CP

MULTIPOLE
POWER CONNECTORS

Motor to bogie, Intervehicle,
Jumpers, Junction boxes

Radiall™

VanSystem

VanSystem

About Us

Radiall

Since 1952, Radiall Sa have been enabling the future through collaboration with our customers.
The results are a range of innovative and award-winning products that customers trust for unrivaled repeatability and performance.

Radiall Sa are a global company with facilities around the world that specializes in manufacturing the highest quality interconnect components to support the most demanding applications.

At Radiall, you can rely on us to be the industry's global market leader.

VanSystem

VanSystem is a company founded in Lombardy - Italy, which has been operating since 1985 in the industrial market.
Since 2015 VanSystem is a Radiall company.

Besides connectors with screw or bayonet coupling complying with the Mil-DTL-5015 standard, VanSystem designs and manufactures non-standard products for special applications.
One of VanSystem's strong points is an agile and dynamic organizational structure which enables direct and constant interaction with customers in order to meet all their requirements and build solid, long-term partnerships.
The VanSystem team's professionalism, skill and commitment are at your service to help you achieve the solution you are looking for.

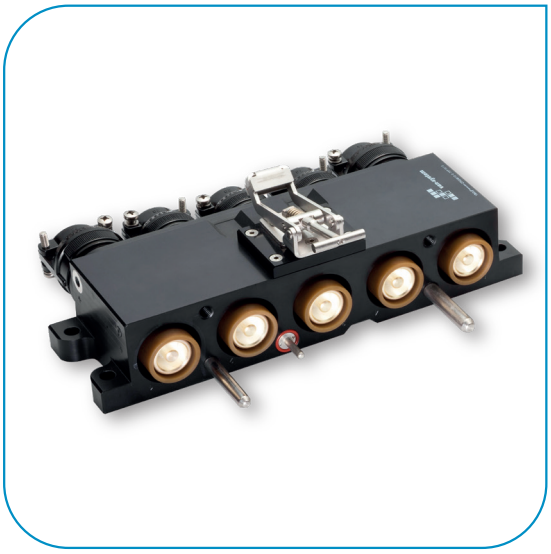
VanSystem's Quality System is qualified according to ISO 9001:2015 and ISO/TS 22163:2017 IRIS Certification™ rules:2017 (International Railway Industry Standard).

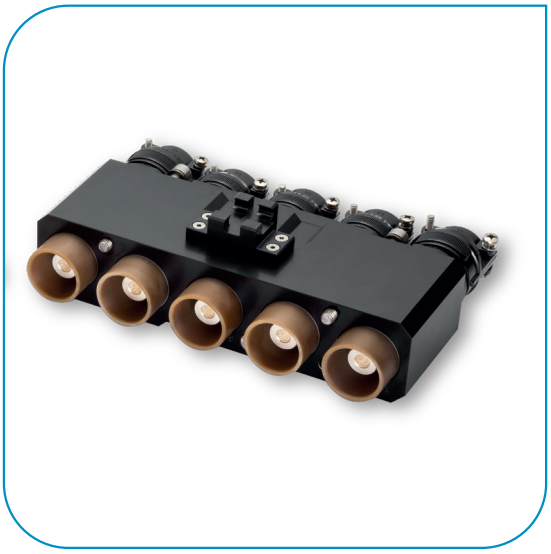
IRIS Certification

QUALITY SYSTEM CERTIFICATION ISO 9001 DNV

CP Connectors - Introduction

Multipole Power Connectors





CP - Connectors

Multipole power connectors, up to 1000A rated current:

- High copper content alloy, silver plating. Can be supplied with multi-contacting band
- Could be used in Railway application for car-to-car jumpers, power distributions and traction motors
- Robust Connection: fully protected connectors: no risk to damage the contacts thanks the robust shell, could be supplied with conductive plating and the proper rear accessory
- Easy installation: fast and reliable coupling with alignment columns, accessories for fastening cable/conduit fixation
- Suitable for harsh environments (adapted for outdoor use), waterproof connection corrosion resistant
- Fire resistant and halogen free compound employed when no flame propagation. Qualified according to EN 45545-2

CP - Box

Junction and Distribution Boxes:

- Type T or Type Y junction box connectors
- Can be supplied with connectors or cable gland
- Could be used in Railway application for power distributions
- Suitable for harsh environments (adapted for outdoor use), waterproof connection corrosion resistant
- Self-protected junction box to connect several lines, power and sensors
- Housing material: aluminum, black anodic oxidation
- Thermoplastic Resin Fire behaviour according to EN 45545-2

VanSystem

CP Connectors - Introduction

Multipole Power Connectors

CP connectors: up to 1.000A

CP multipole connectors has been developed for motor and power connection in Railway application.
Suitable for harsh environments, could be used for car-to-car jumpers, power distributions and traction motors.

Applications:

- Railway
- Energy
- Naval
- Industrial

International Standard Document Compliance:

- EN 50124-1: Railway applications - Insulation coordination
- IEC 60077-1: Railway applications - Electric equipment for rolling stock
- EN 45545-2: Railway applications - Fire protection on railway vehicles
- NFPA 130 (ASTM E 162, ASTM E 662): Standard for Fixed Guideway Transit and Passenger Rail Systems
- UNI CEI 11170-3 : Guidelines for railway vehicle protection for tramways and with guided rail
- NFF 16-102: Railway Rolling Stock - Fire Behavior
- EN 50467: Railway applications - Rolling stock - Electrical connectors, requirements and test methods
- IEC 61373: Railway applications. Rolling stock equipment. Shock and vibration tests
- IEC 60529: Degrees of protection provided by enclosures (IP Code)
- European Directive 2011/65: RoHS complying

CP Box - Introduction

Multipole Power Connectors

Features and Benefits:

- Robust Connection
  - Fully protected connectors: no risk to damage the contacts thanks the robust shell
  - Could be supplied with conductive plating and the proper rear accessory

- Easy installation
  - Fast and reliable coupling with alignment columns
  - Accessories for fastening cable/conduit fixation

- Suitable for harsh environments (adapted for outdoor use)
  - Waterproof connection
  - Dust proof
  - Corrosion resistant

External metal shells	Aluminum alloy
Shell finishes (according to the type)	Hard black anodized Black polyurethanic varnish Gray anodic oxidation
Internal Insulator	Thermoplastic resin Fire behaviour according to EN45545-2
Contacts	High copper content alloy Silver plating
Gasket	Flame retardant silicone compound
Screws and locking levers system	Stainless steel
Cable retention	MS3057 type B/C cable clamp or cable gland

CP - Screw locking

MOTOR TO BOGIE, INTERVEHICLE, JUMPERS

CP520911 - 410A *Page 12*
- 2 poles, 410A
- screw locking system

CP520911 - DC *Page 14*
- 2 poles, 1.000A
- screw locking system

CP160913 *Page 15*
- 3 poles, 240A
- screw locking system

CP030616 *Page 16*
- 3 poles, 350A
- screw locking system

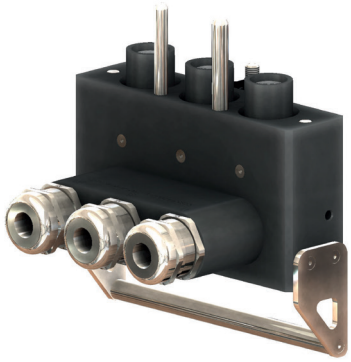
CP030616-38-09S M060 *Page 17*
- 3 power cables entry – 3 cables exit

CP - Screw locking

MOTOR TO BOGIE, INTERVEHICLE, JUMPERS

CP010218 *Page 18*

- 3 poles, 500A
- screw locking system



CP520911-3PH *Page 19*

- 4 poles, 500A
- screw locking system

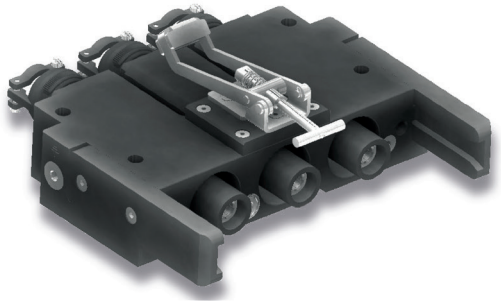
CP520911 *Page 20*

- 8 poles, 1.000A
- screw locking system

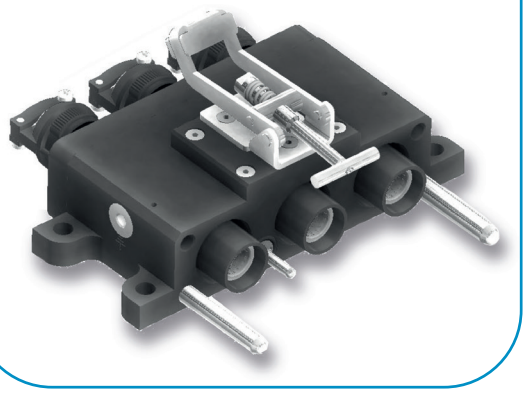
CP - Locking Lever - 3 poles

MOTOR TO BOGIE, INTERVEHICLE, JUMPERS

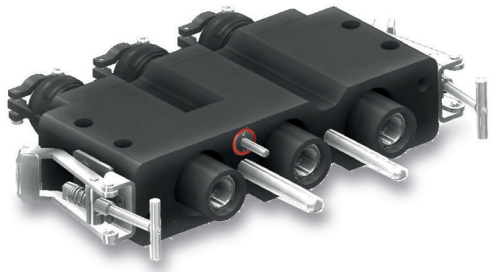
CP060212 *Page 22*
- 3 poles, 350A
- single locking lever system



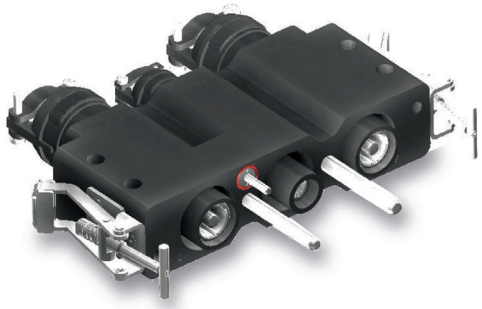
CP150916 *Page 24*
- 3 poles, 550A
- single locking lever system



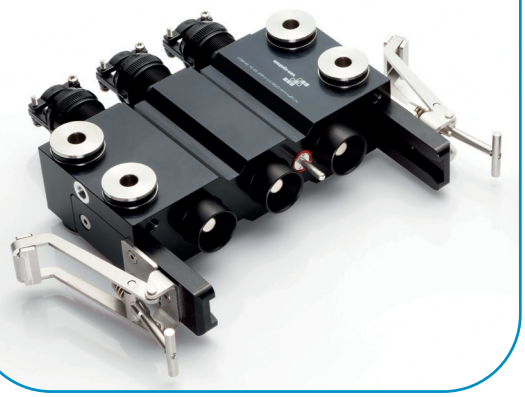
CP160613-450A *Page 25*
- 3 poles, 450A
- double locking levers system



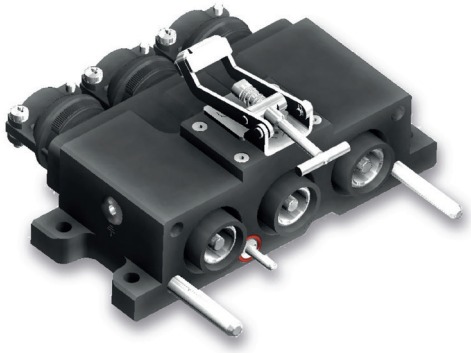
CP160613-900A *Page 26*
- 3 poles, 900A
- double locking levers system



CP581111 *Page 27*
- 3 poles, 400A
- double locking levers system with anti-vibration - elastic supports



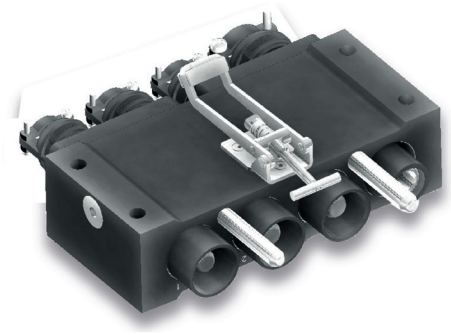
CP020113 *Page 28*
- 3 poles, 800A
- single locking lever system



CP - Locking Lever - 4 / 5 poles

MOTOR TO BOGIE, INTERVEHICLE, JUMPERS

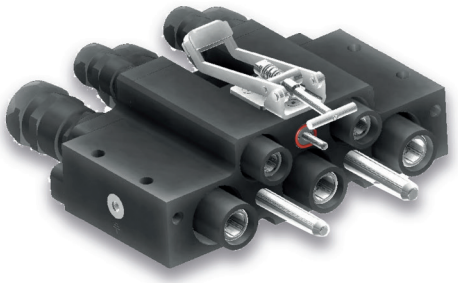
CP291215 *Page 29*
- 4 poles, 600A
- single locking lever system



CP020113 *Page 30*
- 5 poles, 1.000A
- single locking lever system

CP220211 *Page 31*
- 5 poles, 600A/700A
- double locking levers system

CP191013 *Page 32*
- 5 poles, 675A
- single locking lever system



CP - Power Boxes

JUNCTION BOXES

CP120616 *Page 33*
- type T junction box
- for 6 cable section 50mm2
- 225A / 450A

CP010718 *Page 35*
- type T junction box
- for 6 cable section 50mm2
- 225A / 450A

CP331112 *Page 36*
- type Y junction box
- entry of 3 feeding cables
- exit with 2 connectors
- 250A / 500A

CP060414 *Page 38*
- type Y junction box
- entry of 3 feeding cables
- exit of 6 cables
- 225A / 450A

CPB050317/BT3 *Page 39*
Junction Box with metal fixing frame and 2 bayonet connectors

CPB050317/BT2 *Page 40*
Junction Box with metal fixing frame and bayonet connector

CP - Power Boxes

JUNCTION BOXES

PB400611 *Page 41*
- 3 Ways Junction Box

PB400611-06-50 *Page 42*
- 3 Ways Junction Box

PB030113 *Page 43*
- 3 Ways Junction Box

CP520911 - Connector with 2 contacts + ground contact

SCREW LOCKING

Main application: Battery connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289015	CP520911-2-06P-70-M016A	Connector with 2 Pin contacts + ground contact, crimp termination for 70mm² cables, straight plug. Mating Configuration A
VS289014	CP520911-2-03S-70-M016A	Connector with 2 Socket contacts + ground contact, crimp termination for 70mm² cables, rear panel mounting receptacle. Mating Configuration A

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
300V (PD4 – OV4)	1.750Vac	410A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Tightening screw	200 mating cycles minimum	Body mounted, cat. 1, class B

Z-B.Bus

CP520911 - Connector with 2 contacts + ground contact

SCREW LOCKING

Main application: Battery connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289017	CP520911-2-06P-70-M016B	Connector with 2 Pin contacts + ground contact, crimp termination for 70mm² cables, straight plug. Mating Configuration B
VS289016	CP520911-2-03S-70-M016BS	Connector with 2 Socket contacts + ground contact, crimp termination for 70mm² cables, rear panel mounting receptacle. Mating Configuration B

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
3600V (PD4 – OV3)	10.500Vac	410A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV3	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Tightening screw	200 mating cycles minimum	Body mounted, cat. 1, class B

Z-Acm

CP520911 - 2 poles rectangular power connector

SCREW LOCKING

Main application: Battery connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289019	CP520911-2-06P-185-M016	Connector with 2 Pin contacts + ground contact, crimp termination for 185mm² cables, straight plug
VS289018	CP520911-2-03S-150-M016	Connector with 2 Socket contacts + ground contact, crimp termination for 150mm² cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
3.600V (PD4 – OV3)	10.700Vac	1.000A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV3	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Tightening screw	200 mating cycles minimum	Body mounted, cat. 1, class B

Z-DC

CP160913 - 3 poles rectangular power connector

SCREW LOCKING

Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289052	CP160913-3-04P-M001	Power receptacle connector with 3 Pin contacts + ground contact
VS289053	CP160913-3-04S-M001	Power plug connector with 3 Socket contacts + ground contact

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test voltage (EN 60077-1)	Working current	Max. current (20°C)	Starting current (80°C)	Air and creepage distances	Contact resistance	Insulating resistance
900V (PD4 - OV4)	3.300Vac	240A	240A	370A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +125°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Tightening screws	200 mating cycles minimum	Body mounted, cat. 1, class B

Sir

CP030616 - 3 poles rectangular power connector

SCREW LOCKING

Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289171	CP030616-3-06P	Connector with 3 Pin contacts + ground contact, crimp termination for 50mm² cables, straight plug
VS289170	CP030616-38-09S	Connector with 3 Socket contacts + ground contact, crimp termination for 50mm² cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test voltage (EN 60077-1)	Working current	Air and creepage distances	Contact resistance	Insulating resistance
3.250V (PD4 – OV3)	9.800Vac	350A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV3	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +250°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Tightening screw	150 mating cycles minimum	Category 2, bogie mounted

TS

CP030616-38-09S M060 - 3 power cables entry – 3 cables exit

SCREW LOCKING

Main application: Motor Connection
Contacts nr: 3 Socket designed for direct connection to Lug
Mating system composed by: Alignment columns for assisted coupling
Threaded hole for safe locking

Reference documents:
- EN 50124-1
- EN 60077-1
- EN 45545-2
- EN 60529
- EN 61373
- European directive 2011/65UE RoHs
- MIL - HDB 217

Materials and finishes:
- Metal shells: aluminum alloy - Gray anodic oxidation
- Screws and columns: stainless steel
- Internal insulators: Thermoplastic resin - Fire behaviour according to EN 45545-2 HL2
  Silicone compound - Fire behaviour according to EN 45545-2 HL2
- Contacts: copper alloy - Plating: silver 3.5µ min.

Order Number	Short Description P/N	Description
on request	CP030616-38-09S M060	Power receptacle connector with 3 socket contacts + ground contact ,exit bar at 90°

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test voltage (EN 60077-1)	Working current	Air and creepage distances	Contact resistance	Insulating resistance
3.250V (PD4 – OV3)	9.800Vac	350A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) - Over-voltage category: OV3	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	Rated insulation voltage UNm	IP Protection degree (EN 60529)
- 55°C ÷ +250°C	3900V	IP67 (connectors mated)

MECHANICAL CHARACTERISTICS

External metal shell	Screws	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Metal shells: aluminum alloy Gray anodic oxidation	Stainless Steel	Thermoplastic resin, Silicone compound Fire behaviour according to EN 45545-2 HL2	Category 2 bogie mounted

CP010218 - 3 poles rectangular power connector

SCREW LOCKING

Main application: Power connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289184	CP010218-38-09PZ	Power Receptacle connector with 3 contacts . Cable exit at 90° - Mating configuration Z Contacts nr: 3 Female - Contact termination able to connect with Lug according to standard NFF 00363 (up to 150 mm²)
VS289183	CP010218-38-09PC	Power Receptacle connector with 3 contacts . Cable exit at 90° - Mating configuration C Contacts nr: 3 Female - Contact termination able to connect with Lug according to standard NFF 00363 (up to 150 mm²)
VS289182	CP010218-38-06S	Power plug connector with 3 contacts . Cable exit at 90° - Mating configuration Z / C Contacts nr: 3 Female - Contact termination able to connect with Lug according to standard NFF 00363 (up to 150 mm²)

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Clearances and creepage distances According to EN 50124-1	Contact resistance	Insulating resistance
750V (PD4 – OV4)	3300Vac	500A	Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ
1500V (PD4 – OV1)	6400Vac	500A	Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV1	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +125°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Two secure look screws + Nord-lock	200 mating cycles minimum	Category 2, bogie mounted

Al-Bel

CP520911 - Connector with 4 contacts + ground contact

SCREW LOCKING

Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289013	CP520911-4-06P-50-M016	Connector with 4 Pin contacts + ground contact, crimp termination for 50mm² cables, straight plug
VS289012	CP520911-4-03S-70-M016	Connector with 4 Socket contacts + ground contact, crimp termination for 70mm² cables, rear panel mounting receptacle
VS289011	CP520911-4-06P-95-M016	Connector with 4 Pin contacts + ground contact, crimp termination for 95mm² cables, straight plug
VS289010	CP520911-4-03S-95-M016	Connector with 4 Socket contacts + ground contact, crimp termination for 95mm² cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
660V (PD4 – OV4)	10.500Vac	500A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Tightening screw	200 mating cycles minimum	Body mounted, cat. 1, class B

3PH

CP520911 - 8 poles rectangular power connector

SCREW LOCKING

Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289007	CP520911-8-03S-240-M016	Connector with 8 Socket contacts + ground contact, crimp termination for 240mm^2 cables, rear panel mounting receptacle

To be mated with 2 connectors CP520911 – 4 poles (page 21)

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
2.100V (PD4 - OV4)	7.500Vac	1000A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Tightening screw	200 mating cycles minimum	Body mounted, cat. 1, class B

Z-Lcm

CP520911 - 4 poles rectangular power connector

SCREW LOCKING

Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289008	CP520911-4-06P-240-M016A	Connector with 4 Pin contacts + ground contact, crimp termination for 240mm2 cables, straight plug – Mating Configuration A
VS289009	CP520911-4-06P-240-M016B	Connector with 4 Pin contacts + ground contact, crimp termination for 240mm2 cables, straight plug – Mating Configuration B

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
2.100V (PD4 - OV4)	7.500Vac	1.000A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

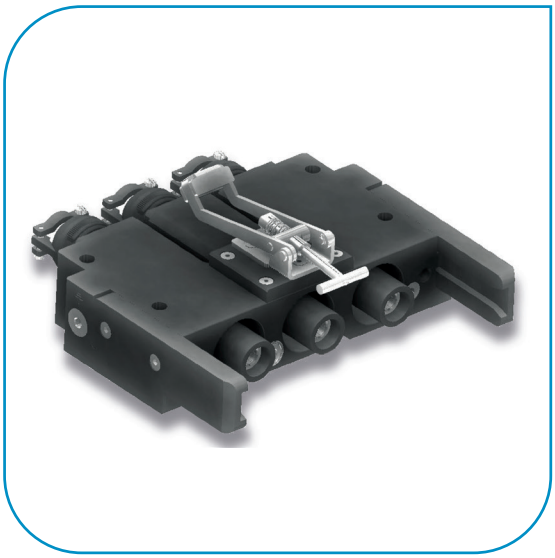
MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Tightening screw	200 mating cycles minimum	Body mounted, cat. 1, class B

Z-LCM

CP060212 - 3 poles rectangular power connector

LOCKING LEVER



Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289002	CP060212-3-06P	Connector with 3 Pin contacts + ground contact, crimp termination for 95mm² cables, straight plug
VS289001	CP060212-3-09S	Connector with 3 Socket contacts + ground contact, crimp termination for 120mm² cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
3600V (PD4 - OV4)	9.200Vac	350A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

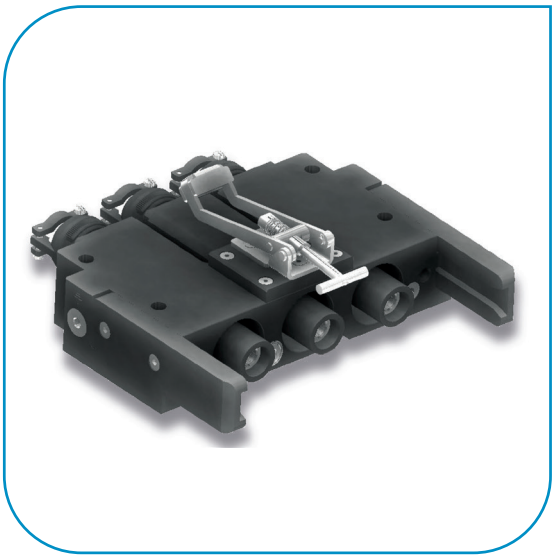
MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Single locking lever	200 mating cycles minimum	Body mounted, cat. 1, class B

Ta

CP060212 - 3 poles rectangular power connector

LOCKING LEVER



Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289004	CP060212-3-06P-B	Connector with 3 Pin contacts + ground contact, crimp termination for 95mm² cables, straight plug. Mating Configuration B.
VS289003	CP060212-3-09S-B	Connector with 3 Socket contacts + ground contact, crimp termination for 120mm² cables, rear panel mounting receptacle. Mating Configuration B.

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
3600V (PD4 - OV4)	9.200Vac	350A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

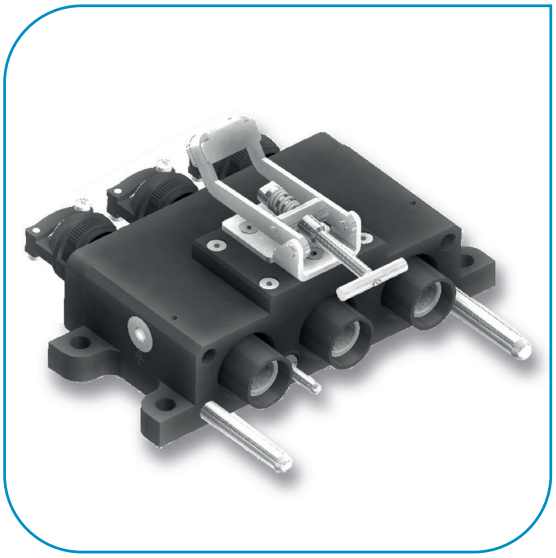
MECHANICAL CHARACTERISTICS

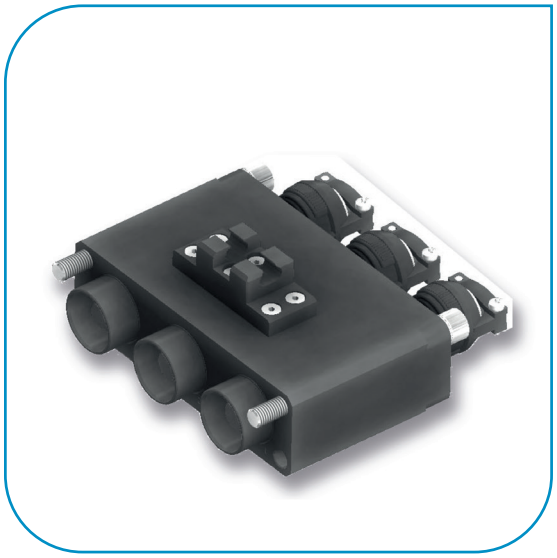
Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Single locking lever	200 mating cycles minimum	Body mounted, cat. 1, class B

Tai

CP150916 - 3 poles rectangular power connector

LOCKING LEVER





Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289133	CP150916-3-06P	Connector with 3 Pin contacts + ground contact, crimp termination for AWG 1/0 cables, straight plug
VS289132	CP150916-3-09S	Connector with 3 Socket contacts + ground contact, crimp termination for AWG 1/0 cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
3.000V (PD4 – OV3)	9.200Vac	550A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV3	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +125°C	IP67 (when mated)

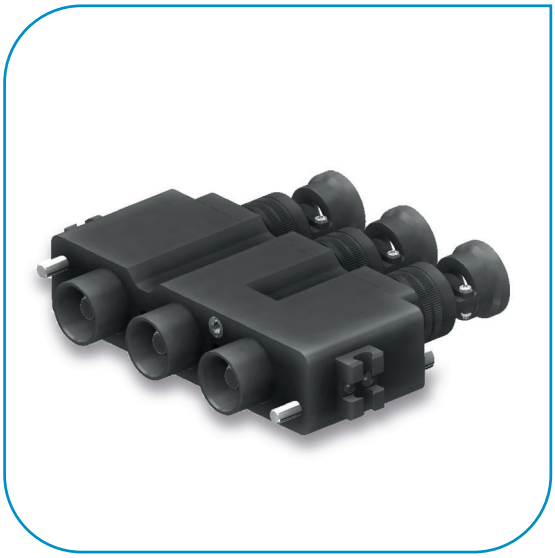
MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Single locking lever	200 mating cycles minimum	Body mounted, cat. 1, class B

Clem

CP160613 - 3 poles rectangular power connector

LOCKING LEVER



Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289106	CP160613-3-06P M022	Connector with 3 Pin contacts + ground contact, crimp termination for MCM313 - 160mm^2 cables, straight plug
VS289107	CP160613-3-09S M023	Connector with 3 Socket contacts + ground contact, crimp termination for MCM313 - 160mm^2 cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
750V (PD4 - OV4)	3.300Vac	450A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +125°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Double locking levers	200 mating cycles minimum	Category 2, bogie mounted

Mia-Hon

CP160613 - 3 poles rectangular power connector

LOCKING LEVER

Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289108	CP160613-3-06P M020	Connector with 3 Pin contacts + ground contact, 2 crimp termination for MCM 646 - 327mm² cables and 1 crimp termination or cable AWG 2 - 33mm² straight plug
VS289109	CP160613-3-09S M021	Connector with 3 Socket contacts + ground contact, 2 crimp termination for MCM 646 - 327mm² cables and 1 crimp termination or cable AWG 2 - 33mm² rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
750V (PD4 - OV4)	3.300Vac	900A (AWG 2: 150A)	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +125°C	IP67 (when mated)

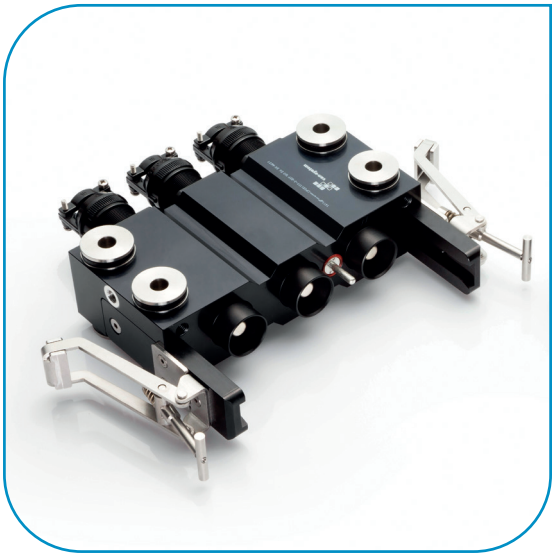
MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Double locking levers	200 mating cycles minimum	Body mounted, cat. 1, class B

Mia-Hon

CP581111 - 3 poles rectangular power connector

LOCKING LEVER



Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289026	CP581111-3-02P 120	Connector with 3 Pin contacts + ground contact, 2 crimp termination for 120mm² cables and straight plug
VS289027	CP581111-3-06A 120	Connector with 3 Socket contacts + ground contact, 2 crimp termination for 120mm² cables and rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test voltage (EN 60077-1)	Working current	Air and creepage distances	Contact resistance	Insulating resistance
2.800V (PD4 - OV4)	8.700Vac	400A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +125°C	IP67 (when mated)

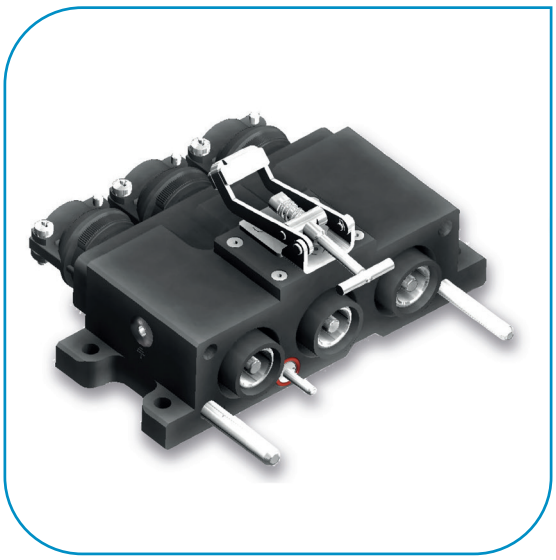
MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Alignment guides for assisted coupling, 2 mechanical locking lever and a secure lock screw with Nord-lock vibration proof washers	200 mating cycles minimum	Category 2 bogie mounted Fixed connector supplied with anti-vibration elastic supports

Met-Gen

CP020113 - 3 poles rectangular power connector

LOCKING LEVER



Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289079	CP020113-3-06S M019	Connector with 3 Socket contacts + ground contact, crimp termination for 150mm2 or 180mm^2 cables, straight plug
VS289078	CP020113-3-09P M019	Connector with 3 Pin contacts + ground contact, crimp termination for 150mm2 or 180mm^2 cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
1.500V	5.600Vac	800A	According to EN 50124-1	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +180°C	IP67 (when mated)

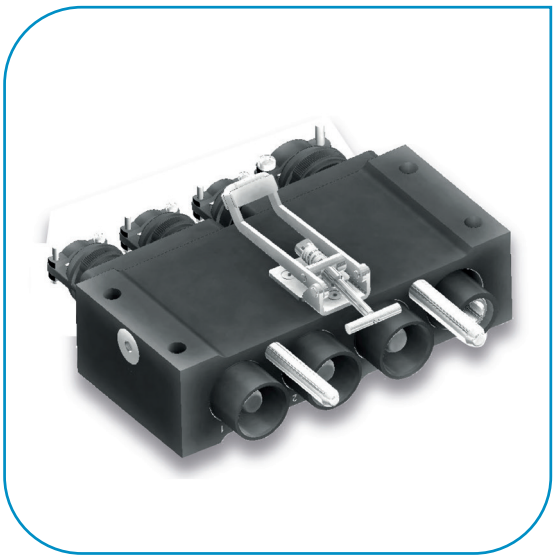
MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Single locking lever	200 mating cycles minimum	Body mounted, cat. 1, class B

Men

CP291215 - 4 poles rectangular power connector

LOCKING LEVER



Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289160	CP291215-4-09P M027	Connector with 3 Pin contacts Finger Tested + 1 Socket contact + ground contact, 3 crimp termination for 120mm² and 1 crimp termination for 150mm² cables, straight plug
VS289168	CP291215-4-06S M027	Connector with 3 Socket contacts Finger Tested + 1 Pin contact + ground contact, 3 crimp termination for 120mm² and 1 crimp termination for 150mm² cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
2.000V (PD4 - OV4)	6.800Vac	800A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +125°C	IP67 (when mated)

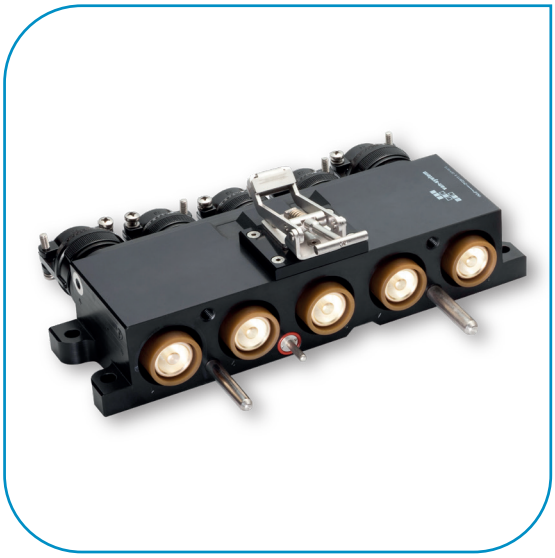
MECHANICAL CHARACTERISTICS

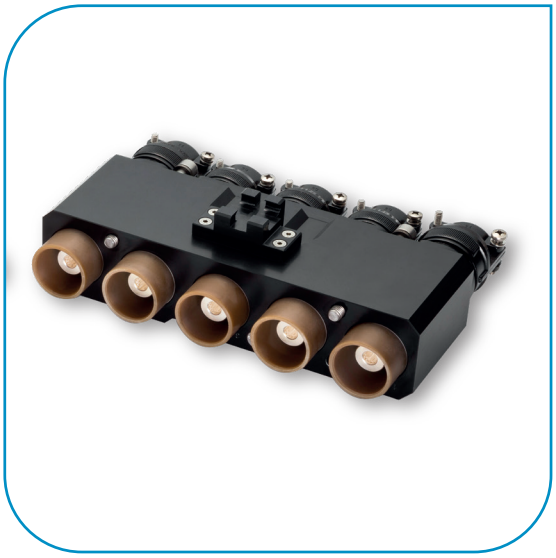
Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Single locking lever Alignment polarized colums	200 mating cycles minimum	Category 2 bogie mounted

MI L4

CP020113 - 5 poles rectangular power connector

LOCKING LEVER





Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289036	CP020113-5-06S M019	Connector with 5 Socket contacts + ground contact, 2 crimp termination for 240mm² and 3 crimp termination for 150mm² or 185mm² cables, straight plug
VS289035	CP020113-5-09P M019	Connector with 5 Pin contacts + ground contact, 2 crimp termination for 240mm² and 3 crimp termination for 150mm² or 185mm² cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
1.500V (PD4 - OV4)	5.600Vac	Up to 1.000A	According to EN 50124-1	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +180°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Single locking lever Alignment polarized colums	200 mating cycles minimum	Body mounted, cat. 1, class B

Men

CP220211 - 5 poles rectangular power connector

LOCKING LEVER

Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289021	CP220211-5-06P-120/185-M001	Connector with 5 Pin contacts + ground contact 4 crimp termination for 120mm² cables and 1 crimp termination for 185mm² cables, straight plug
VS289020	CP220211-5-06S-120/185-M001	Connector with 5 Socket contacts + ground contact 4 crimp termination for 120mm² cables and 1 crimp termination for 185mm² cables, rear panel mounting receptacle

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
750V (PD4 - OV4)	3300Vac	600A / 700A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +100°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Double locking levers	200 mating cycles minimum	Category 2 bogie mounted

Tai

CP191013 - 5 poles rectangular power connector

LOCKING LEVER

Main application: Motor to vehicle connection

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
*	*	Connector with 5 Pin contacts + ground contact 3 crimp termination for 150mm² cables and 2 crimp termination for 50mm² cables, straight plug
*	*	Connector with 5 Socket contacts + ground contact 3 crimp termination for 150mm² cables and 2 crimp termination for 50mm² cables, rear panel mounting receptacle

** Consult our commercial office*

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
3.000V (PD4 – OV3)	9200Vac	675A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV3	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–60°C ÷ +125°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Single locking lever	200 mating cycles minimum	Category 2 bogie mounted

Gim

CP120616 - 3 power cables entry – 6 cables exit

CP JUNCTION AND DISTRIBUTION BOX

Main application: Junction and Distribution Boxes

Type T junction box

Order Number	Short Description P/N	Description
VS289169	CP120616	Junction Box: 3 power cables entry size 120mm² (MS 3057 20C Ø 18mm - Ø 25mm) 6 cables exit size 50mm² (M32: Ø 11mm - Ø 21mm)

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances
750V (PD4 - OV4)	3.300Vac	225 A / 450A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +125°C	IP67 (when box closed)

MECHANICAL CHARACTERISTICS

External metal shell	Screws	Bracket	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Aluminum alloy – black varnish finishes	Stainless steel	Stainless Steel Neutral passivation	Fire behaviour according EN 45545-2	Category 2 bogie mounted

MI L4

CP010718 - 3 power cables entry – 6 cables exit

CP JUNCTION AND DISTRIBUTION BOX

Main application: Junction and Distribution Boxes

Type T junction box

Order Number	Short Description P/N	Description
VS289193	CP010718 M033	Junction Box: 3 power cables entry size 120mm² (MS 3057 20C Ø 18mm - Ø 25mm) 6 cables exit size 50mm² (M32: Ø 11mm - Ø 21mm)

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances
750V (PD4 - OV4)	3.300Vac	225 A / 450A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +125°C	IP67 (when box closed)

MECHANICAL CHARACTERISTICS

External metal shell	Screws	Bracket	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Aluminum alloy Black anodic oxidation	Stainless Steel	Stainless Steel Neutral passivation	Fire behaviour according EN 45545-2	Category 2 bogie mounted

Met Bs

CP010718 - 3 power cables entry – 6 cables exit

CP JUNCTION AND DISTRIBUTION BOX

Main application: Junction and Distribution Boxes

Type T junction box

Order Number	Short Description P/N	Description
VS350071	CP010718	Junction Box: 3 power cables entry size 120mm^2 (M40 Ø19mm - Ø 28mm) 6 cables exit size 50mm^2 (M32 Ø11mm - Ø21mm)

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances
750V (PD4 - OV4)	3.300Vac	225 A / 450A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–55°C ÷ +125°C	IP67 (when box closed)

MECHANICAL CHARACTERISTICS

External metal shell	Screws	Bracket	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Aluminum alloy Black anodic oxidation	Stainless Steel	Stainless Steel Neutral passivation	Fire behaviour according EN 45545-2	Category 2 bogie mounted

San

CP331112 - 3 power cables entry – 6 cables exit

CP JUNCTION AND DISTRIBUTION BOX

Main application: Junction and Distribution Boxes

Type Y junction box

Order Number	Short Description P/N	Description
VS289082	CP331112	Junction Box: 3 power cables entry size 185mm² (MS 3057 24C Ø16mm - Ø 23,8mm) exit with 2 connectors (to be ordered separately)

To be mated with connector CP331112-3-06S (2 connectors per box)

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances
1.500V	5.600Vac	250A / 500A	According to EN 50124-1

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +120°C	IP67 (when box closed and connectors mated)

MECHANICAL CHARACTERISTICS

External metal shell	Screws	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Aluminum alloy – black varnish finishes	Stainless steel	Fire behaviour according EN 45545-2	Category 2 bogie mounted

Men-Lim

CP331112 - 3 poles rectangular power connector

CP JUNCTION AND DISTRIBUTION BOX

Main application: Junction Boxes

Conforms European norm EN50467 “Railway applications - rolling stock - electrical connectors requirements and test methods” (where applicable)

Order Number	Short Description P/N	Description
VS289080	CP331112-3-06S 50-M017 A	Connector with 3 Pin contacts + ground contact, 3 crimp termination 50mm² (MS 3057 20C Ø16mm - Ø23,8mm) - straight plug. Mating Configuration A.
VS289081	CP331112-3-06S 50-M017 B	Connector with 3 Pin contacts + ground contact, 3 crimp termination 50mm² (MS 3057 20C Ø16mm - Ø23,8mm) - straight plug. Mating Configuration B.
VS289033	CP331112-3-06S 95-M017 A	Connector with 3 Pin contacts + ground contact, 3 crimp termination 95mm² (MS 3057 20C Ø16mm - Ø23,8mm) - straight plug. Mating Configuration A.
VS289034	CP331112-3-06S 95-M017 B	Connector with 3 Pin contacts + ground contact, 3 crimp termination 95mm² (MS 3057 20C Ø16mm - Ø23,8mm) - straight plug. Mating Configuration B.

To be mated with box CP331112

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances	Contact resistance	Insulating resistance
1.500V	5.600Vac	250A	According to EN 50124-1	< 0,5 mΩ	> 5 GΩ

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +120°C	IP67 (when mated)

MECHANICAL CHARACTERISTICS

Mating system	Mating endurance	Shock and vibrations tests (EN 61373)
Single locking lever	200 mating cycles minimum	Category 2 bogie mounted

Men-Lim

CP060414 - 3 power cables entry – 6 cables exit

CP JUNCTION AND DISTRIBUTION BOX

Main application: Junction and Distribution Boxes

Type Y junction box

Order Number	Short Description P/N	Description
VS289110	CP060414	Junction Box: 3 power cables entry size MCM313 (MS 3057 20C Ø 15,5mm - Ø 23,8mm) 6 cables exit size AWG 2/0 (M32 Ø11mm - Ø20mm)

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Air and creepage distances
750V (PD4 - OV4)	3.300Vac	225A / 450A	According to EN 50124-1 Pollution degree: PD4 with protection degree IP67 (mated connectors) Over-voltage category: OV4

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +120°C	IP67 (when box closed)

MECHANICAL CHARACTERISTICS

External metal shell	Screws	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Aluminum alloy – black anodic oxidation	Stainless Steel	Fire behaviour according EN 45545-2	Category 2 bogie mounted

Mia

CPB050317/BT2 - Cables entry – 2 Bayonet Connectors

CP JUNCTION AND DISTRIBUTION BOX

Main application: Junction and Distribution Boxes

Type T junction box

Order Number	Short Description P/N	Description
VS350069	CPB050317/BT2	Junction Box with metal fixing frame and bayonet connectors

ELECTRICAL CHARACTERISTICS (Bayonet Connectors)

Nominale voltage	Test Voltage	Working current	Number of contacts	Contacts plating
500 Vac 700 Vdc	2.000Vac	13A	37+37	Gold

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +120°C	IP67 (when box closed)

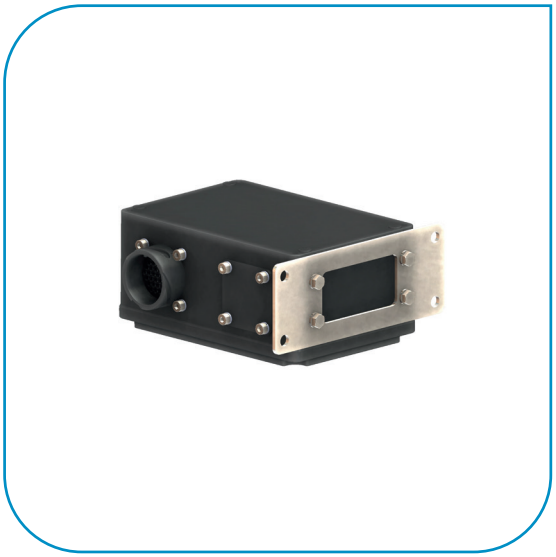
MECHANICAL CHARACTERISTICS

External metal shell	Screws	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Aluminum alloy – black varnish finishes	Stainless Steel	Fire behaviour according EN 45545-2	Category 2 bogie mounted

Car

CPB050317/BT3 - Cables entry – 1 Bayonet Connector

CP JUNCTION AND DISTRIBUTION BOX



Main application: Junction and Distribution Boxes

Type T junction box

Order Number	Short Description P/N	Description
VS350070	CPB050317/BT3	Junction Box with metal fixing frame and bayonet connector

ELECTRICAL CHARACTERISTICS (Bayonet Connector)

Nominale voltage	Test Voltage	Working current	Number of contacts	Contacts plating
500 Vac 700 Vdc	2.000Vac	13A	37	Gold

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
–40°C ÷ +120°C	IP67 (when box closed)

MECHANICAL CHARACTERISTICS

External metal shell	Screws	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Aluminum alloy – black varnish finishes	Stainless Steel	Fire behaviour according EN 45545-2	Category 2 bogie mounted

Car

PB400611 - 3 Ways Junction Box

CP JUNCTION AND DISTRIBUTION BOX

Main application: Motor Connection

3-way junction box complete with housing
for fixing cables and cable glands at 90° for 50 mm² cables

Reference documents:

- EN 50124-1
- EN 60077-1
- UNI CEI 11170-3
- NFF 16-102
- EN 60529

Materials and finishes:

- Body and cap: Thermoplastic resin fire resistant according to UNI CEI 11170-3 and NFF 16-102
- Cable glands: nickel-plated brass (RoHS)
- Screws : Stainless steel

Order Number	Short Description P/N	Description
on request	PB400611	3 Ways Junction Box

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Peak current
1.500V	5.600V	130A	200A 10 sec

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
-25°C ÷ +115°C	IP67 (with sealed busbar)

MECHANICAL CHARACTERISTICS

Body and cap	Screws	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Thermoplastic resin fire resistant according to UNI CEI 11170-3 and NFF 16-102	Stainless Steel	Fire behaviour according EN 45545-2	Category 2 bogie mounted

PB400611-06-50 - 3 Ways Junction Box

CP JUNCTION AND DISTRIBUTION BOX

Main application: Motor Connection

3-way junction box complete with housing
for fixing cables and cable glands at 90° for 50 mm² cables

Reference documents:

- EN 50124-1
- EN 60077-1
- UNI CEI 11170-3
- NFF 16-102
- EN 60529

Materials and finishes:

- Body and cap: Thermoplastic resin fire resistant according to UNI CEI 11170-3 and NFF 16-102
- Cable glands: nickel-plated brass (RoHS)
- Screws : Stainless steel

Order Number	Short Description P/N	Description
on request	PB400611	3 Ways Junction Box

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Peak current
1.500V	5.600V	130A	200A 10 sec

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
-25°C ÷ +115°C	IP67 (with sealed busbar)

MECHANICAL CHARACTERISTICS

Body and cap	Screws	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Thermoplastic resin fire resistant according to UNI CEI 11170-3 and NFF 16-102	Stainless Steel	Fire behaviour according EN 45545-2	Category 2 bogie mounted

PB030113 - 3 Ways Junction Box

CP JUNCTION AND DISTRIBUTION BOX

Main application: Motor Connection
3-way junction box
- Cable retention by cable glands
- Watertight lid with phases indication closed with captive screws

Reference documents:
- EN 50124-1
- EN 60077-1
- UNI CEI 11170-3
- NFF 16-102
- EN 60529

Materials and finishes:
- Body and cap: Thermoplastic resin fire resistant according to UNI CEI 11170-3 and NFF 16-101
- Cable glands: Polyamide PA6
- Screws : Stainless steel
- Gasket: Silicone elastomer

Order Number	Short Description P/N	Description
on request	PB030113	3 Ways Junction Box

ELECTRICAL CHARACTERISTICS

Nominale voltage	Test Voltage	Working current	Peak current
1.500V	4.400V	150A	300A 10 sec

ENVIRONMENTAL CHARACTERISTICS

Connectors working temperature	IP Protection degree (EN 60529)
-25°C ÷ +125°C	IP67 (with sealed busbar)

MECHANICAL CHARACTERISTICS

Body and cap	Screws	Thermoplastic Resin	Shock and vibrations tests (EN 61373)
Thermoplastic resin fire resistant according to UNI CEI 11170-3 and NFF 16-101	Stainless Steel	Fire behaviour according EN 45545-2	Category 2 bogie mounted

Safety

Information regarding the use of the product within recommended safety limits

To use the connectors described in this catalogue according to the necessary safety requirements we suggest you apply the following criteria:

• use the connectors and connected cables within their electrical and environmental limits

• follow the characteristics of each version (shell, class and type of strain relief) and carefully choose the appropriate connector for the required use

• make sure to respect the procedures regarding the correct assembly of connectors and the crimping of contacts

• any connector damaged during shipment, storage, assembly or use should be replaced

• never uncouple the connectors when under power

• always protect the parts against shock when the circuit is under power

• always check the circuit before putting it under power

• consult Radiall VanSystem Srl if in doubt

• the user must take final responsibility for electrical safety Radiall VanSystem Srl reserves the right to amend the specifications of this catalogue without issuing prior notice.

For the instructions concerning assembly and crimping of contacts please consult the appropriate tools manuals.

We recommend to respect the following general rules:

• to be used always the tools recommended by Radiall VanSystem's catalogue or manuals

• to be applied the suggested norms for tool maintenance and calibration

DO NOT USE ALTERNATIVE GREASES OR OILS which could damage the insert and affect the functionality of the connector.
Radiall VanSystem Srl reserves the right to amend the specifications of this catalogue without issuing prior notice.

The data defined in this document are given as an indication. In the effort to improve our products, we reserve the right to make any change judged necessary.

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