GIOVENZANA
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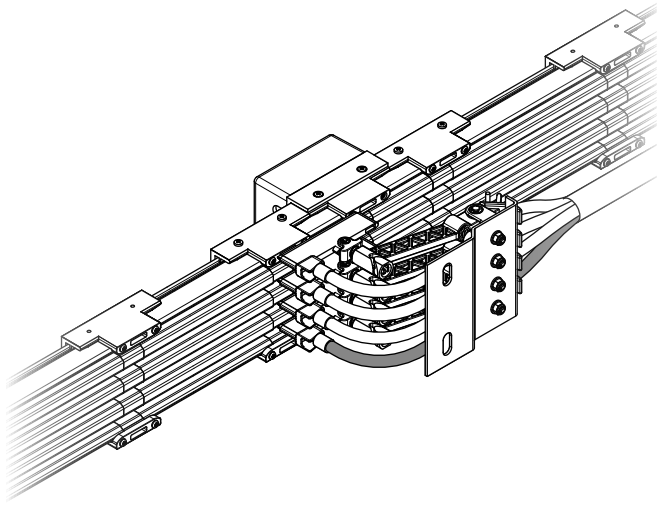
EN
instruction manual



MP04P

MULTIPOLE SYSTEM

Before use, read this booklet carefully to acquaint yourself with the features of the product. This booklet is an integral part of the product and therefore must be kept until the product is dismissed.

Giovenzana International B.V. reserves the right to change the features and data shown in this document at any time and without notice. This document cannot therefore be considered a contract with third parties.

Improper installation or tampering can cause serious damage to people and property, therefore installation and maintenance must be carried out by specialized and authorized personnel.

The device is not intended for use in environments with a potentially explosive atmosphere or in the presence of corrosive substances and in salt fog.

IMPORTANT INFORMATION

THE INFORMATION SHOWN ON THESE PAGES IS ESSENTIAL FOR THE CORRECT INTERPRETATION OF WHAT HAS BEEN EXPOSED IN THIS BOOKLET.

Symbols

The following symbols are used in this booklet:

Read carefully before use.

Information note.

ATTENTION, the information highlighted by this symbol is very important.

DANGER, the information highlighted by this symbol concerns environments with a potentially explosive atmosphere or the presence of corrosive substances and salt fog.

This symbol highlights the recommended tightening torques to guarantee the degree of protection of the product and to prevent it from breaking.

Introduction

This manual contains all the necessary instructions for the correct installation and commissioning of the MP04P series multipole system.

The operations described in this manual must be performed by fully qualified and specialized personnel. Requisites:
- Knowledge of general safety regulations.
- Knowledge of accident prevention regulations.
- Knowledge of electrical installation standards.
- Skilled in the use of electrical tools and equipment.

The installer is required to follow these instructions in order to ensure both long-term reliable functioning and safety in using this product.

Non-observance of these instructions may result in both operator injury and/ severe damage to the equipment.

In the event case of special installations and/or those that require a different configuration not present in this manual, please contact GIOVENZANA INTERNATIONAL B.V. technical support.

Any additional drawing or document provided with the supplied component takes priority over this manual.

ATTENTION
Dimensions in mm / illustrations NOT in scale.

Safety

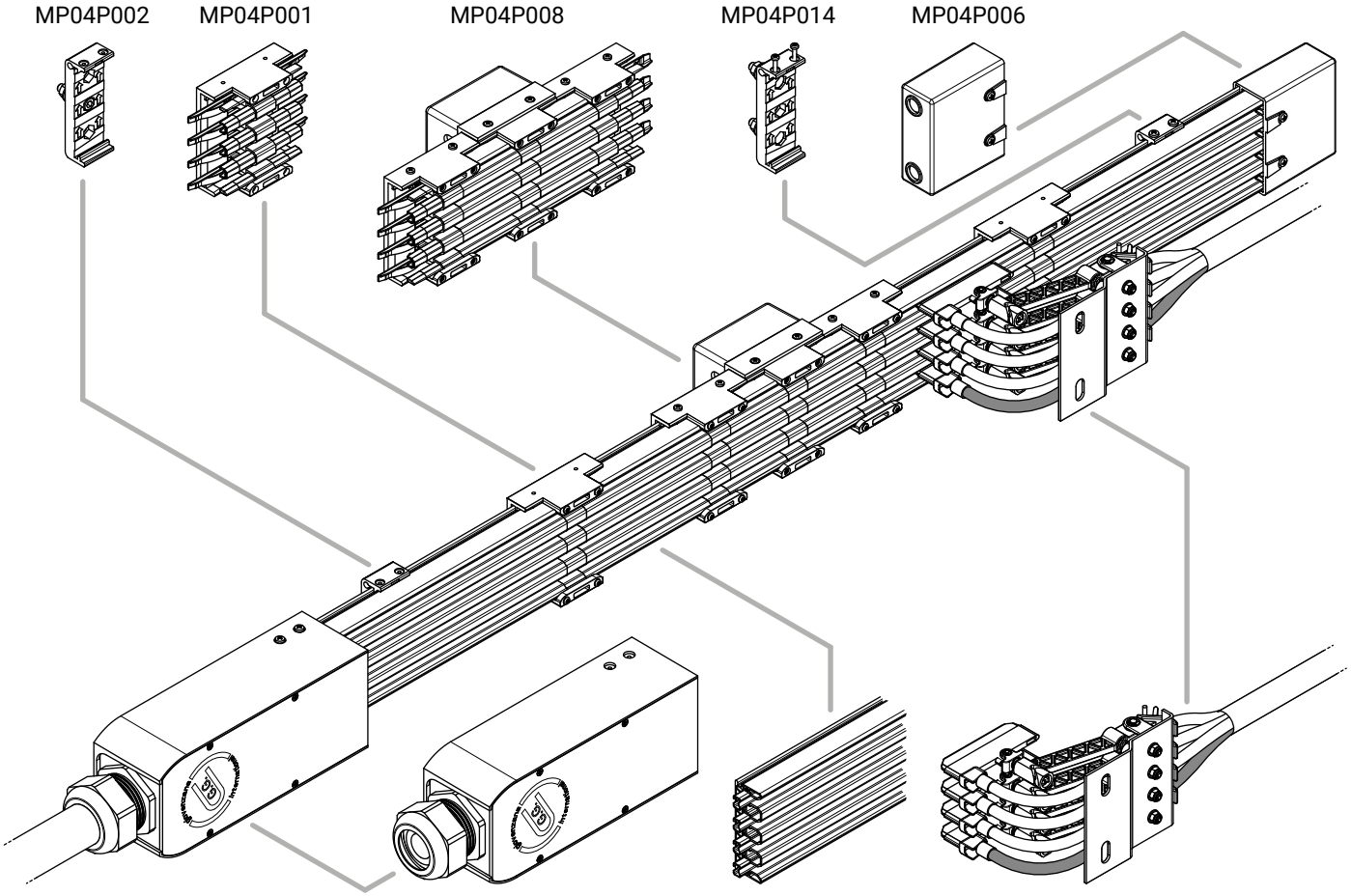
Ensure the following during line installation or maintenance operations:
- The team must be composed of at least two people.
- The workplace safety plan must be followed.
- Wear/use the personal protective equipment provided for by current regulations.
- Use type-approved lifting equipment (ladders, scaffolding, lifting platforms, etc.) in conformity with current regulations, and avoid hazardous situations when handling.
- Provide safety equipment in the case of installation at large heights.
- Keep persons not involved in line installation away from work area.

ATTENTION
Work with power disconnected from the line and ensure that under no circumstances can the line be powered up, even accidentally.

MP04P multipole features

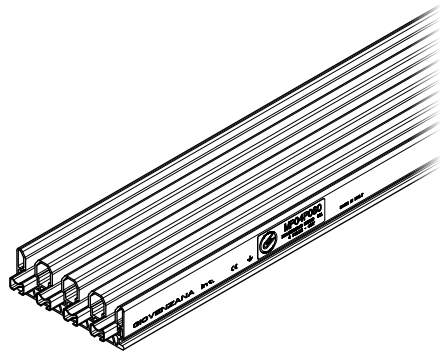
Number of poles	4
Length of busbar	4 m
Ampacity of the line	60A - 100 A - 140 A
Ampacity of trolley collector	50 A
Maximum travel speed	400 m/min

Typical MP04P multipole layout

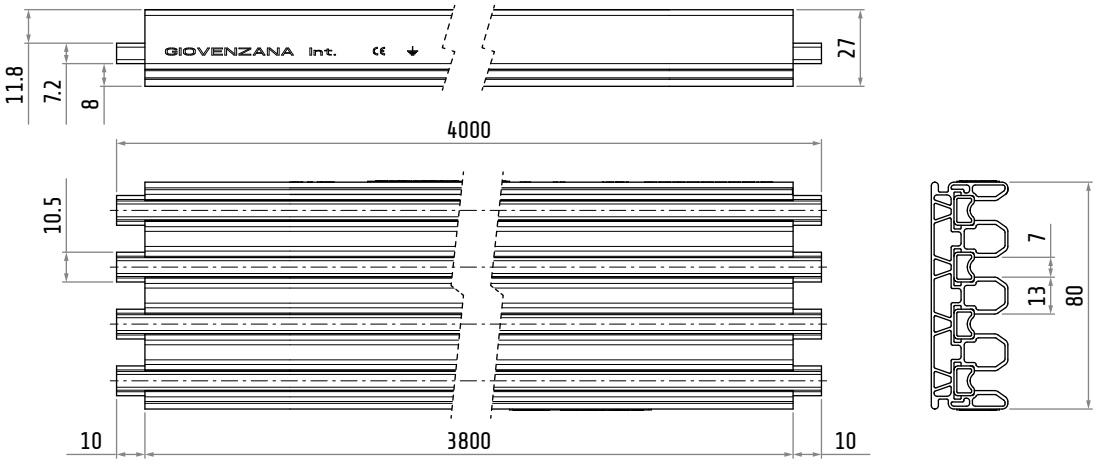


MP04P060 MP04P100 MP04P140	Busbar 60 A Busbar 100 A Busbar 140 A	p. 6
MP04P001	Joint unit	p. 7
MP04P002	Hanger clip	p. 9
MP04P003	Head feed	p. 10
MP04P006	End cap	p. 12
MP04P008	In-line feed	p. 13
MP04P011 MP04P012	Trolley current collector (compact) Trolley current collector (long)	p. 15
MP04P014	Fixed point	p. 17

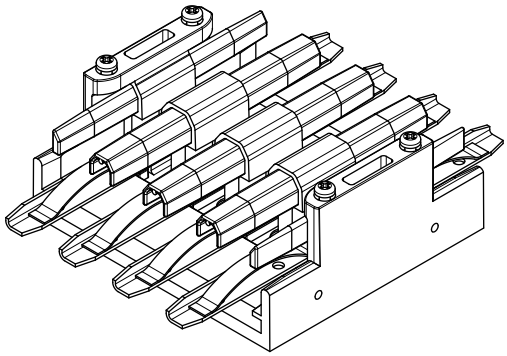
MP04P060 / MP04P100 / MP04P140 - Busbar 60 A / 100 A / 140 A

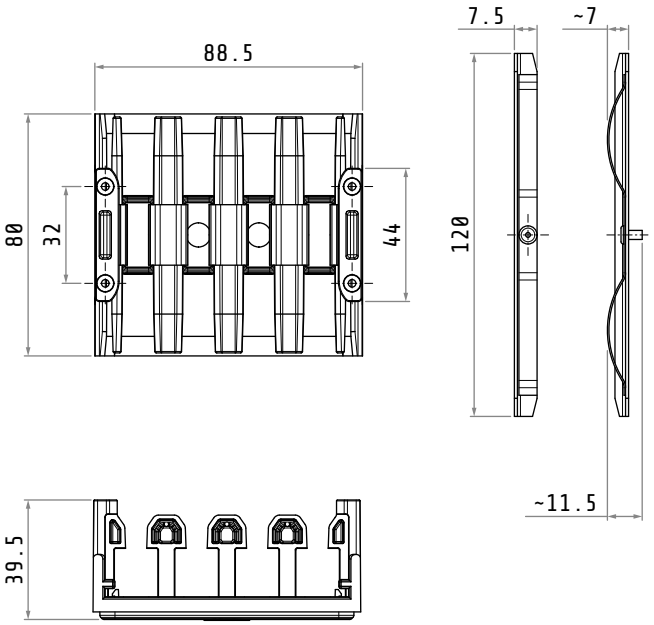


		MP04P060	MP04P100	MP04P140
Poles		4	4	4
Length		4 m	4 m	4 m
Material	busbar conductor	thermoplastic copper	thermoplastic copper	thermoplastic copper
Operating current	at 23°C	60 A	100 A	140 A
Rated operating voltage	Ue	600 V AC	600 V AC	600 V AC
Frequency		50 Hz	50 Hz	50 Hz
Conditional short circuit withstand current		10 kA	10 kA	10 kA
Fuse rating	gG	60 A	100 A	140 A
Protection class	CEI EN 60529	IP20	IP20	IP20
Flammability resistance	UL94 CEI EN 60695-2-1	V0 960°C	V0 960°C	V0 960°C
Ambient temperature	operating storage	-30 ... +55°C -30 ... +70°C	-30 ... +55°C -30 ... +70°C	-30 ... +55°C -30 ... +70°C
Max admissible trolley speed		400 m/min	400 m/min	400 m/min
ETP copper strip section		15 mm²	24 mm²	32 mm²
Resistance		11.33 × 10^{-4} Ω/m	7.83 × 10^{-4} Ω/m	5.48 × 10^{-4} Ω/m
Impendence		11.38 × 10^{-4} Ω/m	7.87 × 10^{-4} Ω/m	5.55 × 10^{-4} Ω/m
Weight		1.25 kg/m ±50 g	1.55 kg/m ±50 g	1.85 kg/m ±50 g



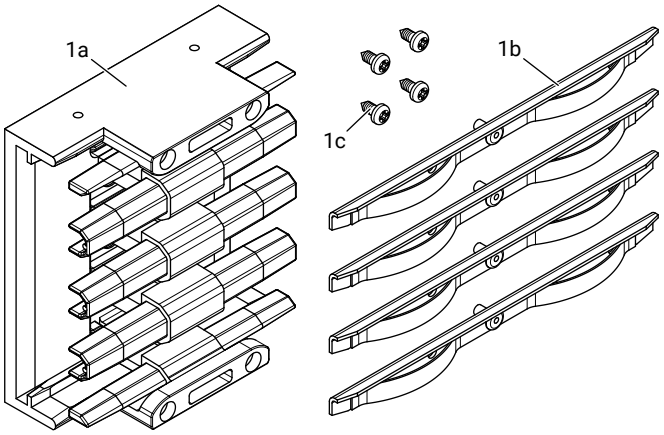
MP04P001 - Joint unit



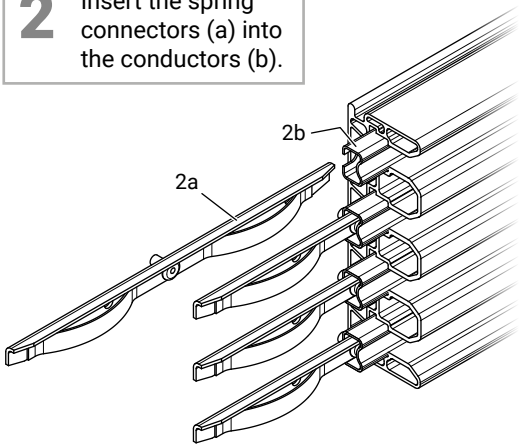


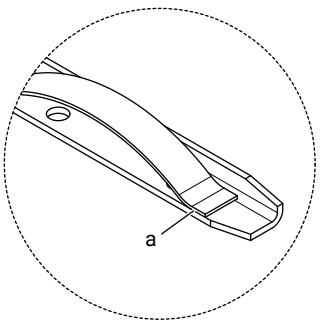
Material	body hardware conductor	thermoplastic galvanized steel copper
Weight		140 g

1 The unit consists of 1 joint body (a), 4 connectors (b) and 4 fixing screws (c).



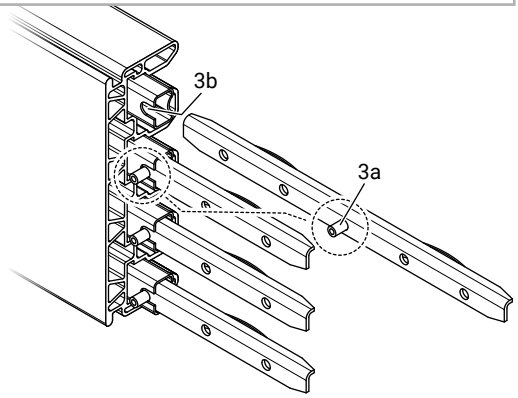
2 Insert the spring connectors (a) into the conductors (b).



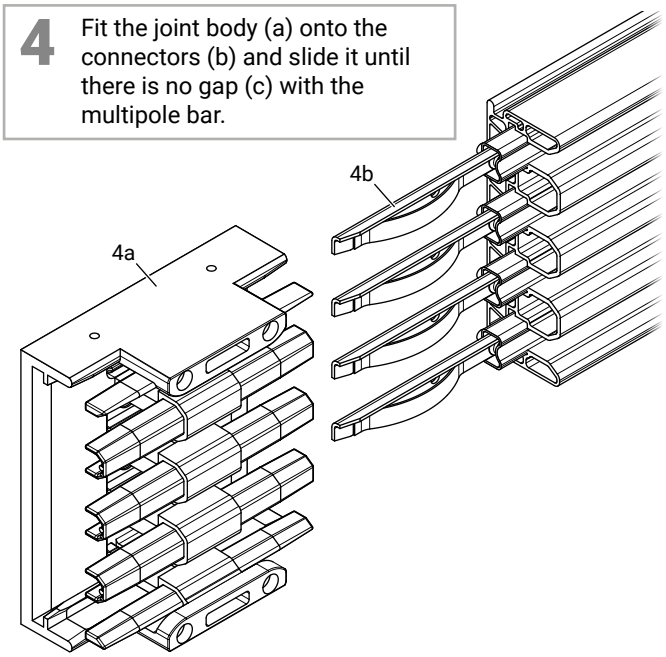


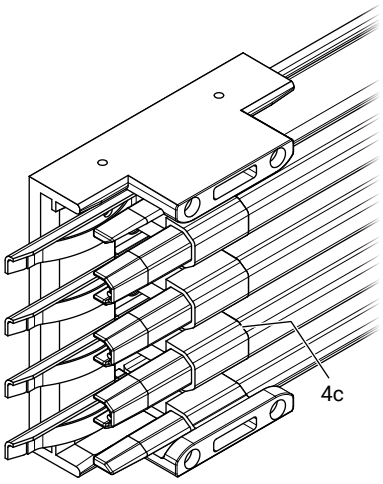
ATTENTION
Make sure there is no gap (a) between the spring and the connector bar.

3 Slide the spring connectors until the pins (a) fit into the conductors' grooves (b).

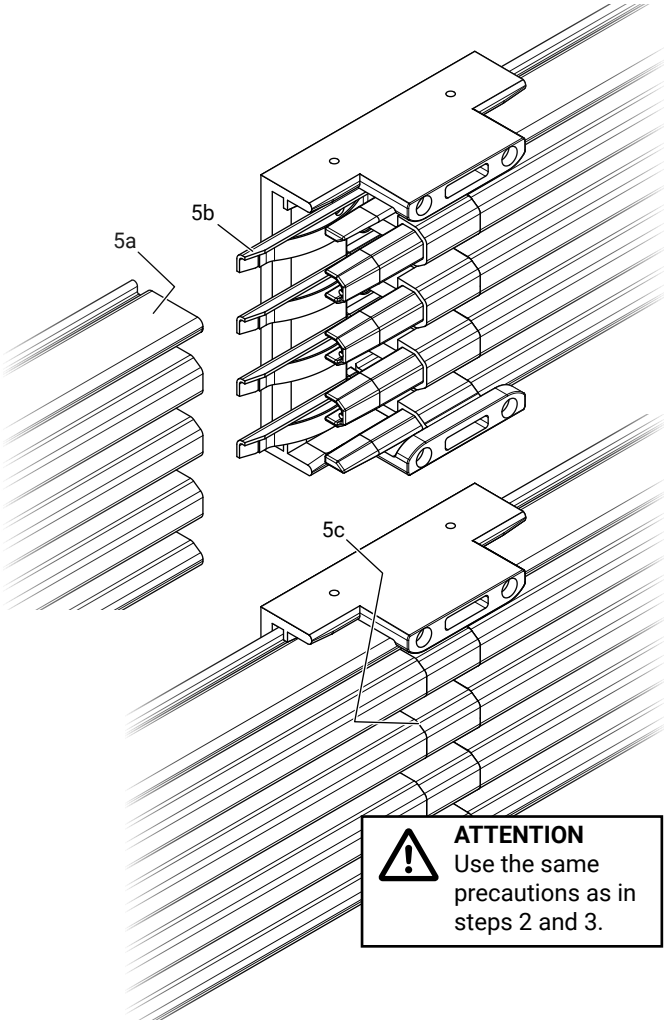


4 Fit the joint body (a) onto the connectors (b) and slide it until there is no gap (c) with the multipole bar.



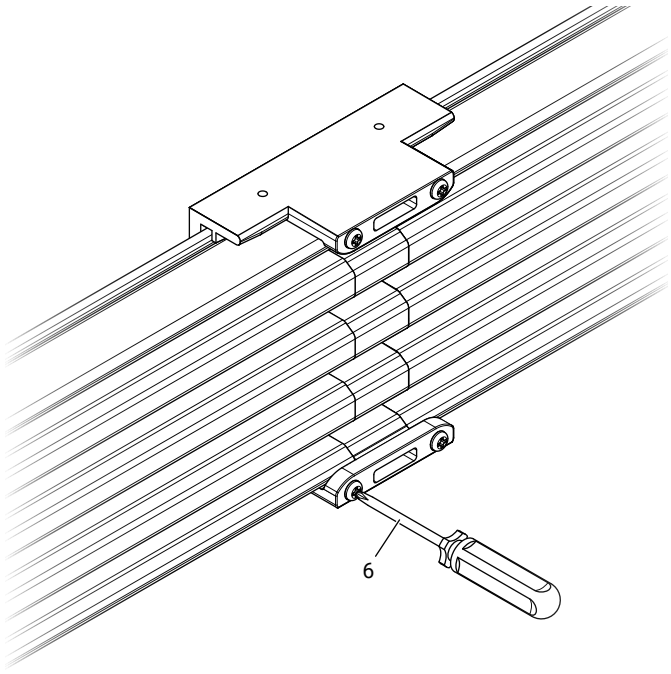


5 Fit the multipole bar (a) onto the connectors (b) and slide it until there is no gap (c) with the joint body.

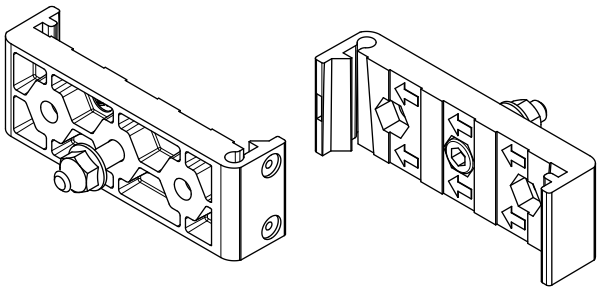


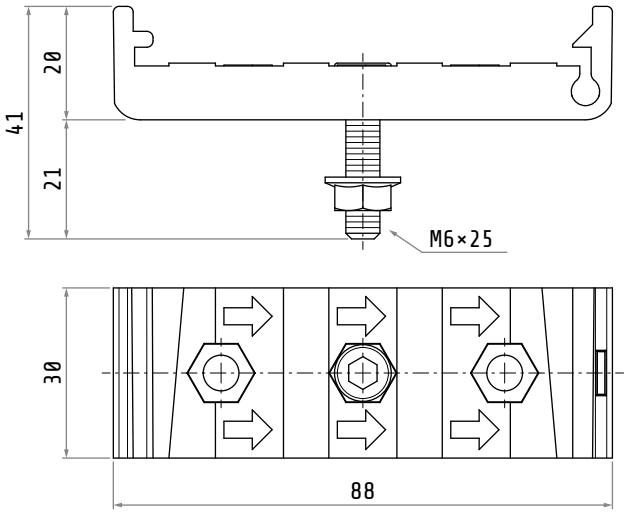
ATTENTION
Use the same precautions as in steps 2 and 3.

6 Lock the joint with the 4 fixing screws.



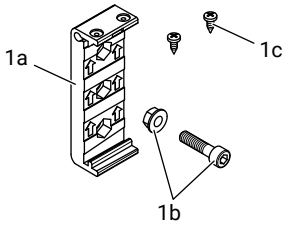
MP04P002 - Hanger clip

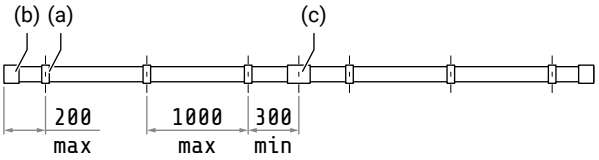




Material	body hardware	thermoplastic galvanized steel
Weight		35 g

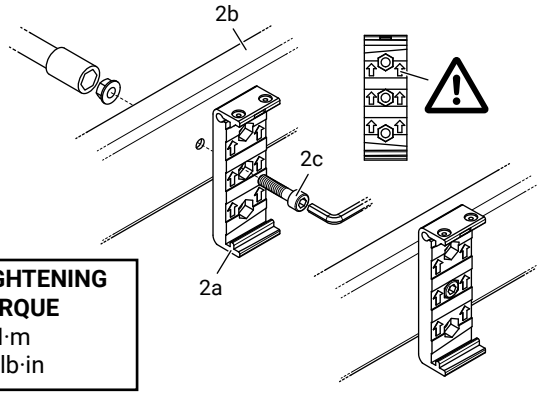
1 The unit consists of 1 support clip (a), 1 allen screw with nut (b) and 2 fixing screws (c).





ATTENTION
It's necessary to place a hanger clip (a) at max 200 mm from the end of section (b) and guarantee a minimum distance between hanger and joint or feed (c) of 300 mm (center distance). The distance between the suspensions must be 1000 mm maximum.

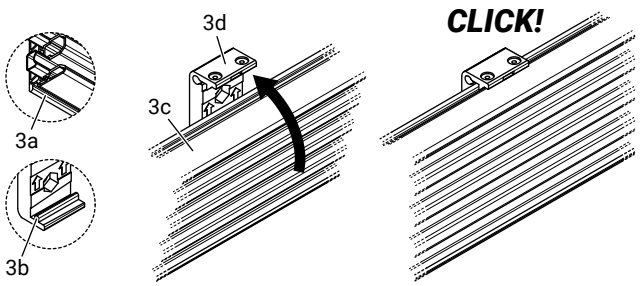
2 Fix the support clip (a) to a suitable profile (b) with the allen screw (c).



TIGHTENING TORQUE
7 N·m
62 lb·in

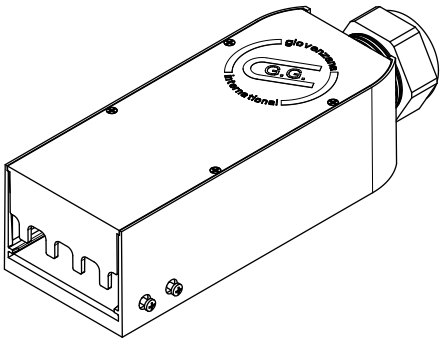
ATTENTION
In an horizontal installation the arrows must point upwards.

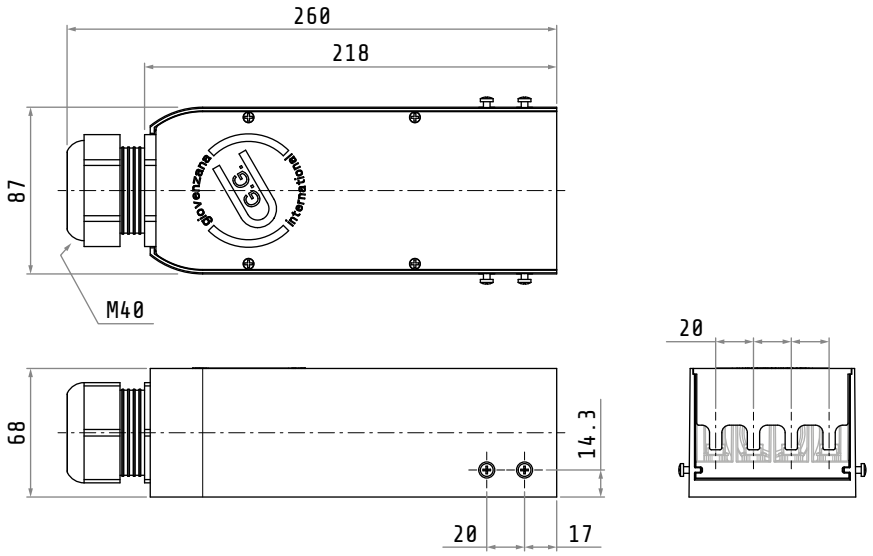
3 Place the groove of the conductor (a) on the notch of the support (b) and push the conductor (c) towards the support (d).



ATTENTION
After this operations, verify the alignment of the conductor rail: it must be parallel and straight to the track of the device to be powered.

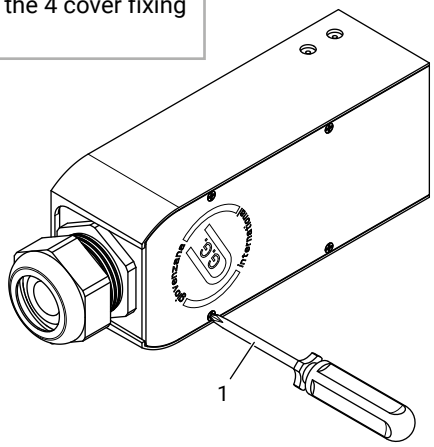
MP04P003 - Head feed



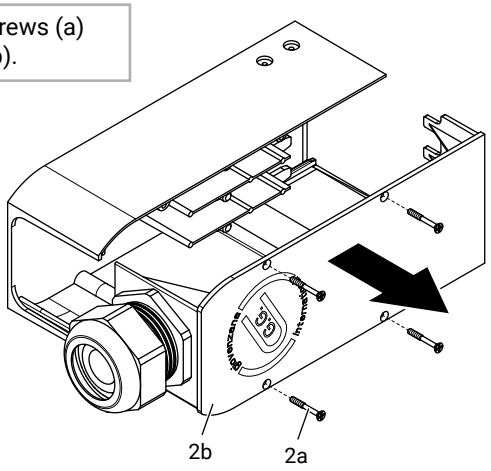


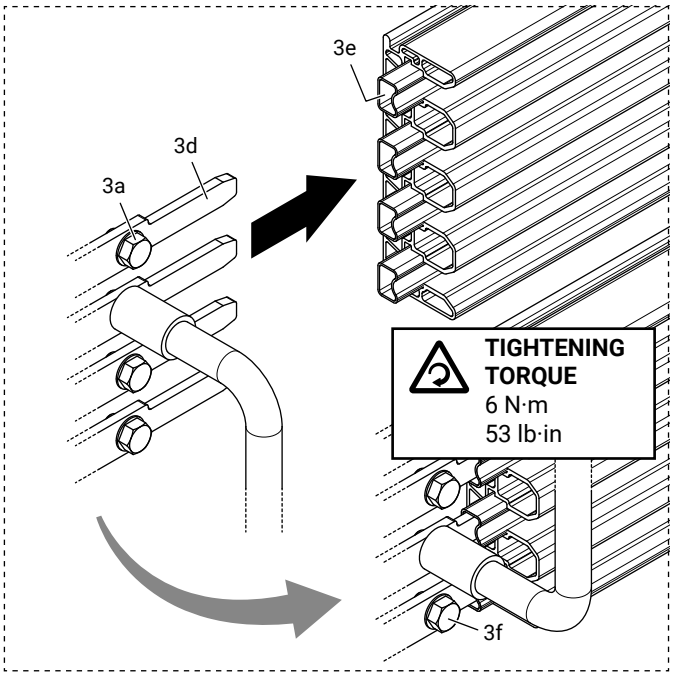
Material	thermoplastic
Weight	570 g

1 Unscrew the 4 cover fixing screws.

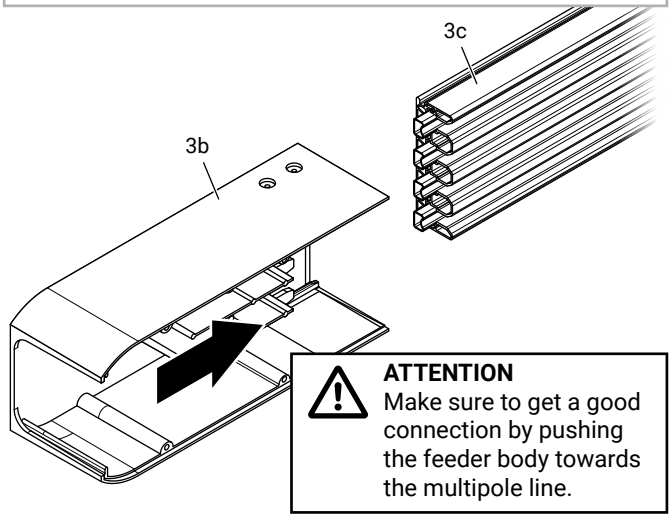


2 Revove the 4 screws (a) and the cover (b).



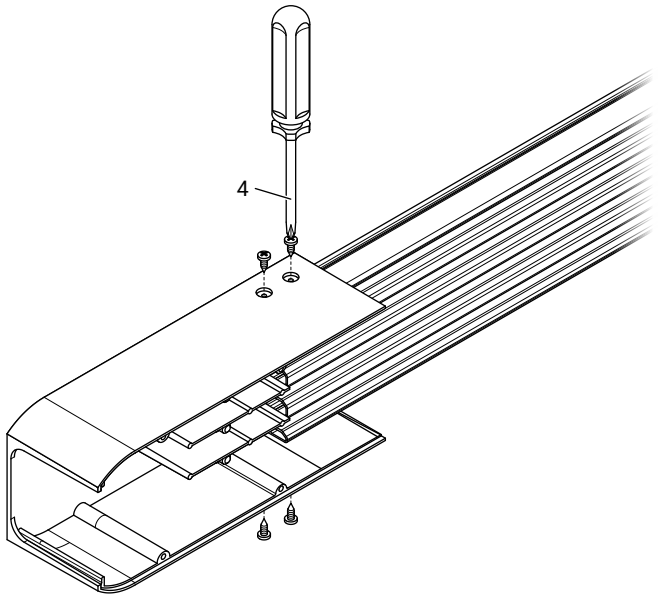


3 Loosen the M5 bolt (a) and slide the feeder body (b) on the multipole line (c) in order to insert the pins (d) into the copper conductors (e) and then tighten the bolts (f).



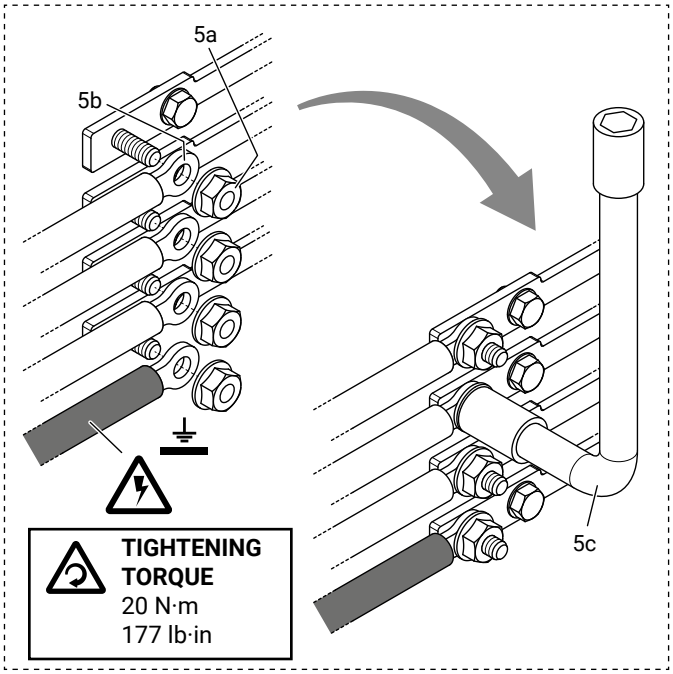
ATTENTION
Make sure to get a good connection by pushing the feeder body towards the multipole line.

4 Fasten the lateral screws to fix the feeder body to the multipole line.

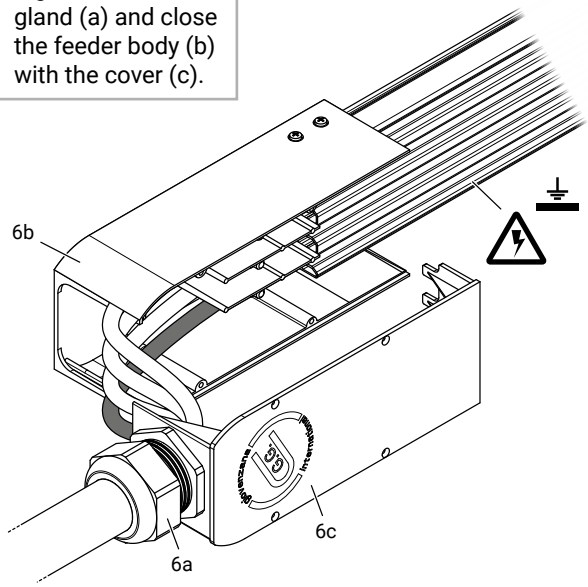


ATTENTION
Verify the position of the earth conductor and carry out the wiring accordingly.

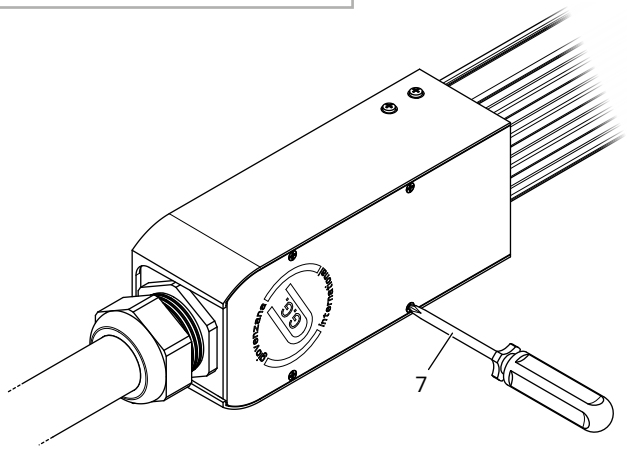
5 Remove the M8 nuts (a) and place the wire lugs (b) in position. Lock the wire lugs with the M8 nuts (c).



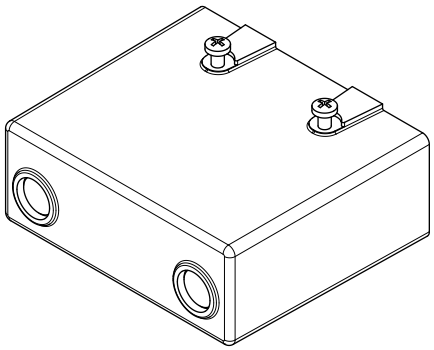
6 Tighten the cable gland (a) and close the feeder body (b) with the cover (c).

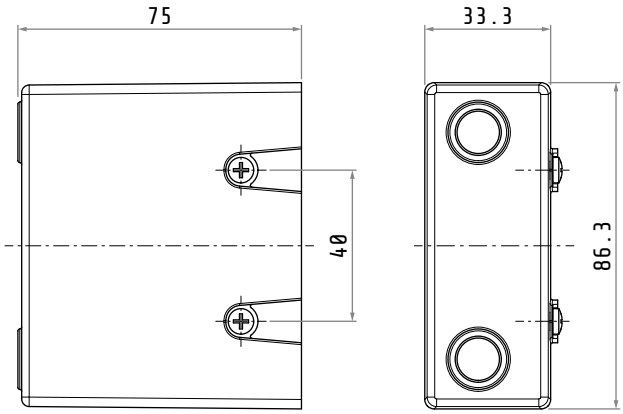


7 Tighten the 4 screws to lock the feeder.



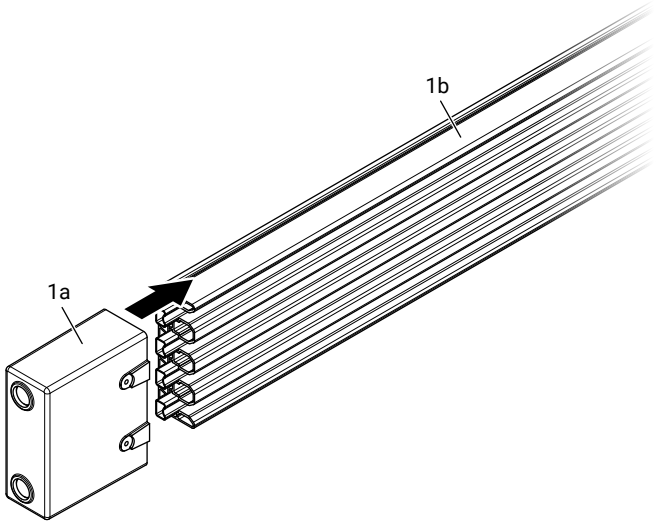
MP04P006 - End cap



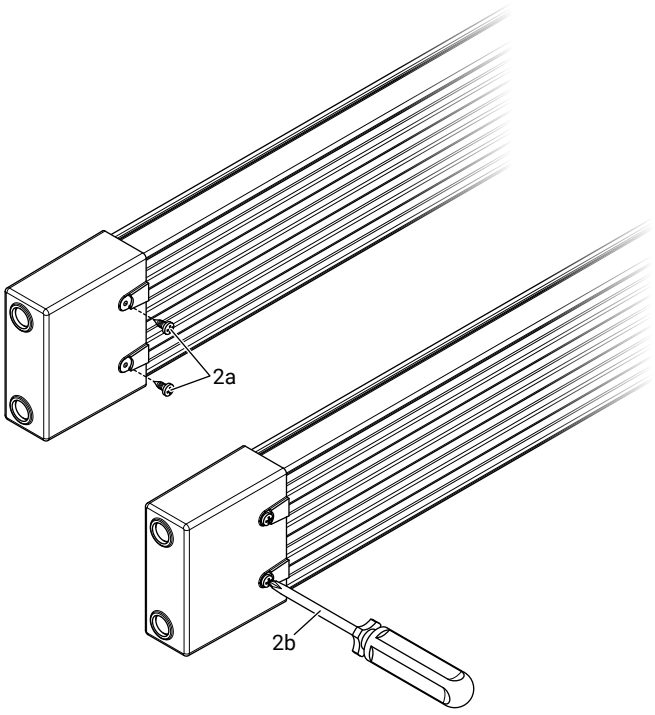


Material	thermoplastic
Weight	100 g

1 Push the end cap (a) on the multipole profile.



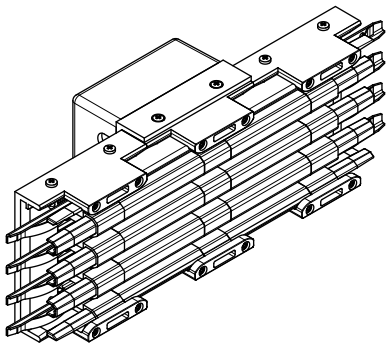
2 Fix the cap in place with the supplied screws (a) using a suitable Phillips screwdriver (b).

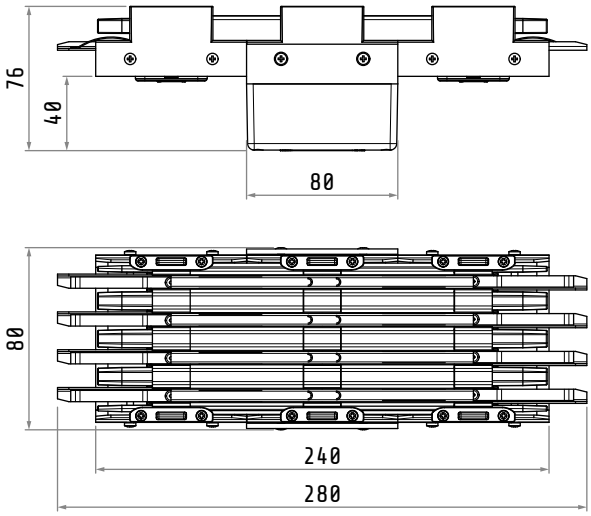


ATTENTION
Verify the distance between cap and support hanger is 200 mm min and 400 mm max.

TIGHTENING TORQUE
1.8-2.2 N·m / 16-19.5 lb·in

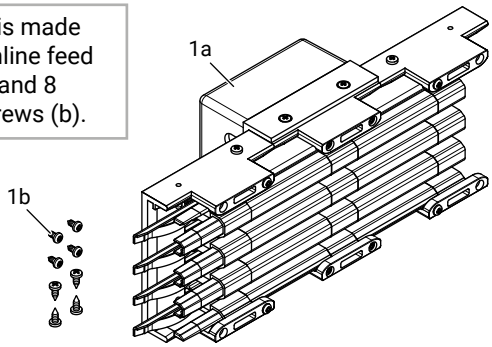
MP04P008 - In-line feed



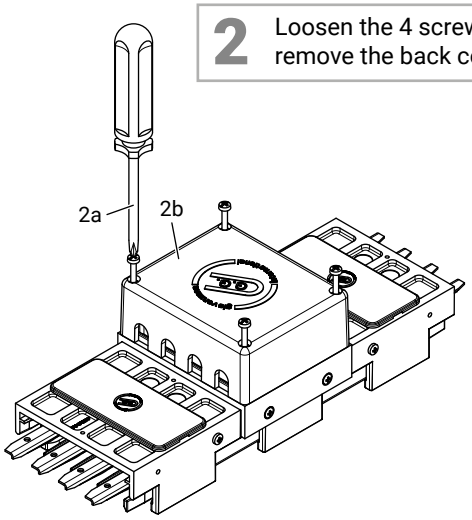


Material	body hardware conductor	thermoplastic galvanized steel copper
Weight		885 g

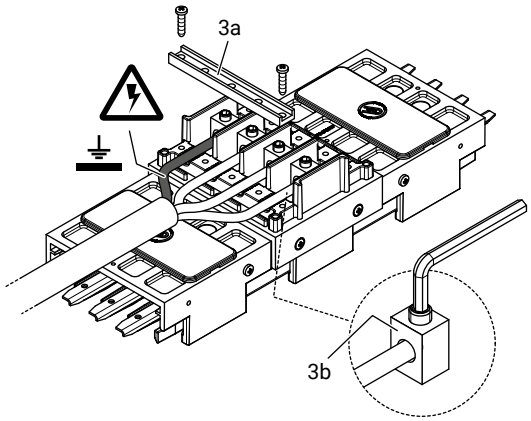
1 The unit is made up of 1 inline feed body (a) and 8 fixing screws (b).



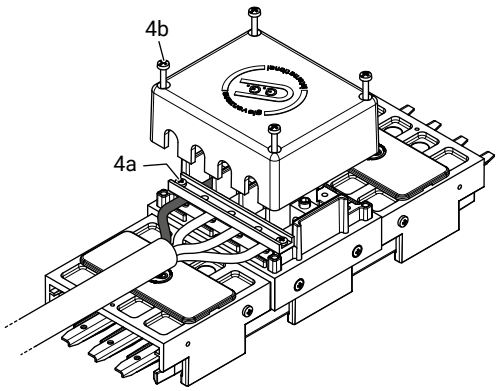
2 Loosen the 4 screws (a) and remove the back cover (b).



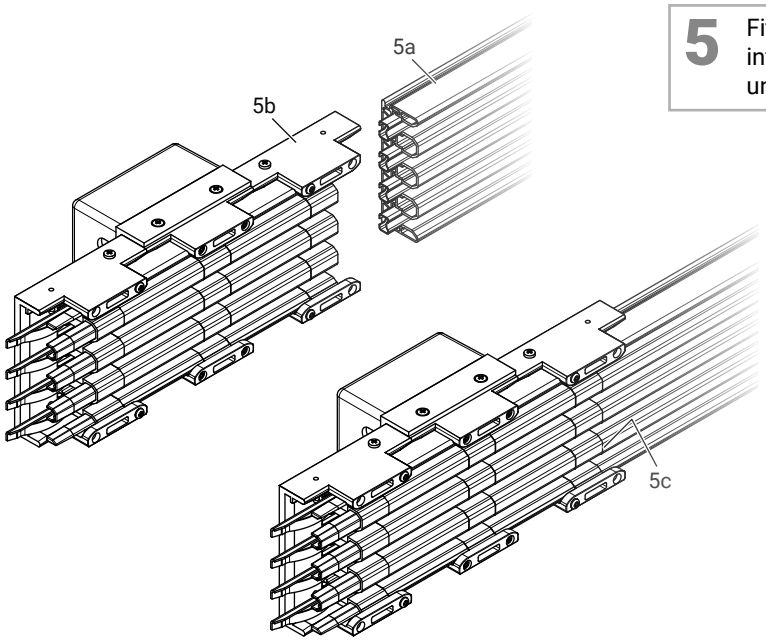
3 Remove the locking bar (a) and make the wiring fastening each pole into the corresponding block (b) with an Allen key.



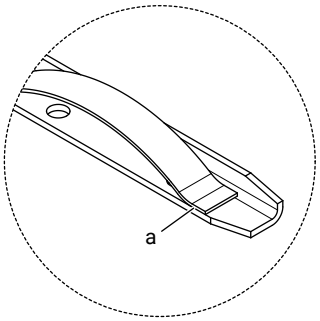
4 Lock the bar (a) and close the back cover thightening the four screws.



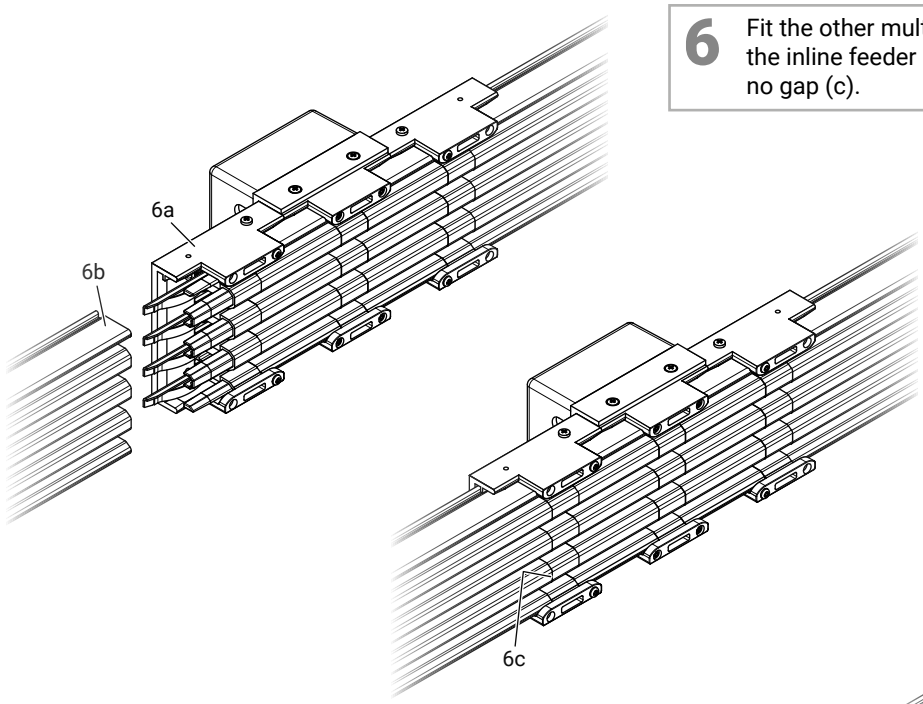
ATTENTION
Verify the position of the earth conductor and carry out the wiring accordingly.



5 Fit the multipole bar (a) into the inline feeder (b) until there is no gap (c).

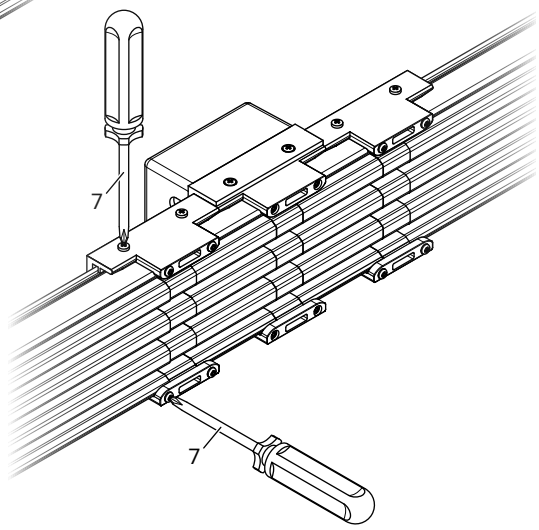


ATTENTION
Make sure there is no gap (a) between the spring and the connector bar.

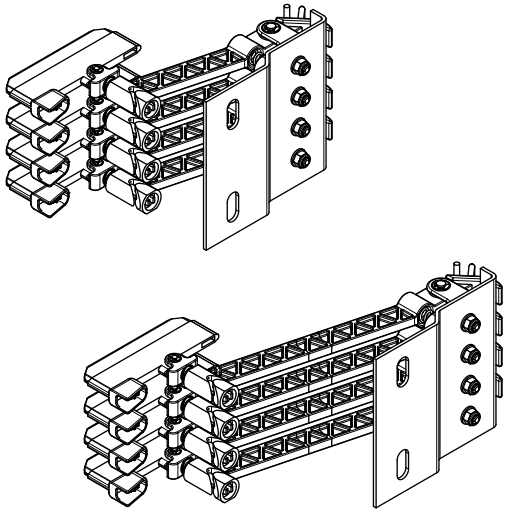


6 Fit the other multipole bar (a) into the inline feeder (b) until there is no gap (c).

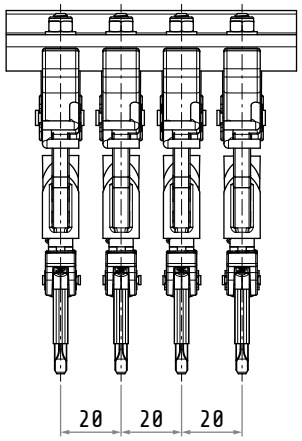
7 Lock the inline feeder with the 4 fixing screws.

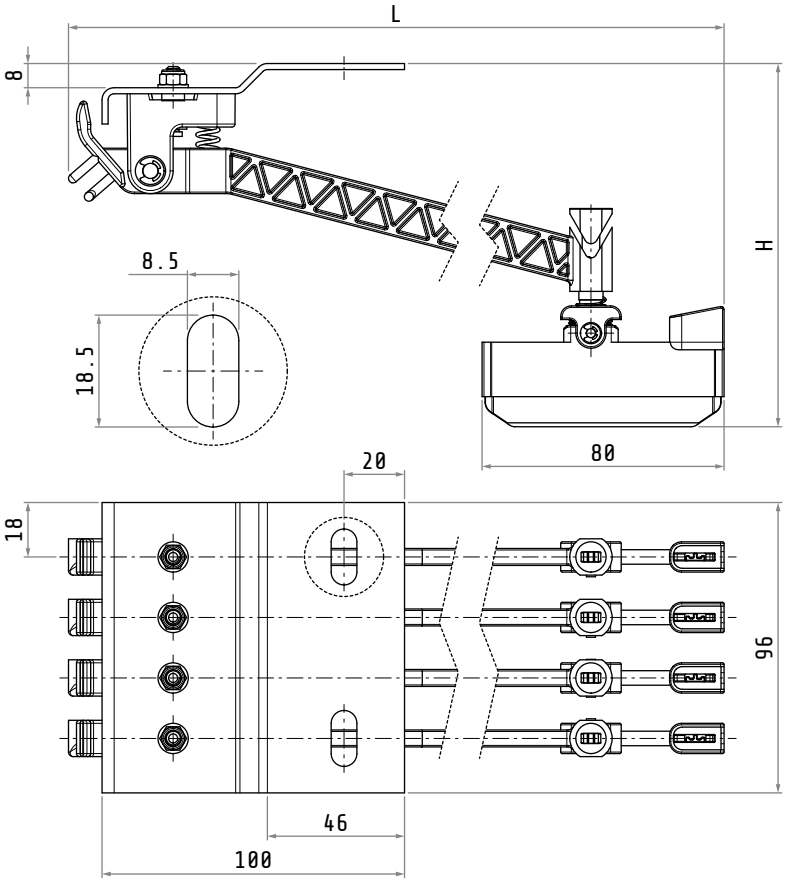


MP04P011 / MP04P011 - Trolley current collector



	MP04P011	MP04P012
Material		
body	thermoplastic	thermoplastic
hardware	galvanized steel	galvanized steel
brushes	copper, lead and carbon	copper, lead and carbon
Operating current	50 A	50 A
Form factor	compact	long
Maximum deflection	±15 mm	±30 mm
Weight	730 g	745 g

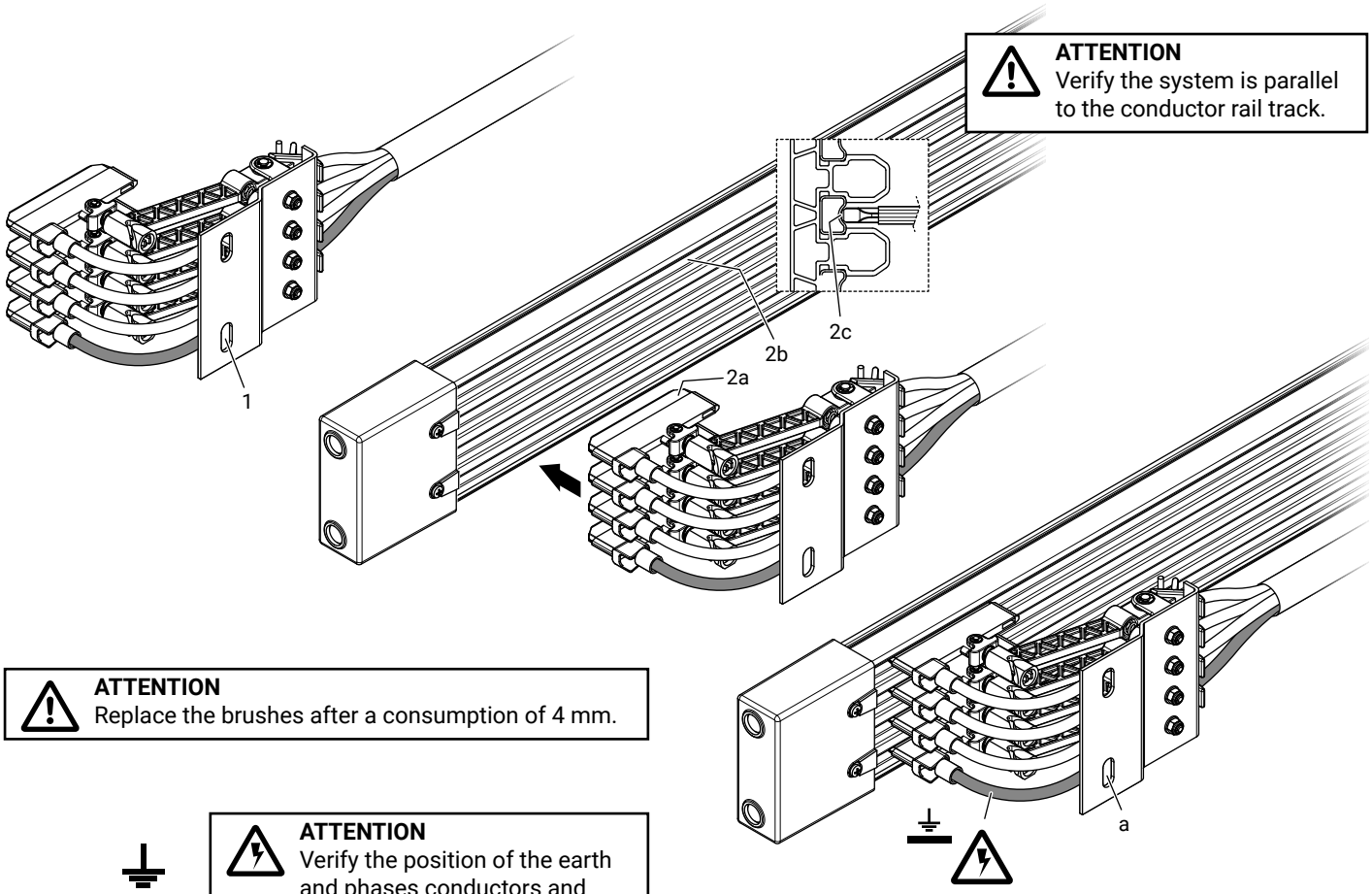




	MP04P011	MP04P012
L	162	217
H	106	120

1 Assemble the collector to the installation trolley using the M8 slotted holes.

2 Fit the brushes (a) into the grooves of the busbar (b) matching them with the conductors (c).

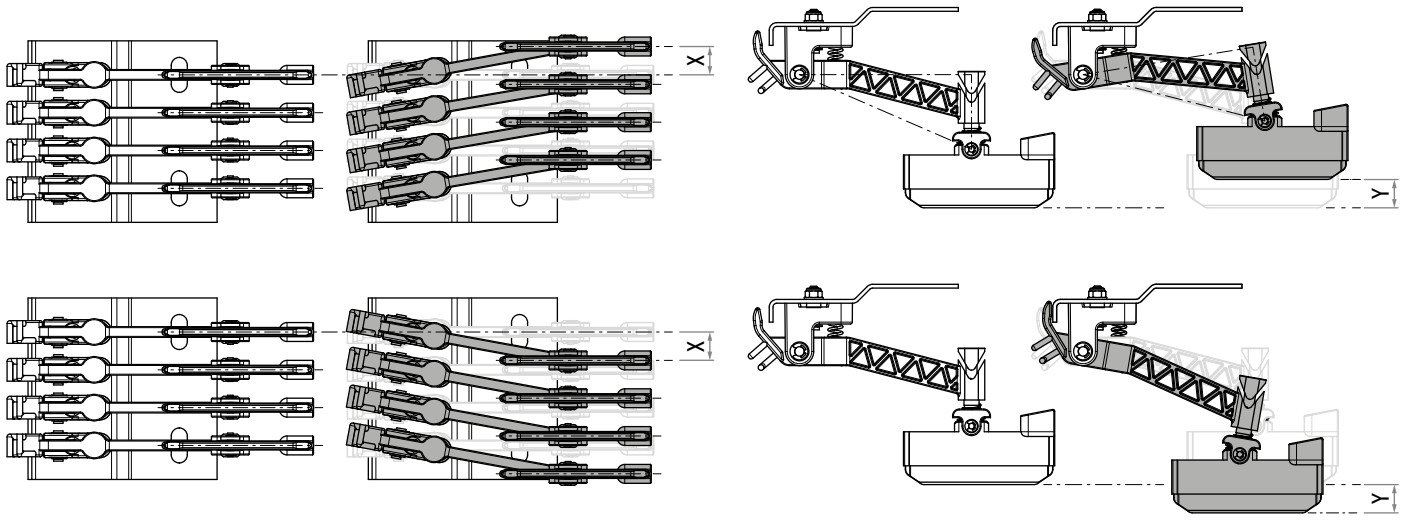


ATTENTION
Verify the system is parallel to the conductor rail track.

ATTENTION
Replace the brushes after a consumption of 4 mm.

ATTENTION
Verify the position of the earth and phases conductors and carry out the wiring accordingly.

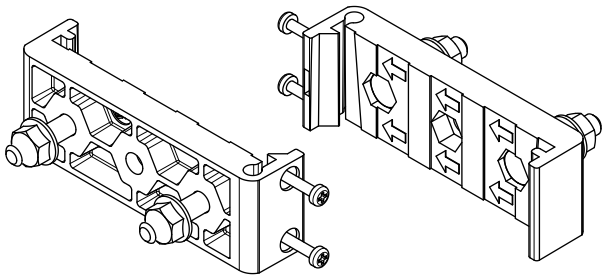
ATTENTION
Pushing too much the collector against the rail can increase the consumption but a contact too loose can affect the power transmission.

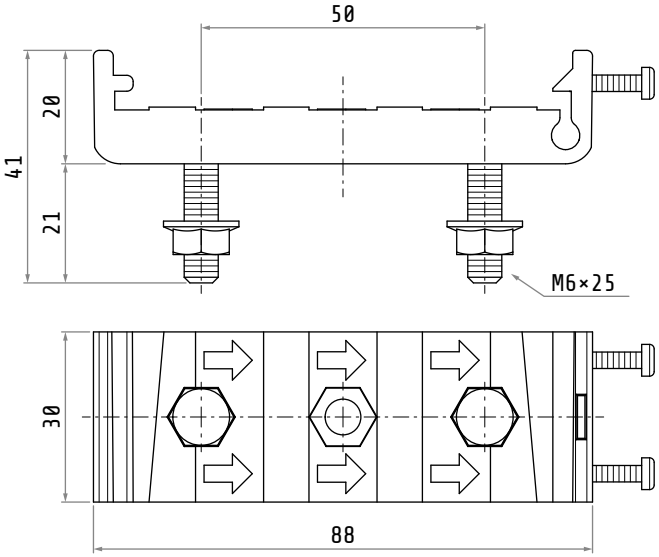


	MP04P011	MP04P012
X	±15 mm	±30 mm
Y	±15 mm	±30 mm

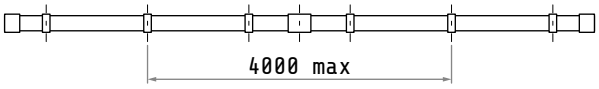
ATTENTION
The collector can compensate for any misalignment as shown in the table and in the figure.

MP04P014 - Fixed point

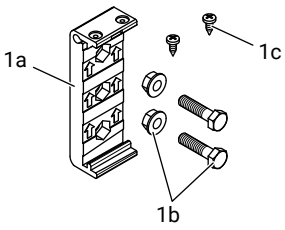




Material	body hardware	thermoplastic galvanized steel
Weight		45 g

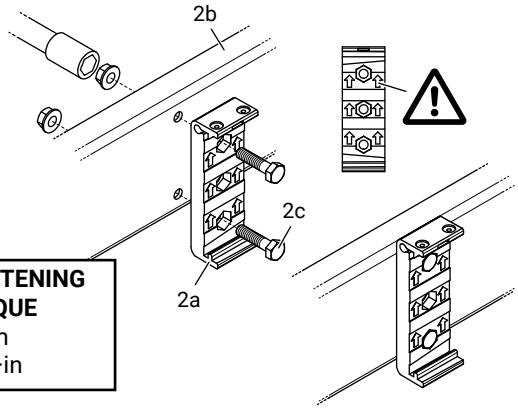


1 The unit is made up of 1 support clip (a), 2 bolts with nut (b) and 2 fixing screws (c).



ATTENTION
This item is installed every bar following the rules of hanger clip with a max distance between each other of 4 m.

2 Fix the support clip (a) to a suitable profile (b) with the bolts (c).

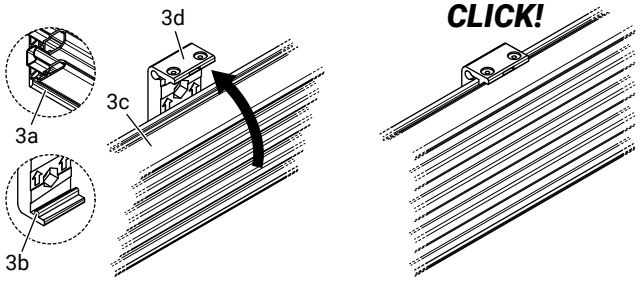


TIGHTENING TORQUE
7 N·m
62 lb·in

ATTENTION
In an horizontal installation the arrows must point upwards.

ATTENTION
After this operations, verify the alignment of the conductor rail: it must be parallel and straight to the track of the device to be powered.

3 Place the groove of the conductor (a) on the notch of the support (b) and push the support (c) towards the support (d).



4 Fasten the profile to the support with the fixing screws.