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ENERGY TRANSMISSION SYSTEM
BUSBAR - MULTIPOLE - FESTOON





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- 6/7 Line construction
- 8 Technical Data - Busbar and Multipole System

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10/11	Continuous conductors Max 5 Poles	40A		60A							
	Max 5 conductors slot										
12/13	Pre-mounted conductors Max 5 Poles	40A		60A							
	4 poles 5 poles										
TR85H5P		40A	50A	60A	70A	100A	140A	160A	200A	320A	
14/15	Continuous conductors Max 5 Poles	40A			70A	100A	140A				
	Max 5 conductors slot										
16/17	Pre-mounted conductors Max 5 Poles	40A			70A	100A	140A				
	4 poles 5 poles										
TR85H7P		40A	50A	60A	70A	100A	140A	160A	200A	320A	
18/19	Continuous conductors Max 7 Poles		50A			100A		160A	200A *	320A *	
	Max 7 conductors slot										
20/21	Pre-mounted conductors Max 7 Poles		50A			100A		160A	200A *	320A *	
	7 poles										
* Only 4 poles with parallel connections											
22/23	Accessories										
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26/29 MULTIPOLE SYSTEM

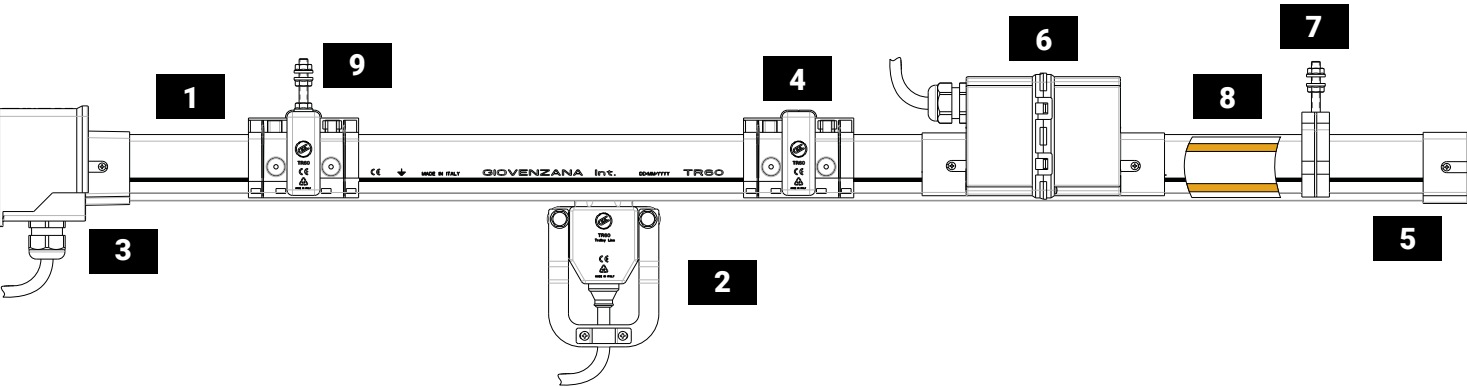
		LINE TYPE / AMPERAGE COVERAGE									
MP04P		40A	50A	60A	70A	100A	140A	160A	200A	320A	
28/29	Pre-Mounted Conductors 4 Poles			60A		100A	140A				
	4 Poles										
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BUSBAR SYSTEM

The **Conductor Busbar System** is a modern and safe power transmission system for various types of equipment, such as cranes, overhead cranes, conveyor belts, chain conveyors, etc...

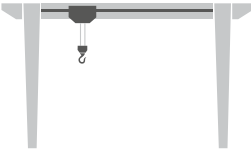
The busbar system complies with relevant international standards, ensuring operator safety, ease of installation and reliability. The “H” honeycomb profile of the TR85H line ensures greater strength and light weight.

TYPICAL LAYOUT




1	BUSBAR	PVC Housing
2	TROLLEY CURRENT COLLECTOR	Transmits the energy from the conductor to the machine
3	HEAD FEED BOX	Connects power supply to the conductor
4	JOINT BOX	Links two busbars
5	END CAP	Closes and protects the busbar end
6	IN-LINE FEED BOX	Connects power supply from centre to avoid the voltage drop
7	HANGER CLAMP	Connects the busbar to the brackets
8	COPPER STRIP	Transmits the energy from the power supply to the current collector
9	FIXED POINT	Creates a fixed point


TYPICAL APPLICATIONS



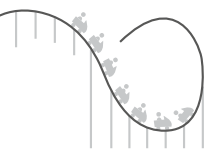
CRANE TECHNOLOGY
 Cranes and Hoists
 Recycling plans
 Galvanized plants




PRODUCTION AUTOMATION
 Electric systems
 Automated conveyors



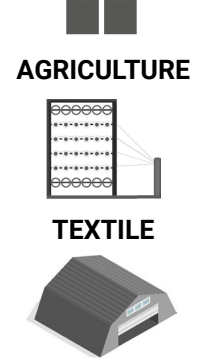
BMU
 Building Maintenance Units
 Airport and terminal stations
 Skyscrapers
 Cleanroom technology



PEOPLE MOVER SYSTEM
 People movers
 Vertical elevators
 Inclined elevators



STORAGE
 High-bay warehouses
 Automated storage

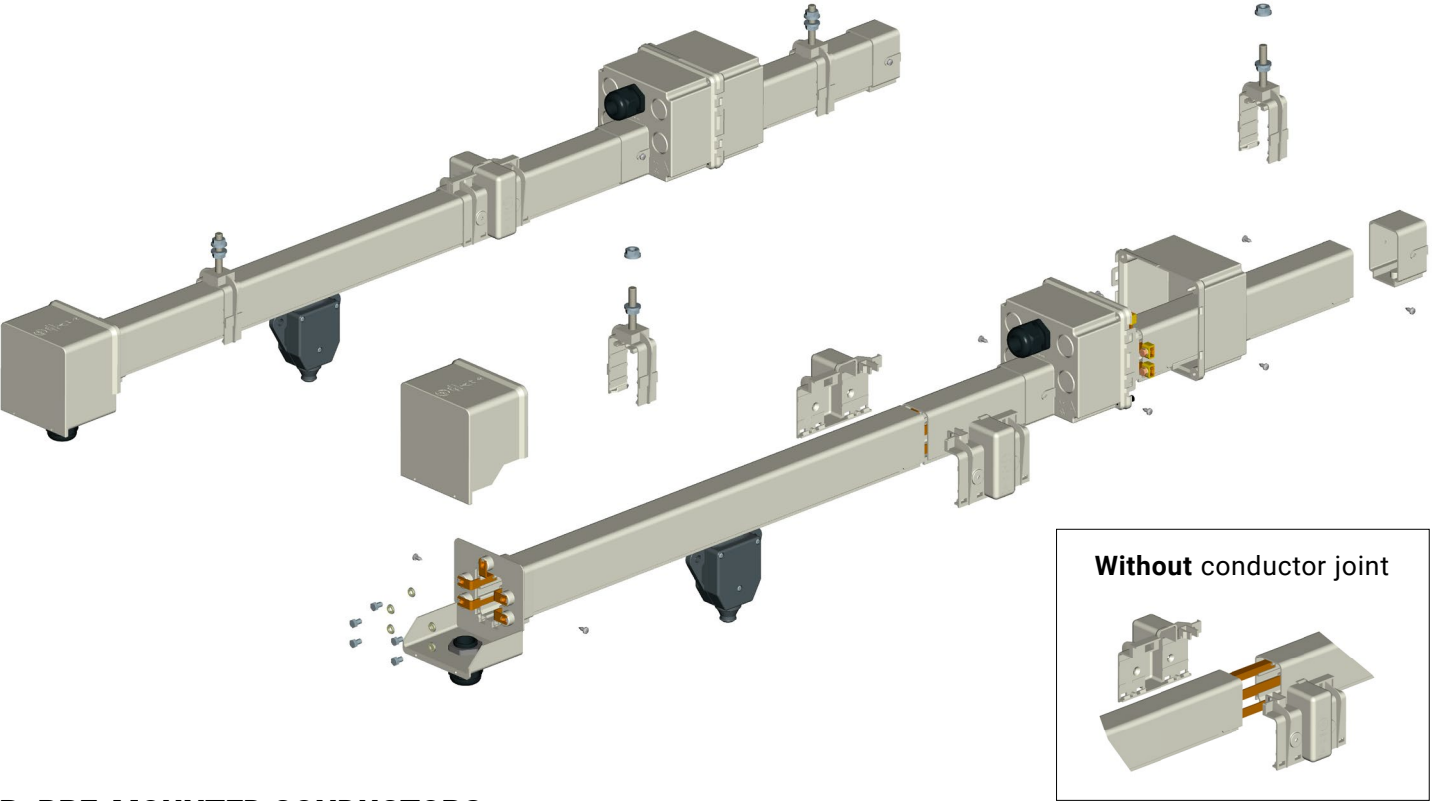


AGRICULTURE
TEXTILE
AIRCRAFT HANGAR DOORS

AVAILABLE VERSIONS

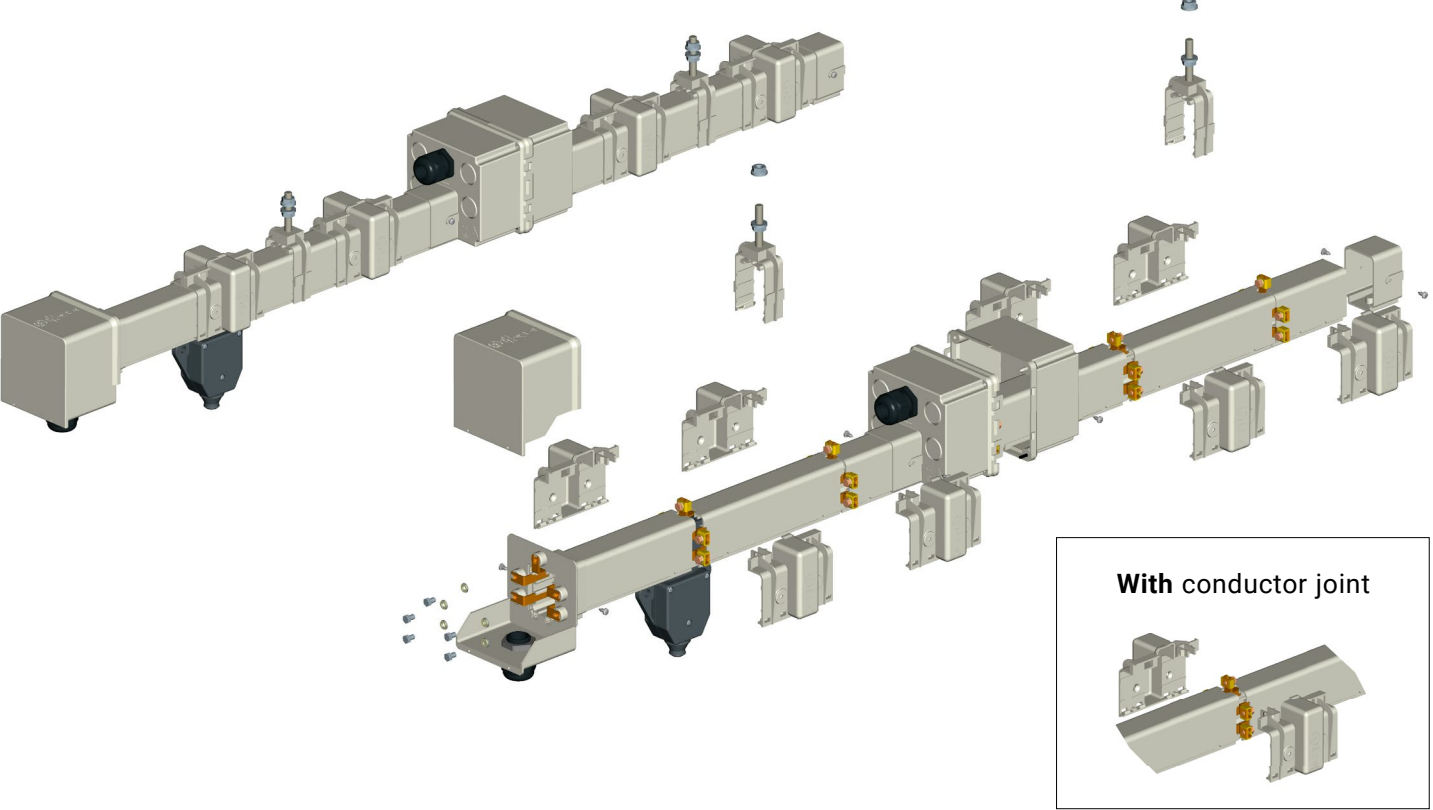
A. CONTINUOUS CONDUCTORS

The conductors are pulled from a coil without joints into the already installed casing.



B. PRE-MOUNTED CONDUCTORS

The conductors are already inserted in the plastic casing.



LINE CONSTRUCTION

When deciding on the size of the trolleys, it is necessary to consider:

- Maximum current in service;
- Devices (cage motors, slip-rings motors, resistors, electronic starters);
- Starting current of the devices;
- Maximum ambient temperature;
- The distance between device to the nearest power supply;
- Allowable voltage and voltage drop in continuous duty and starting;
- Type of current;
- Duty cycle of the devices (load factor).

CALCULATION OF THE VOLTAGE DROP

- The voltage drop must not exceed 5% of the rated voltage under normal operating conditions.

Three-phase alternating current:

$$\Delta u = \sqrt{3} \times I \times L_t \times Z$$

$$\Delta u\% = \frac{\Delta u \times 100}{U}$$

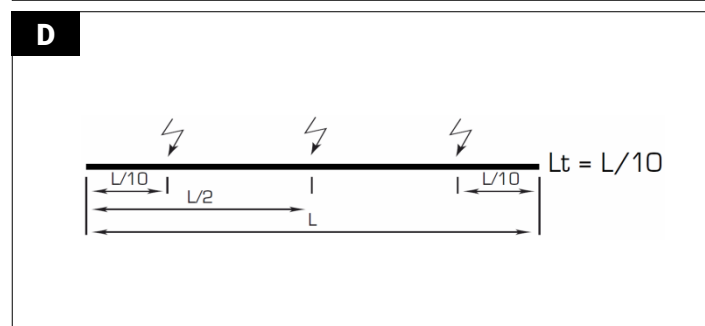
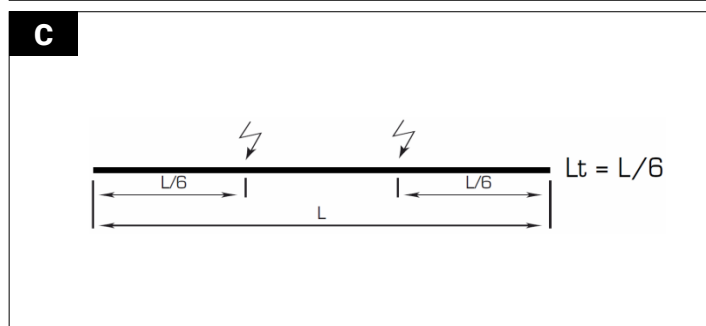
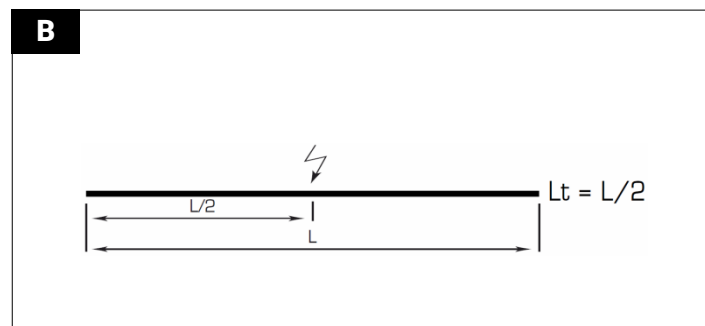
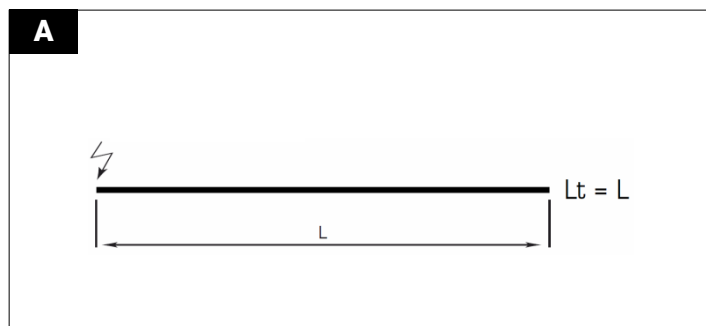
Keys:

Δu = Voltage drop [V]
 $\Delta u\%$ = Voltage drop [%]
 I = Current intensity [A]
 L_t = Length of section [m]
 Z = Impedence [Ω/m]
 U = Voltage [V]

POWER FEED: BUSBAR TRACK LENGHT

- Proper arrangement of power points minimizes voltage reduction.
 If "L" is the line length, "Lt" is the maximum track length to consider voltage reduction.

- A** $L_t = L$ - with ending/starting power feed
- B** $L_t = L/2$ - with in-line power feed
- C** $L_t = L/6$ - with power feed at 1/6 from each end
- D** $L_t = L/10$ - with three power feed at L/2 and L/10 from each end



CURRENT IN CONTINUOUS SERVICE

- Specify the number of devices working simultaneously to calculate the corresponding current:

$$I_n = I_1 + I_2 + I_3 + \dots$$

- The current can be determined by the power of the devices [W], which, for a three-phase system, is equal to:

$$I_n = \frac{P_u}{\sqrt{3} \times U \times \cos\phi \times \eta}$$

Keys:

I_n = Current consumption [A]
 P_u = Power devices [W]
 η = Devices performance
 U = Operating Voltage [V]
 $\cos\phi$ = Power factor

- In the absence of information on the operation of simultaneous devices, consider the following table:

N° OF IN-LINE LIFTING DEVICE	LIFTING EQUIPMENT IN USE			
	1 ST ENGINE	2 ND ENGINE	3 TH ENGINE	4 TH ENGINE
	max power engine*	decreasing power engine*		
1	x	x		
2	x	x	x	
3	x	x	x	
4	x	x	x	x
5	x	x	x	x
N° 2 lifting equipment operating simultaneously	x	x	x	x

* About η motors connected in parallel with rated current I_n' , consider $I_n = \eta \times I_n'$.

STARTING CURRENT

- Calculate the numbers of simultaneously started devices and the device already in service, then calculate the corresponding current. If the startup current is not known, proceed with the following approximation:

For a single user

$$I_a = K \times I_n \quad K = \frac{\text{Starting current (Ia)}}{\text{Nominal current (In)}}$$

As a general rule, consider:
 $K = 5$ to 6 for cage motors
 $K = 2$ for winding motors
 $K = 2$ for inverters
 (frequency converters)

- In the absence of information on the operation of simultaneous devices, consider the following table:

N° OF IN-LINE LIFTING DEVICE	LIFTING EQUIPMENT IN USE							
	1 ST ENGINE		2 ND ENGINE		3 TH ENGINE		4 TH ENGINE	
	Ia	In	Ia	In	Ia	In	Ia	In
1	x			x				
2	x			x		x		
3	x		x					
4	x		x			x		
5	x		x			x		x
N° 2 lifting equipment operating simultaneously	x		x			x		x



TECHNICAL DATA

	TR60		TR85H5P				TR85H7P			MP04P		
	40	60	40	70	100	140	50	100-200*	160-320*	60	100	140
Operating current 23°C	40A	60A	40A	70A	100A	140A	50A	100A	160A	60A	100A	140A
Comply with standards	CEI EN 60439-1, CEI EN 60439-2, CEI EN 60695-2-1, CEI EN 60570											
Markings	CE EAC											
Rated operating voltage [Ue]	600Vac											
Frequency	50Hz											
Conditional short circuit withstand current	10 ka											
Fuse rating gG	40A	60A	40A	70A	100A	140A	50A	100A	160A	60A	100A	140A
Protection class CEI EN 60529	IP13 (IP44 with gasket accessories)									IP20		
Flammability resistance of the busbar:												
UL94	V0											
Cei EN 60695-2-1	960°C											
Ambient Temperature												
operating	-30°C +55°C											
storage	-30°C +70°C											
Max admissible trolley speed	200 m/min ⁻¹									400 m/min ⁻¹		
ETP Copper strip section [mm²]	10 10×1	15 10×1,5	9,3 15,5×0,6	15,5 15,5×1	23,25 15,5×1,5	31 15,5×2	10 12,5×0,8	22,5 12,5×1,8	31,25 12,5×2,5	15	24	32
Resistance [Ω/m 10 ⁻⁴]	17	11,33	18,27	10,96	7,83	5,48	17	8,38	5,29	11,33	7,83	5,48
Impedence [Ω/m 10 ⁻⁴]	17,09	11,38	18,36	11,01	7,87	5,55	17,09	8,42	5,36	11,38	7,87	5,55

* 200A and 320A models are obtained in parallel configuration, thus for 4 poles only. Values given are for the single conductor.

	TR60		TR85H5P				TR85H7P			MP04P		
	40	60	40	70	100	140	50	100	160	60	100	140
Weight [kg/m] +/- 50g												
4 poles	1,05	1,25	1,40	1,65	1,95	2,25	-	-	-	1,25	1,54	1,83
5 poles	1,15	1,35	1,50	1,80	2,15	2,55	-	-	-	-	-	-
7 poles	-	-	-	-	-	-	1,70	2,30	3,05	-	-	-

MATERIAL	CERTIFICATIONS	RIGID PVC
Self-extinguish	UL94	V0
	DIN 4102	B2
	D.M. 6/7/83	CI
Ultimate tensile strenght	ISO R527 23°C	430 kg/cm²
Yield point	ISO R527 23°C	460 kg/cm²
Modulus of elasticity	ISO R178 23°C	30.000 kg/cm³
Impact resistance	DIN 53453	Unbroken
Dielectric strenght	ASTM 149	25 kv/mm
Softening temperature - Vicat	ISO R306 49N	82°C







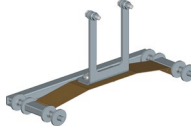



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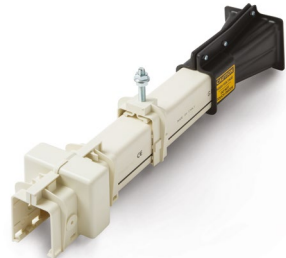
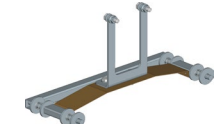

BUSBAR SYSTEM

TR60
CONTINUOUS CONDUCTORS

ITEM	PRODUCT	SPECIFICATION	40A	60A
BUSBAR		Standard lenght: 4 meters *. Material: PVC.	TR6000W	
CONDUCTOR SIZE		ETP copper.	CS40 10×1 - 10mm ²	CS60 10×1,5 - 15mm ²
JOINT BOX		Material: plastic. To connect two busbars.	TR6001W	
HANGER CLAMP		Material: plastic. Max support spacing: 1,33 m.	TR6002W	
		Material: steel. Max support spacing: 1,33 m.	TR6020	
END CAP		Material: plastic. Closes and protects the busbar end.	TR6006W	
FEED BOX		Material: plastic. To use to feed the line (at the head of the line).	TR6003W	
IN-LINE FEED		To use along the line in order to prevent voltage drop. Clamps or screws + nuts not included.	TR6008W Recommended use of dedicated accessories to page 23.	
TROLLEY CURRENT COLLECTOR (for straight and curved lines)		25A - 4 conductors.	TR6004	
		25A - 5 conductors.	TR6005	

ITEM	PRODUCT	SPECIFICATION	40A	60A
TOWING ARM		To use to move the trolley current collector.	TR8557	
TOWING ARM BRACKET		Alternative product of TR8557 (with TR8510).	TR6007	
TOWING ARM		To use with TR6007 or TR6013.	TR8510	
DOUBLE TROLLEY SUPPORT		For utilization with two trolleys in order to have ampacity of 50A.	TR6013	
FIXED POINT		Fix the line to control thermal expansion. One for each line.	TR6014W	
TRANSFER GUIDE			TR6034	
SPRING LOADED TOWING ARM		For transfer guide.	TR8538	
GASKET IP44			TR6012	
CONDUCTOR INSERTION TROLLEY		For insertion of copper conductor in the line.	TR6011	
DE-COIL UNIT			TR8513	

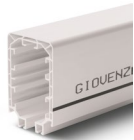









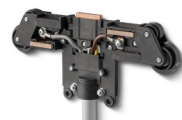

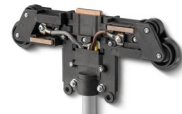
ITEM	PRODUCT	SPECIFICATION	40A	60A
BUSBAR		Standard lenght: 4 meters *. 4 conductors.	TR60404CW	TR60604CW
		Standard lenght: 4 meters *. 5 conductors.	TR60405CW	TR60605CW
		Conductor type.	Included in busbar code 10×1 - 10mm ²	Included in busbar code 10×1,5 - 15mm ²
JOINT BOX		Material: plastic. To connect two busbars.	TR6001W	
HANGER CLAMP		Material: plastic. Max support spacing: 1,33 m.	TR6002W	
		Material: steel. Max support spacing: 1,33 m.	TR6020	
END CAP		Material: plastic. Closes and protects the busbar end.	TR6006W	
FEED BOX		4 conductors.	TR6003A4W	
		5 conductors.	TR6003A5W	
IN-LINE FEED		4 conductors.	TR6008A4W	
		5 conductors.	TR6008A5W	
TROLLEY CURRENT COLLECTOR		25A - 4 conductors.	TR6004	
		25A - 5 conductors.	TR6005	







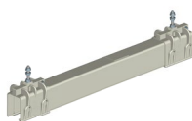


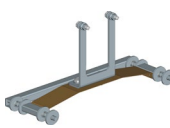



ITEM	PRODUCT	SPECIFICATION	40A	60A
TOWING ARM		To use to move the trolley current collector.	TR8557	
TOWING ARM BRACKET		Alternative product of TR8557 (with TR8510).	TR6007	
TOWING ARM		To use with TR6007 or TR6013.	TR8510	
DOUBLE TROLLEY SUPPORT		For utilization with two trolleys in order to have ampacity of 50A.	TR6013	
FIXED POINT		To fix the line to control thermal expansion. 1 for each line.	TR6014W	
TRANSFER GUIDE		LEFT 4 conductors.	TR6034A4W	
		LEFT 5 conductors.	TR6034A5W	
		RIGHT 4 conductors.	TR6035A4W	
		RIGHT 5 conductors.	TR6035A5W	
SPRING LOADED TOWING ARM		For transfer guide.	TR8538	
GASKET IP44			TR6012	













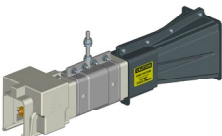
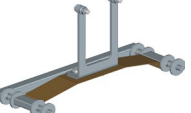

BUSBAR SYSTEM








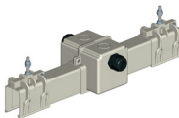





TR85H5P
CONTINUOUS CONDUCTORS





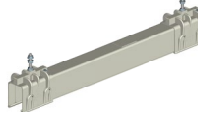



ITEM	PRODUCT	SPECIFICATION	40A	70A	100A	140A
BUSBAR		Standard lenght: 4 meters *. Material: PVC.	TR85H5PW			
CONDUCTOR SIZE		ETP copper.	RM40 15,5×0,6 9,3mm ²	RM70 15,5×1 15,5mm ²	RM100 15,5×1,5 23,25mm ²	RM140 15,5×2 31mm ²
JOINT BOX		Material: plastic. To connect two busbars.	TR8501W			
		Material: steel. To connect two busbars.	TR8524			
HANGER CLAMP		Material: plastic. Max support spacing: 1,33 m.	TR8502W			
		Material: steel. Max support spacing: 1,33 m.	TR8525			
END CAP		Material: plastic. Closes and protects the busbar end.	TR8506W			
FEED BOX		Material: plastic. To use to feed the line (at the head of the line).	TR8503W			
IN-LINE FEED		To use along the line to prevent voltage drop. Clamps or screws + nuts not included.	TR8547W Recommended use of dedicated accessories to page 23.			
TROLLEY CURRENT COLLECTOR		35A - 4 conductors.	TR8511			
		35A - 5 conductors.	TR8512			
		70A - 4 conductors.	TR8518			
		70A - 5 conductors.	TR8519			
TROLLEY CURRENT COLLECTOR FOR CURVES		35A - 4 conductors.	TR8516			
		70A - 4 conductors.	TR8532			

ITEM	PRODUCT	SPECIFICATION	40A	70A	100A	140A
TOWING ARM		To use to move the trolley current collector.	TR8557			
TOWING ARM BRACKET		Alternative product of TR8557 (with TR8510).	TR6007			
TOWING ARM		To use with TR6007 or TR8523.	TR8510			
DOUBLE TROLLEY SUPPORT		For utilization with two trolleys in order to have ampacity of 140A.	TR8523			
FIXED POINT		To fix the line to control thermal expansion 1 for each line.	TR8527.1			
EXPANSION JOINT		To use to compensate thermal expansion.	TR85H5P07W			
INSPECTION JOINT		To use to extract the trolley from the line (when there are more than two trolleys).	TR85H5P28W			
SECTION JOINT		To use to section the line (double up the number of the trolleys).	TR85H5P45W			
TRANSFER GUIDE			TR85H5P34			
SPRING LOADED TOWING ARM		For transfer guide.	TR8538			
GASKET IP44			TR8505S			
CONDUCTOR INSERTION TROLLEY		For insertion of copper conductor in the line.	TR8514			
DE-COIL UNIT			TR8513			

ITEM	PRODUCT	SPECIFICATION	40A	70A	100A	140A
BUSBAR		Standard lenght: 4 meters *. 4 conductors.	TR85H5P 404CW	TR85H5P 704CW	TR85H5P 1004CW	TR85H5P 1404CW
		Standard lenght: 4 meters *. 5 conductors.	TR85H5P 405CW	TR85H5P 705CW	TR85H5P 1005CW	TR85H5P 1405CW
		Conductor type.	Included in Busbar code			
			15,5×0,6 9,3mm ²	15,5×1 15,5mm ²	15,5×1,5 23,25mm ²	15,5×2 31mm ²
JOINT BOX		Material: plastic. To connect two busbars.	TR8535W			
HANGER CLAMP		Material: plastic. Max support spacing: 1,33 m.	TR8502W			
		Material: steel. Max support spacing: 1,33 m.	TR8525			
END CAP		Material: plastic. Closes and protects the busbar end.	TR8506W			
FEED BOX		4 conductors.	TR85H5P03A4W			
		5 conductors.	TR85H5P03A5W			
IN-LINE FEED		To use along the line in order to prevent voltage drop.	TR8547W			
TROLLEY CURRENT COLLECTOR		35A 4 conductors.	TR8511			
		35A 5 conductors.	TR8512			
		70A 4 conductors.	TR8518			
		70A 5 conductors.	TR8519			
TROLLEY CURRENT COLLECTOR FOR CURVES		35A 4 conductors.	TR8516			
		70A 4 conductors.	TR8532			

ITEM	PRODUCT	SPECIFICATION	40A	70A	100A	140A
TOWING ARM		To use to move the trolley current collector.	TR8557			
TOWING ARM BRACKET		Alternative product of TR8557 (with TR8510).	TR6007			
TOWING ARM		To use with TR6007 or TR8523.	TR8510			
DOUBLE TROLLEY SUPPORT		For utilization with two trolleys in order to have ampacity of 140A.	TR8523			
FIXED POINT		To fix the line to control thermal expansion. 1 for each line.	TR8527.1			
SECTION JOINT		To use to section the line (double up the number of the trolleys).	TR85H5P45W			
TRANSFER GUIDE		LEFT 4 conductors.	TR85H5P34A4W			
		LEFT 5 conductors.	TR85H5P34A5W			
		RIGHT 4 conductors.	TR85H5P35A4W			
		RIGHT 5 conductors.	TR85H5P35A5W			
SPRING LOADED TOWING ARM		For transfer guide.	TR8538			
GASKET IP44			TR8505S			

ITEM	PRODUCT	SPECIFICATION	50A	100/200A*	160/320A*
BUSBAR		Standard lenght: 4 meters.	TR85H7PW		
CONDUCTOR SIZE		ETP copper.	CSH750 12,5×0,8 10mm²	CSH7100 12,5×1,8 22,5mm²	CSH7160 12,5×2,5 31,25mm²
JOINT BOX		Material: plastic. To connect two busbars.	TR8501W		
		Material: steel. To connect two busbars.	TR8524		
HANGER CLAMP		Material: plastic. Max support spacing: 1 m.	TR8502W		
		Material: steel. Max support spacing: 1 m.	TR8525		
END CAP		Material: plastic. Closes and protects the busbar end.	TR8506W		
FEED BOX		Only for 7 poles till 100A.	TR85H7P005W		-
IN-LINE FEED		Clamps or screws + nuts not included.	TR85H7P03W Recommended use of dedicated accessories to page 23.		
TRANSITION BOX		For parallel connections 200A or 320A.	-	TR8564	
FIXED POINT		To fix the line to control thermal expansion. 1 for each line.	TR8527.1		
TROLLEY CURRENT COLLECTOR		35A - single.	TR85H7P001		
		70A - double.	TR85H7P002		
		105A - triple.	TR85H7P010		

ITEM	PRODUCT	SPECIFICATION	50A	100/200A*	160/320A*
TOWING ARM		Single.	TR8557		
		Double.	TR8558		
		Triple.	TR8559		
4 POLES TROLLEY CONNECTION CLAMP		Single (3ph 70A-PE 35A).	TR8561		
		Double (3ph 140A-PE 70A).	TR8562		
		Triple (3ph 210A-PE 105A).			
EXPANSION JOINT		To use to compensate thermal expansion.	TR85H7P07W		
INSPECTION JOINT		To use to extract the trolley from the line (when there are more than two trolleys).	TR85H7P28W		
SECTION JOINT		To use to section the line (double up the number of the trolleys).	TR85H7P45W		
GASKET IP44			TR8505S		
CONDUCTOR INSERTION TROLLEY		For insertion of copper conductor in the line.	TR85H7P14		
DE-COIL UNIT			TR8513		



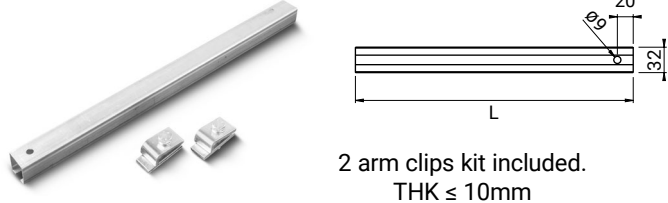
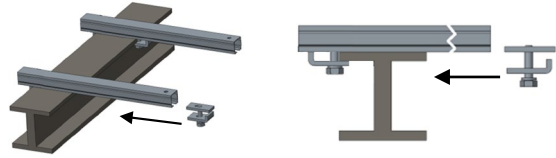
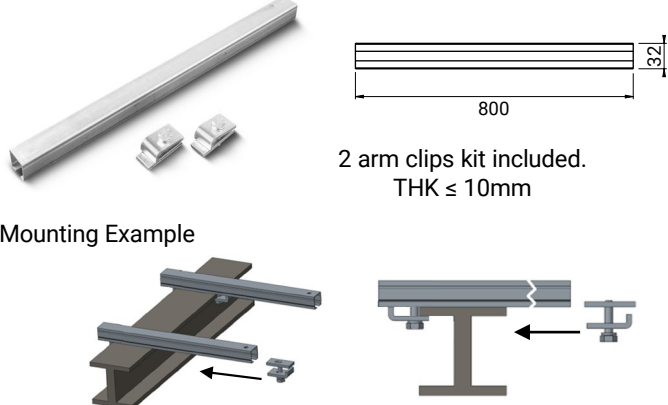
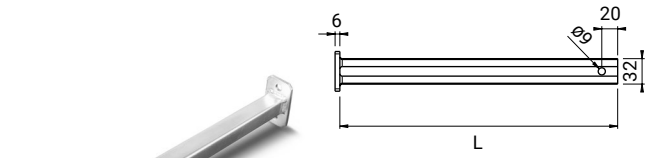
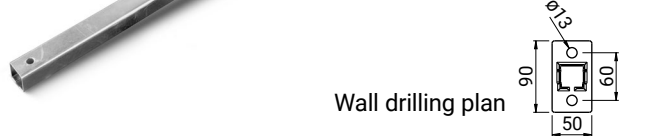
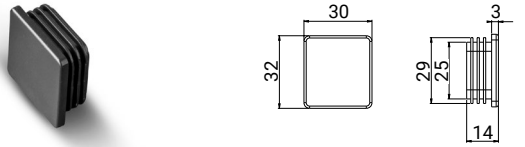
BUSBAR SYSTEM

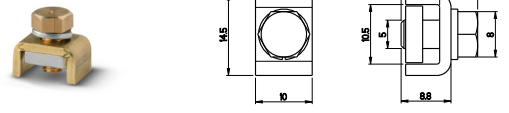
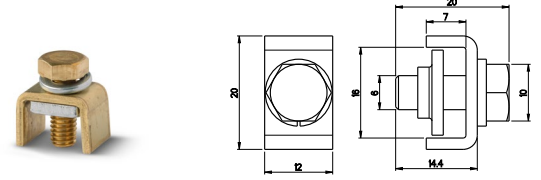
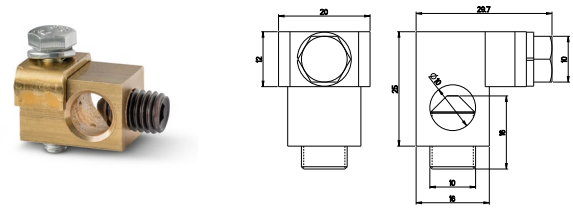


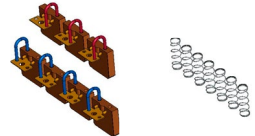
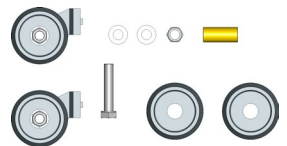
TR85H7P
PRE-MOUNTED CONDUCTORS

ITEM	PRODUCT	SPECIFICATION	50A	100A	160A	200A*	320A*
BUSBAR		Standard lenght: 4 meters *. 4 conductors.	-	-	-	TR85H7P 1007CW	TR85H7P 1607CW
		Standard lenght: 4 meters. 7 conductors.	TR85H7P 507CW	TR85H7P 1007CW	TR85H7P 1607CW	-	-
		Conductor type.	Included in busbar code				
			12,5×0,8 10mm ²	12,5×1,8 22,5mm ²	12,5×2,5 31,25mm ²	2X (12,5×1,8) 2×22,5mm ²	2X (12,5×2,5) 2×31,25mm ²
JOINT BOX		Material: plastic. To connect two busbars.	TR85H7P007W				
HANGER CLAMP		Material: plastic. Max support spacing: 1 m.	TR8502W				
		Material: steel. Max support spacing: 1 m.	TR8525				
END CAP		Material: plastic. Closes and protects the busbar end.	TR8506W				
FEED BOX		7 conductors.	TR85H7P005A7W		-		
IN-LINE FEED		7 conductors.	TR85H7P03A7W				
TRANSITION BOX		For parallel connections 200A or 320A.	-			TR8564	
FIXED POINT		To fix the line to control thermal expansion. 1 for each line.	TR8527.1				
TROLLEY CURRENT COLLECTOR		35A - single.	TR85H7P001				
		70A - double.	TR85H7P002				
		105A - triple.	TR85H7P010				

ITEM	PRODUCT	SPECIFICATION	50A	100A	160A	200A*	320A*
TOWING ARM		Single.	TR8557				
		Double.	TR8558				
		Triple.	TR8559				
4 POLES TROLLEY CONNECTION CLAMP		Single (3ph 70A - PE 35A).	TR8561				
		Double (3ph 140A - PE 70A).	TR8562				
		Triple (3ph 210A - PE 105A).					
SECTION JOINT		To use to section the line (double up the nr of the trolleys).	TR85H7P45W				
GASKET IP44			TR8505S				



ITEM	PRODUCT	SPECIFICATION	CODE
SUPPORT BRACKET (RAIL Fixing)	 2 arm clips kit included. THK ≤ 10mm	L=350mm	TR8550
	 Mounting Example	L=500mm	TR8551
	 2 arm clips kit included. THK ≤ 10mm	L=800mm	TR8552
SUPPORT BRACKET (Wall Fixing)	 L	L=350mm	TR8555
	 Wall drilling plan	L=500mm	TR8556
END CAP			30607015

ITEM	PRODUCT	SPECIFICATION	CODE
TR60 CONDUCTORS CONNECTION CLAMP		Brass material	TR6015
TR85H5P CONDUCTORS CONNECTION CLAMP		Brass material	TR8548
TR85H5P CONDUCTORS CONNECTION CLAMP (for IN-LINE FEED)		Brass material	TR8537
TR85H7P CONDUCTORS CONNECTION KIT		Flanged screw M6×12	11606075
		Flanged nut M6	11612013
TR85H5P BRUSH KIT REPLACEMENT		Only for: TR8518, TR8519, TR8532. One piece for each pole.	TR8520K
TR85H7P BRUSH KIT REPLACEMENT		1x TR85H7P001 2x TR85H7P002 3x TR85H7P010	TR85H7P020K
TR85H7P WHEELS KIT REPLACEMENT		Only for: TR85H7P001 TR85H7P002 TR85H7P010	TR85H7P021K



BUSBAR SYSTEM | CUSTOMIZATION FORM

BUSBAR
SURVEY

COMPANY NAME:

CITY:

COUNTRY:

CONTACT:

PHONE:

MAIL:

DATE:

REFERENCE:

1GENERAL DATA

1.1TYPE OF INDUSTRY ☐ Crane ☐ BMU ☐ Storage ☐ Other

1.2N° MACHINE FOR TRACK

1.3N° OF TRACKS

1.4TRACK LENGHT m

1.5TRACK LAYOUT m straight - m curved
(please include Layout Drawing on the next page)

2ELECTRICAL DATA

2.1POWER / CURRENT PER MACHINE Kw - Inom A - Istart A

2.2MAX SIMULTANEOUS CURRENT PER TRACK A

2.3POWER SUPPLY VOLTAGE V 50/60 Hz - n° phases ☐ PE ☐ N

2.4CONTROL SIGNALS Specify number - Voltage

2.5SWITCH FREQUENCY AND DUTY CYCLE OF THE MACHINERY per
duty cycle ☐ 50% ☐ 60% ☐ 70% ☐ 80% ☐ 90% ☐ 100%

3SYSTEM CONFIGURATION

3.1FEED POINT(S) ☐ At beginning - ☐ At m from beginning - ☐ At m from each end

3.2CENTRE DISTANCE HANGERS m

4MACHINE PARAMETERS

4.1TRAVEL SPEED m/min

4.2BUILD DIMENSIONS Please list if there are any build dimensions to take in consideration
(include drawing)

5ENVIRONMENTAL DATA

5.1INDOOR OR OUTDOOR ☐ Indoor ☐ Outdoor

5.2MIN & MAX AMBIENT TEMP. °C min °C max

5.3ENVIRONMENTAL DETAILS ☐ Normal ☐ Dusty ☐ Humid ☐ Corrosive ☐ Other

6OPTIONS

6.1TRANSFER GUIDES ☐ Yes ☐ No - Quantity

6.2SECTION JOINT ☐ Yes ☐ No - Specify the position in the line

6.3IP44 RUBBER GASKET ☐ Yes ☐ No

6.4OTHER

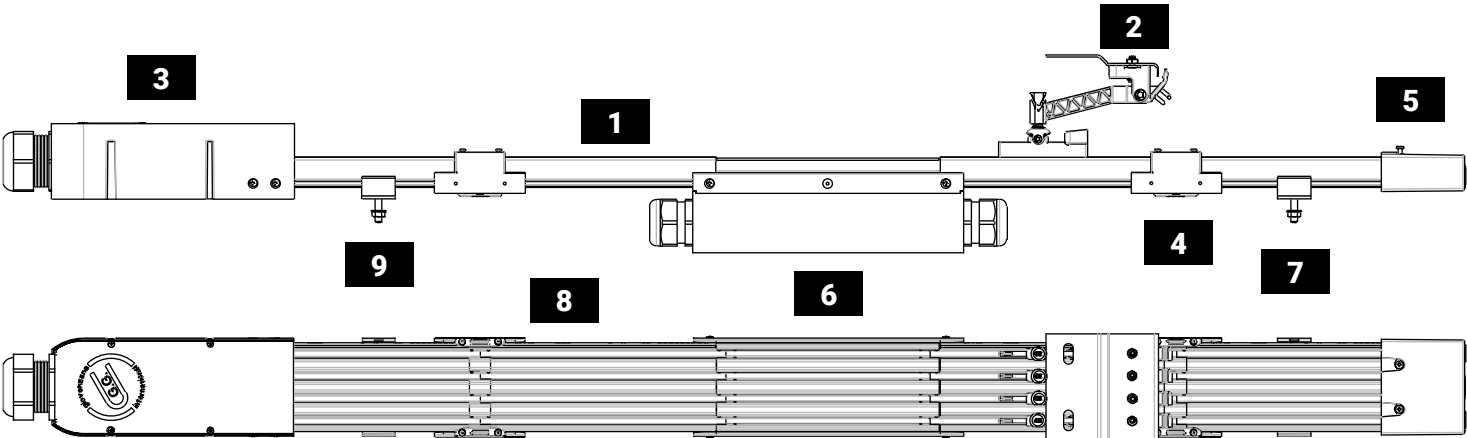
1.5 LAYOUT DRAWING

MULTIPOLE
 SYSTEM

MULTIPOLE SYSTEM

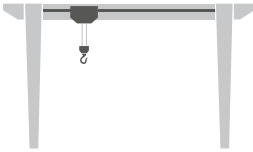
The **Multipole System** is one of the most used insulated system for transmission of power. The main applications of this system are for mobile power consumer: automatic warehouse, light cranes and packaging machinery.
 The honeycomb profile guarantees high rigidity and the design of the trolley allow to feed device that have high travel speed (up to 500 m/min).

TYPICAL LAYOUT




1	BUSBAR	PVC Housing
2	TROLLEY CURRENT COLLECTOR	Transmits the energy from the conductor to the machinery
3	HEAD FEED BOX	Connects power supply to the conductors
4	JOINT BOX	Links two busbars
5	END CAP	Closes and protects the busbar end
6	IN-LINE FEED BOX	Connects power supply from centre to the conductors
7	HANGER CLAMP	Connects the busbar to the support (posts, columns)
8	COPPER STRIP	Transmits the energy from the power supply to the current collector
9	FIXED POINT	Creates a fixed point to control thermal expansion


TYPICAL APPLICATIONS




CRANE TECHNOLOGY
 Cranes and Hoists
 Recycling plans
 Galvanized plant



PRODUCTION AUTOMATION
 Electric systems
 Automated conveyors



PORT TECHNOLOGY
 RTG cranes
 STG cranes

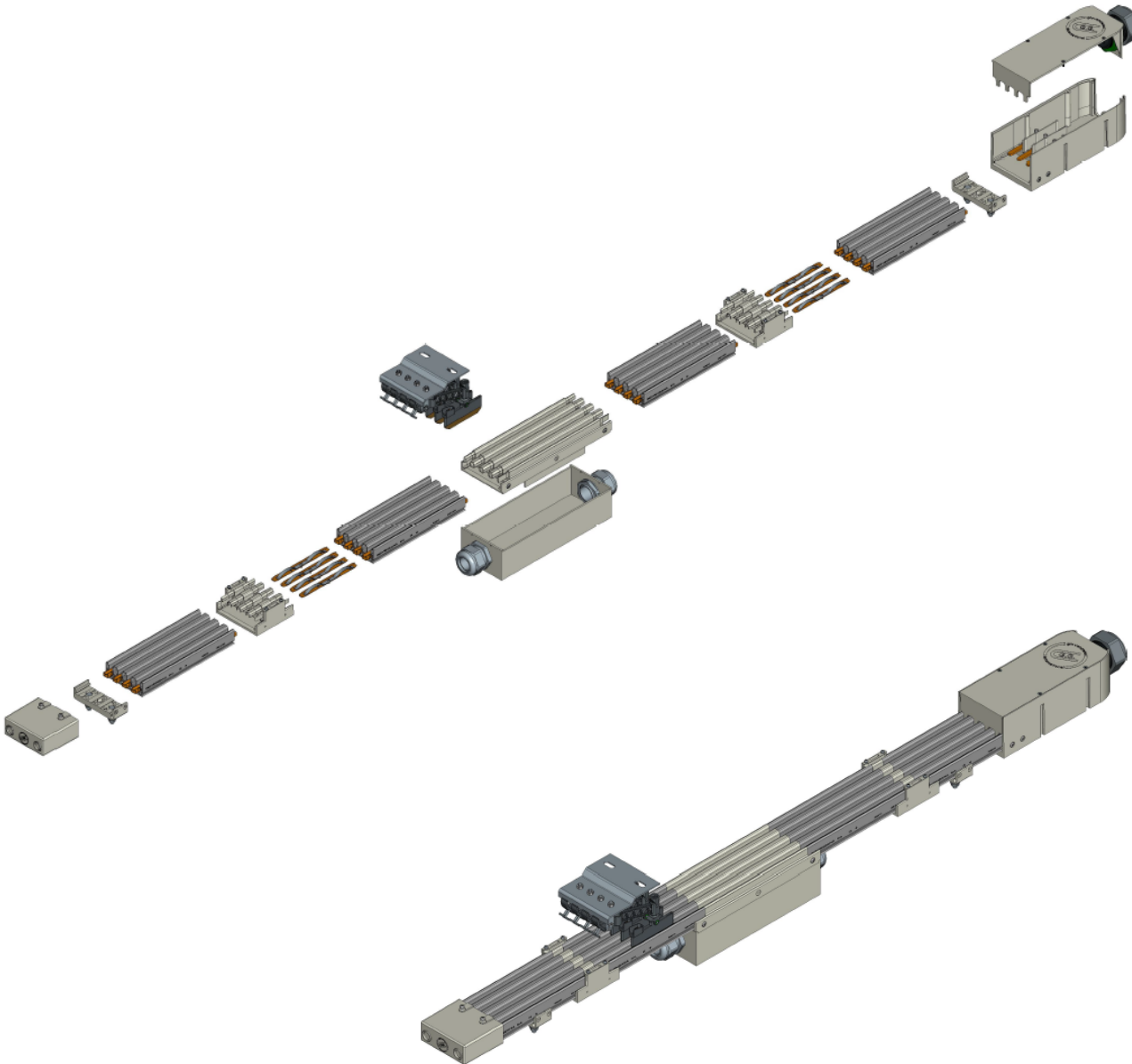


STORAGE
 High-bay warehouses
 Automated storages

AVAILABLE VERSION







PRE-MOUNTED CONDUCTORS

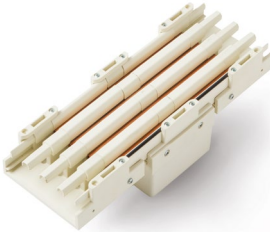
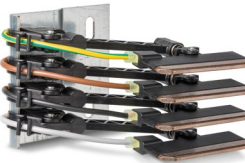
The conductors are already inserted in the plastic casing.



MULTIPOLE SYSTEM

MP04P
PRE-MOUNTED CONDUCTORS

ITEM	PRODUCT	SPECIFICATION	60A	100A	140A
BUSBAR		PVC busbar. ETP copper. Length of 4 meters. 4 poles.	MP04P060	MP04P100	MP04P140
JOINT UNIT		Material: nylon and copper. To use to connect two busbar.	MP04P001		
HANGER CLAMP		Material: nylon. 1 or 2 screws to fix. 1 piece each 1 meter.	MP04P002		
FIXED POINT HANGER		Material: nylon. 1 or 2 screws to fix. 1 piece each 1 line.	MP04P014		
END CAP		Material: nylon. To use at the end of the line.	MP04P006		
END FEEDER BOX		Material: nylon and copper. To use to feed the line. Mounted at the extremity of the line.	MP04P003		

ITEM	PRODUCT	SPECIFICATION	60A	100A	140A
IN-LINE FEED BOX		Material: nylon and copper. To provide intermediate feeding points to reduce voltage drop. Mounted along of the line.	MP04P008		
TROLLEY CURRENT COLLECTOR		50A. Compact. Max deflection: +15mm.	MP04P011		
		50A. Long. Max deflection: +30 mm.	MP04P012		