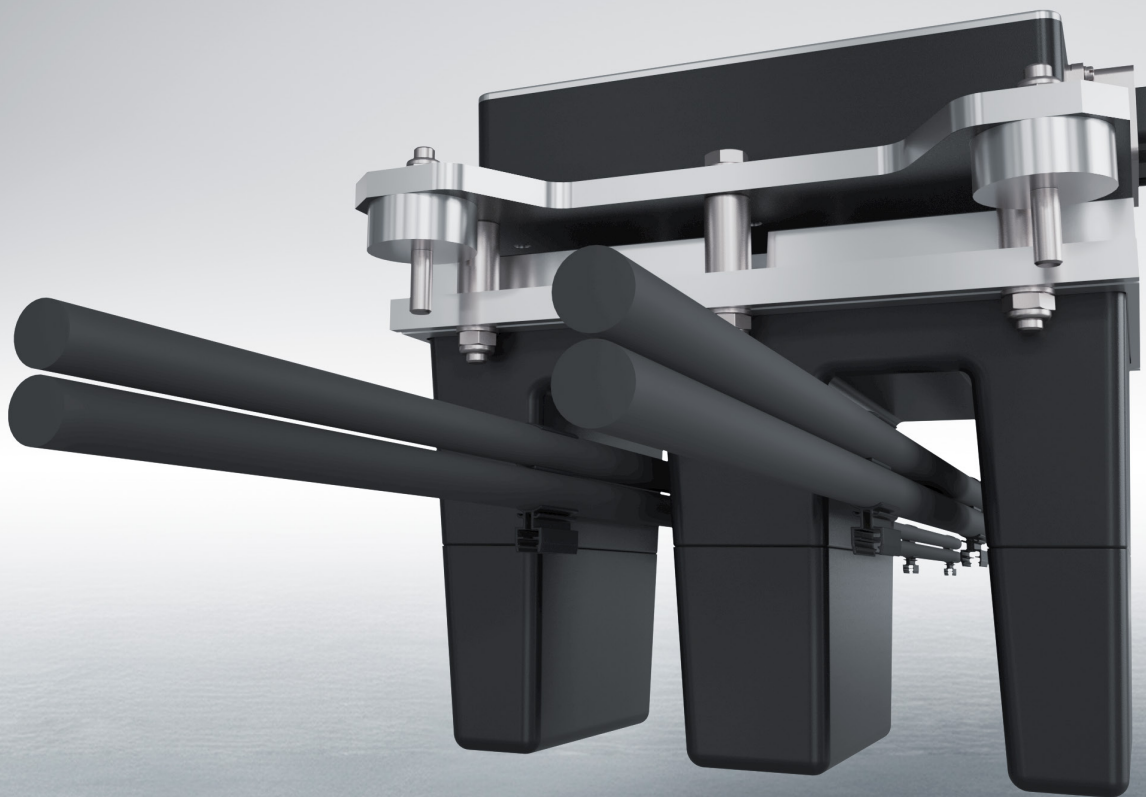


CPS® 20KHZ

CONTACTLESS POWER SUPPLY
20 KHZ TECHNOLOGY



CPS® 20KHZ – KEY HIGHLIGHTS



GLOBAL USE

The VAHLE CPS® 20kHz is used in many branches of industry with more than 450 installations realized worldwide. This includes the great “know-how” of VAHLE and finding individual solutions together with the customer.



HIGH EFFICIENCY

Due the exceptionally low track current of only 72/124A and modern power electronics, there is a particularly high efficiency and good electromagnetic compatibility (EMC).

HIGHEST SYSTEM AVAILABILITY

The CPS® 20kHz convinces with its wear- and largely maintenance-free power supply. In addition, the VAHLE systems are resistant to contamination and meet the requirements of high-speed applications. Of course, optimum efficiency can only be guaranteed under appropriate environmental and mechanical conditions.



WIDE RANGE OF SERVICES

The CPS® 20kHz has been continuously further developed since 1997 – with the emphasis on important criteria such as economic coverage of a large performance range.



GENERAL CPS® 20KHZ OPERATING PRINCIPLE

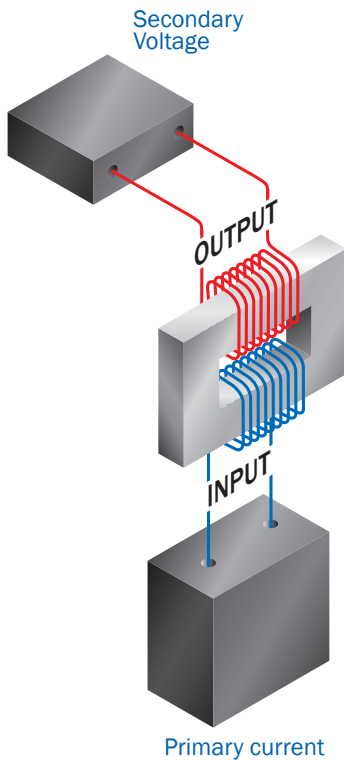
TRANSFORMER PRINCIPLE

VAHLE CPS® 20kHz technology provides electrical energy without any mechanical contact. It utilizes the induction principle similar to a transformer's primary/secondary transfer. In a transformer, the primary and secondary windings are on a common, closed ferro-magnetic core. CPS® 20kHz technology, on the other

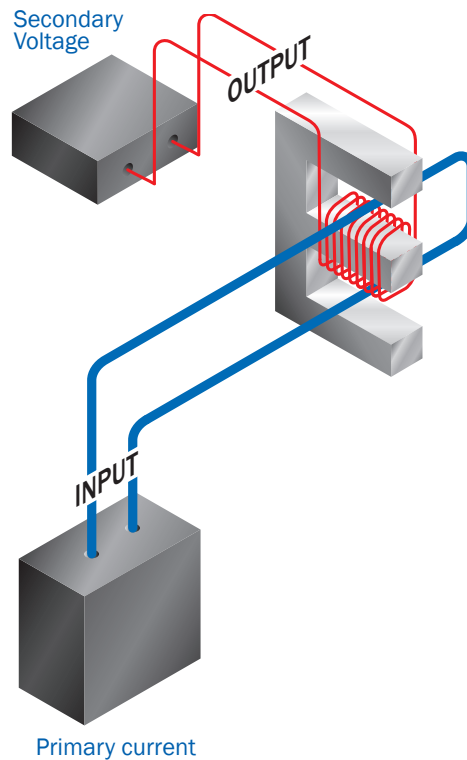
hand, „stretches“ the primary winding to a long loop and places the secondary winding onto an open ferro-magnetic core. This allows relative motion of the two windings. The transmission characteristics are optimized by using a high transmission frequency of 20 kHz.

CPS® TECHNOLOGY

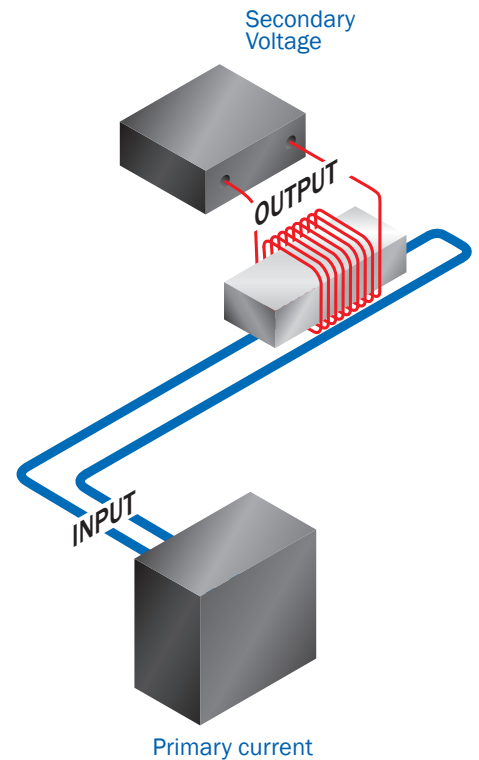
Conventional transformer



E-shaped pickup

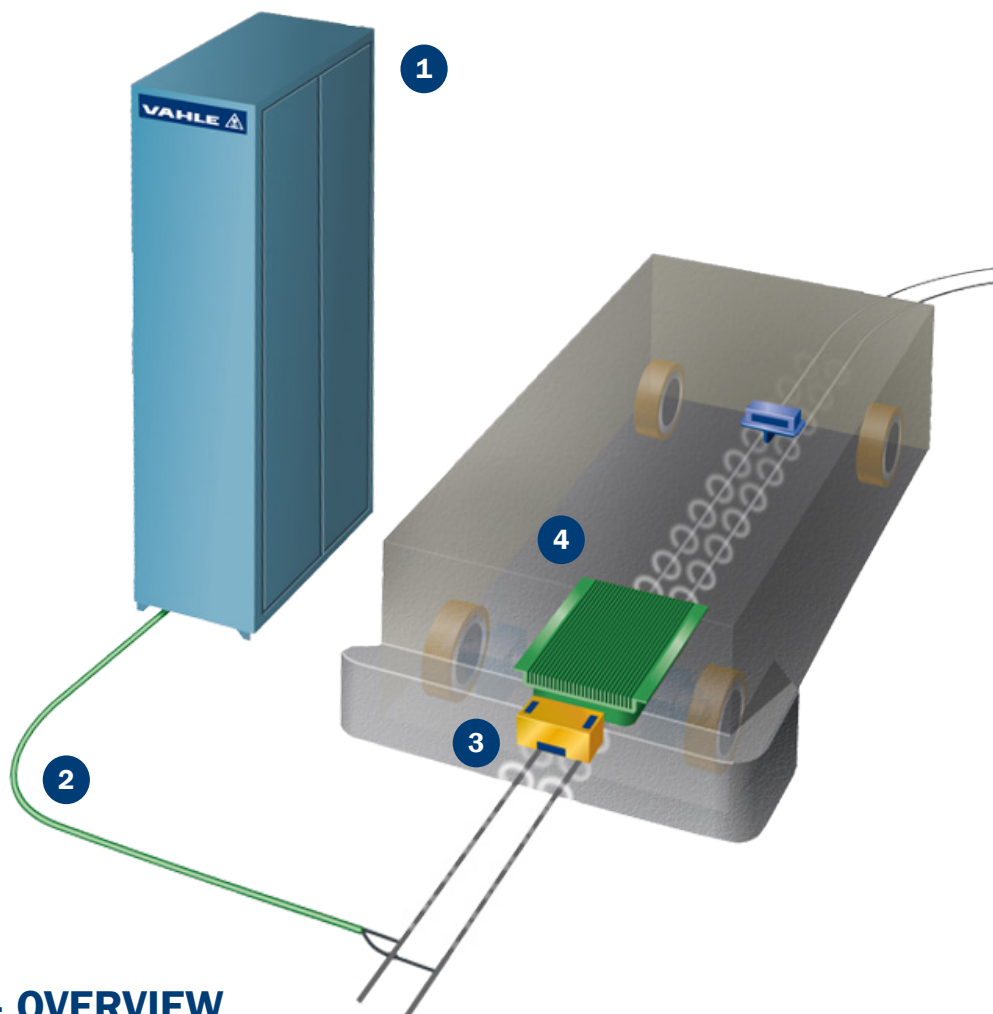


Flat pickup



CPS® 20KHZ – SYSTEM OVERVIEW

- 1.PPU Primary Power Unit
- 2.Track Power Litz Cable
- 3.Guidance
- 4.F-PU: Flat Pickup



PRIMARY EQUIPMENT – OVERVIEW

CABINET PRIMARY INVERTER

As the centerpiece of the contactless power supply, the primary inverter delivers the required electrical power for all mobile consumers located on the track. Standard three-phase alternating current of 400V / 50 Hz (or different regional standards) is initially converted to single-phase alternating current of 20 kHz and then fed to the primary cable at a constant current of 70A. A suitable diagnostics interface is available for displaying or monitoring the actual operating condition.

Complete cabinet 45 kW / 11 kW

- Cabinet ready for use
- Technical design depending on installed system
- Design according to customer specifications
- Several cabinets can be interconnected for large systems with a high power requirements

Mounting plate 45 kW / 11 kW

- All 20 kHz CPS® components are pre-mounted and completely wired
- Installation in an existing power switch cabinet
- Supply with 400V, three-phase alternating current
- 20 kHz output for supplying the primary loop

PRIMARY POWER UNIT

TECHNICAL DATA

Electrical data

Power (nominal/peak) . 8.8 kW / 11 kW (PPU11K)

Power (nominal/peak) . 36 kW / 45 kW (PPU45K)

Supply voltage 3 x 400 VAC

Mechanical data

Dimension..... 2000 x 1200 x 500 mm + 200 mm socket
(complete cabinet)

1900 x 700 mm (mounting plate)

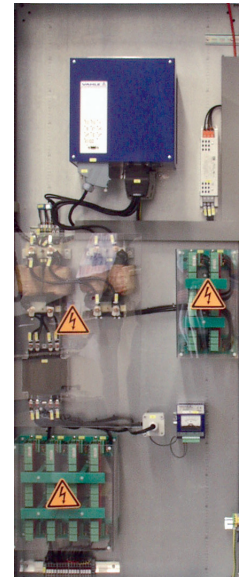
Temperature range 0 – 30 °C

Protection Type..... IP54 (complete cabinet)

IP00 (mounting plate)



Complete cabinet



Mounting plate

PPU45K – 45 KW (124A, HF50)

Type	Description	Order No.
PPU45k.1-020-124-A-IO	Primary power unit 45 kW / Terminal screw for standard application / 20 kHz / 124 A / Stand alone / Digital IOs / Track compensation not included	10022379
PPU45k.3-020-124-A-IO	Primary power unit 45 kW / Terminal screw for PU22 application / 20 kHz / 124 A / Stand alone / Digital IOs / Track compensation not included	10022796
PPU45k.1-020-124-M-IO	Primary power unit 45 kW / Terminal screw for standard application / 20 kHz / 124 A / Sync-Master / Digital IOs / Track compensation not included	10022797
PPU45k.1-020-124-U-IO	Primary power unit 45 kW / Terminal screw for standard application / 20 kHz / 124 A / Sync-Sub-Slave / Digital IOs / Track compensation not included	10022380
PPU45k.1-020-124-S-IO	Primary power unit 45 kW / Terminal screw for standard application / 20 kHz / 124 A / Sync-Slave / Digital IOs / Track compensation not included	10022800

PPU45K – 45 KW (72A, HF25)

Type	Description	Order No.
PPU45k.1-020-072-A-IO	Primary power unit 45 kW / Terminal screw for standard application / 20 kHz / 72 A / Stand alone / Digital IOs / Track compensation not included	10022802
PPU45k.1-020-072-M-IO	Primary power unit 45 kW / Terminal screw for standard application / 20 kHz / 72 A / Sync-Master / Digital IOs / Track compensation not included	10022803
PPU45k.1-020-072-U-IO	Primary power unit 45 kW / Terminal screw for standard application / 20 kHz / 72 A / Sync-Sub-Slave / Digital IOs / Track compensation not included	10022804
PPU45k.1-020-072-S-IO	Primary power unit 45 kW / Terminal screw for standard application / 20 kHz / 72 A / Sync-Slave / Digital IOs / Track compensation not included	10022805

PPU45K – 45 KW (72A, PL8X4)

Type	Description	Order No.
PPU45k.2-020-072-A-IO	Primary power unit 45 kW / Feed-through terminal for standard application / 20 kHz / 72 A / Stand alone / Digital IOs / Track compensation not included	10022801
PPU45k.2-020-072-M-IO	Primary power unit 45 kW / Feed-through terminal for standard application / 20 kHz / 72 A / Sync-Master / Digital IOs / Track compensation not included	10022821
PPU45k.2-020-072-U-IO	Primary power unit 45 kW / Feed-through terminal for standard application / 20 kHz / 72 A / Sync-Sub-Slave / Digital IOs / Track compensation not included	10022807
PPU45k.2-020-072-S-IO	Primary power unit 45 kW / Feed-through terminal for standard application / 20 kHz / 72 A / Sync-Slave / Digital IOs / Track compensation not included	10022808

PPU11K – 11 KW

PPU11K – 11KW (124A, HF50)

Type	Description	Order No.
PPU11k.1-020-124-A-IO	Primary power unit 11 kW / Terminal screw for standard application / 20 kHz / 124 A / Stand alone / Digital IOs / Track compensation not included	10022809
PPU11k.1-020-124-M-IO	Primary power unit 11 kW / Terminal screw for standard application / 20 kHz / 124 A / Sync-Master / Digital IOs / Track compensation not included	10022810
PPU11k.1-020-124-U-IO	Primary power unit 11 kW / Terminal screw for standard application / 20 kHz / 124 A / Sync-Sub-Slave / Digital IOs / Track compensation not included	10022811
PPU11k.1-020-124-S-IO	Primary power unit 11 kW / Terminal screw for standard application / 20 kHz / 124 A / Sync-Slave / Digital IOs / Track compensation not included	10022812

PPU11K – 11KW (72A, HF25)

Type	Description	Order No.
PPU11k.1-020-072-A-IO	Primary power unit 11 kW / Terminal screw for standard application / 20 kHz / 72 A / Stand alone / Digital IOs / Track compensation not included	10022813
PPU11k.1-020-072-M-IO	Primary power unit 11 kW / Terminal screw for standard application / 20 kHz / 72 A / Sync-Master / Digital IOs / Track compensation not included	10022814
PPU11k.1-020-072-U-IO	Primary power unit 11 kW / Terminal screw for standard application / 20 kHz / 72 A / Sync-Sub-Slave / Digital IOs / Track compensation not included	10022815
PPU11k.1-020-072-S-IO	Primary power unit 11 kW / Terminal screw for standard application / 20 kHz / 72 A / Sync-Slave / Digital IOs / Track compensation not included	10022816

PPU11K – 11KW (72A, PL8X4)

Type	Description	Order No.
PPU11k.2-020-072-A-IO	Primary power unit 11 kW / Feed-through terminal for standard application / 20 kHz / 72 A / Stand alone / Digital IOs / Track compensation not included	10022817
PPU11k.2-020-072-M-IO	Primary power unit 11 kW / Feed-through terminal for standard application / 20 kHz / 72 A / Sync-Master / Digital IOs / Track compensation not included	10022818
PPU11k.2-020-072-U-IO	Primary power unit 11 kW / Feed-through terminal for standard application / 20 kHz / 72 A / Sync-Sub-Slave / Digital IOs / Track compensation not included	10022819
PPU11k.2-020-072-S-IO	Primary power unit 11 kW / Feed-through terminal for standard application / 20 kHz / 72 A / Sync-Slave / Digital IOs / Track compensation not included	10022820

TRACK COMPENSATION (MOUNTING PLATE)

Type	Description	Order No.
P-SK-0220NF-0400-015-028-300-000-0-000+V	Tuning-Compensation for PPU15..28X220NF	0915125-9
P-SK-0150NF-0600-015-028-300-000-0-000+V	Tuning-Compensation for PPU15..28X150NF	0915125-8
P-SK-0100NF-0600-015-028-300-000-0-000+V	Tuning-Compensation for PPU15..28X100NF	0915125-7
P-SK-0068NF-0650-015-028-300-000-0-000+V	Tuning-Compensation for PPU15..28X68NF	0915125-6
P-SK-0047NF-0650-015-028-300-000-0-000+V	Tuning-Compensation for PPU15...28X47NF	0915125-5

PRIMARY EQUIPMENT CONFIGURATION

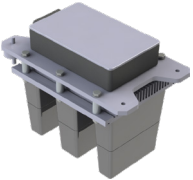
The primary inverter units shown here are generally suitable for all areas of application indicated in this catalog. From a technical and economical aspect, an optimum adaptation to the respective conditions of a specific installation is assured due to an available, wide-ranging performance grading scale. Whether a complete cabinet is needed or a mounting plate – our experienced project team will always be glad to help you selecting the best suitable components.

Primary equipment can be configured for installations with one segment (stand alone) or for installations with several segments.

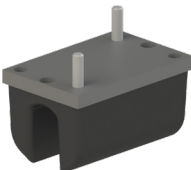
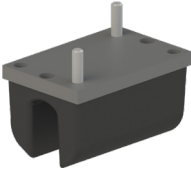
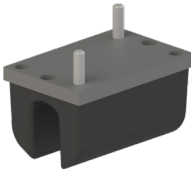
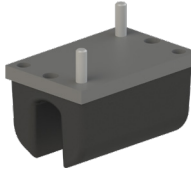
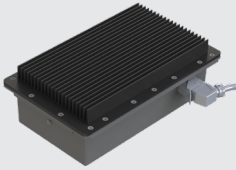
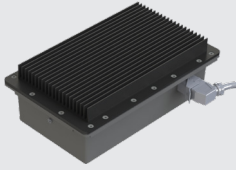
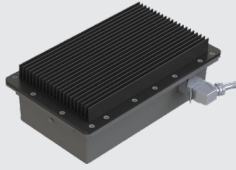
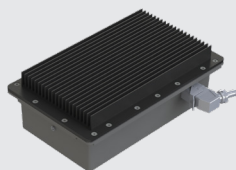
A system with two segments consists of a master unit and a slave unit. A system with more than two segments consists of a master unit, sub-slave units and a slave unit.

Examples: System with two segments: 1x master and 1x slave.
 System with four segments: 1x master, 2x sub-slave and 1x slave

CONFIGURATION FOR 124 A (PRIMARY CABLE HF50)

System with one segment		System with several segments		
Stand alone	Stand alone PU22	Master	Sub-Slave	Slave
PPU45k.1-020-124-A-IO	PPU45k.3-020-124-A-IO	PPU45k.1-020-124-M-IO	PPU45k.1-020-124-U-IO	PPU45k.1-020-124-S-IO
PPU11k.1-020-124-A-IO		PPU11k.1-020-124-M-IO	PPU11k.1-020-124-U-IO	PPU11k.1-020-124-S-IO
				
F-Pickup	E-Pickup	F-Pickup	F-Pickup	F-Pickup

CONFIGURATION FOR 72 A (PRIMARY CABLE HF25)

System with one segment		System with several segments		
Stand alone		Master	Sub-Slave	Slave
PPU45k.1-020-072-A-IO		PPU45k.1-020-072-M-IO	PPU45k.1-020-072-U-IO	PPU45k.1-020-072-S-IO
PPU11k.1-020-072-A-IO		PPU11k.1-020-072-M-IO	PPU11k.1-020-072-U-IO	PPU11k.1-020-072-S-IO
				
U-Pickup		U-Pickup	U-Pickup	U-Pickup
Primary cable PL8x4				
PPU45k.2-020-072-A-IO		PPU45k.2-020-072-M-IO	PPU45k.2-020-072-U-IO	PPU45k.2-020-072-S-IO
PPU11k.2-020-072-A-IO		PPU11k.2-020-072-M-IO	PPU11k.2-020-072-U-IO	PPU11k.2-020-072-S-IO
				
F-Pickup system		F-Pickup system	F-Pickup system	F-Pickup system

TRACK EQUIPMENT

TRACK COMPENSATION

- Compact design
- Positioning near track possible
- A box is required every 33 to 44 m

Track compensation KB 10.1

Dimensions (L x W x H) .. 194 x 154 x 100

Protection Type..... IP65

Weight..... 1.5 kg

Track current 72 A

Track compensation KB 10.4

Dimensions (L x W x H) .. 2x 440 x 156 x 110

Protection Type..... IP54

Weight..... 4 kg

Track current 124 A



Track Power Compensation Box

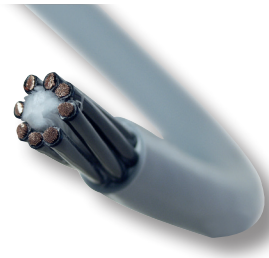
PRIMARY CABLE

Primary cable 8 x 4

Application..... Floor skid conveyor

Diameter 15.7 mm

Weight..... 0.49 kg/m



- For standard applications
- Single insulated copper conductors
- Easy installation with standard cable tools

Primary cable HF 25

Application..... EMS

Diameter 11 mm

Weight..... 0.28 kg/m



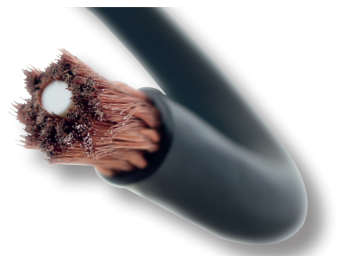
- For EMS and sortation technology applications
- Special conductor made of single insulated copper braid
- Small outside diameter

Primary cable HF 50

Application..... Floor skid conveyor/
crane installations

Diameter 16.5 mm

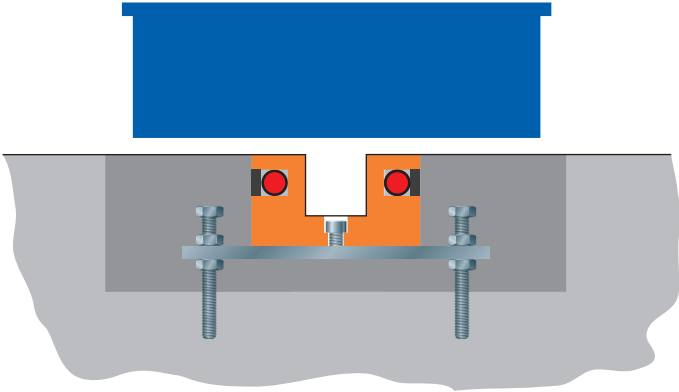
Weight..... 0.56 kg/m



- For very long track sections
- Special conductor made of single insulated copper braid
- Very low power loss due to large conductor cross section

LAYOUT METHODS

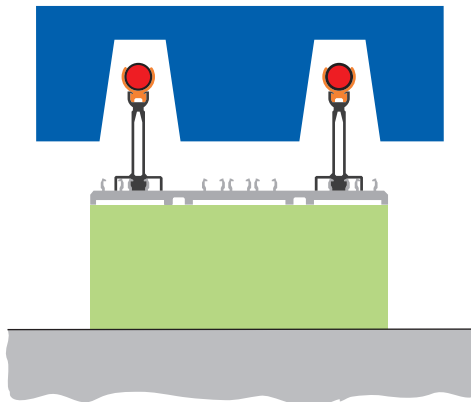
Installed inside vehicle guide track



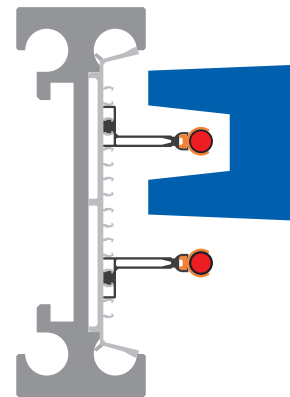
Cable installed directly into the floor



Cable on special support



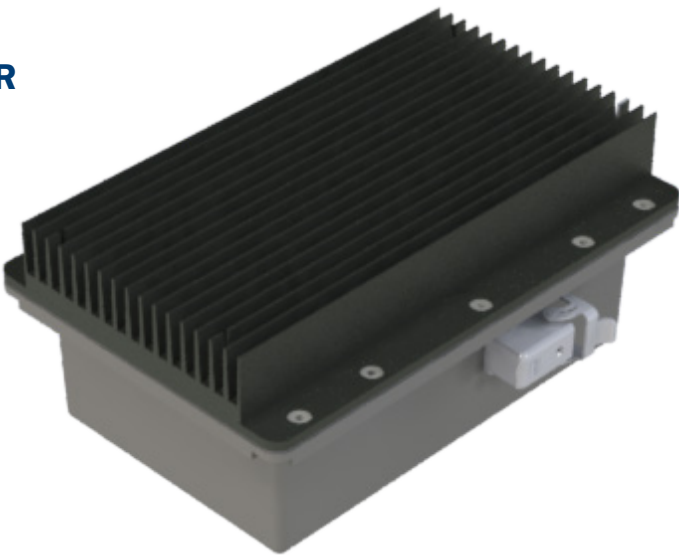
Cable in an EMS profile



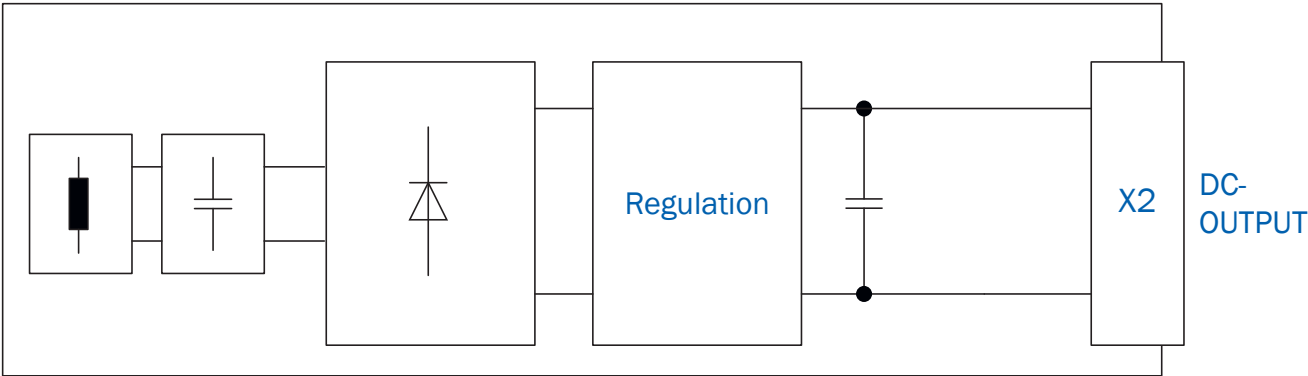
Type	Description	Order No.
P-KB-KB10.4-2M25-1μ5-440-312-110-4-M03+V	Track Power Compensation Box for 124 A / 20 kHz	10013900
P-KB-KB10.1-2M25-1μ5-245-156-110-4-M03+V	Track Power Compensation Box for 72 A / 20 kHz	0915461
LT-PL04.000-0000-19-00-00-GY+V	Track Power Litz Cable / 20 kHz / 72 A / 20 kHz CPS®PL04 8 x 4 mm ² / 15.7 mm ± 0.3 mm / UL-CSA	10021712
LT-PL25.000-0000-20-00-00-BK+V	Track Power Litz Cable / 20 kHz / 72 A / 20 kHz CPS®PL25 Cross section: 4 x 6 x 33 x 0.20 mm / 10.7 mm ± 0.4 mm	10021713
LT-PL50.000-0000-20-00-00-BK+V	Track Power Litz Cable / 20 kHz / 124 A / 20 kHz CPS®PL50 Cross section: 8 x 4 x 50 x 0.20 mm / 16.5 mm ± 0.5 mm	10021715

VEHICLE EQUIPMENT FOR 24V / 27V

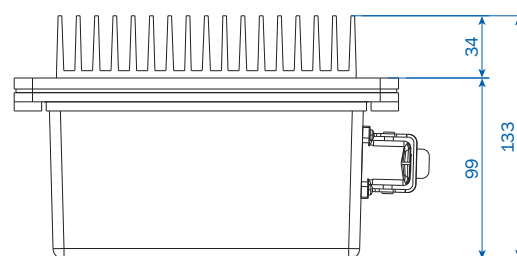
F-PICKUP PS08 WITH INTEGRATED REGULATOR



BLOCK DIAGRAM

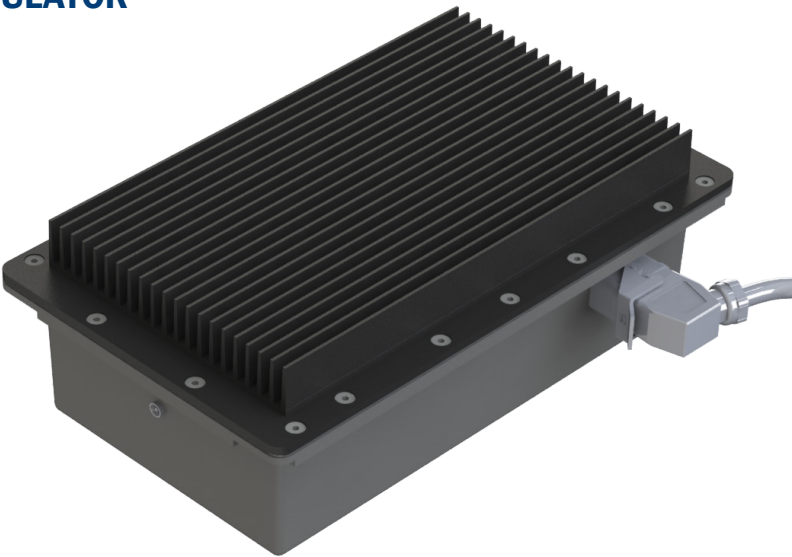


Type	Description	Order No.
PS08-0027V019AD-00000000-1C103-00310+V	PS08 / 0.5 kW / 20 kHz / Track conductor spacing 80 mm / integrated Regulator / 27 VDC / 19 A max / Battery Charging	0915429-3E21
PS08-0600W024VD-00000000-1C102-00300+V	PS08 / 0.6 kW / 20 kHz / Track conductor spacing 80 mm / integrated Regulator / 24 VDC / 25 A max	0915429-1A11
AL-5X2,5	Cable connection between PS08 and external application	see page 22

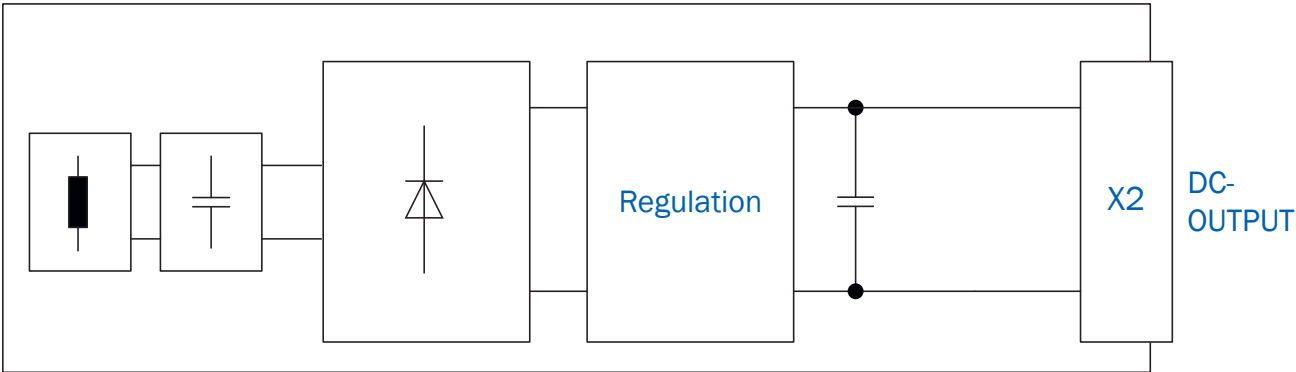


VEHICLE EQUIPMENT FOR 24V / 28.2V / 56.2V

F-PICKUP PS27.1 WITH INTEGRATED REGULATOR⁽¹⁾

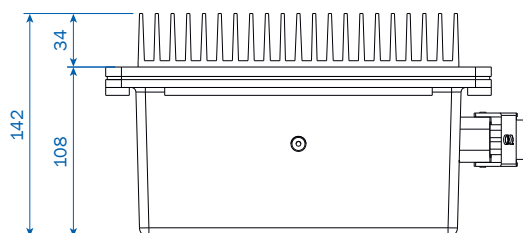


BLOCK DIAGRAM



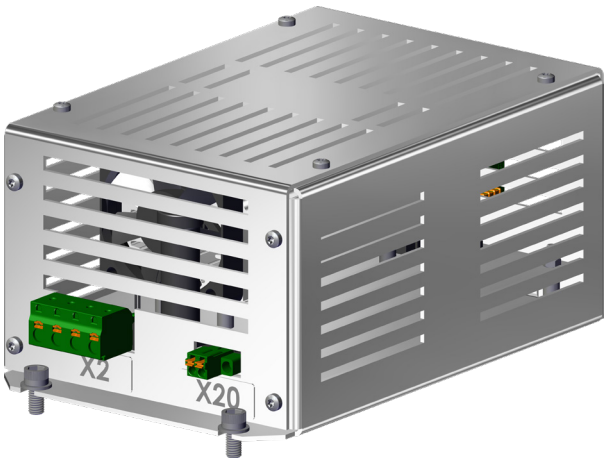
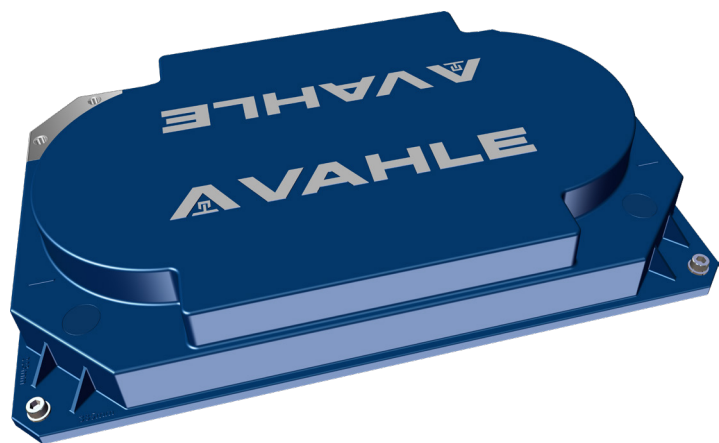
Type	Description	Order No.
PS27.1-1000W024VD-00000000-1A002-0030L+V	PS27.1 / 1 kW / 20 kHz / Track conductor spacing 100 mm / integrated Regulator / 24 VDC / 42 A max	10011549 ⁽¹⁾
PS27.1-28.2V036AD-00000000-1B002-0031L+V	PS27.1 / 1 kW / 20 kHz / Track conductor spacing 100 mm / integrated Regulator / 28.2 VDC / 36 A max. / Battery Charging	10014177 ⁽¹⁾
PS27.1-56.2V020AD-00000000-1B002-0031L+V	PS27.1 / 1 kW / 20 kHz / Track conductor spacing 100 mm / integrated Regulator / 56.2 VDC / 20 A / Battery Charging	10014214 ⁽¹⁾
AL-7G2,5	Cable connection between PS27.1 and external application	see page 22

(1) Discontinued product. Please consult with VAHLE technical department if you want to replace or to upgrade existing parts in use.

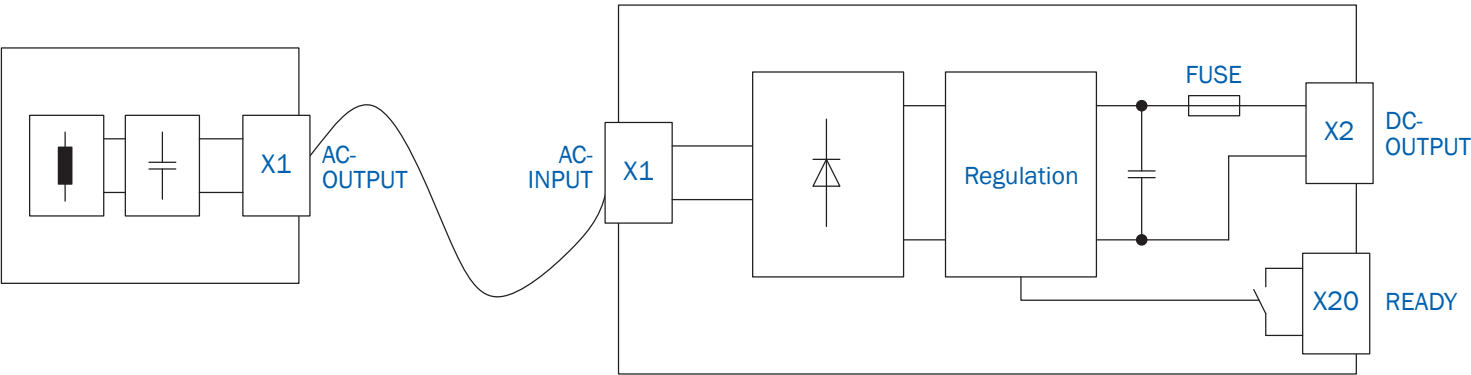


VEHICLE EQUIPMENT FOR 560V

F-PICKUP F330 AND REGULATOR RE330



BLOCK DIAGRAM



Type	Description	Order No.
vPOW_F330.1-020-124-04-L0-HV	F330 / 3.3 kW / 20 kHz / 124 A / Duty 40 % / Linear	10017749
vPOW_RE330.1-020-560-04-NI-ST-RC-NI	Regulator / 3.3 kW / 20 kHz / 560 V / Duty 40 % / No thermal monitoring / LITE / Relay contact / No Auxiliary	10017419
PX12	Cable connection between F330 and RE330	see page 22

TECHNICAL DATA

Electrical data

Peak power 3.3 kW
 Nominal power 1.3 kW
 Output voltage 560 VDC $\pm 5\%$
 Output current max 6.5 A
 Duty cycle 40 % duty (10 min cycle)
 Track current 124 A
 Track frequency 20 kHz
 Track conductor spacing 100 mm

Protection

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

Regulator mechanical data

Dimension 190 x 120 x 87.4 mm
 Mounting holes 180.5 x 80 mm
 Weight 1 kg
 Protection rating IP20
 Ambient temperature... 0 ... +40°C non-condensing
 Environment General industrial
 Cooling Forced convection

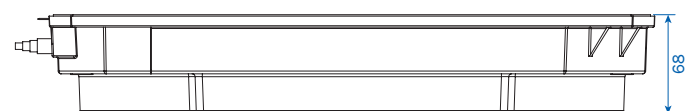
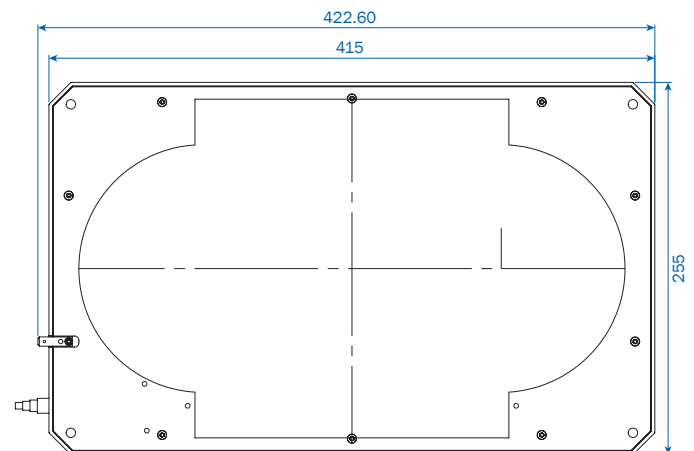
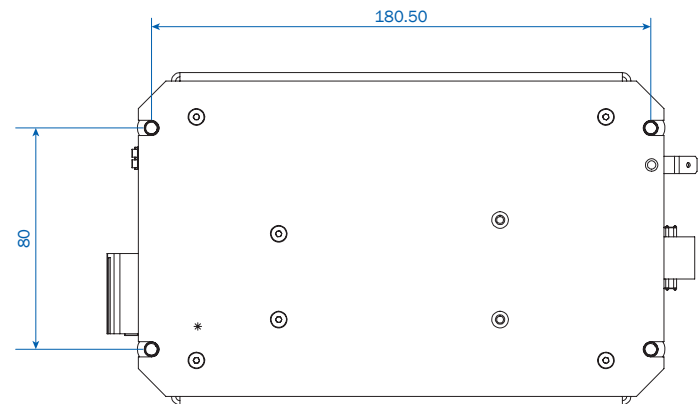
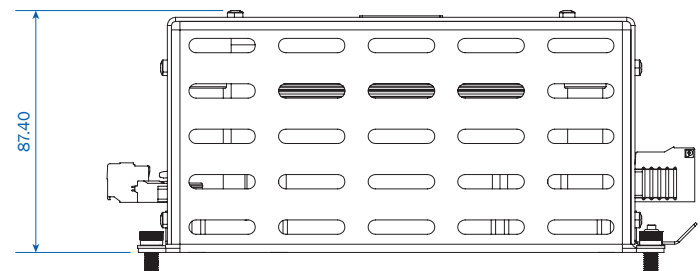
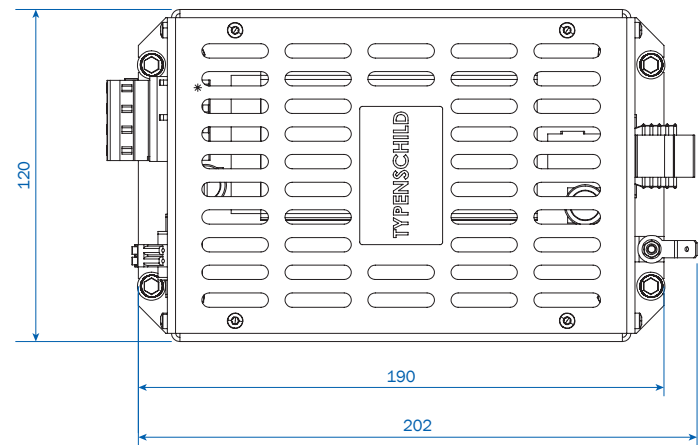
Pickup connection cable

Length 1/2/4/6 m
 Outer diameter 11 mm
 Connections Pre-terminated
 Application Flexible
 Min. bending radius 50 mm

Pickup mechanical data

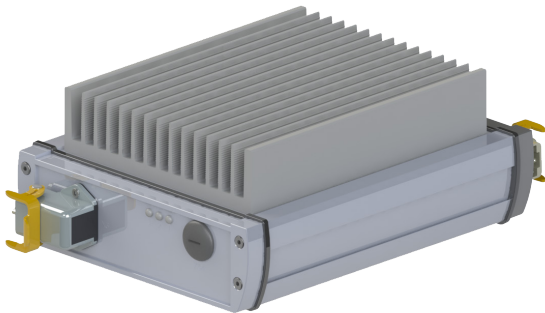
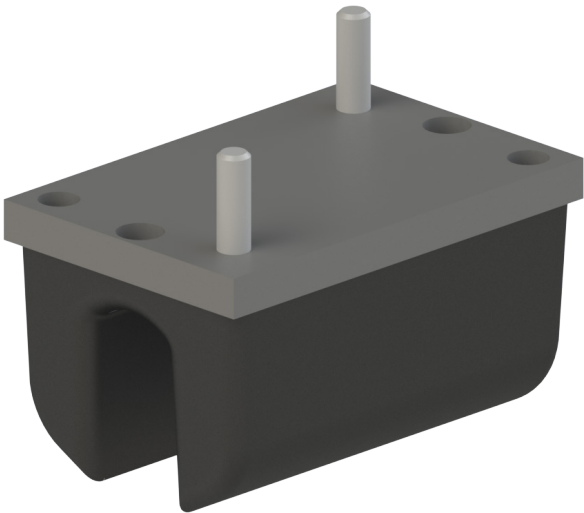
Dimension 415 x 255 x 66.5 mm
 Mounting holes 385 x 225 mm
 Weight 17 kg
 Nominal airgap 15 mm (from top of track cable to bottom of pickup)
 Vertical tolerances ± 5 mm
 Lateral tolerances ± 20 mm
 Protection rating IP54
 Ambient temperature... 0 ... +40°C non-condensing
 Environment General industrial
 Cooling Natural convection

DIMENSIONS

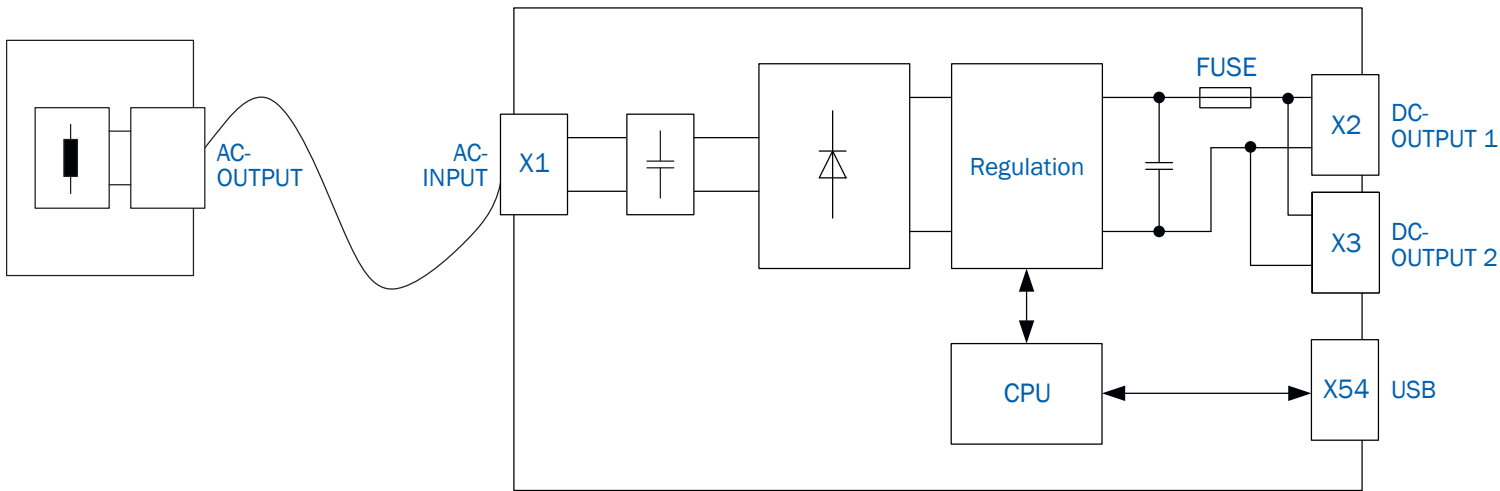


VEHICLE EQUIPMENT FOR 48V

U-PICKUP PK31 AND REGULATOR RE080



BLOCK DIAGRAM



Type	Description	Order No.
PK31 -0900W110VA-VLPK1000-19I00-8000K+V	PK31 / 900 W / 20 kHz / Nominal power 400 W / 1 m connecting cable	10020600
RE080.1-20-048-03-UC-LI-NI-NI	Regulator / 0.8 kW / 20 kHz / Duty 30 % / 48 V / Thermal monitoring / LITE / Relay contact / No Auxiliary	10033323
AL-3G4	Cable connection between RE080 and external application	see page 22

TECHNICAL DATA

Electrical data

Peak power..... 0.8 kW (5 s)
Nominal power 0.26 kW
Output voltage 48 VDC $\pm$ 5 %
Output current max 18 A
Duty cycle..... 30 % (10 min cycle)
Track current 72 A
Track frequency..... 20 kHz
Track conductor spacing 67 mm

Protection

Output over voltage..... Yes
Output over current..... Yes
Over temperature..... Yes

Regulator mechanical data

Dimension..... 304 x 220 x 94.5 mm

Mounting holes..... 204 x 175 mm

Weight..... 3.7 kg

Protection rating..... IP20 with open plug connection
IP54 with plug connected

Ambient temperature... 5 ... +40 °C non-condensing

Environment General industrial

Cooling Natural convection

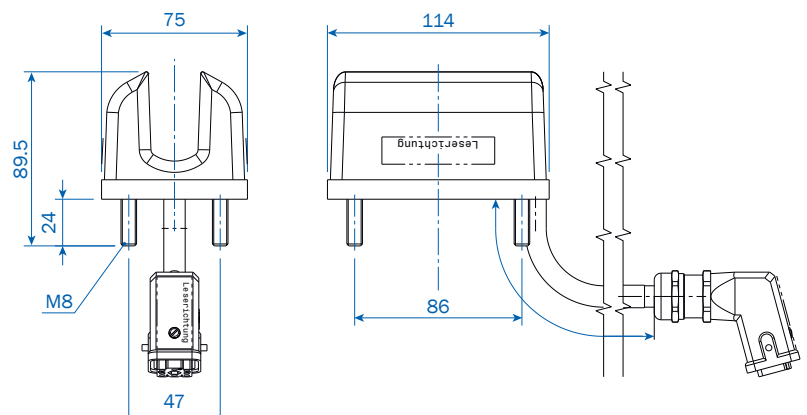
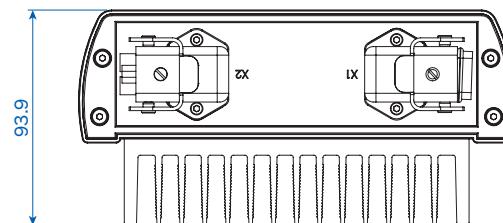
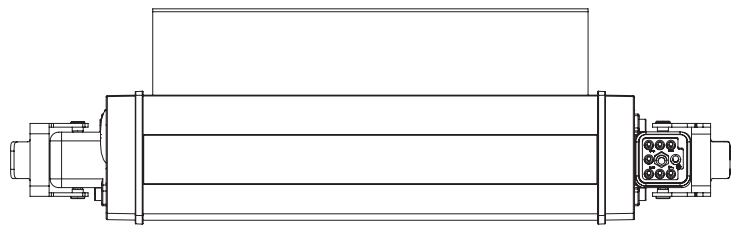
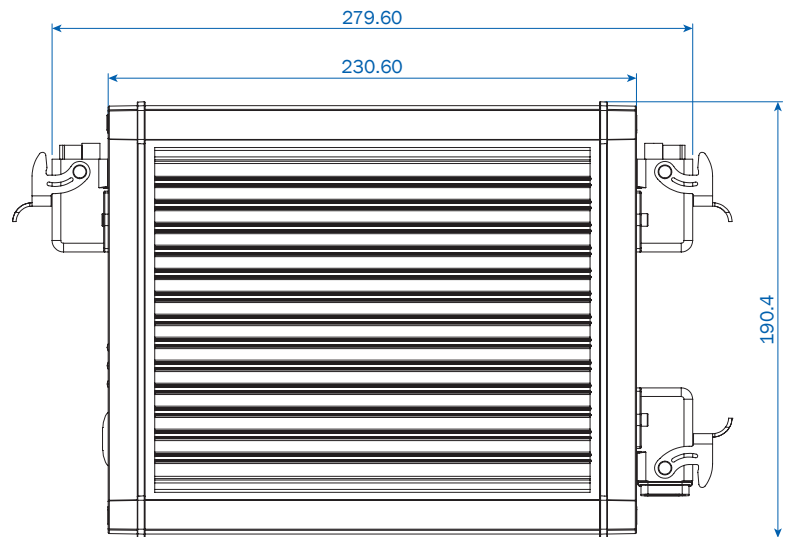
Pickup connection cable

Length.....	1 m
Outer diameter	11.2 mm
Connections.....	Pre-terminated
Application	Flexible
Min. bending radius	40 mm

Pickup mechanical data

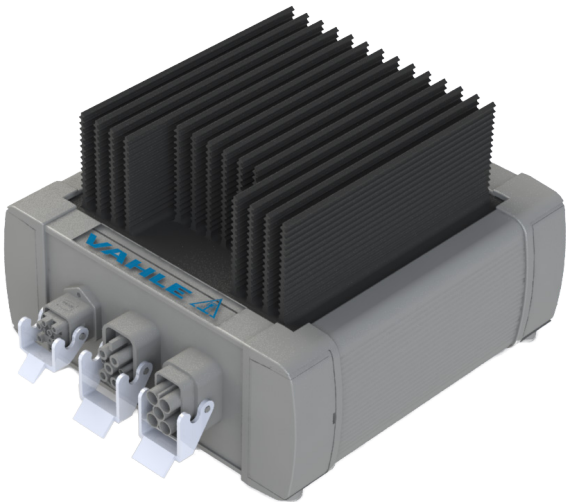
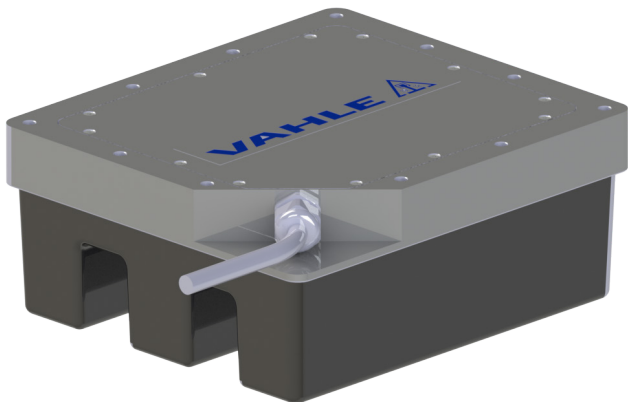
Dimension.....	114 x 75 x 89.4 mm
Mounting holes.....	86 x 47 mm
Weight.....	1.6 kg
Nominal air gap.....	12.5 mm
Vertical tolerances	±3 mm
Lateral tolerances	+4 / -12.5 mm @ 100% > +4 mm derating
Protection rating.....	IP20 with open plug connection IP54 with plug connected
Ambient temperature...	5 ... +40 °C non-condensing
Environment	General industrial
Cooling	Natural convection

DIMENSIONS

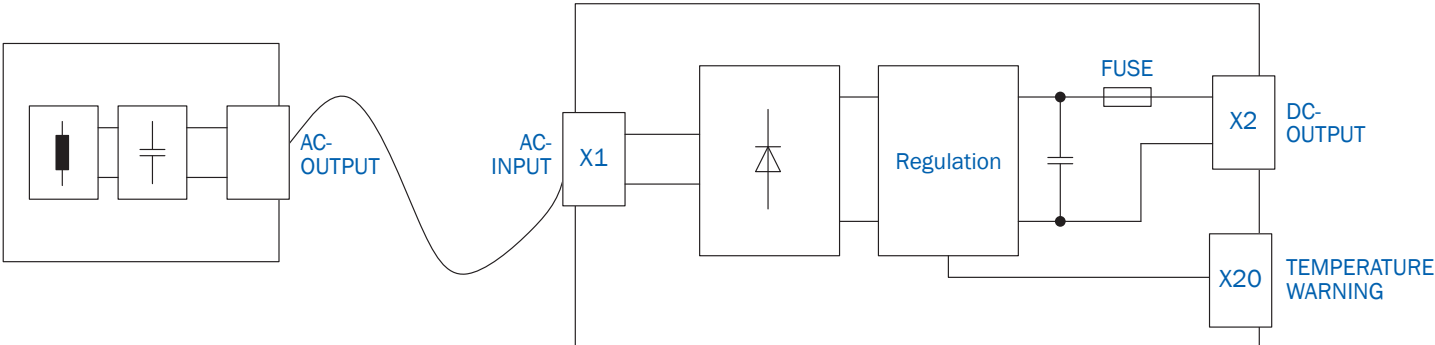


VEHICLE EQUIPMENT FOR 560 V

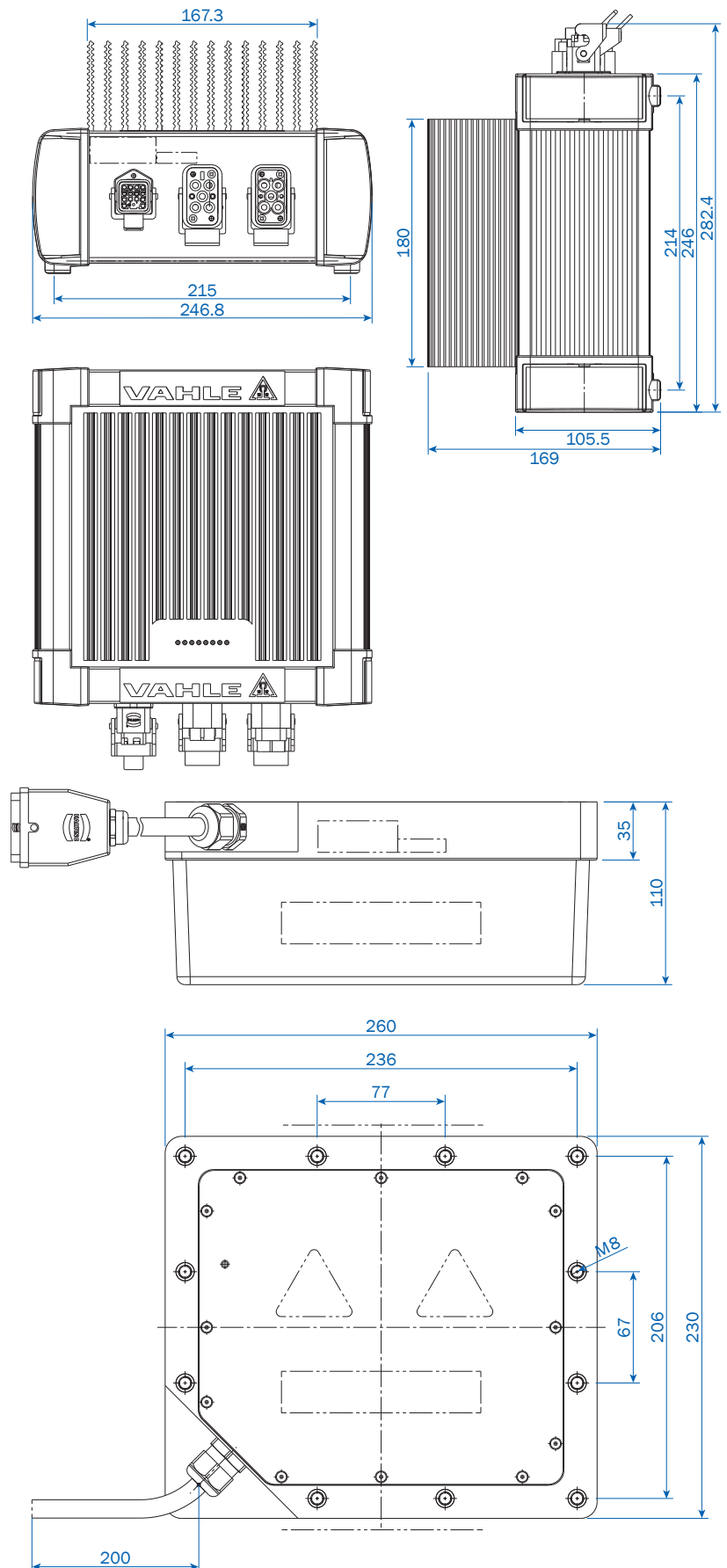
E-PICKUP PUE4 AND REGULATOR RE55



BLOCK DIAGRAM

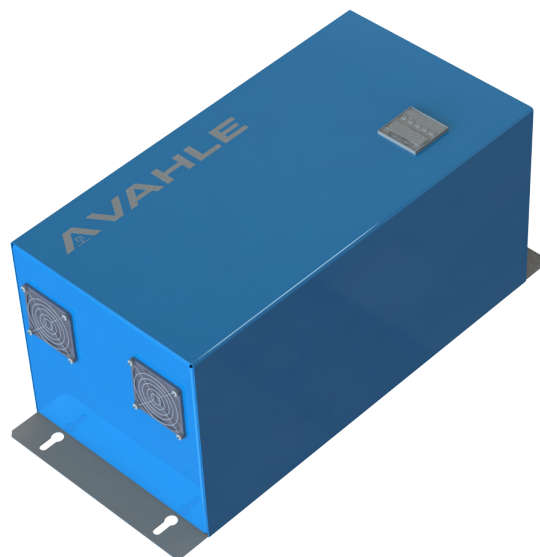
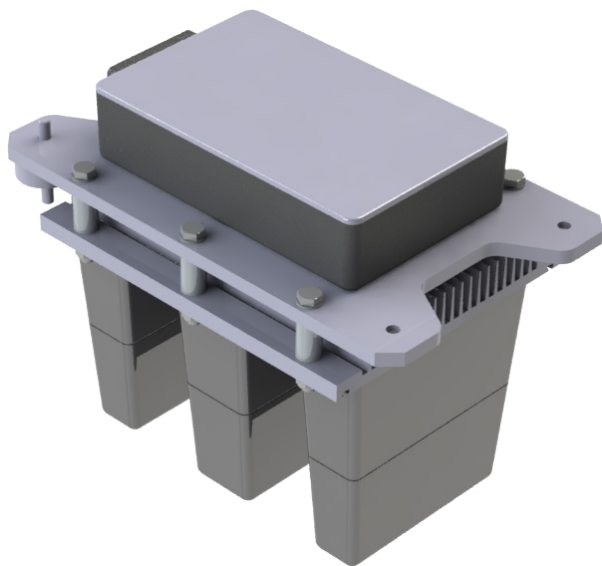


Type	Description	Order No.
PUE4-4000W270VA-00000000-12E00-00E00+V	PUE4 / 4 kW / 20 kHz / Nominal power 3.2 kW / 200 mm connecting cable	10005185
RE55.1-5500W560VD-000W00VD-11014-0030X+V	RE55.1 / 5.5 kW / 20 kHz / 560 VDC	10016225
VL-7G2,5	Cable connections between PUE4 and RE55	see page 22

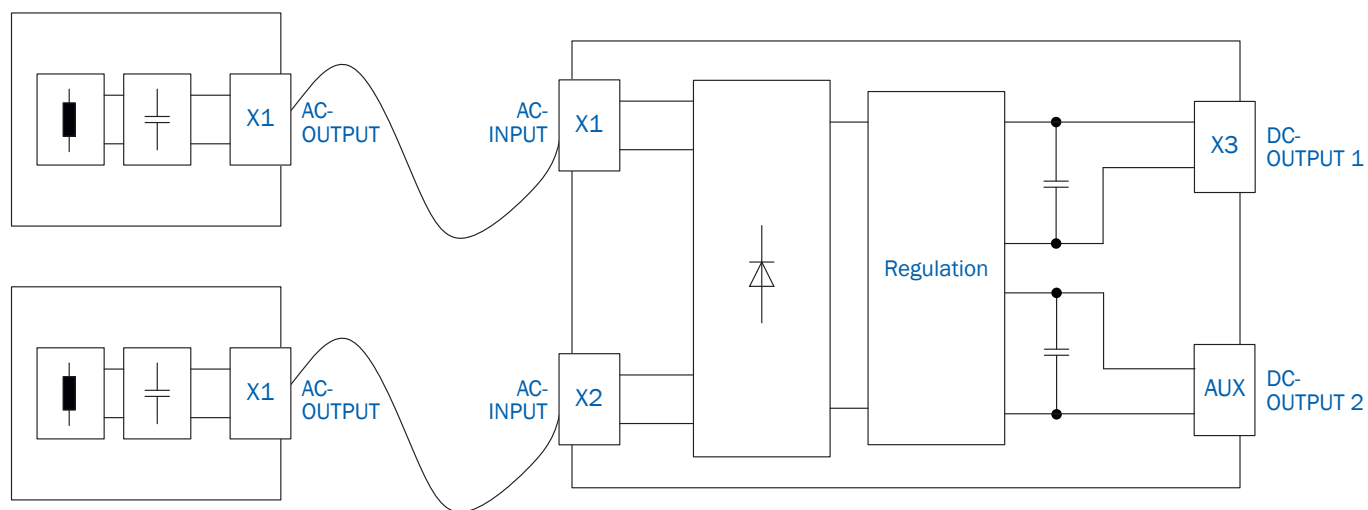


VEHICLE EQUIPMENT FOR 288V / 560V

E-PICKUP PU22 AND REGULATOR RE22



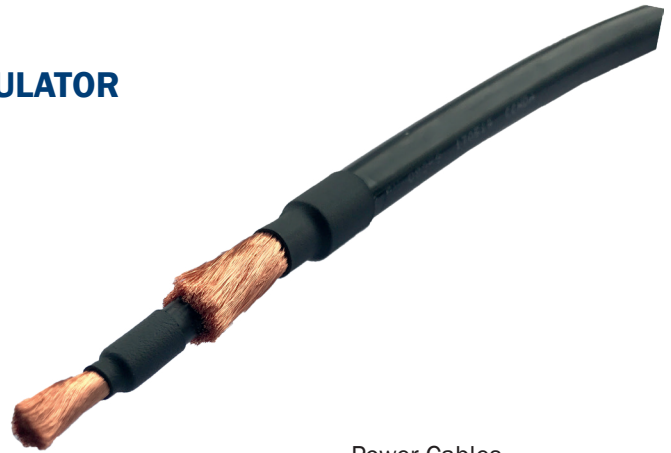
BLOCK DIAGRAM



Type	Description	Order No.
PU22-022KW310VA-00000000-00000-00C00+V	PU22 / 22 kW / 20 kHz / Mounting on narrow side	0915007-120
PU22-022KW310VA-00000000-00000-00D00+V	PU22 / 22 kW / 20 kHz / Mounting on long side	0915007-220
RE22-040KW288VD-1K6W-24VD-25A11-13400+V	RE22 / 40 kW / 20 kHz / 2x PU22 / 288VDC / Auxiliary / 1.6 kW / 24 VDC	0915011-0218
RE22-040KW560VD-960W24VD-25A00-00400+V	RE22 / 40 kW / 20 kHz / 2x PU22 / 560VDC / Auxiliary / 0.19 kW / 24 VDC	0915011-0200
AL-5G16	Cable connections between PU22 and RE22	see page 22

VEHICLE EQUIPMENT

CABLE CONNECTION BETWEEN PICKUP AND REGULATOR



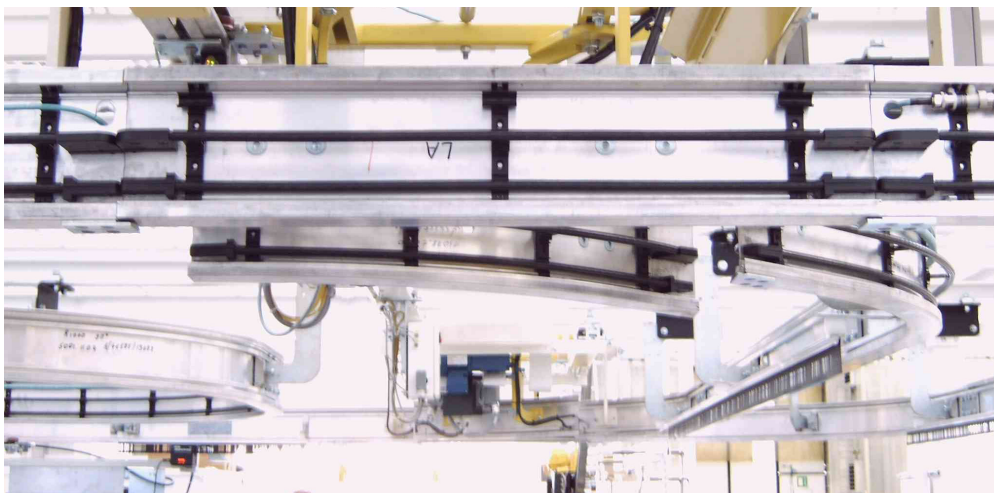
Power Cables

Description		Order No.
AL-5X2,5000-5000-01-02-00-GR+V	Cable connection between PS08 and external application / 5.0 meter	0915089-0500
AL-7G2,5000-3000-06-05-00-GR-01+V	Cable connection between PS27.1 and external application / 3.0 meter	10011506
AL-7G2,5000-5000-06-05-00-GR-01+V	Cable connection between PS27.1 and external application / 5.0 meter	10015608
AL-5G2,5000-3000-33-56-00-GR-00+V	Cable connection between RE55 and external application / 3.0 meter	10013942
AL-5G2,5000-5000-33-56-00-GR-00+V	Cable connection between RE55 and external application / 5.0 meter	10014875
vPOW_PX12-10-SF	Cable connection between F330 and RE330 / 12 A / 1.0 meter / Spring terminal connection	10018436
vPOW_PX12-20-SF	Cable connection between F330 and RE330 / 12 A / 2.0 meter / Spring terminal connection	10018437
vPOW_PX12-40-SF	Cable connection between F330 and RE330 / 12 A / 4.0 meter / Spring terminal connection	10018438
vPOW_PX12-60-SF	Cable connection between F330 and RE330 / 12 A / 6.0 meter / Spring terminal connection	10018439
AL-3G4,0000-3000-07-67-00-GR+V	Cable connection between RE080 and external application / 3.0 meter	10009468
VL-7G2,5000-0200-06-60-08-SW-00+V	Cable connection between PUE4 and RE55 / 0.2 meter	10014874
VL-7G2,5000-1000-06-60-08-SW-00+V	Cable connection between PUE4 and RE55 / 1.0 meter	10013817
VL-7G2,5000-2000-06-60-08-SW-00+V	Cable connection between PUE4 and RE55 / 2.0 meter	10007727
VL-7G2,5000-3000-06-60-08-SW-00+V	Cable connection between PUE4 and RE55 / 3.0 meter	10012482
VL-7G2,5000-4500-06-60-08-SW-00+V	Cable connection between PUE4 and RE55 / 4.5 meter	10015584
AL-5G16,000-1500-03-10-00-GR+V	Cable connection between PU22 and RE22 / 1.5 meter	0915132-0150
AL-5G16,000-2000-03-10-00-GR+V	Cable connection between PU22 and RE22 / 2.0 meter	0915132-0200
AL-5G16,000-3000-03-10-00-GR+V	Cable connection between PU22 and RE22 / 3.0 meter	0915132-0300
AL-5G16,000-6000-03-10-00-GR+V	Cable connection between PU22 and RE22 / 6.0 meter	0915132-0600
AL-5G16,000-7000-03-10-00-GR+V	Cable connection between PU22 and RE22 / 7.0 meter	0915132-0700



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

APPLICATION EXAMPLES





VAHLE, Inc.

**407 Cane Island Parkway
Katy, Texas 77494, USA**

**Phone: +1 713.465.9796
Fax: +1 713.465.1851**

**sales.usa@vahle.com
www.vahle.com**

**You can find your local contact at:
www.vahle.com/contact**