

VPUM2I2SXXFXV101TXPX10**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



PV Protect is the solution for optimum protection of the inverter against overvoltages. The ready-to-connect boxes are available for different system voltages and can be supplied with various arrester types and MPP trackers. Depending on requirements, connection is made via cable glands or WM4C connectors with convenient and reliable PUSH IN connection technology.

General ordering data

| | |
|------------|--|
| Version | Surge protection, 2 MPP's, Surge protection I / II, WM4C, 1000 V |
| Order No. | 2764150000 |
| Type | VPUM2I2SXXFXV101TXPX10 |
| GTIN (EAN) | 4064675016120 |
| Qty. | 1 pc(s). |

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Technical data

Dimensions and weights

| | | | |
|------------|---------|-----------------|------------|
| Depth | 91 mm | Depth (inches) | 3.583 inch |
| Height | 160 mm | Height (inches) | 6.299 inch |
| Width | 168 mm | Width (inches) | 6.614 inch |
| Net weight | 1,008 g | | |

Temperatures

| | | | |
|---------------------|-----------------------|-----------------------|----------------|
| Storage temperature | -40 °C...85 °C | Operating temperature | -40 °C...85 °C |
| Humidity | 5 - 95% rel. humidity | | |

Approvals and norms

| | |
|-----------|-------------|
| Approvals | EN 50539-11 |
|-----------|-------------|

Enclosure

| | | | |
|-------------------------------|-----------|----------------------|---|
| Connection type string | Plug WM4C | Enclosure attachment | Via the four holes under the cover screws |
| Switch disconnecter execution | no switch | | |

General data

| | |
|-------------------|------|
| Protection degree | IP67 |
|-------------------|------|

Inputs

| | | | |
|--------------------------------|-----------------------------------|-------------------------|-----------------------|
| Amount of maximum power points | 2 MPP | | |
| DC Input + & - | Wire connection | Type of connection | WM4 C field connector |
| | Cable entry | Number of cable entries | 2 |
| Functional earth connector | Cable entry | Number of cable entries | 1 |
| | Wire connection | Type of connection | PUSH IN |
| Fuse type | Neither fuse cartridge nor holder | | |

Surge protection DC side

| | | | |
|--|---------------|--|---------------|
| Conditions and requirements | EN 50539-11 | Discharge current I_n (8/20 μ s) | 20 kA |
| Discharge current, max. (8/20 μ s) | 40 kA | Lightning test current I_{imp} (10/350 μ s) | 6.25 kA |
| Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/-PE | 1,100 V | Operating height in the grounded PV system | ≤ 4000 m |
| Operating height in ungrounded PV system | ≤ 4000 m | PV system voltage, max. U_{cpv} | 1,100 V |
| Protection level U_p (+/-, -/PE, +/-PE) | $\leq 4,2$ kV | Requirements class | Type I/II |
| Short-circuit current I_{SCP} | 11 kA | Total discharge current I_{total} (8/20 μ s) | 50 kA |
| Total discharge current I_{total} (10/350 μ s) | 12.5 kA | | |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC000941 | ETIM 7.0 | EC000941 |
| ETIM 8.0 | EC000941 | ETIM 9.0 | EC000941 |
| ECLASS 9.1 | 27-13-08-05 | ECLASS 10.0 | 27-13-08-05 |
| ECLASS 11.0 | 27-13-08-05 | ECLASS 12.0 | 27-17-90-90 |
| ECLASS 13.0 | 27-17-90-90 | | |

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Technical data

Tender specification sheets

Long specification

Designation 2: VPU PV
BOX WM4 I+II 5 1000
2M Over voltage protec-
tion box for inverters with
2Mpp tracker, used to pro-
tect the DC side. Max.
String voltage Uoc: 1000
V MPPT1: 1 input, con-
nection via WM4 C plug-
in connector, compati-
ble with cable type TÜV
2 Pfg 1169/08.07 / EN
50618:2069 MPPT 2
is identical to MPPT 1
Connection of the box in
stitch without DC switch
2 surge protection type II
Connection of function-
al earth via cable glands
(8-12mmØ) cable cross-
section: 16mm² Protection
class: IP65 and IP67 Plas-
tic enclosure Dimensions
HxWxD: 168x160x91
mm According to stan-
dard, EN 50539-11:
2013+A1:2014 IEC
61643-31: 2018

Important note

Product information

The SPD in the box cannot be replaced.

Approvals

Approvals



ROHS

Conform

Downloads

Approval/Certificate/Document of Con- formity

[PV Protect EU Declaration of Conformity](#)

User Documentation

[Manual PV Protect T1](#)

Catalogues

[Catalogues in PDF-format](#)

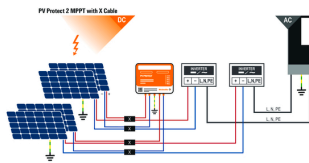
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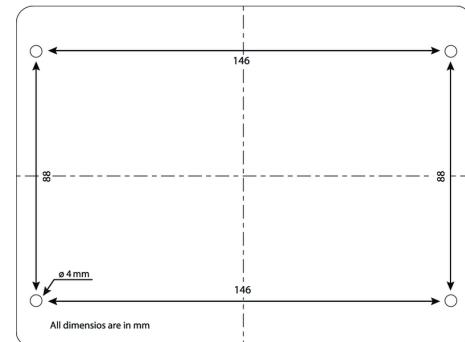
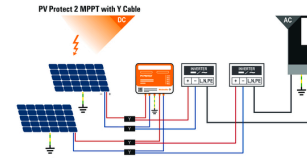
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Drawings

Connection diagram



Connection diagram



| VPUM2I2SXFV101TXPX10 | | | | | | | | | |
|----------------------|-----------------------|--|--|--|--|--|--|--|-----------------------|
| Series | PVN = PV Next | | | | | | | | Voltage |
| | VPU = PV Protect | | | | | | | | 10 = 1kV |
| | | | | | | | | | 11 = 1.1kV |
| | | | | | | | | | 15 = 1.5kV |
| Level | 1 = DC trunk box (L1) | | | | | | | | Powersupply |
| | | | | | | | | | x = n/a |
| Series | 1 = 1 MPPT supported | | | | | | | | Monitoring |
| | 2 = 2 MPPT supported | | | | | | | | x = n/a |
| | 3 = 3 MPPT supported | | | | | | | | Output Type |
| | 4 = 4 MPPT supported | | | | | | | | 0 = GG |
| | 6 = 6 MPPT supported | | | | | | | | 1 = VMAAC |
| | | | | | | | | | 2 = MCA-5m 2' |
| Inputs | 1..12 inputs | | | | | | | | SPD |
| | | | | | | | | | 0 = TYP II |
| Switch | x = n/a | | | | | | | | 1 = TYP I-II |
| | 0 = manual switch | | | | | | | | X = No SPD |
| | 1 = remote switch | | | | | | | | Fuses |
| | | | | | | | | | x = n/a |
| | | | | | | | | | 3 = only fuse holders |

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Accessories

X-Connector Cables



The Y or X cable is used to connect three or four elements of a PV system, such as the connection between PV panels, inverters and surge protection boxes. The cables are available in different connection variants.

General ordering data

| | | |
|------------|----------------------------|---|
| Type | PVHXM+M+W-XX06M-15 | Version |
| Order No. | 2814270000 | Photovoltaics, X-Connector Cable, 2x MC4 Female, 1x WM4 C Male, |
| GTIN (EAN) | 4064675298953 | 1x MC4 Male, 6mm², 1000 V |
| Qty. | 1 pc(s). | |
| Type | PVHXW-W-PXXX06W+15 | Version |
| Order No. | 2814280000 | Photovoltaics, X-Connector Cable, 2x WM4 C Male, 1x Partly stripped |
| GTIN (EAN) | 4064675298960 | cable end, 1x WM4 C Female, 6mm², 1500 V |
| Qty. | 1 pc(s). | |
| Type | PVHXW-W-W+XX06W+15 | Version |
| Order No. | 2814240000 | Photovoltaics, X-Connector Cable, 2x WM4 C Male, 2x WM4 C |
| GTIN (EAN) | 4064675298922 | Female, 6mm², 1500 V |
| Qty. | 1 pc(s). | |
| Type | PVHXW+W+W-XX06W-15 | Version |
| Order No. | 2814250000 | Photovoltaics, X-Connector Cable, 2x WM4 C Female, 2x WM4 C |
| GTIN (EAN) | 4064675298939 | Male, 6mm², 1500 V |
| Qty. | 1 pc(s). | |
| Type | PVHXM-M-W+XX06M+15 | Version |
| Order No. | 2814260000 | Photovoltaics, X-Connector Cable, 2x MC4 Male, 1x WM4 C Female, |
| GTIN (EAN) | 4064675298946 | 1x MC4 Female, 6mm², 1000 V |
| Qty. | 1 pc(s). | |
| Type | PVHXW+W+PXXX06M-15 | Version |
| Order No. | 2814290000 | Photovoltaics, X-Connector Cable, 2x WM4 C Female, 1x Partly |
| GTIN (EAN) | 4064675298977 | stripped cable end, 1x WM4 C Male, 6mm², 1500 V |
| Qty. | 1 pc(s). | |

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Accessories

Accessories



The dust protection cap "Dustcap VSSO" protects the Weidmüller and type 4 solar connectors against dust and dirt.

The "SafetyClip" protects the Weidmüller solar connectors against unintentional opening and can only be released using the special multi-tool.

General ordering data

| | | |
|------------|----------------------------|--|
| Type | SAFETY-CLIP WM4 VPE10 | Version |
| Order No. | 1328150000 | Photovoltaics, Accessories, Locking clip |
| GTIN (EAN) | 4050118238631 | |
| Qty. | 10 pc(s). | |
| Type | VSSO WM4 C | Version |
| Order No. | 1254870000 | Photovoltaics, Flat design |
| GTIN (EAN) | 4050118047479 | |
| Qty. | 100 pc(s). | |

Tools



- For flexible and solid conductors with special insulating materials
- High-quality stripping for industrial applications (complies with aircraft industry requirements)
- Specially shaped blades enable stripping of special types of insulation and conductor configurations
- Stripping length adjustable via end stop
- Very versatile thanks to interchangeable stripping units
- Stripping results reproduced accurately over and over again
- No damage to the conductor
- A long-lasting, reliable tool thanks to its sturdy design
- Integrated cutting function

General ordering data

| | | |
|------------|----------------------------|----------------------------------|
| Type | MULTI-STRIPAX PV | Version |
| Order No. | 1190490000 | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4032248973262 | |
| Qty. | 1 pc(s). | |

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Accessories

PV-Stick field connectors



Faster is better. This also applies to the cabling of solar systems. Our handy connectors stay firmly in your grip even in frosty temperatures and can be installed very quickly and easily without a crimping tool.

You don't need crimp contacts and crimping tools and you avoid assembly errors. This saves up to 50% installation time – without affecting quality. The new photovoltaic connectors are TÜV-approved and comply with IEC 62852.

Our "PUSH IN" technology enables safe connections with minimal effort – insert, turn: current!

- 1.500 V DC (DE) / 1,500 V DC (EN)
- PUSH IN technology
- Standard-compliant quality in accordance with IEC 62852
- Ergonomic, prize-winning design
- Fastest PV connector currently available
- Reliable latching

General ordering data

| | | |
|------------|----------------------------|--|
| Type | PV-STICK+ VPE10 | Version |
| Order No. | 1303450000 | Photovoltaics, Plug-in connector, PUSH IN connection, female |
| GTIN (EAN) | 4050118102468 | |
| Qty. | 10 pc(s). | |
| Type | PV-STICK- VPE10 | Version |
| Order No. | 1303490000 | Photovoltaics, Plug-in connector, PUSH IN connection, male |
| GTIN (EAN) | 4050118102529 | |
| Qty. | 10 pc(s). | |
| Type | PV-STICK SET | Version |
| Order No. | 1422030000 | Photovoltaics, Plug-in connector, PUSH IN connection, male, female |
| GTIN (EAN) | 4050118225723 | |
| Qty. | 1 pc(s). | |

Crosshead screwdriver Phillips



Crosshead screwdriver, Phillips, SDK PH DIN 5262, ISO 8764/2-PH, output to ISO 8764-PH, ChromTop tip, SoftFinish grip

General ordering data

| | | |
|------------|----------------------------|--------------------------|
| Type | SDK PH2 | Version |
| Order No. | 9008490000 | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056484 | |
| Qty. | 1 pc(s). | |

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General ordering data

| | | |
|------------|----------------------------|---|
| Type | PVHYM+XXW-XX06M-15 | Version |
| Order No. | 2814210000 | Photovoltaics, Y-Connector Cable, 1x MC4 Female, 1x WM4 C Male, |
| GTIN (EAN) | 4064675298892 | 1x MC4 Male, 6mm ² , 1000 V |
| Qty. | 1 pc(s). | |
| Type | PVHYM+XXW+XX06M+15 | Version |
| Order No. | 2814200000 | Photovoltaics, Y-Connector Cable, 1x MC4 Male, 1x WM4 C Female, |
| GTIN (EAN) | 4064675298885 | 1x MC4 Female, 6mm ² , 1000 V |
| Qty. | 1 pc(s). | |
| Type | PVHYW+XXW+XX06W+15 | Version |
| Order No. | 2814180000 | Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x WM4 C |
| GTIN (EAN) | 4064675298861 | Female, 6mm ² , 1500 V |
| Qty. | 1 pc(s). | |
| Type | PVHYW+XXW-XX06W-15 | Version |
| Order No. | 2814190000 | Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x WM4 C |
| GTIN (EAN) | 4064675298878 | Male, 6mm ² , 1500 V |
| Qty. | 1 pc(s). | |
| Type | PVHYW+XXPXX06W+15 | Version |
| Order No. | 2814220000 | Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 1x Partly stripped |
| GTIN (EAN) | 4064675298908 | cabl end, 1x WM4 C Female, 6mm ² , 1500 V |
| Qty. | 1 pc(s). | |

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www.weidmueller.com**Accessories****... for photovoltaic plug-in connectors**

After stripping the insulation, a suitable contact or wire end ferrule can be crimped onto the end of the cable. Crimping forms a secure connection between conductor and contact and has largely replaced soldering. Crimping denotes the creation of a homogeneous, permanent connection between conductor and connecting element. The connection can be made only with high-quality precision tools. The result is a secure and reliable connection both in mechanical and electrical terms. Weidmüller offers a wide range of mechanical crimping tools. Integral ratchets with release mechanisms guarantee optimum crimping. Crimped connections made with Weidmüller tools comply with international standards and regulations.

General ordering data

| | | |
|------------|----------------------------|---|
| Type | CTF PV WM4 | Version |
| Order No. | 1222870000 | Photovoltaics, Crimping tool for photovoltaic contacts, Mechanical, |
| GTIN (EAN) | 4050118006254 | without interchangeable inserts |
| Qty. | 1 pc(s). | |