

# PVC DC 2I 1O 12MPP SPD1R WM4 11

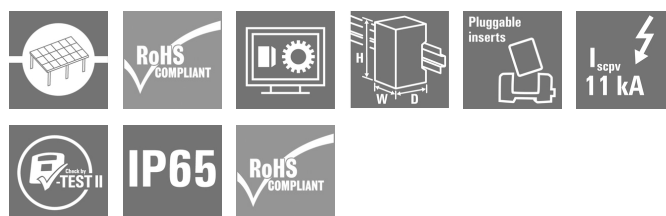
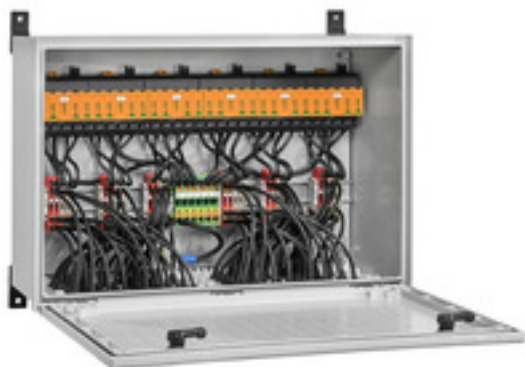
**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

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Germany

[www.weidmueller.com](http://www.weidmueller.com)



PV Next combiner boxes for inverters with 1 to 12 MPP trackers are used to protect the DC side of a photovoltaic system. The combiner boxes protect the inverter against overvoltages and thus comply with the European Directive CLC/TS 51643-32. In addition, these products offer the possibility to protect the system against reverse currents and the possibility to combine strings to save cables during installation.

## General ordering data

|                   |                                                                                                                    |
|-------------------|--------------------------------------------------------------------------------------------------------------------|
| Version           | Photovoltaics, Combiner Box, PV Next, 1100 V, 12 MPP's, 2 Inputs / 1 Output per MPP, Surge protection I / II, WM4C |
| Order No.         | <a href="#">8000115469</a>                                                                                         |
| Type              | PVC DC 2I 1O 12MPP SPD1R WM4 11                                                                                    |
| GTIN (EAN)        | 4099986879126                                                                                                      |
| Qty.              | 1 pc(s).                                                                                                           |
| Replacement parts | <a href="#">2530600000</a> <a href="#">2534300000</a> <a href="#">3020600000</a> <a href="#">3098500000</a>        |

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Catalogue status 26.04.2025 / We reserve the right to make technical changes.

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## Technical data

## Dimensions and weights

|            |            |                 |             |
|------------|------------|-----------------|-------------|
| Depth      | 250 mm     | Depth (inches)  | 9.842 inch  |
| Height     | 467 mm     | Height (inches) | 18.386 inch |
| Width      | 600 mm     | Width (inches)  | 23.622 inch |
| Net weight | 16,434.6 g |                 |             |

## Temperatures

|                     |                |          |                           |
|---------------------|----------------|----------|---------------------------|
| Ambient temperature | -25 °C...50 °C | Humidity | 5 - 90 %, no condensation |
|---------------------|----------------|----------|---------------------------|

## DC string monitoring

|                     |               |
|---------------------|---------------|
| Monitoring function | Non monitored |
|---------------------|---------------|

## Approvals and norms

|           |                         |
|-----------|-------------------------|
| Approvals | EN 61439-2, IEC 61439-2 |
|-----------|-------------------------|

## Guarantee

|               |         |
|---------------|---------|
| Time interval | 5 years |
|---------------|---------|

## Electrical characteristics

Current per Maximum Power Point, max. 35 A

|                                     |               |         |
|-------------------------------------|---------------|---------|
| Rated DC voltage                    |               | 1,100 V |
| Rated short-term current resistance | Rated current | 43.75 A |

## Enclosure

|                        |                                   |                      |                                                 |
|------------------------|-----------------------------------|----------------------|-------------------------------------------------|
| Connection type string | Plug WM4C                         | Enclosure attachment | Via mounting foots                              |
| Impact resistance      | IK10 in accordance with IEC 62262 | Insulating material  | Polyester glass-fibre reinforced, Polycarbonate |
| Protection class       | II                                | Type of mounting     | Fixing lugs                                     |

## General data

|                       |                                          |                   |      |
|-----------------------|------------------------------------------|-------------------|------|
| Installation location | Protected outdoor area (> 1 km from sea) | Protection degree | IP65 |
| Standards             | EN 61643-31                              |                   |      |

## Inputs

|                                      |                 |                              |                        |
|--------------------------------------|-----------------|------------------------------|------------------------|
| Amount of maximum power points (MPP) | 12              |                              |                        |
| DC Input + & -                       | Wire connection | Type of connection           | WM4C plug-in connector |
|                                      |                 | Compatible cable crossection | TÜV 2 Pfg 1169/08.07   |
|                                      |                 | Wire cross-section, min.     | 4 mm²                  |
|                                      |                 | Wire cross-section, max.     | 6 mm²                  |
|                                      | Cable entry     | Number of cable entries      | 24                     |

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|                                    |                                                        |                                           |                                        |
|------------------------------------|--------------------------------------------------------|-------------------------------------------|----------------------------------------|
| Functional earth connector         | Cable entry                                            | Number of cable entries                   | 1                                      |
|                                    | Wire connection                                        | Type of connection                        | PUSH IN with actuator                  |
|                                    |                                                        | Flexible, max. H05(07) V-K                | 25 mm <sup>2</sup>                     |
|                                    |                                                        | w. wire end ferrule, DIN 46228 pt 1, max. | 16 mm <sup>2</sup>                     |
| Fuse type                          | Neither fuse cartridge nor holder                      |                                           |                                        |
| Fuses                              | No                                                     |                                           |                                        |
| Max. number of DC inputs           | per Maximum Power Point 2 inputs connected in parallel |                                           |                                        |
| Number of conduit inlets           | 24                                                     |                                           |                                        |
| Number of string inputs per MPP    | ≤ 2                                                    |                                           |                                        |
| Surge protection auxiliary contact | Wire connection                                        | Type of connection                        | Tension clamp connection with actuator |
|                                    |                                                        | Flexible, max. H05(07) V-K                | 1.5 mm <sup>2</sup>                    |
|                                    |                                                        | w. wire end ferrule, DIN 46228 pt 1, max. | 1.5 mm <sup>2</sup>                    |
|                                    | Cable entry                                            | Number of cable entries                   | 1                                      |
| Number of inputs                   | 24                                                     |                                           |                                        |

## Outputs

|                           |                                  |                                |                        |
|---------------------------|----------------------------------|--------------------------------|------------------------|
| DC Output + & -           | Wire connection                  | Type of connection             | WM4C plug-in connector |
|                           |                                  | Compatible cable cross-section | TÜV 2 Pfg 1169/08.07   |
|                           |                                  | Wire cross-section, min.       | 4 mm <sup>2</sup>      |
|                           |                                  | Wire cross-section, max.       | 6 mm <sup>2</sup>      |
| Max. number of DC outputs | per Maximum Power Point 1 output |                                |                        |

## Surge protection DC side

|                                                    |          |                                                                    |                    |
|----------------------------------------------------|----------|--------------------------------------------------------------------|--------------------|
| Discharge current $I_n$ (8/20 $\mu$ s)             | 20 kA    | Discharge current, max. (8/20 $\mu$ s)                             | 40 kA              |
| Lightning test current $I_{imp}$ (10/350 $\mu$ s)  | 6.25 kA  | Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/-PE | 1,100 V            |
| PV system voltage, max. $U_{cpv}$                  | 1,100 V  | Protection level $U_p$ (+/-, -/PE, +/-PE)                          | ≤ 3.8 kV           |
| Protection level $U_p$ (+/-)                       | ≤ 3.8 kV | Protection level $U_p$ (+/PE)                                      | ≤ 3.8 kV           |
| Protection level $U_p$ (-/PE)                      | ≤ 3.8 kV | Requirements class                                                 | Type I/II          |
| Short-circuit current $I_{SCPv}$                   | 11,000 A | Standards                                                          | EN 61643-31        |
| Standby power consumption $P_C$                    | <0.2 W   | Surge protection DC side                                           | 1000 V type I + II |
| Total discharge current $I_{total}$ (8/20 $\mu$ s) | 50 kA    | Total discharge current $I_{total}$ (10/350 $\mu$ s)               | 12.5 kA            |

## DC load break switch

|                               |           |              |    |
|-------------------------------|-----------|--------------|----|
| Switch disconnector execution | no switch | Voltage type | DC |
|-------------------------------|-----------|--------------|----|

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## Technical data

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002928    | ETIM 7.0    | EC002928    |
| ETIM 8.0    | EC003857    | ETIM 9.0    | EC003857    |
| ETIM 10.0   | EC003857    | ECLASS 9.0  | 22-57-92-03 |
| ECLASS 9.1  | 22-57-02-90 | ECLASS 10.0 | 22-57-02-90 |
| ECLASS 11.0 | 22-57-02-92 | ECLASS 12.0 | 22-57-02-92 |
| ECLASS 13.0 | 22-57-02-92 | ECLASS 14.0 | 22-57-02-92 |
| ECLASS 15.0 | 22-57-02-92 |             |             |

## Tender specification sheets

## Long specification

Combiner box for inverters with 12 MPP tracker, suitable for protecting the DC side of a photovoltaic system according to EN 51543-32.

## MPP1:

2 inputs, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg 1169/08.07 / EN 50618:2063

1 output, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg 1169/08.07 / EN 50618:2063

## MPP2 to 12:

identical to MPP1

Max. string voltage Uoc: 1100V

1 class/type I + II combined arrester with signal contact

Connection of the signal contact via cable glands (8-12mmØ) max. conductor cross-section: 1.5mm<sup>2</sup>

Connection of the functional earth via cable glands (8-12mmØ) Conductor cross-section: 16-25mm<sup>2</sup>

Protection class: IP65

All built into a glass fibre reinforced polyester housing. Dimensions HxWxD: 467x600x250 mm

Approval according to low voltage switchgear and controlgear IEC 61439-1:2011 and EN 61439-2:2011

## Environmental Product Compliance

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| RoHS Compliance Status               | Compliant with exemption             |
| RoHS Exemption (if applicable/known) | 7a, 7cl                              |
| REACH SVHC                           | Lead 7439-92-1                       |
| SCIP                                 | bdab5698-6a20-4370-8e28-8810d882d01a |

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## Technical data

## Important note

## Product information

The SCIP number was assigned due to a lead content of more than 0.1 % of the net weight.

Safe use instruction according to ECHA:

The identification of the hazardous substance is sufficient to allow safe use of the article throughout its life cycle, including the service life, disassembly and waste/recycling phase

## Approvals

## Approvals



## Approvals MAMID

[https://mdcop.weidmueller.com/mediadelivery/rendition/900\\_319222/-T1z1mm-S800/](https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/)

## ROHS

Conform

## Downloads

## Approval/Certificate/Document of Conformity

[Declaration of Conformity](#)

## Engineering Data

[CAD data – STEP](#)

## Technical Documentation

[Schematic diagram](#)

## User Documentation

[Manual PV Next String Combiner Box](#)[MANUAL PV NEXT IT/ES/FR](#)

## White paper

[Fact Sheet DE PV CB Wie man Gebäude gegen Blitzeinschläge schützt](#)[Fact Sheet DE PV Wie man die Lebensdauer eines GAK verlängert](#)[Fact Sheet DE PV CB Wann Sicherungen zu installieren sind](#)[Fact Sheet DE CB PV NEXT](#)[Fact Sheet EN PV CB When DC fuses are mandatory to install](#)[Fact Sheet EN CB PV NEXT](#)[Fact Sheet EN PV How to protect buildings against lightning strikes](#)[Fact Sheet EN PV How to extend the life time of a Combiner Box](#)[Fact Sheet DE CB PV Strings kombinieren](#)[Fact Sheet EN CB Combining PV strings](#)[Fact Sheet EN PV Combiner Box earthing](#)[Fact Sheet DE PV Combiner Box Erdung](#)

## Catalogues

[Catalogues in PDF-format](#)

### PVC DC 2I 10 12MPP SPD1R WM4 11

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## Drawings



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## Accessories

## UV-resistant cable ties

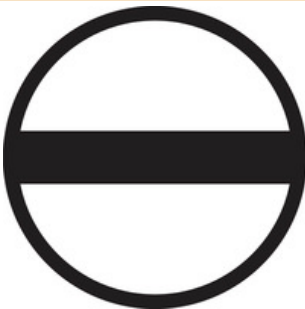


UV-resistant polyamide 6.6 ensures long durability of our special cable ties even with strong UV radiation. Ideal for continuous outdoor use.

## General ordering data

|            |                            |                                               |
|------------|----------------------------|-----------------------------------------------|
| Type       | CB-UVR 290/4,5 BK          | Version                                       |
| Order No.  | <a href="#">2659350000</a> | Cable ties, 4,5 x 290 mm, Polyamide 66, 220 N |
| GTIN (EAN) | 4050118682816              |                                               |
| Qty.       | 100 pc(s).                 |                                               |

## Slotted screwdriver



VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

## General ordering data

|            |                            |                                                                                         |
|------------|----------------------------|-----------------------------------------------------------------------------------------|
| Type       | SDIS 0.6X3.5X100           | Version                                                                                 |
| Order No.  | <a href="#">2749810000</a> | Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm |
| GTIN (EAN) | 4050118897012              |                                                                                         |
| Qty.       | 1 pc(s).                   |                                                                                         |
| Type       | SDIS 1.0X5.5X125           | Version                                                                                 |
| Order No.  | <a href="#">2749850000</a> | Screwdriver, Blade width (B): 5.5 mm, Blade length: 125 mm, Blade thickness (A): 1 mm   |
| GTIN (EAN) | 4050118897050              |                                                                                         |
| Qty.       | 1 pc(s).                   |                                                                                         |

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## Accessories

## Sealing sets



## General ordering data

|            |                            |                                                               |
|------------|----------------------------|---------------------------------------------------------------|
| Type       | BLINDPLUG SET5 7X28MM      | Version                                                       |
| Order No.  | <a href="#">3077670000</a> | Photovoltaics, Blind plug                                     |
| GTIN (EAN) | 4099987081894              |                                                               |
| Qty.       | 1 pc(s).                   |                                                               |
| Type       | BLINDPLUG SET50 7X28MM     | Version                                                       |
| Order No.  | <a href="#">3077650000</a> | Photovoltaics, Blind plug, Accessories, Blind plug, 50 pieces |
| GTIN (EAN) | 4099987081870              |                                                               |
| Qty.       | 1 pc(s).                   |                                                               |

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

- 1,500 V DC (DE) / 1,500 V DC (EN)
- SNAP 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 SET               | Version                          |
| Order No.  | <a href="#">1422030000</a> | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4050118225723              |                                  |
| Qty.       | 1 pc(s).                   |                                  |
| Type       | PV-STICK+ VPE10            | Version                          |
| Order No.  | <a href="#">1303450000</a> | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4050118102468              |                                  |
| Qty.       | 10 pc(s).                  |                                  |



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## Accessories

|            |                            |                                  |
|------------|----------------------------|----------------------------------|
| Type       | PV-STICK- VPE10            | Version                          |
| Order No.  | <a href="#">1303490000</a> | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4050118102529              |                                  |
| Qty.       | 10 pc(s).                  |                                  |
| Type       | PV-STICK+ VPE200           | Version                          |
| Order No.  | <a href="#">1303470000</a> | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4050118102543              |                                  |
| Qty.       | 200 pc(s).                 |                                  |
| Type       | PV-STICK- VPE200           | Version                          |
| Order No.  | <a href="#">1303510000</a> | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4050118102390              |                                  |
| Qty.       | 200 pc(s).                 |                                  |
| Type       | PV-STICK+ VPE50            | Version                          |
| Order No.  | <a href="#">1303460000</a> | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4050118102383              |                                  |
| Qty.       | 50 pc(s).                  |                                  |
| Type       | PV-STICK- VPE50            | Version                          |
| Order No.  | <a href="#">1303500000</a> | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4050118102536              |                                  |
| Qty.       | 50 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.  | <a href="#">1190490000</a> | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4032248973262              |                                  |
| Qty.       | 1 pc(s).                   |                                  |

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## Accessories

## Y-Connector Cables



The Y cable is used for the parallel connection of several strings in a PV system, e.g. for splitting a line in front of an inverter.

The cables are available in different connection variants.

## General ordering data

|            |                            |                                                                 |
|------------|----------------------------|-----------------------------------------------------------------|
| Type       | PVHYM-M-XXXX6W+11          | Version                                                         |
| Order No.  | <a href="#">2877850000</a> | Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x MC4 Male, |
| GTIN (EAN) | 4064675666417              | 6mm <sup>2</sup> , 1100 V                                       |
| Qty.       | 1 pc(s).                   |                                                                 |
| Type       | PVHYM+M+XXXX6W-11          | Version                                                         |
| Order No.  | <a href="#">2877860000</a> | Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x MC4 Female, |
| GTIN (EAN) | 4064675666424              | 6mm <sup>2</sup> , 1100 V                                       |
| Qty.       | 1 pc(s).                   |                                                                 |

## Cutting tools



Cutting tools for conductors up to 8 mm, 12 mm, 14 mm and 22 mm outside diameter. The special blade geometry allows pinch-free cutting of copper and aluminium conductors with minimum physical effort. The cutting tools (KT 8 to KT 22) also come with VDE and GS-tested protective insulation up to 1,000 V in accordance with EN/IEC 60900.

## General ordering data

|            |                            |                                                    |
|------------|----------------------------|----------------------------------------------------|
| Type       | KT 14                      | Version                                            |
| Order No.  | <a href="#">1157820000</a> | Cutting tools, Cutting tool for one-hand operation |
| GTIN (EAN) | 4032248945344              |                                                    |
| Qty.       | 1 pc(s).                   |                                                    |

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**Replacement parts****Spare Arrester****General ordering data**

|            |                            |                                                                        |
|------------|----------------------------|------------------------------------------------------------------------|
| Type       | VPU PV I+II 0 1000         | Version                                                                |
| Order No.  | <a href="#">2530600000</a> | Surge voltage arrester, Low voltage, Accessories, Surge protection I / |
| GTIN (EAN) | 4050118540819              | II, Spare arrester                                                     |
| Qty.       | 9 pc(s).                   |                                                                        |
| Type       | VPU PV I+II OM 1000        | Version                                                                |
| Order No.  | <a href="#">2534300000</a> | Surge voltage arrester, Low voltage, Surge protection I / II, Spare    |
| GTIN (EAN) | 4050118545906              | arrester                                                               |
| Qty.       | 9 pc(s).                   |                                                                        |

**Replacement parts****General ordering data**

|            |                            |                                                          |
|------------|----------------------------|----------------------------------------------------------|
| Type       | BRES REPLACEMENT HINGE     | Version                                                  |
| Order No.  | <a href="#">3098500000</a> | Photovoltaics, Spare part, Hinge pin, 10 MPP's, 12 MPP's |
| GTIN (EAN) | 4099987129831              |                                                          |
| Qty.       | 1 pc(s).                   |                                                          |
| Type       | BRES OFM-14 WALLMOUNT      | Version                                                  |
| Order No.  | <a href="#">3020600000</a> | Photovoltaics, Mounting foot, 10 MPP's, 12 MPP's         |
| GTIN (EAN) | 4099986933705              |                                                          |
| Qty.       | 1 pc(s).                   |                                                          |