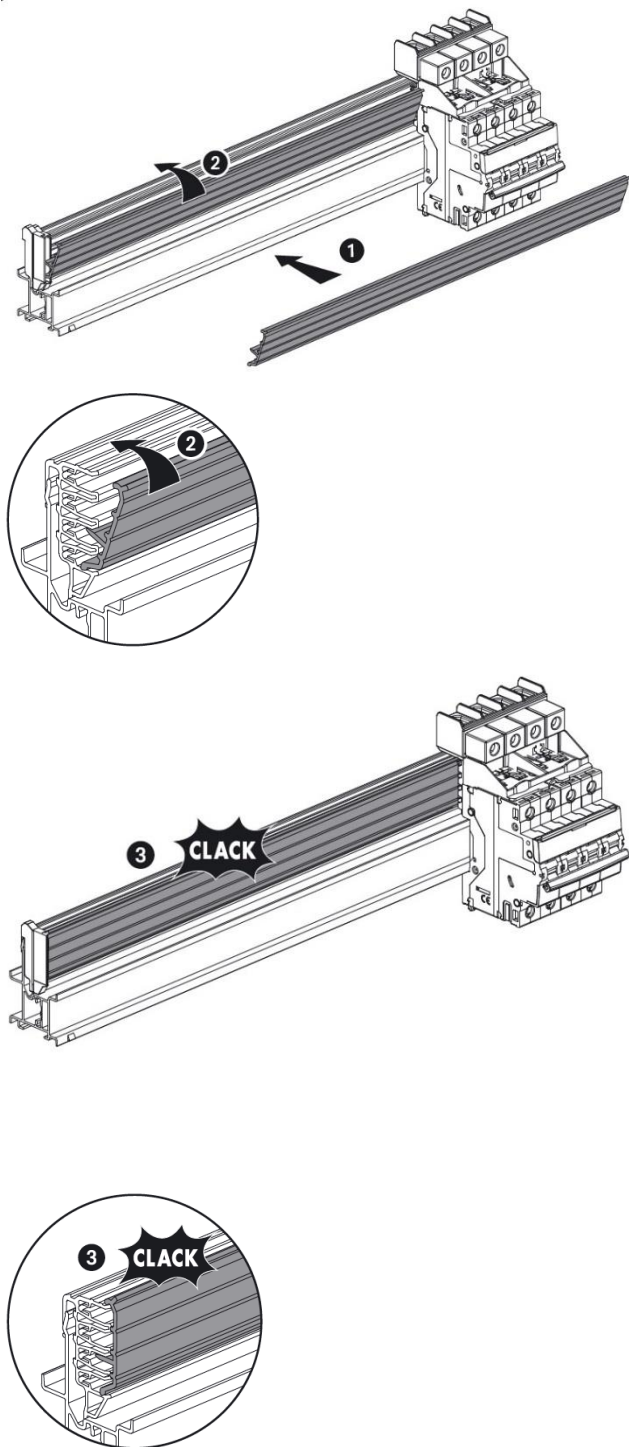
## 4. PREPARATION - CONNECTION *(continued)*

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



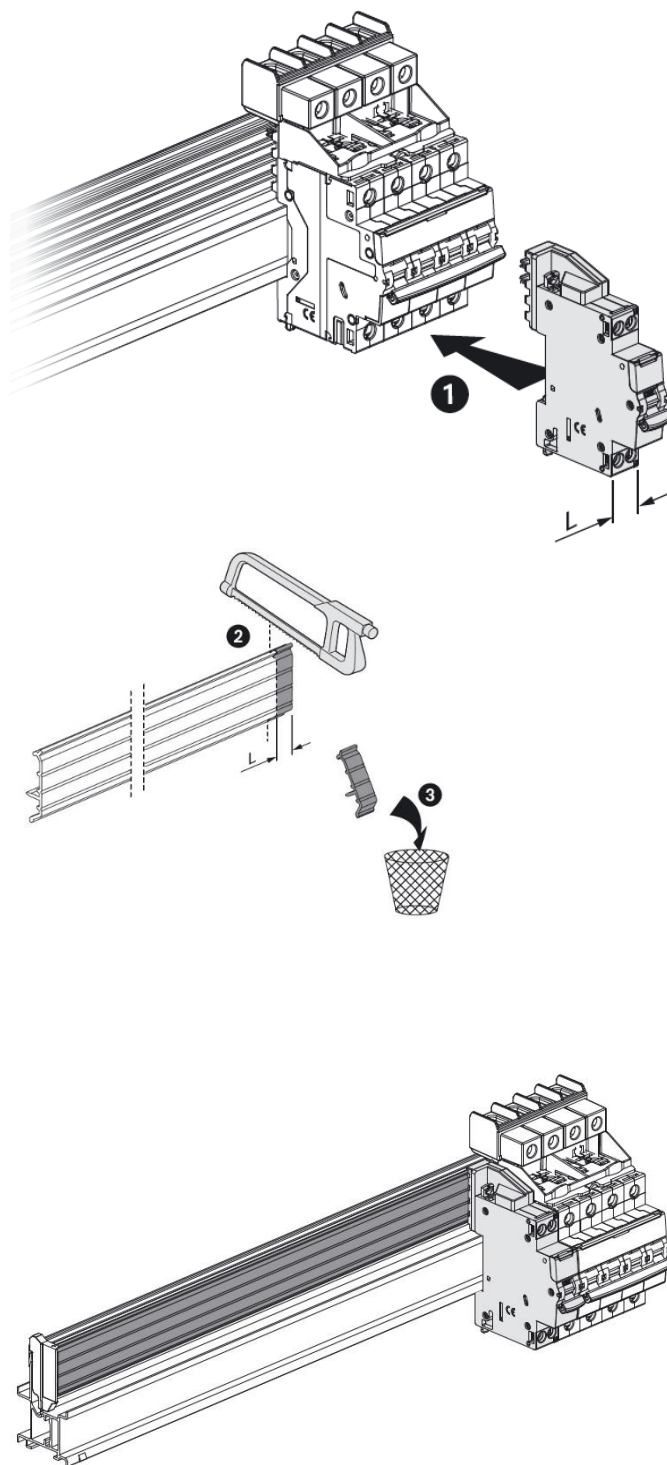
## 4. PREPARATION - CONNECTION *(continued)*

Use of protection IP40 (FP36IP40)



## 4. PREPARATION - CONNECTION *(continued)*

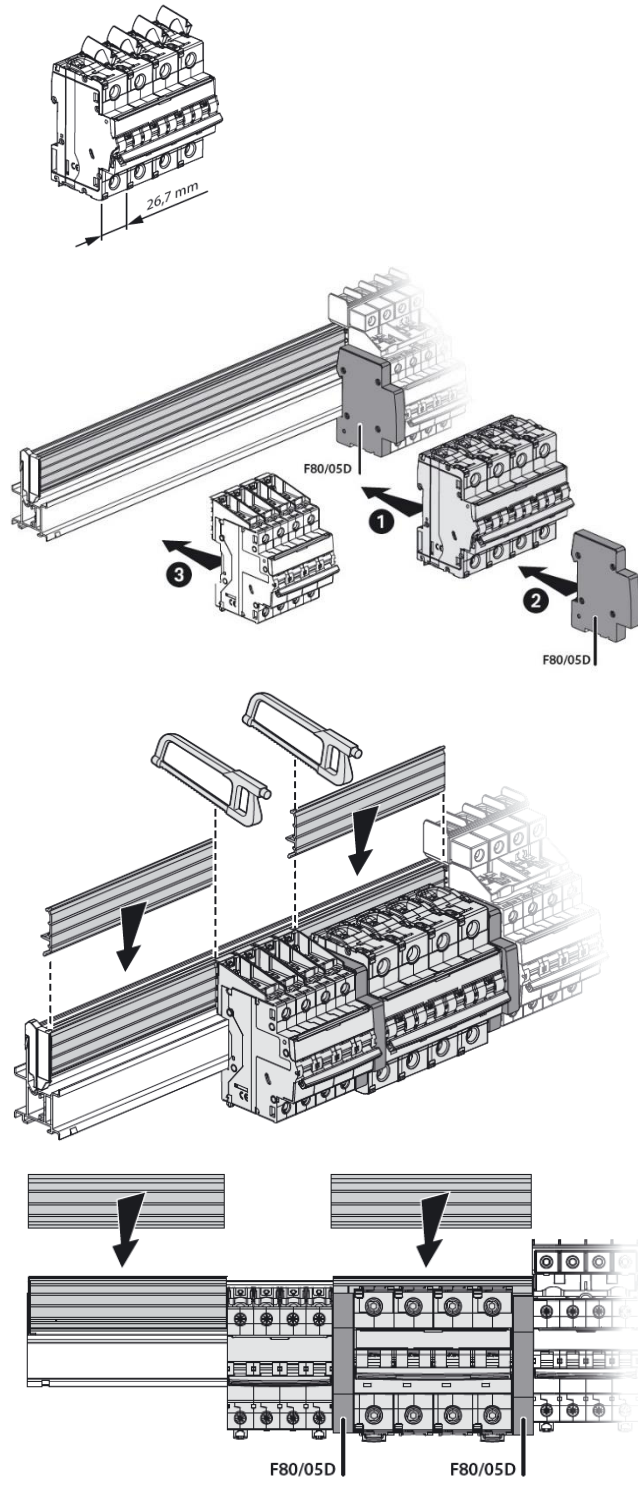
Use of protection IP40 (FP36IP40)



## 4. PREPARATION - CONNECTION *(continued)*

Use of protection IP40 (FP36IP40)

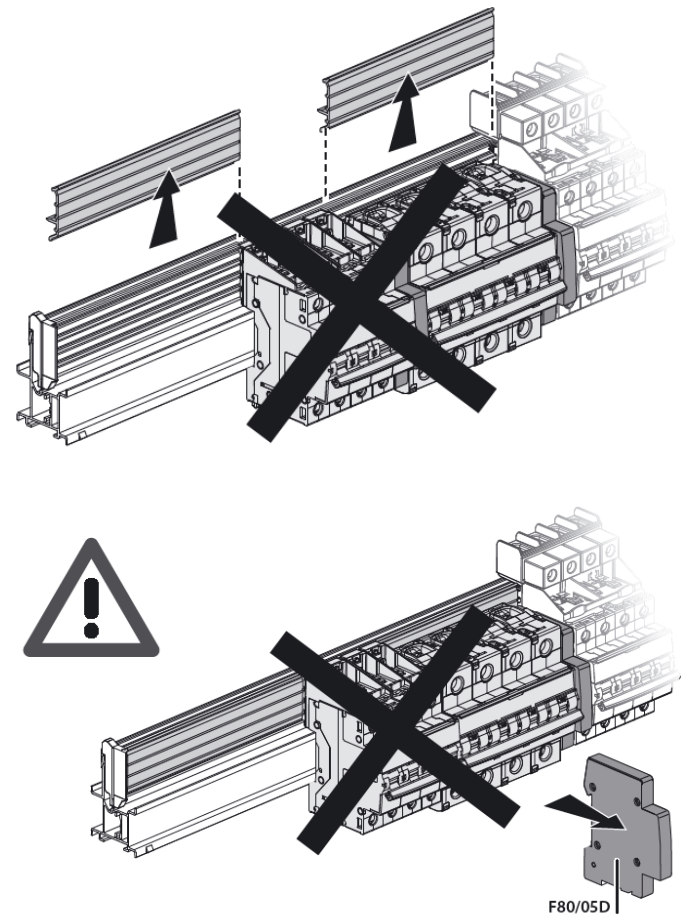
Assembly of the different elements of the system in case of use of MCB DX3 HP



## 4. PREPARATION - CONNECTION *(continued)*

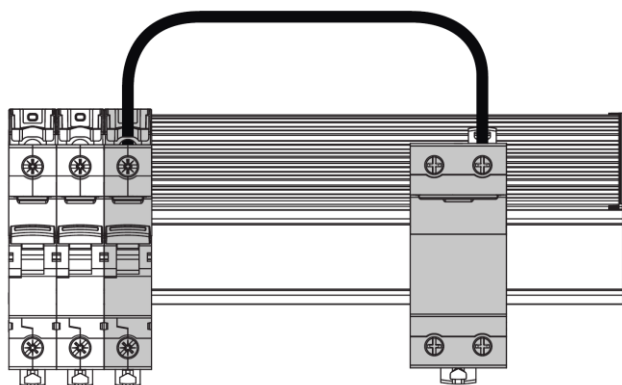
Use of protection IP40 (FP36IP40)

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

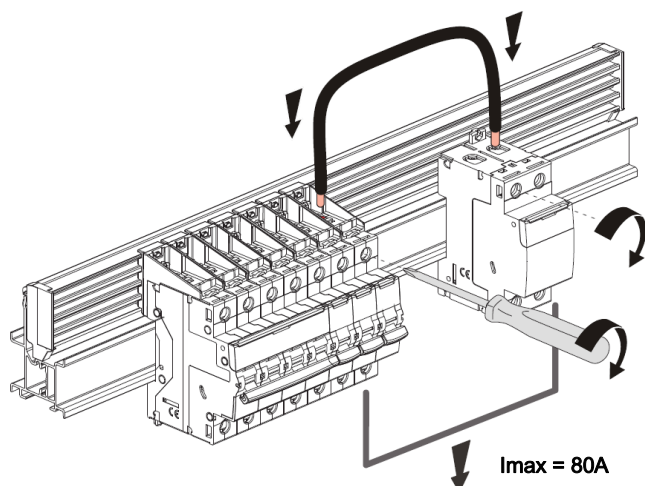


## 4. PREPARATION - CONNECTION *(continued)*

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



- . This operation is possible with the connection modules 1P et 4P.
- . Fix the device to be powered on the DIN rail 93600N, 93800N, 93600NC, 93800NC, FEN7039.
- . 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 125A (W):

- . 17,4W for the distribution busbar 24 modules (cat. n° FEN24MOD).
- . 26,4W for the distribution busbar 36 modules (cat. n° FEN36MOD)

### 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
- . Connection module (4P): 0,636 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/s<sup>2</sup>)

### 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 4P: 0,040 kg
- . Connection module 1P+N: 0,019 kg.
- . Power supply security module: 0,033kg
- . Protection IP40: 0.046kg

## EASY TIFAST system 125A

### Cat. nos:

FEN24MOD - FEN36MOD - FENALM - FEP - FENAL1 -  
FENAL2 - FENAL3 - FENAN - FENA4P - FEN2L1N -  
FEN2L2N - FEN2L3N

### 5 GENERAL CHARACTERISTICS *(continued)*

#### Volume when packed:

|                                                           | Volume (dm <sup>3</sup> ) |
|-----------------------------------------------------------|---------------------------|
| Distribution busbar 24 modules (pack. per 5)              | <b>3,3</b>                |
| Distribution busbar 36 modules (pack. per 5)              | <b>4,8</b>                |
| Power supply module (pack. per 1)                         | <b>0,39</b>               |
| Power supply security module (pack. per 1)                | <b>0,39</b>               |
| Connection module 1P (pack. per 10)                       | <b>0,75</b>               |
| Connection module 1P+N (pack. per 10)                     | <b>0,75</b>               |
| Connection module 4P (pack. per 1)                        | <b>0,31</b>               |
| Accessory for mounting in MAS 160 enclosure (pack. per 2) | <b>0,58</b>               |

#### 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:

. IEC 61439

#### Environment respect – Compliance with CEE directives:

- Compliance with directive 2002/95 modified from directive 2015/863 (RoHS 2) concerning limitations on the use of certain hazardous substances in electrical and electronic equipment.  
- Compliance to the REACH Regulation (1907/2006): at the date of publication of this document, no substance included in Annex XIV (update to 27/06/2018) is present in these products.  
. RAEE Directive (2012/19 / EU): the commercialization of this product foresees a contribution to the eco-organizations responsible, in each European country, for the management of the end of life of the products that fall within the scope of the European Directive on Waste Electrical Equipment and Electronics.

#### 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 Directive 94/62/EC.