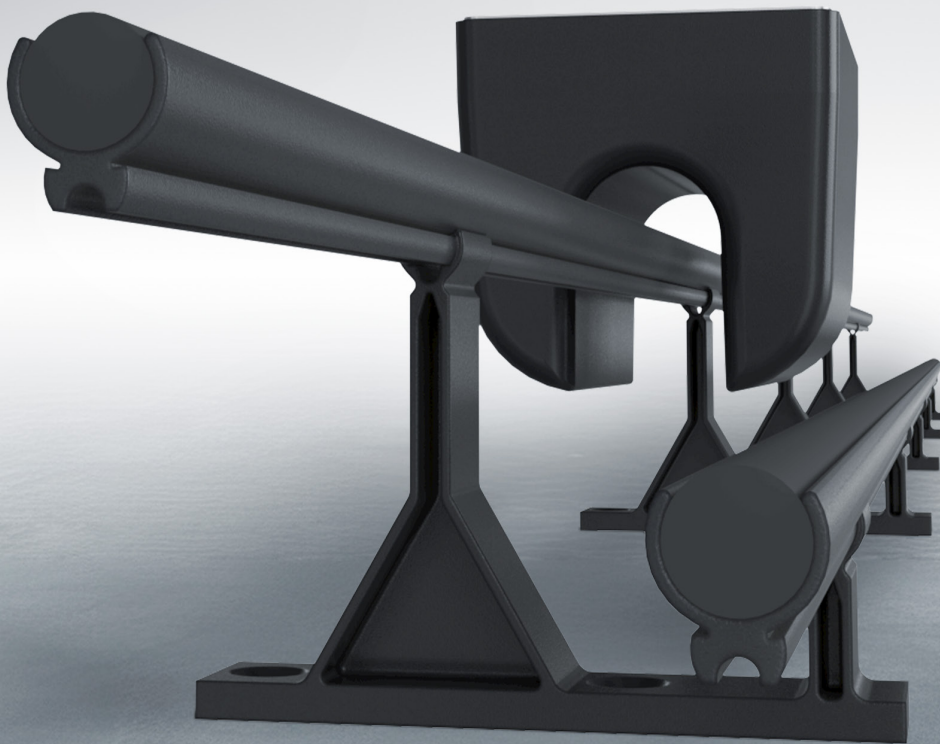
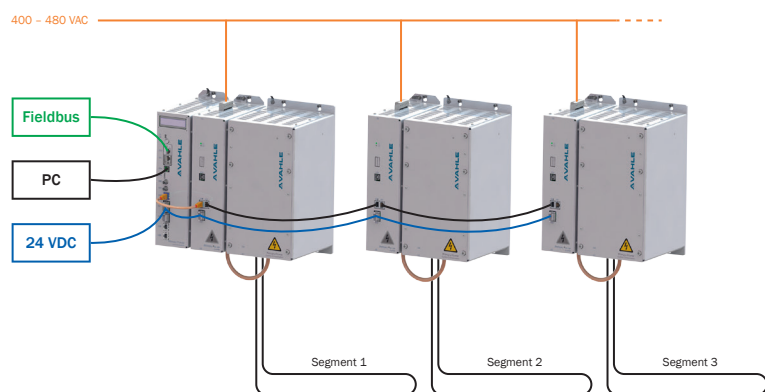


CPS® 140KHZ

CONTACTLESS POWER SUPPLY
140 KHZ TECHNOLOGY



CPS® 140KHZ – KEY HIGHLIGHTS



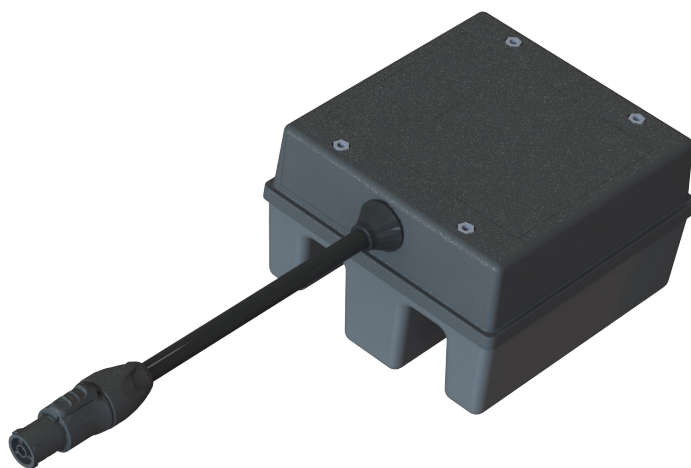
MODULAR DESIGN

Due to the modular structure of the CPS® 140kHz system, many diverse combinations of power ranges can be assembled. The primary side consists of 3.4 kW or 10 kW elements for a modular equipment.

Pickups with an output of 150 W–4 kW can be used on the secondary side. Additionally, it is possible to parallel the outputs from multiple secondaries to obtain higher power per vehicle. The top can switch from regulated DC output voltage to a DC-Bus that allows up to 30 kW.

SPACE-SAVING COMPACT DESIGN

The extreme compact design of the CPS® 140kHz components means a contactless power system can be implemented on vehicles with minimum space availability. New compensation boxes can be laid underground to minimize hazards and space needed. This is possible, in part, due to the separation of Pickup and Regulator. The Pickup needs to be mounted directly interfacing the primary track while the Regulator can be mounted anywhere on the vehicle allowing for easier access and maintenance. The connection between Pickup and Regulator is by coaxial cable which minimizes any radiated interference.



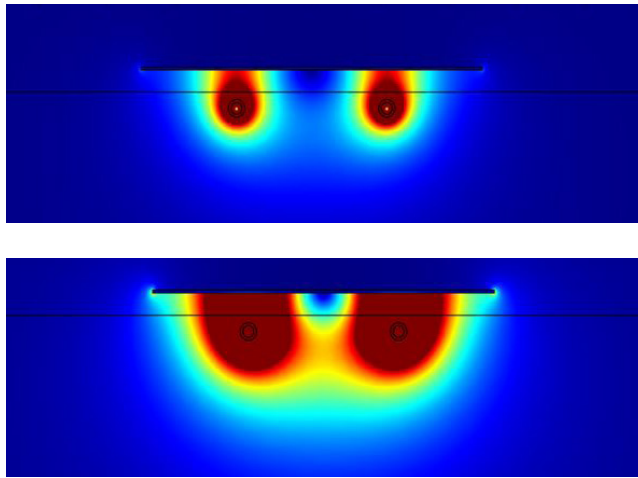
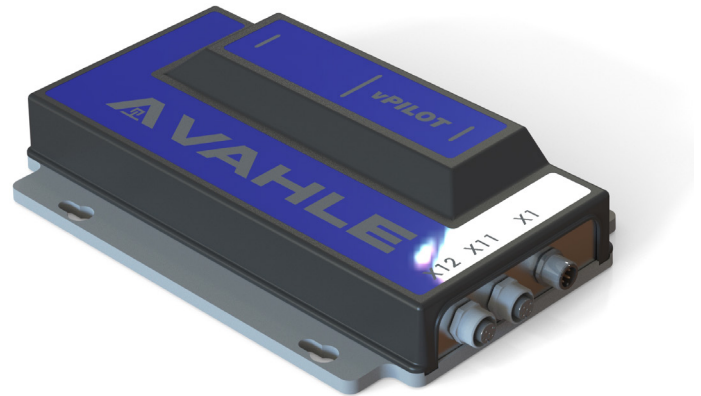
SERVICE AND DIAGNOSIS MODUL

CPS® 140kHz's primary-sided service and diagnostic module allow for whole-system performance control and monitoring. Fieldbus partnered with offered protocols PROFINET-IO, EtherNet-IP, and CC-Link IE, enable worldwide operational capabilities. Important system vitals such as current, voltage, phase angle, and more can be read via an integrated LCD display of a CPS® 140kHz system. All settings are stored on an SD card. Failures and interferences are recorded internally and can be transmitted via a selectable interface allowing fast diagnostics and solutions in case of an event.

GUIDANCE

The main function of the track power cables in the floor is to transfer power to the Pickup(s) on AGVs. However, these cables can also be tracked, using a guidance sensor, to provide a guidance signal to the AGV controller.

The VAHLE Guidance sensor can navigate straight and curved pathways, as well as switches, crossing and power loops. PROFINET-IO and EtherNet-IP interfaces are available, to provide range of communication options AGV controllers.

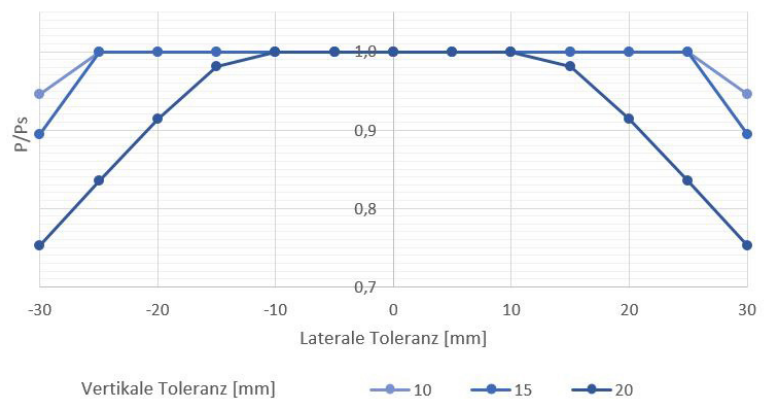


REDUCED IRON-FREE ZONE

By increasing the frequency by a factor of 7, the primary current compared to the former VAHLE inductive technology was reduced. This reduction has a great advantage – the distance to ferromagnetic metals can be reduced during power transfer significantly. When there is an aluminum plate within a distance of 20 mm to the primary field, the power loss in the plate will be reduced by 56% compared to former VAHLE 124 A 20 kHz products, allowing a greater degree of autonomy in the laying of the primary cable.

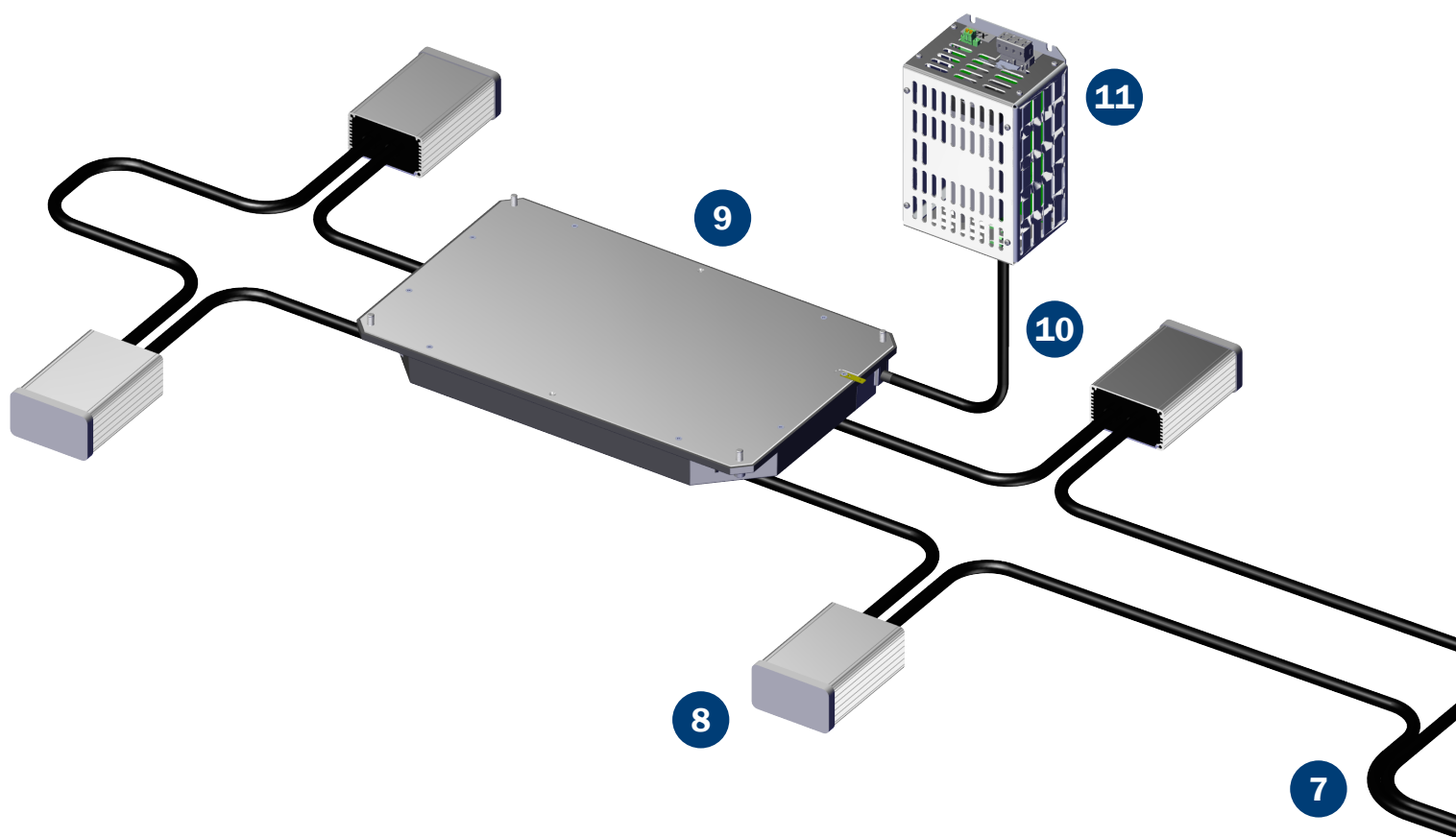
LARGE LATERAL TOLERANCES

The goal during development was to increase the vertical and lateral displacement tolerances to a world class level never achieved before in the industry. When the tolerances are exceeded only a small derating occurs. Even when the specified tolerance range is exceeding closely to the specified, only a small derating will occur. This makes it possible, to drive through most of the trajectory reliable.

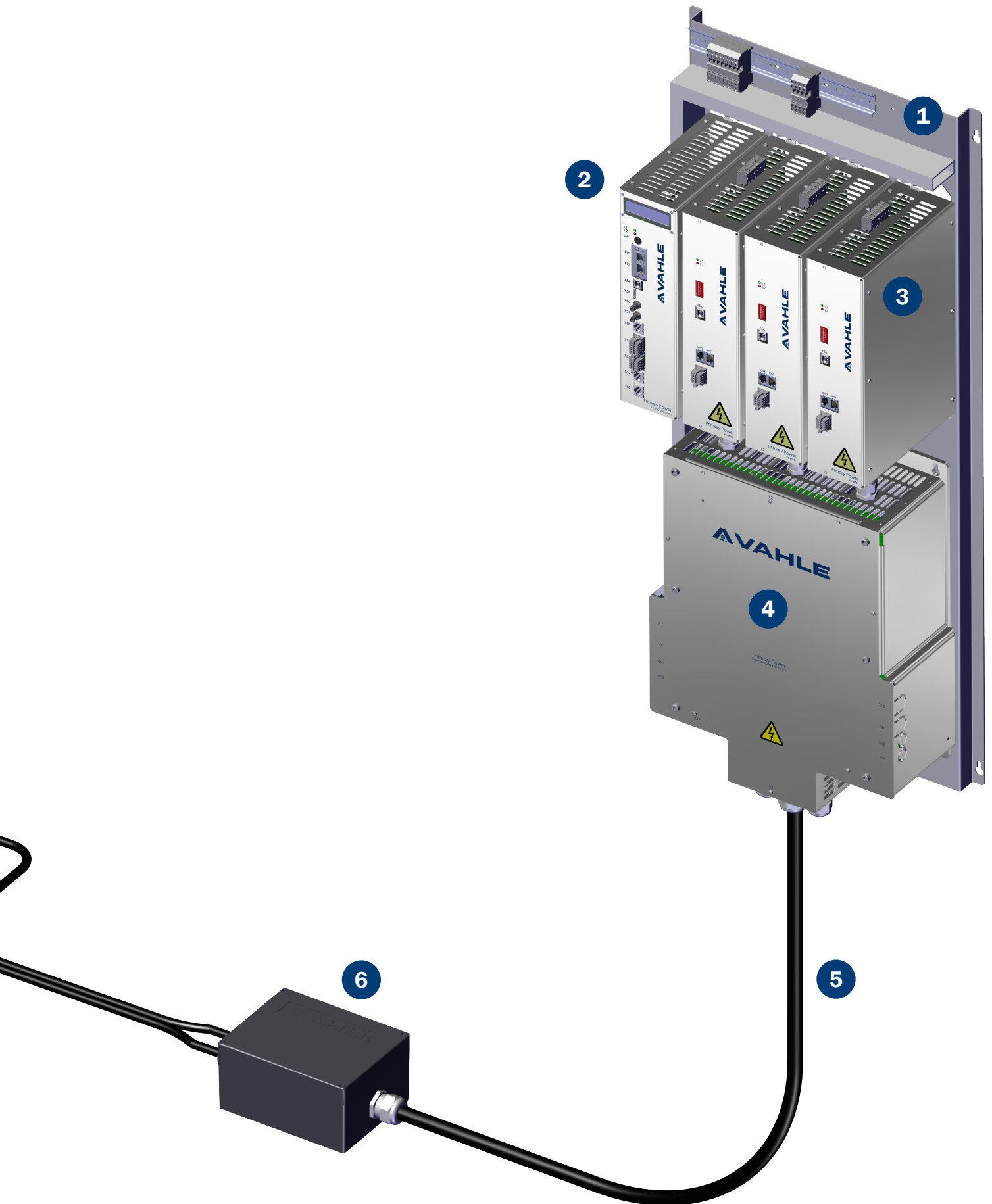


CPS® 140KHZ – SYSTEM OVERVIEW

- 1.PPU:** Primary Power Unit
- 2.PPS:** Primary Power Synchronization
- 3.PPI:** Primary Inverter
- 4.PPGC:** Gyrator and Compensation
- 5.CX45:** Track Power Coaxial Cable
- 6.TPFB:** Track Power Feed Box
(optional required, if Track Power Coaxial Cable CX45 required)
- 7.PX45:** Track Power Cable
- 8.TPCB:** Track Power Compensation Box
- 9.F-PU:** Flat Pickup
- 10.CX12:** Mobile Power Coaxial Cable
- 11.RE:** Regulator



Download operation manuals and more at
<https://www.vahle.com/en/download>



TRACK EQUIPMENT



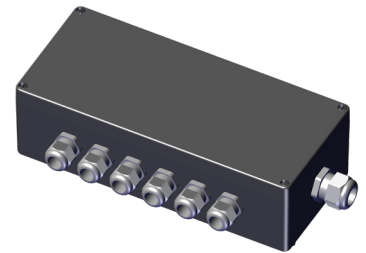
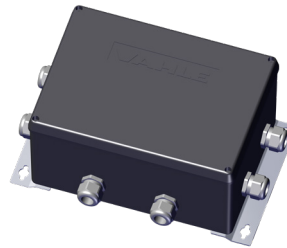
Coaxial cable



Distance cable



Compensation box



Connection boxes

Description		Order No.
vPOW_CX45	Track Power Coaxial Cable between PPU and TPFB / 140 kHz / 45 A	10021717
vPOW_PX45	Track Power Litz Cable / 140 kHz / 45 A	10021716
vPOW_PX45DC	Track Power Litz Cable Drag Chain capable / 140 kHz / 45 A	10027865
vPOW_TPCB.2-140-045-F	Track Power Compensation Box / 140 kHz / 45 A / Fixed capacity	10027809
vPOW_TPFB.3-140-045-1	Track Power Feed Box / 140 kHz / 45 A / 1 Power Input: CX45 / 1 Power	10027810
vPOW_TPFB.4-140-045-1	Track Power Feed Box / 140 kHz / 45 A / 1 Power Input: PX45 / 1 Power output: PX45 / IP54	10027811
vPOW_TPFB.1-140-045-2	Track Power Feed Box / 140 kHz / 45 A / 1 Power output Box for connection between Primary Cable PX45 and 2x Primary Cable PX45	10022185
vPOW_TPFB.1-45-140-6	Track Power Feed Box / 140 kHz / 45 A / 6 Power outputs Box for connection between Track Power Coaxial Cable CX45 and 6x Primary Cable PX45	10019008

VEHICLE EQUIPMENT – GUIDANCE

TECHNICAL DATA

Mechanical data

Dimension..... 239.45 x 155 x 46.50 mm

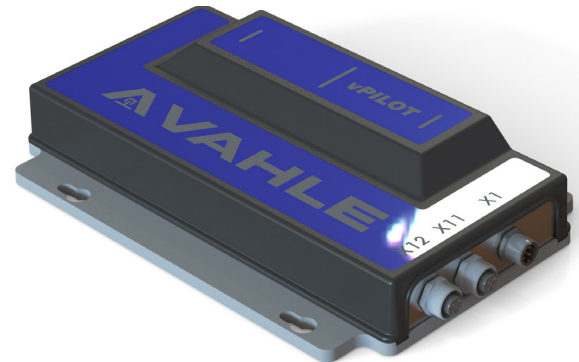
Mounting holes..... 140 x 141 mm

Weight..... 1 kg

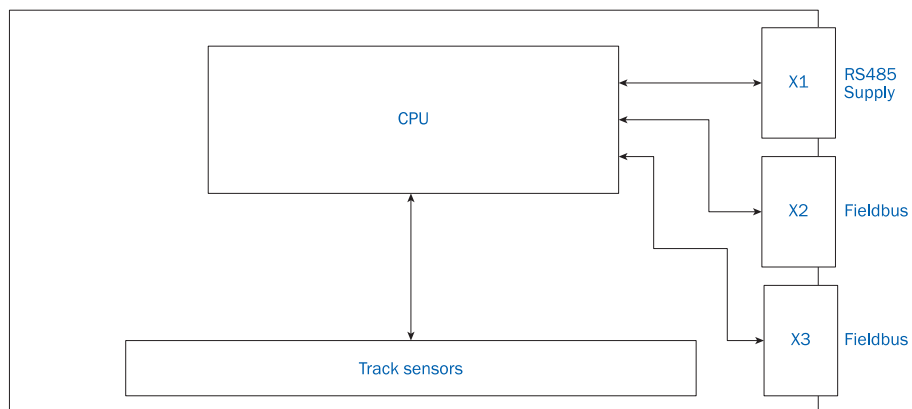
Protection type IP54

Ambient temperature... 0 ... 40°C non-condensing

Environment General industrial



BLOCK DIAGRAM



Description		Order No.
vPOW_Pilot.1-45-140-PN	Guidance Sensor / 140 kHz / 45 A / Profinet IO	10018392
vPOW_Pilot.1-45-140-EI	Guidance Sensor / 140 kHz / 45 A / EtherNet/IP	10018394

PRINCIPLE ARRANGEMENT OF TRACK GUIDANCE

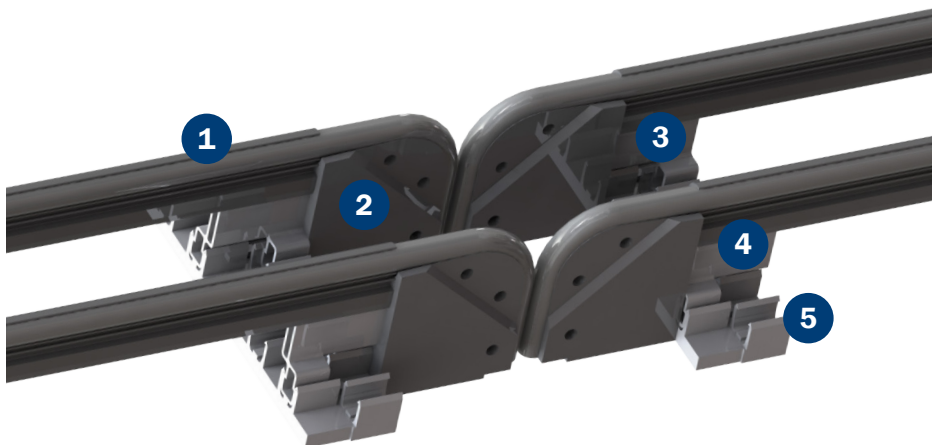


Bottom view

EMS INSTALLATION

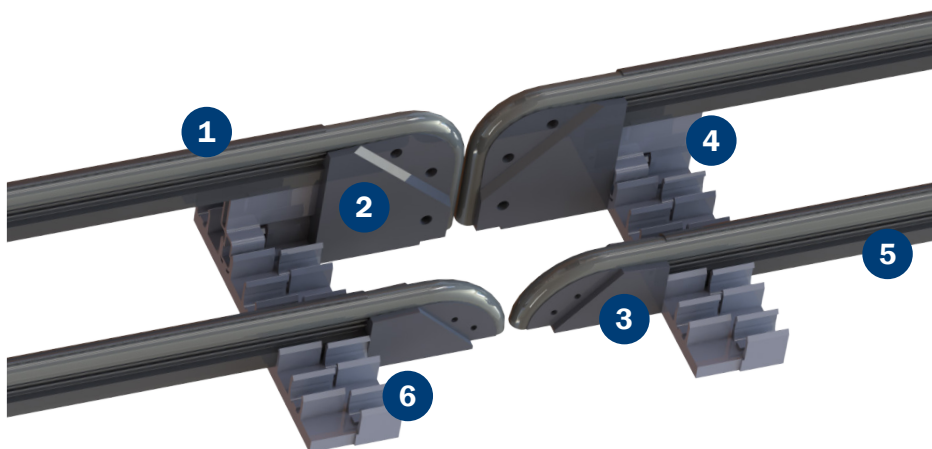
Overview E-Pickup

1. Cable conduit
2. Feeding (active conductor)
3. Spacer for cable conduit
4. Spacer for cable conduit (mirrored)
5. Compact hanger



Overview U-Pickup

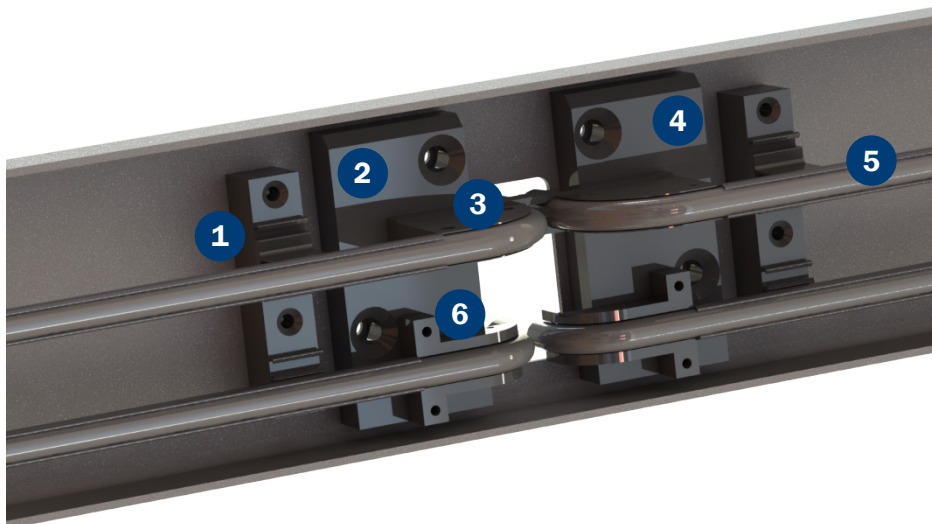
1. Cable conduit
2. Feeding (active conductor)
3. Feeding (passive conductor)
4. Spacer for cable conduit
5. Filling rod for cable conduit
6. Compact hanger



Description		Order No.
AH-KA10L-8/16,5-10N-PA-14	Screw compact hanger 8 pole	0142075
AH-KA10L-10/16,5-N-PA-14	Screw compact hanger 10 pole	0142076
PLZL-A071,8/00000-090-OH-11,0-K-0000-0+V	Feeding / active conductor / use with screw compact hanger	10025930
PLZL-A030,0/00000-090-OR-11,0-K-0000-0+V	Feeding / passive conductor	10022182
PLAH-A52,7/00000-000-00-0000-0-0000-1+V	Spacer for cable conduit / 52.7 mm	10020582
PLAH-A52,7/00000-000-MI-0000-0-0000-1+V	Spacer for cable conduit / mirrored / 52.7 mm	10024107
PLKL-A006,5/00000-000-00-11,0-E-6000-1+V	Cable conduit / straight / D = 11 mm / 6 m	0915116
PLKL-A006,5/00000-000-00-11,0-E-2000-1+V	Cable conduit / straight / D = 11 mm / 2 m	0915155
PLKL-A006,5/00000-UNI-HR-11,0-0-3000-6+V	Cable conduit / curved / D = 11 mm / 3 m	10020864
FÜLLSTAB FÜR VKS-PROFIL	Filling rod for the cable conduit of the passive conductor / 3 m	1023278

SORTER INSTALLATION

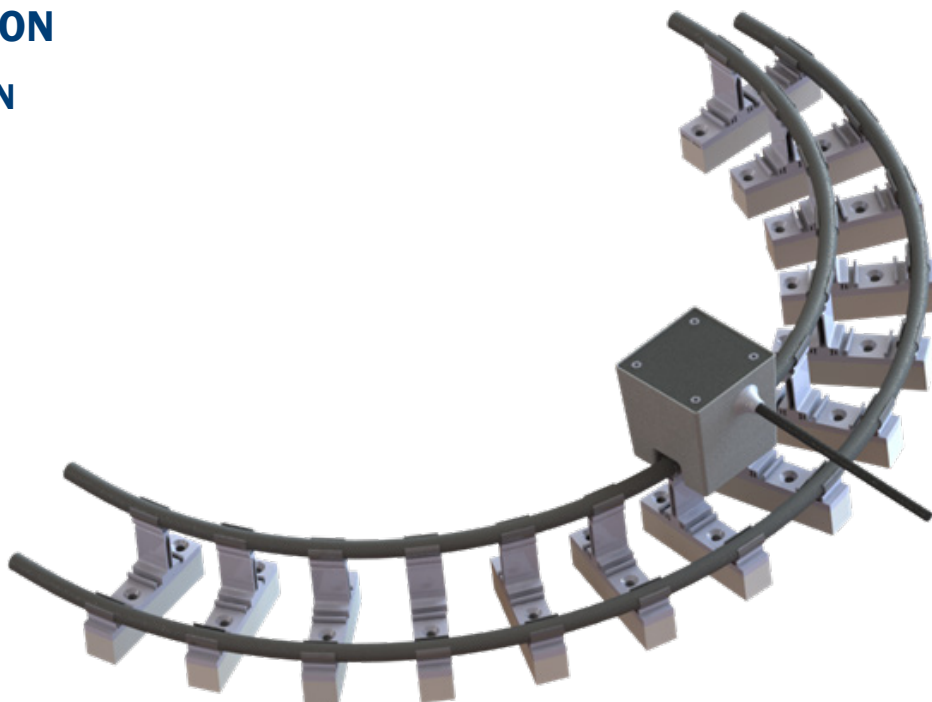
1. Compact hanger 3 in 1
2. Spacer for feeding left
3. Feeding (active conductor)
4. Spacer for feeding right
5. Cable conduit
6. Feeding (passive conductor)



Description		Order No.
PLKH-B60,8/00000-010-02-000D-0-62,8-1+V	Compact hanger 3 in 1 / 60.8 mm / sorter mounting / clip in mechanism	10028258
PLZL-0050,0/00000-090-H0-11,0-0-0000-4+V	Feeding / active conductor	0915295
PLZL-0015,2/00000-090-R0-11,0-0-0000-4+V	Feeding / passive conductor	0915296
PLKL-B007,7/00000-000-00-11,0-E-3000-1+V	Cable conduit / straight / D = 11 mm / 3 m	0915299/00
PLKL-B007,7/00000-000-00-11,0-E-2000-1+V	Cable conduit / straight / D = 11 mm / 2 m	0915298
PLKL-B007,7/00000-000-00-11,0-E-0020-1+V	Cable conduit / straight / D = 11 mm / 20 mm	10024680
PLZL-Z018,5/00000-010-HR-000H-L-0000-4+U	Spacer for feeding left	10001430
PLZL-Z018,5/00000-010-HR-000H-R-0000-4+U	Spacer for feeding right	10001426

U015 – SYSTEM INTEGRATION

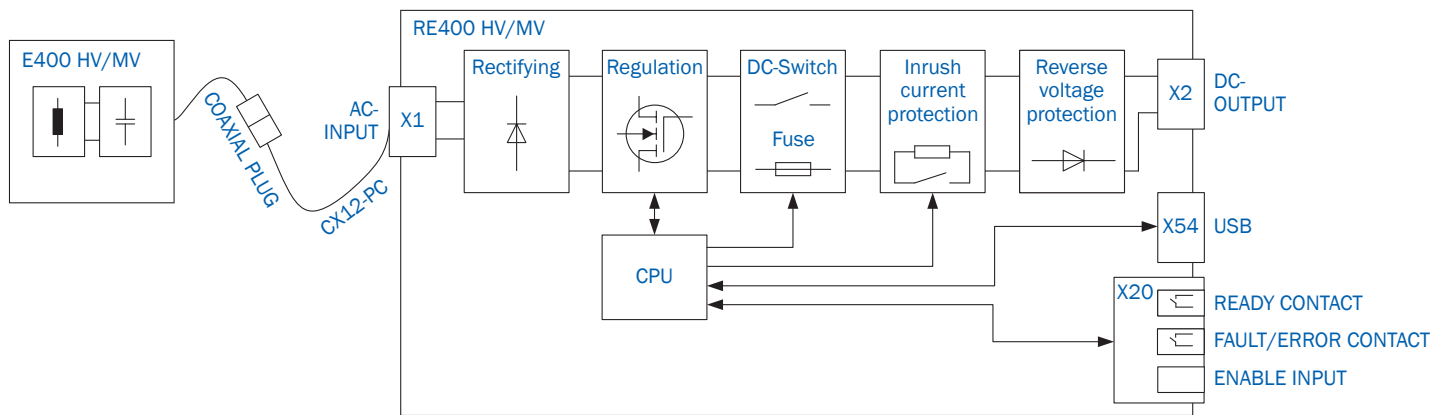
EXAMPLE: SORTER INSTALLATION



VEHICLE EQUIPMENT FOR 560V AND 283V
E-PICKUP E400-140 AND REGULATOR RE400



BLOCK DIAGRAM



Description		Order No.
vPOW_E400.1-140-045-04-LO-HV-05	E-Pickup / 4 kW / 140 kHz / 45 A / Duty 40 % / Linear / High Voltage / Nominal power 1.6 kW / Peak power 4 kW	10023621
vPOW_RE400.2-140-560-04-NI-LI-RC-NI	Regulator / 1.6 kW / 140 kHz / 560 V / ED 40 % / Thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 560 VDC $\pm$ 5 % / Peak power 4 kW / No Battery Charging / Parallelizable output	10023622
vPOW_E400.1-140-045-02-LO-MV-05	E-Pickup / 4 kW / 140 kHz / 45 A / Duty 20 % / Linear / Mid Voltage / Nominal power 1.6 kW / Peak power 4 kW	10023601
vPOW_RE400.2-140-283-02-NI-LI-RC-NI	Regulator / 1.6 kW / 140 kHz / 283 V / ED 20 % / Thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 283 VDC $\pm$ 5 % / Peak power 4 kW / No Battery Charging / Parallelizable output	10023602
vPOW_CX12-PC	Track Power Coaxial Cable between Pickup and Regulator / 12 A	see pages 26, 27

TECHNICAL DATA

Electrical data

Peak power 4 kW
 Nominal power 1.6 kW
 Output voltage 560 VDC / 283 VDC $\pm 5\%$
 Output current max 8 A / 16 A
 Duty cycle 40 % / 20 % Duty (10 min cycle)
 Track current 45 A
 Track frequency 140 kHz
 Track conductor spacing 70 mm

Protection

Output over voltage Yes
 Output over current Yes
 Pickup monitoring I2T
 Inrush current limitation integrated precharging circuit
 Max. reverse voltage 750 VDC

Regulator mechanical data

Dimension 245 x 156 x 90 mm
 Mounting holes 235.25 x 99 mm
 Weight 1.6 kg
 Protection rating IP20
 Ambient temperature... 0 ... +40 °C non-condensing
 Environment General industrial

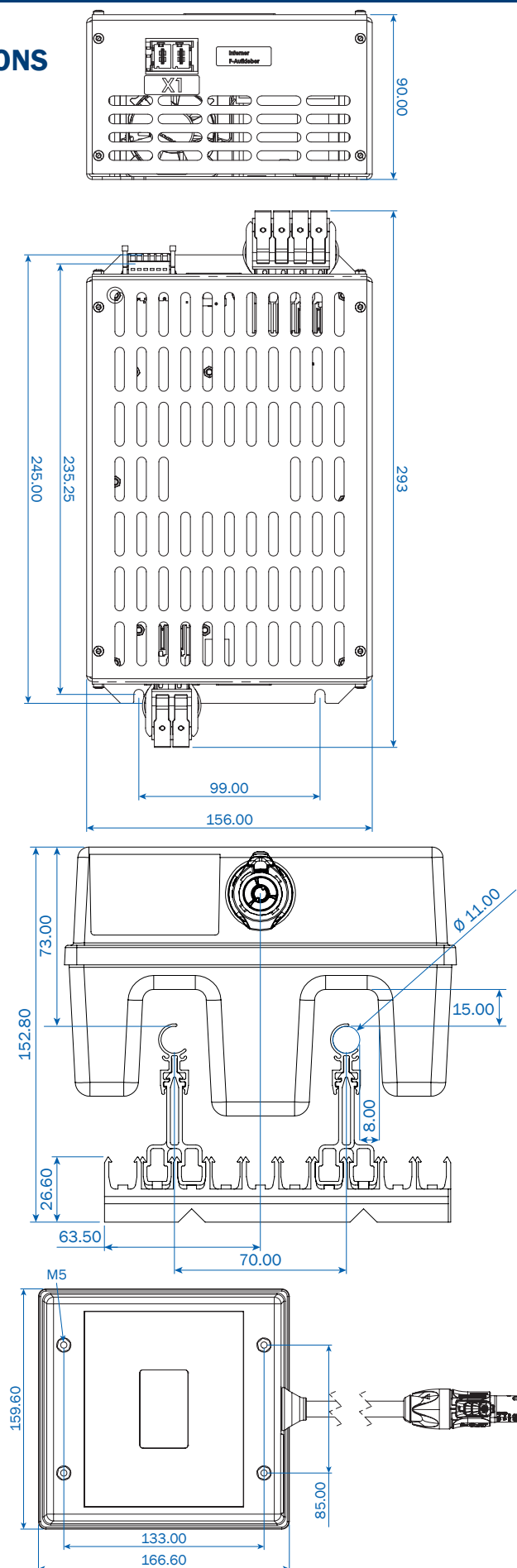
Pickup connection cable

Length 0.5/1.5/3.5/5.5
 Outer diameter 11 mm
 Connections Pre-terminated
 Application Fixed
 Min. bending radius 8 x D

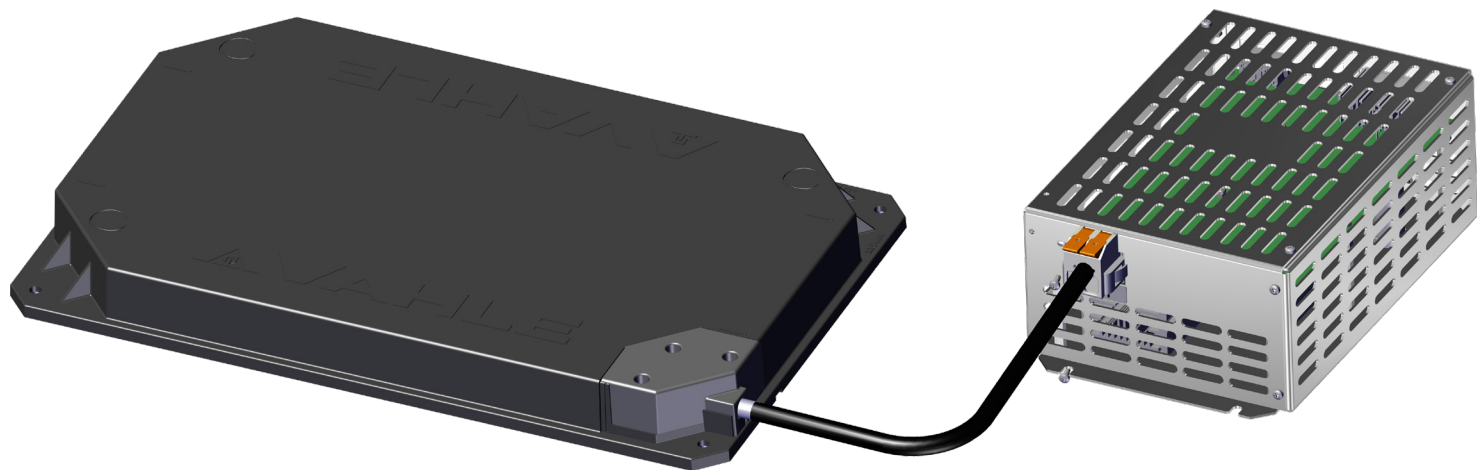
Pickup mechanical data

Dimension 166.6 x 159.6 x 109.5 mm
 Mounting holes 133 x 85 mm
 Weight 5 kg
 Nominal airgap 8 mm (from top of track cable to bottom of Pickup)
 Vertical tolerances ± 8 mm
 Lateral tolerances ± 8 mm
 Protection rating IP54
 Color RAL 9004
 Ambient temperature... 0 ... +40 °C non-condensing
 Environment General industrial
 Cooling Natural convection

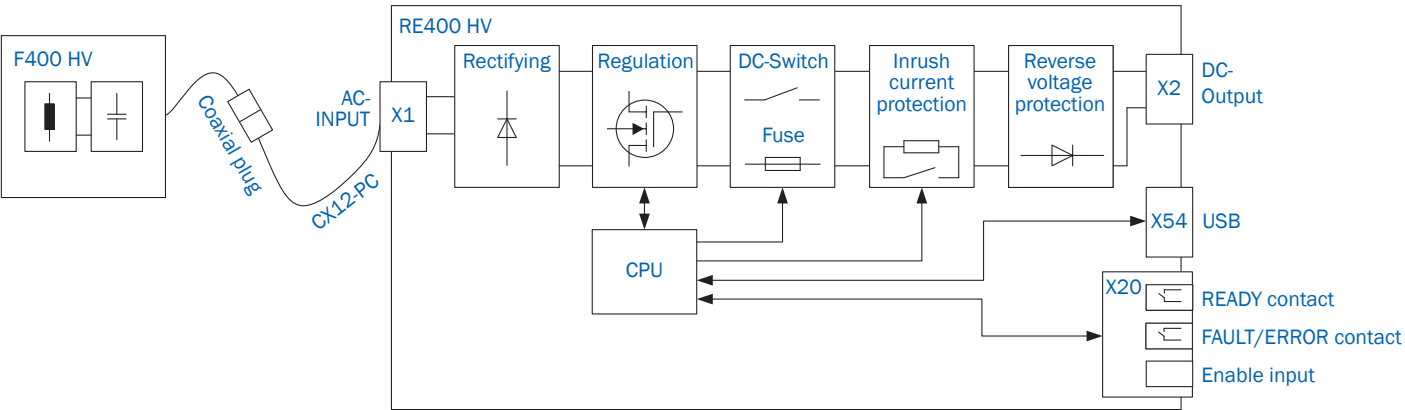
DIMENSIONS



VEHICLE EQUIPMENT FOR 560 V
F-PICKUP F400-140 AND REGULATOR RE400



BLOCK DIAGRAM



Description		Order No.
vPOW_F400.1-140-045-03-LO-HV	F-Pickup / 4 kW / 140 kHz / 45 A / Duty 30 % / Linear / High Voltage / Nominal power 1.2 kW / Peak power 4 kW	10033340
vPOW_RE400.2-140-560-03-FB-LI-RC-NI	Regulator / 1.2 kW / 140 kHz / 560 V / Duty 30 % / No thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 560 VDC ±5 % / Peak power 4 kW / No Battery Charging / Parallelizable output	10033339
vPOW_CX12-SF	Track Power Coaxial Cable between Pickup and Regulator / 12 A / Spring-cage connection F-Pickup	see pages 26, 27

TECHNICAL DATA

Electrical data

Peak power 4 kW
 Nominal power 1.2 kW
 Output voltage 560 VDC
 Output current max 8 A
 Duty cycle 30 %
 Track current 45 A
 Track frequency 140 kHz
 Track conductor spacing 110 mm

Protection

Output over voltage Yes
 Output over current Yes
 Pickup monitoring I2T
 Inrush current limitation integrated precharging circuit
 Max. reverse voltage 750 VDC

Regulator mechanical data

Dimension 245 x 156 x 90 mm
 Mounting holes 235.25 x 99 mm
 Weight 1.6 kg
 Protection rating IP20
 Ambient temperature... 0 ... +40 °C non-condensing
 Environment General industrial

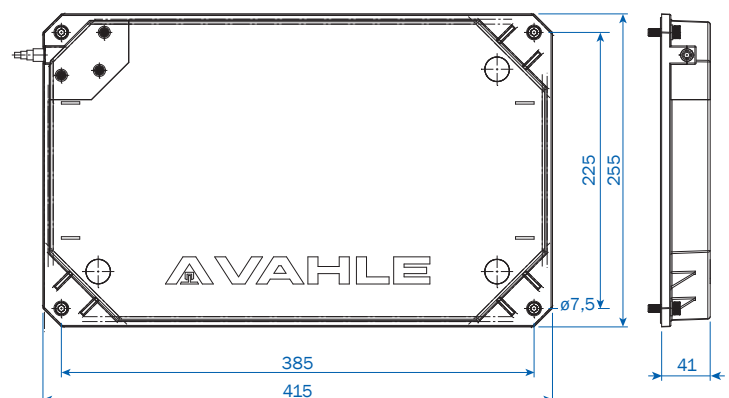
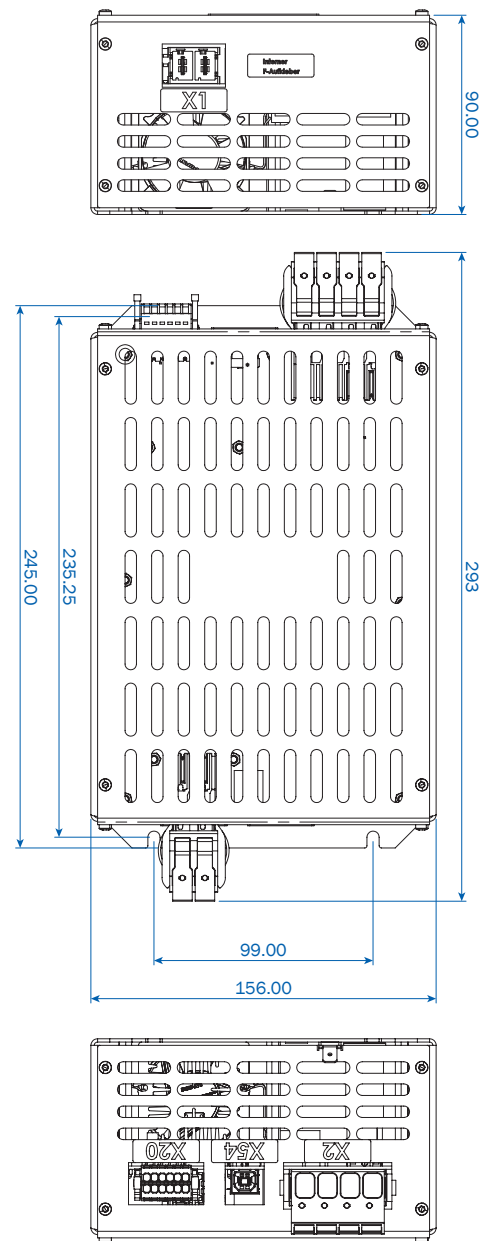
Pickup connection cable

Length 1/2/4/6 m
 Outer diameter 11 mm
 Connections Pre-terminated
 Application Fixed
 Min. bending radius 8 x D

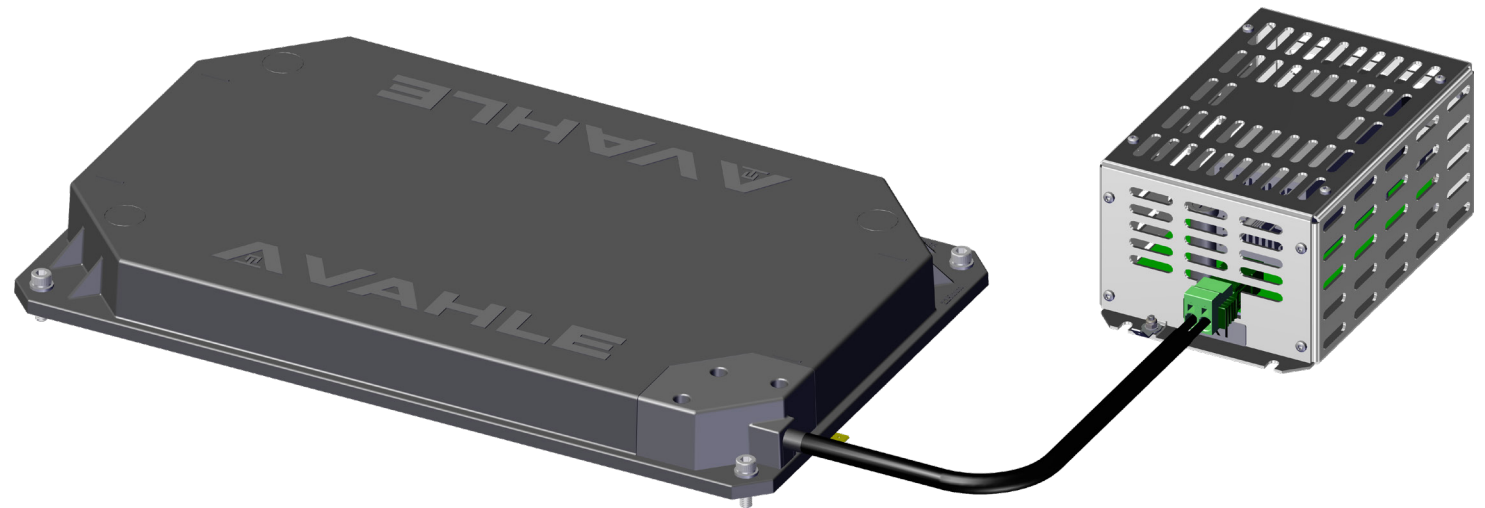
Pickup mechanical data

Dimension 415 x 255 x 41 mm
 Mounting holes 385 x 225 mm
 Weight 9,5 kg
 Nominal airgap 15 mm (from top of track cable to bottom of Pickup)
 Vertical tolerances ±5 mm
 Lateral tolerances ±20 mm
 Protection rating IP54
 Color RAL 9004
 Ambient temperature... 0 ... +40 °C non-condensing
 Environment General industrial

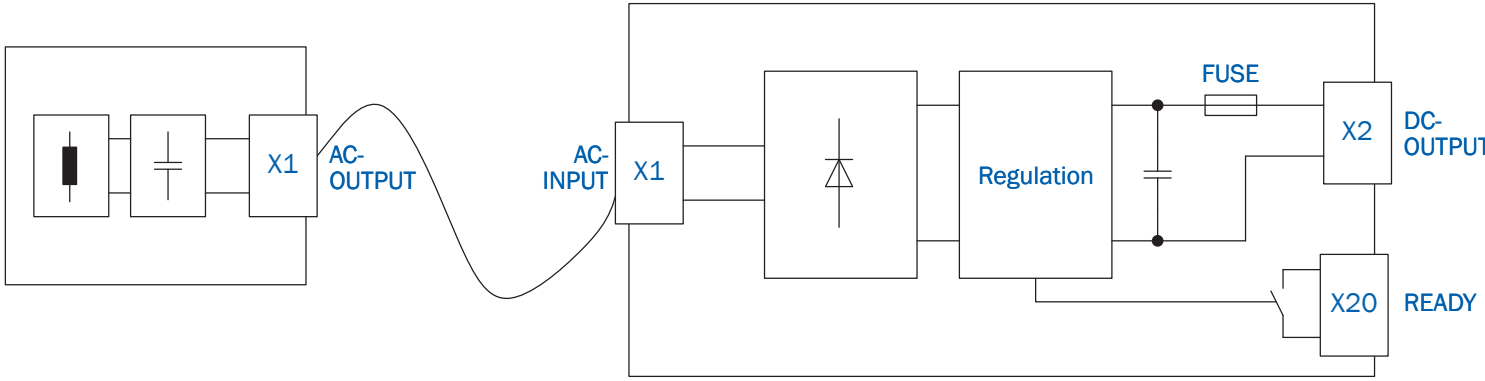
DIMENSIONS



VEHICLE EQUIPMENT FOR 560V
F-PICKUP FXXX-140 AND REGULATOR REXXX



BLOCK DIAGRAM



Description		Order No.
vPOW_F330.1-140-045-04-L0-HV	F-Pickup / 3.3 kW / 140 kHz / 45 A / Duty 40% / Linear / High Voltage / Nominal power 1.3 kW / Peak power 3.3 kW	10017429
vPOW_RE330.1-140-560-04-NI-LI-RC-NI	Regulator / 3.3 kW / 140 kHz / 560V / Duty 40% / No thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 560VDC ±5% / Peak power 3.3 kW / No Battery Charging / Parallelizable output	10017430
vPOW_F250.1-140-045-04-L0-HV	F-Pickup / 2.5 kW / 140 kHz / 45 A / Duty 40% / Linear / High Voltage / Nominal power 1.0 kW / Peak power 2.5 kW	10018442
vPOW_RE250.1-140-560-04-NI-LI-RC-NI	Regulator / 2.5 kW / 140 kHz / 560V / Duty 40% / No thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 560VDC ±5% / Peak power 2.5 kW / No Battery Charging / Parallelizable output	10018452
vPOW_CX12-SF	Track Power Coaxial Cable between Pickup and Regulator / 12A / Spring-cage connection F-Pickup	see pages 26, 27

TECHNICAL DATA

Electrical data

Peak power 3.3 / 2.5 kW
 Nominal power 1.3 / 1.0 kW
 Output voltage 560 VDC $\pm 5\%$
 Output current max 6.5 A
 Duty cycle 40 % Duty (10 min cycle)
 Track current 45 A
 Track frequency 140 kHz
 Track conductor spacing 110 mm

Protection

Output over voltage Yes
 Output over current Yes
 Max. reverse voltage 750 VDC

Regulator mechanical data

Dimension 190 x 120 x 85 mm
 Mounting holes 180.5 x 80 mm
 Weight 1 kg
 Protection rating IP20
 Ambient temperature... 0 ... +40 °C non-condensing
 Environment General industrial

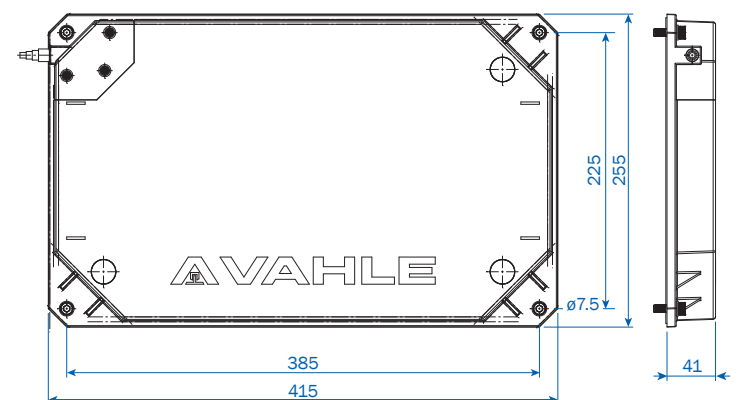
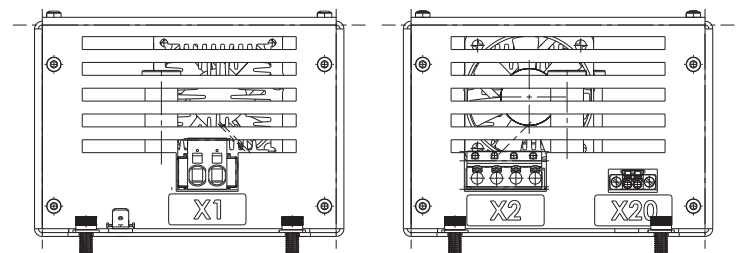
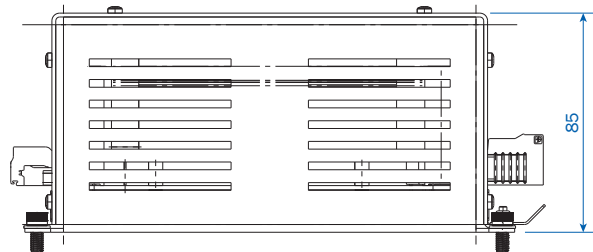
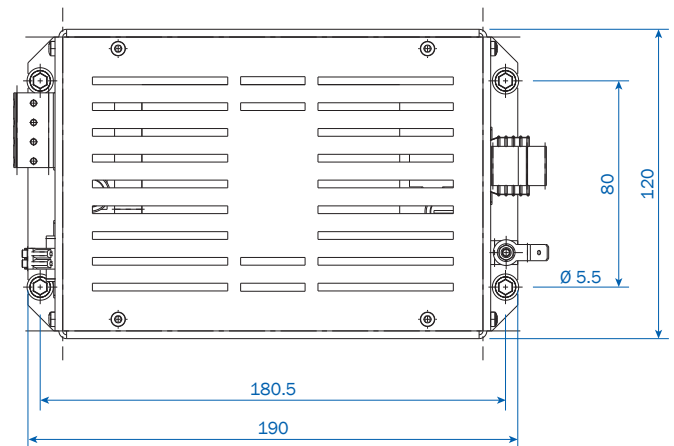
Pickup connection cable

Length 1/2/4/6 m
 Outer diameter 11 mm
 Connections Pre-terminated
 Application Fixed
 Min. bending radius 8 x D

Pickup mechanical data

Dimension 415 x 255 x 41 mm
 Mounting holes 385 x 225 mm
 Weight 9,5 kg
 Nominal airgap 15 mm (from top of track cable to bottom of Pickup)
 Vertical tolerances ± 5 mm
 Lateral tolerances ± 20 mm
 Protection rating IP54
 Color RAL 9004
 Ambient temperature... 0 ... +40 °C non-condensing
 Environment General industrial
 Cooling Natural convection

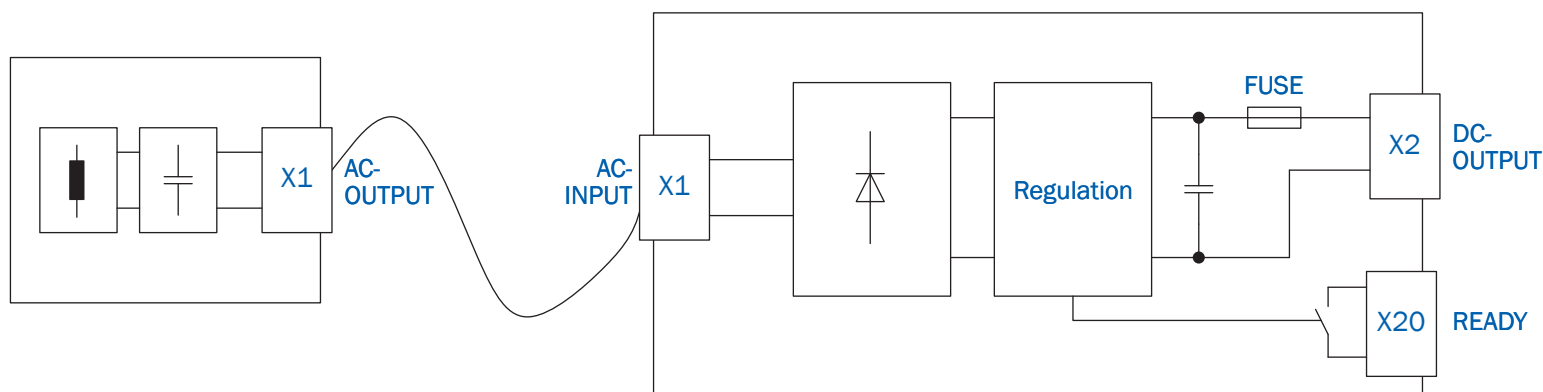
DIMENSIONS



VEHICLE EQUIPMENT FOR 560V AND 283V U-PICKUP U150-140 AND REGULATOR RE150



BLOCK DIAGRAM



Description		Order No.
vPOW_U150.1-140-045-04-L0-HV-05	Pickup U150 for 45 A / 140 kHz linear inductive application / 0.5 m cable attached / Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 %	10028750
vPOW_U150.1-140-045-04-L0-HV-10	Pickup U150 for 45 A / 140 kHz linear inductive application / 1 m cable attached / Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 %	10028751
vPOW_U150.1-140-045-04-L0-HV-15	Pickup U150 for 45 A / 140 kHz linear inductive application / 1.5 m cable attached / Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 %	10028752
vPOW_U150.1-140-045-04-L0-HV-20	Pickup U150 for 45 A / 140 kHz linear inductive application / 2 m cable attached / Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 %	10028753
vPOW_RE150.1-140-560-04-NI-LI-RC-NI	Regulator / 1.5 kW / 140 kHz / 560V / Duty 40 % / No thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 560VDC $\pm 5\%$ / Peak power 1.5 kW / No Battery Charging / Parallelizable output	10018453
vPOW_RE150.1-140-283-04-NI-LI-RC-NI	Regulator / 1.5 kW / 140 kHz / 283V / Duty 40 % / No thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 283VDC $\pm 5\%$ / Peak power 1.5 kW / No Battery Charging / Parallelizable output	10023616

TECHNICAL DATA

Electrical data

Peak power	1.5 kW
Nominal power	0.6 kW
Output voltage	560 VDC / 283 VDC $\pm 5\%$
Output current max.....	3 A / 6 A
Duty cycle.....	40% Duty (10 min cycle)
Track current	45 A
Track frequency.....	140 kHz

Protection

Output over voltage..... Yes
Output over current..... Yes
Max. reverse voltage 750VDC

Regulator mechanical data

Dimension..... 190x120x85 mm
 Mounting holes..... 180.5x80 mm
 Weight..... 1 kg
 Protection type IP20
 Ambient temperature... 0 ... +40°C non-condensing
 Environment General industrial

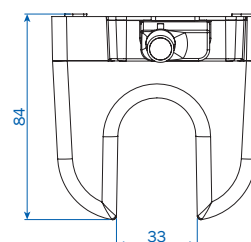
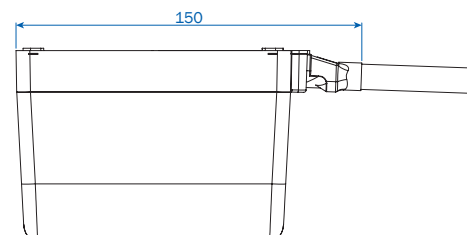
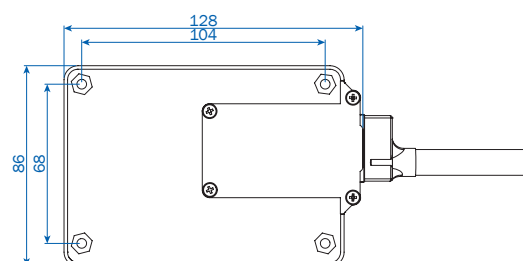
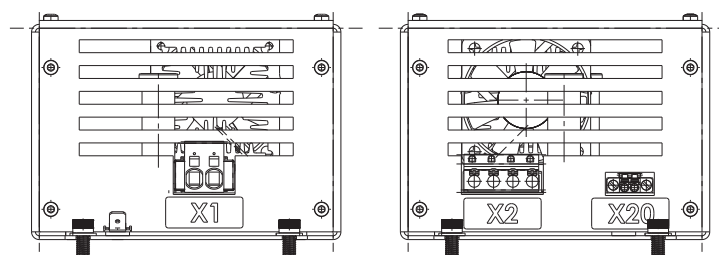
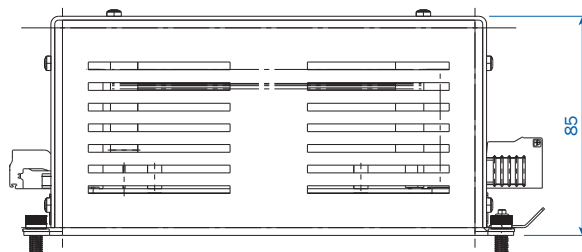
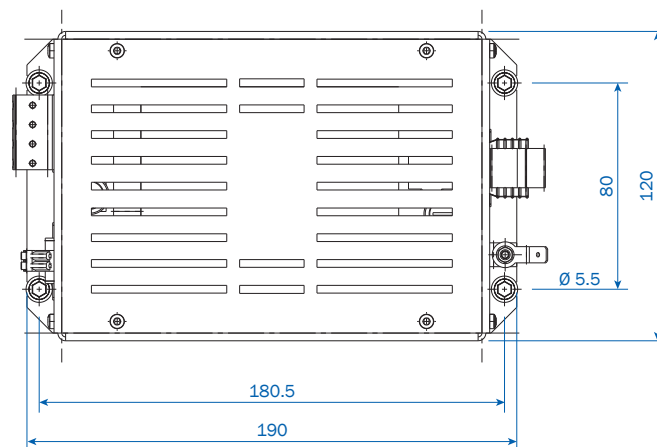
Pickup connection cable

Length 1/2/4/6 m
Outer diameter 11 mm
Connections Pre-terminated
Application Fixed
Min. bending radius 8xD

Pickup mechanical data

Dimension.....	128x86x84 mm
Mounting holes.....	104x68 mm
Weight.....	3 kg
Nominal airgap.....	15 mm (from top of track cable to bottom of Pickup)
Vertical tolerances	±15 mm
Lateral tolerances	±10 mm
Protection type	IP54
Color.....	RAL 9004
Ambient temperature...	0 ... +40° C non-condensing
Environment	General industrial
Cooling	Natural convection

DIMENSIONS

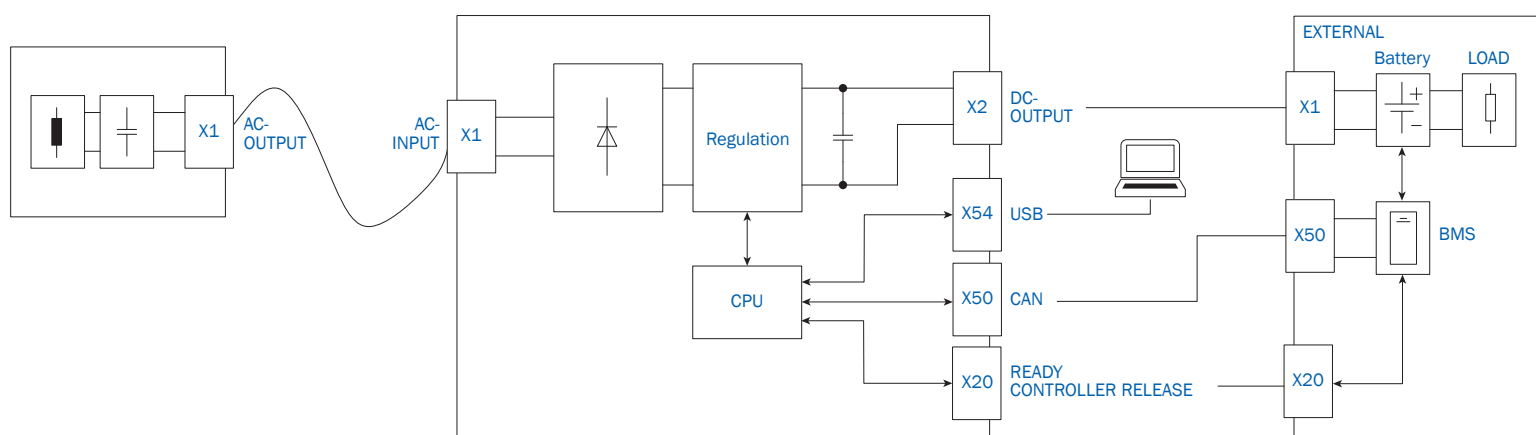


VEHICLE EQUIPMENT FOR 24V AND 48V

F-PICKUP FXXX-140 AND REGULATOR REXXX



BLOCK DIAGRAM



Description		Order No.
vPOW_F075.1-140-045-10-LP-LV	F-Pickup / 0.75 kW / 140 kHz / 45 A / Duty 100 % / Linear, Punctual / Low Voltage / Peak power 0.75 kW	10018445
vPOW_RE075.1-140-024-10-FA-AD-CA-NI	Regulator / 0.75 kW / 140 kHz / 24 V / Duty 100 % / Thermal monitoring / Advanced / CAN / No Auxilliary / Output voltage 24 VDC $\pm 5\%$ / Peak power 0.75 kW / Battery Charging (external BMS)	10018411
vPOW_RE075.1-140-024-04-FA-LI-RC-NI	Regulator / 0.75 kW / 140 kHz / 24 V / Duty 40 % / Thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 24 VDC $\pm 5\%$ / Peak power 0.75 kW / No Battery Charging / Parallelizable output	10018454
vPOW_F150.1-140-045-10-LP-LV	F-Pickup / 1.5 kW / 140 kHz / 45 A / Duty 100 % / Linear, Punctual / Low Voltage / Peak power 1.5 kW	10018444
vPOW_RE150.1-140-048-10-FA-AD-CA-NI	Regulator / 1.5 kW / 140 kHz / 48 V / Duty 100 % / Thermal monitoring / Advanced / CAN / No Auxilliary / Output voltage 48 VDC $\pm 5\%$ / Peak power 1.5 kW / Battery Charging (external BMS)	10018412
vPOW_RE150.1-140-048-04-FA-LI-RC-NI	Regulator / 1.5 kW / 140 kHz / 48 V / Duty 40 % / Thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 48 VDC $\pm 5\%$ / Peak power 1.5 kW / No Battery Charging / Parallelizable output	10021454
vPOW_TPCP150.1-140-045-NI-R1	Charging Plate / 324 x 150 x 12 mm / IP54 / RAL 9004	10019007
vPOW_CX12-SF	Track Power Coaxial Cable between Pickup and Regulator / 12 A / Spring-cage connection F-Pickup	see pages 26, 27

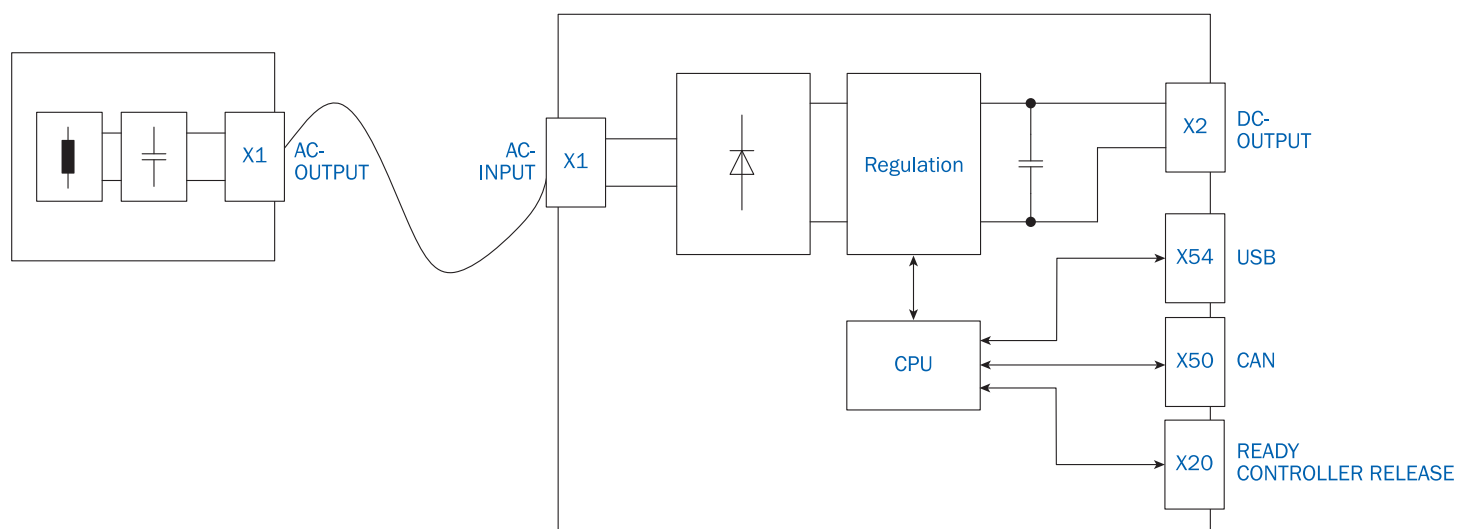
* Linear Charging is also available.

VEHICLE EQUIPMENT FOR 24V AND 48V

U-PICKUP UXXX-140 AND REGULATOR REXXX



BLOCK DIAGRAM



Description		Order No.
vPOW_U150.1-140-045-04-LO-LV-05	Pickup U150 for 45 A / 140 kHz linear inductive application / 0.5 m cable attached / Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 %	10027258
vPOW_U150.1-140-045-04-LO-LV-10	Pickup U150 for 45 A / 140 kHz linear inductive application / 1 m cable attached / Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 %	10028747
vPOW_U150.1-140-045-04-LO-LV-15	Pickup U150 for 45 A / 140 kHz linear inductive application / 1.5 m cable attached / Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 %	10028748
vPOW_U150.1-140-045-04-LO-LV-20	Pickup U150 for 45 A / 140 kHz linear inductive application / 2 m cable attached / Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 %	10028749
vPOW_RE075.1-140-024-10-UA-AD-CA-NI	Regulator / 0.75 kW / 140 kHz / 24 V / Duty 100 % / Thermal monitoring / Advanced / CAN / No Auxilliary / Output voltage 24 VDC / Peak power 0.75 kW / Battery Charging (external BMS)	10021438
vPOW_RE075.1-140-024-04-UA-LI-RC-NI	Regulator / 0.75 kW / 140 kHz / 24 V / Duty 40 % / Thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 24 VDC $\pm 5\%$ / Peak power 0.75 kW / No Battery Charging / Parallelizable output	10018455
vPOW_RE150.1-140-048-10-UA-AD-CA-NI	Regulator / 1.5 kW / 140 kHz / 48 V / Duty 100 % / Thermal monitoring / Advanced / CAN / No Auxilliary / Output voltage 48 VDC / Peak power 1.5 kW / Battery Charging (external BMS)	10017418
vPOW_RE150.1-140-048-04-UA-LI-RC-NI	Regulator / 1.5 kW / 140 kHz / 48 V / Duty 100 % / Thermal monitoring / LITE / Relay contact / No Auxilliary / Output voltage 48 VDC $\pm 5\%$ / Peak power 1.5 kW / No Battery Charging / Parallelizable output	10018456
vPOW_RE150.1-140-072-04-UA-LI-RC-NI	Regulator RE150 with 72 VDC $\pm 5\%$ Nominal Power 0.6 kW / Peak Power 1.5 kW / Duty 40 % at 10 min cycle	10024891

TECHNICAL DATA

Electrical data

Peak power 0.75 / 1.5 kW
 Nominal power 0.3 / 0.6 kW
 Output voltage 24 / 48 VDC $\pm 5\%$
 Output current max 31.3 / 31.3 A
 Duty cycle 40 % Duty (10 min cycle)
 Track current 45 A
 Track frequency 140 kHz

Protection

Output over voltage Yes
 Output over current Yes
 Over temperature Yes

Regulator mechanical data

Dimension 245 x 156 x 90 mm
 Mounting holes 235.3 x 99 mm
 Weight 1 kg
 Protection type IP20
 Ambient temperature... 0 ... +40 °C non-condensing
 Environment General industrial

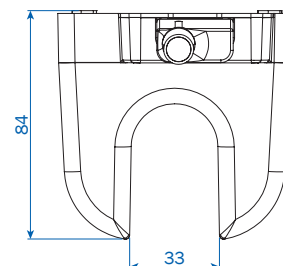
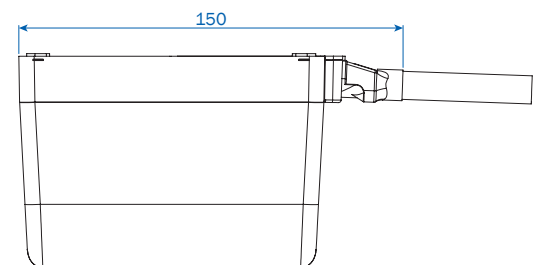
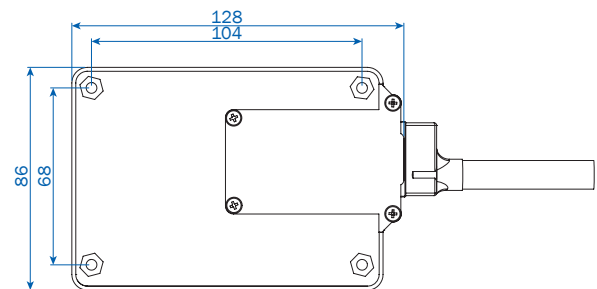
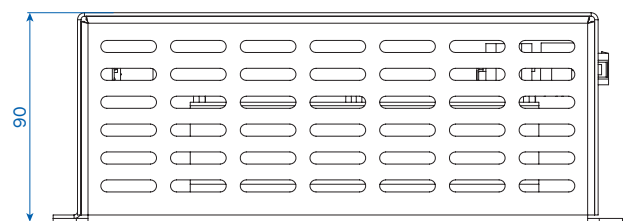
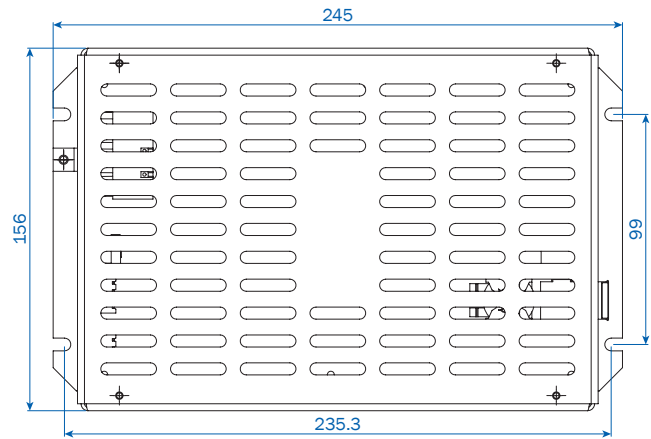
Pickup connection cable

Length 0.5/1/1.5/2 m
 Outer diameter 11 mm
 Connections Pre-terminated
 Application Fixed
 Min. bending radius 8 x D

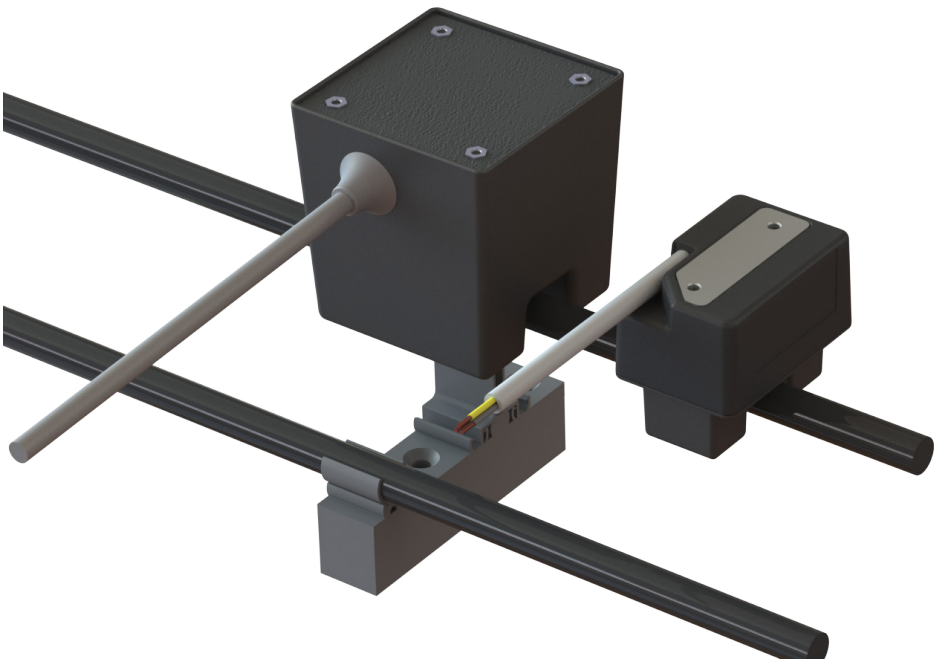
Pickup mechanical data

Dimension 128 x 86 x 84 mm
 Mounting holes 104 x 68 mm
 Weight 3 kg
 Nominal airgap 15 mm (from top of track
 cable to bottom of Pickup)
 Vertical tolerances ± 15 mm
 Lateral tolerances ± 10 mm
 Protection type IP54
 Color RAL 9004
 Ambient temperature... 0 ... +40 °C non-condensing
 Environment General industrial
 Cooling Natural convection

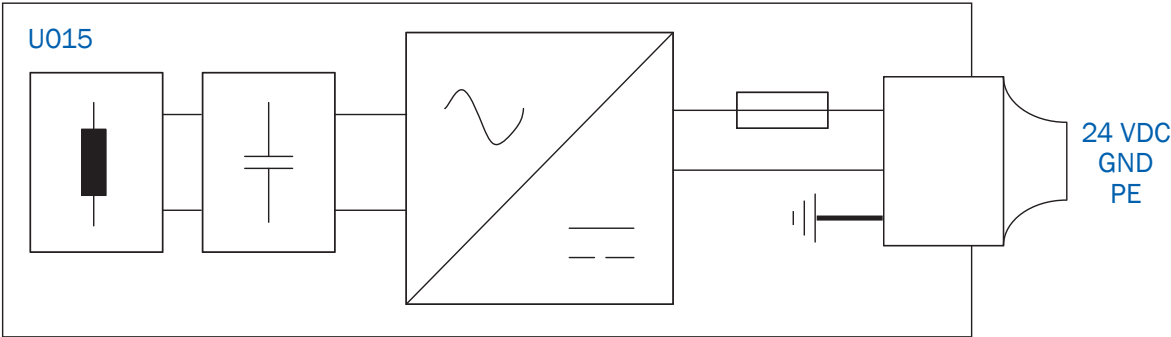
DIMENSIONS



VEHICLE EQUIPMENT FOR 24V
U-PICKUP U015 AND U007



BLOCK DIAGRAM



Description		Order No.
vPOW_U015.1-024-07-140-045-LN-NI-LO	U-Pickup / 150 W / 24 VDC / Duty 70 % / 140 kHz / 45 A / LITE / Not parallelizable / No interface / Linear / IP65 / Output voltage 24 VDC $\pm$ 10 % / Peak power 150 W (0.5 sec)	10022728
vPOW_U007.1-024-06-140-045-LN-NI-LO	U-Pickup / 70 W / 24 VDC / Duty 60 % / 140 kHz / 45 A / LITE / Not parallelizable / No interface / Linear / IP65 / Output voltage 24 VDC $\pm$ 10 % / Peak power 70 W	10027518

U-PICKUP U015

TECHNICAL DATA

Electrical data

Peak power 0.15 kW
 Nominal power 0.1 kW
 Output voltage 24 VDC $\pm 10\%$
 Output current max 6 A
 Duty cycle 70 %
 Track current 45 A
 Track frequency 140 kHz

Protection

Output over current Yes
 Over temperature Yes

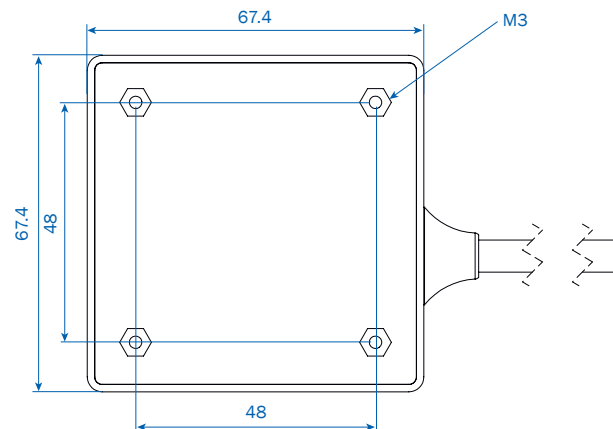
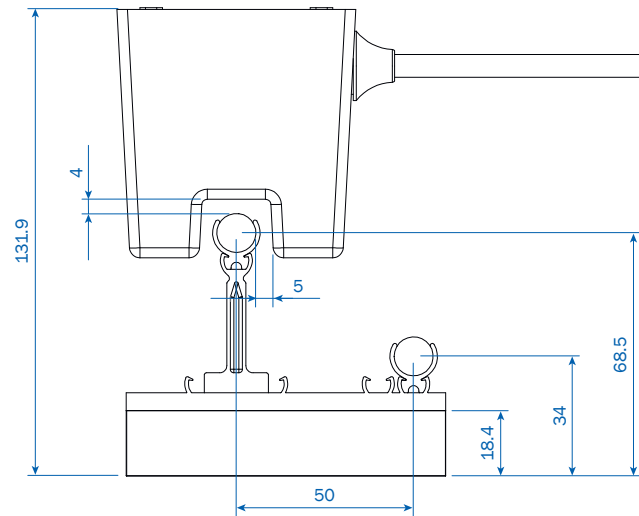
Pickup connection cable

Length 1 m
 Outer diameter 6.5 mm
 Connections Pre-terminated
 Application Flexible
 Min. bending radius 5 x D

Pickup mechanical data

Dimension 67.4 x 67.4 x 71 mm
 Mounting holes 48 x 48 mm
 Weight 650 g
 Nominal airgap 4 mm (from top of track cable to bottom of Pickup)
 Vertical tolerances ± 1 mm
 Lateral tolerances ± 1 mm
 Protection type IP65
 Color RAL 9004
 Ambient temperature ... +5 ... +40 °C non-condensing
 Environment General industrial / clean room
 Cooling Natural convection

DIMENSIONS



U-PICKUP U007

TECHNICAL DATA

Electrical data

Peak power 70 W
 Nominal power 30 W
 Output voltage 24 VDC $\pm 10\%$
 Output current max..... 3 A
 Duty cycle..... 60 %
 Track current 45 A
 Track frequency 140 kHz

Protection

Output over current..... Yes
 Over temperature Yes
 Short circuit protection Yes

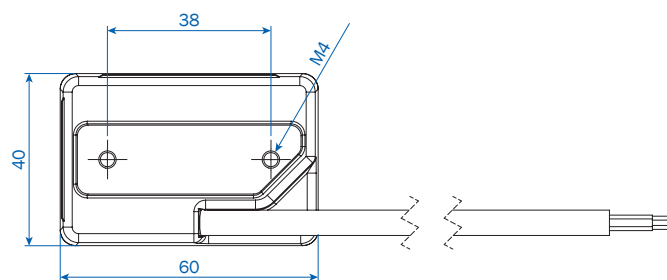
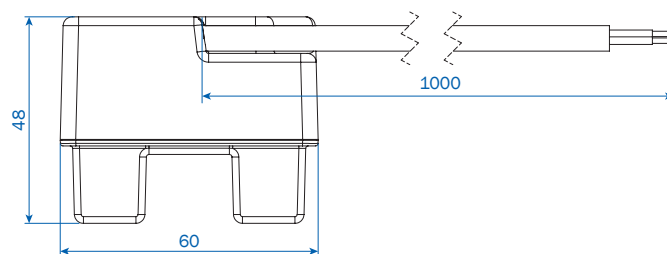
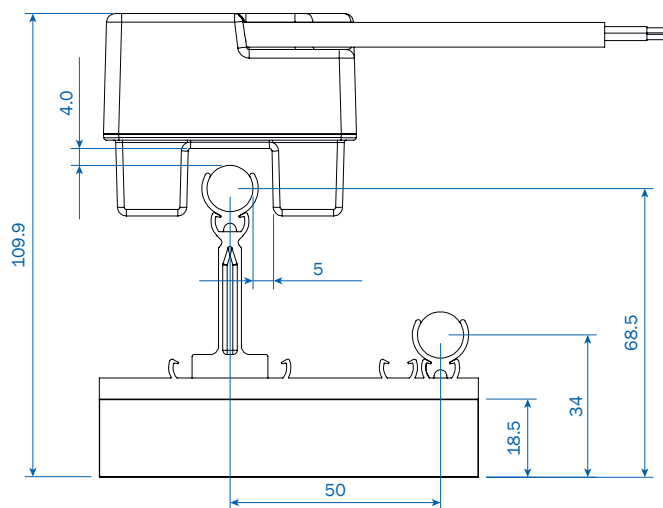
Pickup connection cable

Length 1 m
 Outer diameter 5.5 mm
 Connections..... Pre-terminated
 Application Flexible
 Min. bending radius 4 x D

Pickup mechanical data

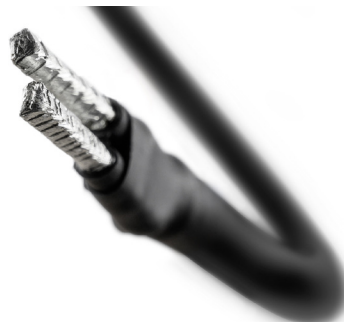
Dimension..... 48 x 40 x 60 mm
 Mounting holes..... 2x M4, 38 mm space
 Weight..... 175 g (incl. 1 m cable 215 g)
 Nominal airgap..... 4 mm
 Vertical tolerances ± 1 mm
 Lateral tolerances ± 1 mm
 Protection type IP65
 Color..... RAL 9004
 Ambient temperature... +5 ... +40 °C non-condensing
 Environment General industrial / clean room
 Cooling Natural convection

DIMENSIONS



VEHICLE EQUIPMENT MOBILE CABLE BETWEEN PICKUP AND REGULATOR

Coaxial cable spring-cage connection



Coaxial cable PowerCon connection



Download operation manuals and more at
<https://www.vahle.com/en/download>

VEHICLE EQUIPMENT

OVERVIEW OF PICKUP AND REGULATOR CONFIGURATIONS

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