



UNIPOLE LINE INSULATED CONDUCTOR RAIL

FOR ELECTRICAL FEEDING OF CRANES
AND MOVING MACHINERY



COMPLIANT



UNIPOLE LINE | INSULATED CONDUCTOR RAIL

The insulated conductor rail system GIOVENZANA, series SL is one of the suitable solution for the electric feeding of cranes, hoists and other mobile machines.

It is designed and realized in order to offer the best safety guarantees against accidental contact, according to the standard EN 60529. The conductor is made of copper or galvanized steel or sea-water resistant aluminium alloy with stainless steel tread.

The Single Line conductor rail system is used as a standard product to power bridge, portal and process cranes, but can also be used in a wide variety of other applications such as people movers.

As an insulated single-pole safety conductor rail, the contact-protected system meets requirements for conductor rails according to European (CE).

Main features:

- Available in different conductor materials;
- Minimal encumbrance, modular and expandable system;
- High solidity and reliability;
- Quick and easy installation;
- Suitable for indoor and outdoor applications;
- Available from 100 A to 1000 A.

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BOLTED JOINT SHROUDED BUSBAR SYSTEM | TECHNICAL DATA

CONDUCTOR RAILS MATERIAL	GALVANISED STEEL		COPPER		ALUMINIUM WITH SS CONDUCTORS for corrosive Atmospheres	
	SL100A4P	SL125A4P	SL160A4P	SL250A4P	SL400A4P	SL200A4P
COMPLIANT						
	Galvanized steel profile PVC Housing		Copper profile PVC Housing		Aluminum profile Stainless steel conductors PVC Housing	

CONDUCTOR								
Current load	100 A	125 A	160 A	250 A	400 A	200 A	315 A	
Cross sectional Area (Thickness)	66 (1.0)	100 (1.6)	53 (0.8)	66 (1.0)	100 (1.6)	104	120	
Impedence milli Ohm/M +35°C	2.86	1.92	0.36	0.30	0.22	0.32	0.29	
DC Resistance milli Ohm/M +35°C	2.84	1.92	0.35	0.27	0.18	0.30	0.26	
Co eff. of Expansion / °C	1.26 × 10 ⁻⁵	1.26 × 10 ⁻⁵	1.62 × 10 ⁻⁵	1.62 × 10 ⁻⁵	1.62 × 10 ⁻⁵	2.38 × 10 ⁻⁵	2.38 × 10 ⁻⁵	
Conductor Rating at 35°C CDF	100%	100 A	125 A	160 A	250 A	400 A	200 A	315 A
	80%	112 A	139 A	180 A	280 A	445 A	222 A	348 A
	60%	130 A	162 A	210 A	325 A	520 A	258 A	405 A
Conductor Rating at 100°C CDF	40%	160 A	200 A	255 A	400 A	635 A	316 A	496 A
	+35°C	100 A	125 A	160 A	250 A	400 A	200 A	315 A
	+40°C	97 A	121 A	149 A	233 A	372 A	184 A	290 A
	+45°C	94 A	117 A	140 A	218 A	348 A	162 A	255 A
	+50°C	91 A	113 A	131 A	205 A	328 A	152 A	240 A
	+55°C	88 A	110 A	125 A	195 A	312 A	136 A	215 A
Standard Conductor Length	4 m		4 m		4 m			
Track Conf. straight / curved	1500 mm		1500 mm		N.A.			
Bending radius min. Horizontal	(Horiz. only)		(Horiz. only)					
Conductor Joint	Bolted Type							

INSULATION			
Standard insulation	PVC	PVC	PVC
System working Temperature	80°C	80°C	80°C
Flame test	Self Extinguishing	Self Extinguishing	Self Extinguishing
Insulation cover	Yellow	Yellow	Yellow
Protection Class (Finger Safe)	IP21	IP21	IP21
Maximum System Voltage	500 V AC / 600 V DC	500 V AC / 600 V DC	500 V AC / 600 V DC
High Voltage withstand for 1 min Flashover Test	2.5 kV / 7.5 kV	2.5 kV / 7.5 kV	2.5 kV / 7.5 kV

INSTALLATION				
Support Pitch	Standard	1000 mm	1000 mm	1000 mm
	Lateral	1000 mm	1000 mm	1000 mm
On curved path		500 mm	500 mm	500 mm
Hanger clamps		1 Pole / 4 Pole	1 Pole / 4 Pole	1 Pole / 4 Pole
Min.Pitch Centre	4P HC Fixed	43 mm	43 mm	43 mm
	1P HC	40 mm min	40 mm min	40 mm min
Max distance between anchor points		75 m	75 m	75 m
Power feeding		At joint or at any location	At joint or at any location	At joint or at any location
Expansion section required for bay lengths more than		150 m	150 m	150 m
Installation suitable for		Indoor / Outdoor	Indoor / Outdoor	Indoor / Outdoor

APPLICATIONS
EOT cranes, Electric Hoists, Straight /Curved Monorails, Conveyors, Amusement Drives, Electric Trolleys, Transfer cars, Automated Storage systems, Material Handling System, etc.

HEAVY CONDUCTORS BUSBAR SYSTEM | TECHNICAL DATA

CONDUCTOR RAILS MATERIAL	ALUMINIUM WITH SS CONDUCTORS for corrosive Atmospheres		
SL CODES	SL500A4P	SL800A4P	SL1000A4P



Aluminum profile
Stainless steel conductors
PVC Housing

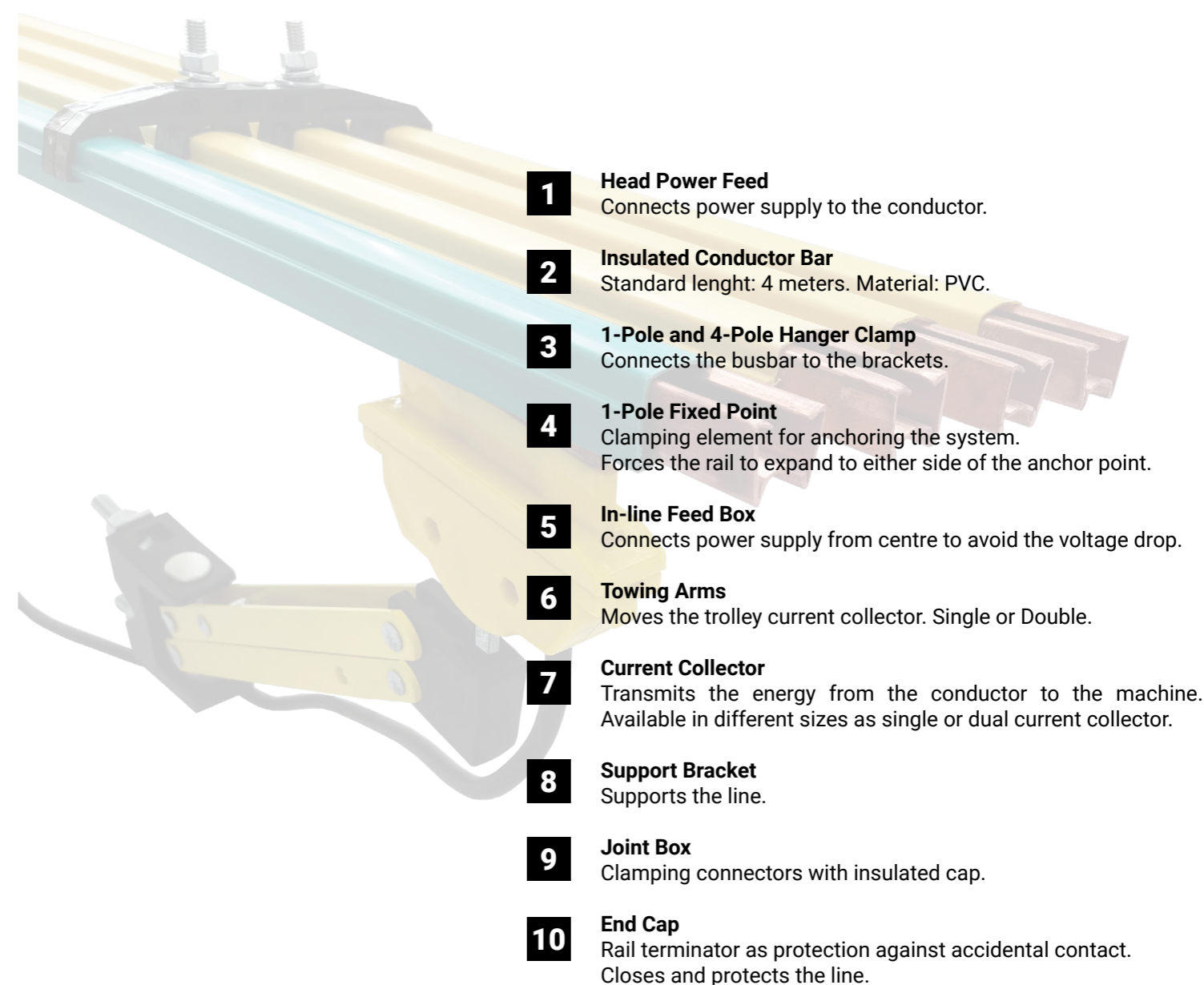
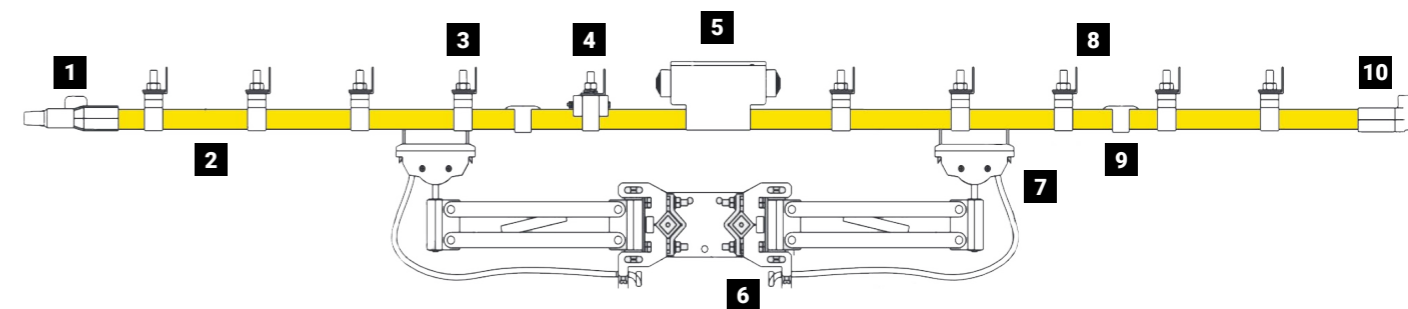
CONDUCTOR				
Conductor Rating at 35°C CDF	100%	500 A	800 A	1000 A
Impedance milli Ohm/M	+35°C	0.158	0.145	0.138
DC Resistance milli Ohm/M	+35°C	0.098	0.075	0.052
Conductor Rating at 100°C CDF	+35°C	500 A	800 A	1000 A
	+40°C	460 A	736 A	920 A
	+45°C	405 A	648 A	810 A
	+50°C	380 A	608 A	760 A
	+55°C	340 A	544 A	680 A
Standard Conductor Length		4 m		
Conductor Joint		Bolted		

INSULATION			
Standard insulation	PVC	PVC	PVC
System working Temperature	80°C	80°C	80°C
Flame test	Self Extinguishing	Self Extinguishing	Self Extinguishing
Insulation cover	Yellow	Yellow	Yellow
Protection Class (Finger Safe)	IP21	IP21	IP21
Maximum System Voltage	500 V AC / 600 V DC	500 V AC / 600 V DC	500 V AC / 600 V DC
High Voltage withstand for 1 min Flashover Test	2.5 kV / 7.5 kV	2.5 kV / 7.5 kV	2.5 kV / 7.5 kV

INSTALLATION				
Support Pitch	Standard	1000 mm	1000 mm	1000 mm
Hanger clamps		1 Pole	1 Pole	1 Pole
Min. Pitch Centre		75 mm	75 mm	75 mm
Max distance between anchor points		75 m	75 m	75 m
Power feeding		At joint or at any location	At joint or at any location	At joint or at any location
Expansion section required for bay lengths more than		200 m	200 m	200 m
Installation suitable for		Indoor / Outdoor	Indoor / Outdoor	Indoor / Outdoor

APPLICATIONS
EOT cranes, Electric Hoists, Conveyors, Amusement Drives, Electric Trolleys, Storage systems, Material Handling System, etc.











SYSTEM STRUCTURE | BASIC LINE



UNIPOLE COMPONENTS | CODES TABLE

Other accessories available according to the the specific customers' needs.

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PRODUCT	CODE	UNIPOLE COMPONENTS DESCRIPTION
	SL001	Current Collector, 125 A
	SL002	Current Collector, 250 A
	SL003	Copper shoe only for current collector, 125 A
	SL004	Copper shoe only for current collector, 250 A
	SL005	Current collector copper shoe with holder, 125 A
	SL006	Current collector copper shoe with holder and pin, 250 A
	SL007	4 pole hanger clamp
	SL008	1 pole hanger clamp
	SL009	1 pole fixed point
	SL010	Joint unit - Galvanized Iron

PRODUCT	CODE	UNIPOLE COMPONENTS DESCRIPTION
	SL011	Joint unit - Copper
	SL012	Joint unit - Aluminum
	SL013	Joint unit cover
	SL014	End cap
	SL015	Head power feed
	SL016	In-line feed
	SL021	Support angle, L = 400 mm
	SL022	Support angle, L = 500 mm
	SL023	Support angle, L = 650 mm
	SL024	Towing arm
	SL025	Double towing arm