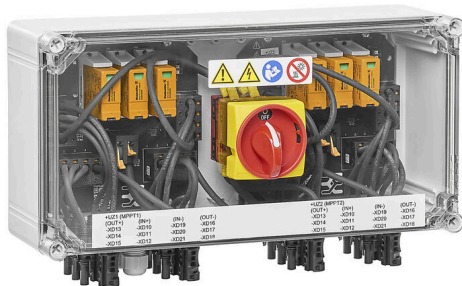


**PVN DC 3I 3O 2MPP SW SPD1R EVO 11**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

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 5 1643-32. 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, 2 MPP's, 3 Inputs / 3 Outputs per MPP, Surge protection I / II, Switch disconnecter, MC4-Evo 2 |
| Order No.  | <a href="#">2890360000</a>   |
| Type       | PVN DC 3I 3O 2MPP SW SPD1R EVO 11  |
| GTIN (EAN) | 4064675878209  |
| Qty.       | 1 items  |

# PVN DC 3I 30 2MPP SW SPD1R EVO 11

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## Technical data

### Approvals

Approvals



ROHS Conform

### Dimensions and weights

|            |        |                 |             |
|------------|--------|-----------------|-------------|
| Depth      | 172 mm | Depth (inches)  | 6.7716 inch |
| Height     | 240 mm | Height (inches) | 9.4488 inch |
| Width      | 400 mm | Width (inches)  | 15.748 inch |
| Net weight | 4170 g |                 |             |

### Temperatures

Ambient temperature -40 °C...50 °C Humidity 5...95 %, no condensation

### Environmental Product Compliance

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

### Included in delivery

|                      |          |               |
|----------------------|----------|---------------|
| Included accessories | Article  | Mounting foot |
|                      | Quantity | 4             |

### Approvals and norms

Approvals EN 61439-2, IEC 61439-2

### Guarantee

Time interval 5 years

### Electrical characteristics

|                                       |                          |         |
|---------------------------------------|--------------------------|---------|
| Rated DC voltage                      | 1100 V                   |         |
| Rated short-term current resistance   | Rated current            | 50 A    |
| Current per Maximum Power Point, max. | 45 A                     |         |
| Rated DC current per connection       | Current per string, max. | 37.50 A |
|                                       | Current per string, max. | 45.00 A |

### Enclosure

|                     |  |                        |                   |
|---------------------|--|------------------------|-------------------|
| Insulating material | Polyester glass-fibre reinforced, Polycarbonate, Polycarbonate       | Type of mounting       | Wall mounting     |
| Impact resistance   | IK08 in accordance with IEC 62208, IK10 in accordance with IEC 62262 | Enclosure attachment   | Via mounting feet |
| Protection class    | II   | Connection type string | Plug MC4-Evo 2    |

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## Technical data

### General data

|                       |                                       |                   |      |
|-----------------------|---------------------------------------|-------------------|------|
| Standards             | EN 61643-31                           | Protection degree | IP65 |
| Installation location | Protected outdoor area (Land and Sea) |                   |      |

### Inputs

|                                      |  |   |   |
|--------------------------------------|--|---|---|
| Amount of maximum power points (MPP) | 2  |   |   |
| Functional earth connector           | Cable entry  | Number of cable entries                   | 2   |
|                                      |  | Wire connection                           | Type of connection Screw connection                       |
|                                      | Wire connection  | 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>  |
| Number of conduit inlets             | 2  |   |   |
| DC Input + & -                       | Wire connection  | Type of connection                        | Stäubli MC4-Evo 2 connector                               |
|                                      |  | Compatible cable crossection              | TÜV 2 Pfg1169/08.07                                       |
|                                      |  | Wire cross-section, min.                  | 2.5 mm <sup>2</sup>                                       |
|                                      |  | Wire cross-section, max.                  | 16 mm <sup>2</sup>  |
| Fuse type                            | Neither fuse cartridge nor holder                      |   |   |
| Fuses                                | No   |   |   |
| Max. number of DC inputs             | per Maximum Power Point 3 inputs connected in parallel |   |   |
| Number of string inputs per MPP      | ≤ 3  |   |   |
| Surge protection auxiliary contact   | Cable entry  | Number of cable entries                   | 2   |
|                                      |  | Wire connection                           | Type of connection Tension clamp connection with actuator |
|                                      | Wire connection  | 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>                                       |
| Number of inputs                     | 3  |   |   |

### Outputs

|                           |   |                              |                             |
|---------------------------|---|------------------------------|-----------------------------|
| Max. number of DC outputs | per Maximum Power Point 3 outputs connected in parallel |                              |                             |
| DC Output + & -           | Wire connection   | Type of connection           | Stäubli MC4-Evo 2 connector |
|                           |   | Compatible cable crossection | TÜV 2 Pfg1169/08.07         |
|                           |   | Wire cross-section, min.     | 2.5 mm <sup>2</sup>         |
|                           |   | Wire cross-section, max.     | 16 mm <sup>2</sup>          |

### Surge protection DC side

|  |             |   |          |
|--|-------------|---|----------|
| Standards                                | EN 61643-31 | Lightning test current Iimp (10/350 μs) | 6.25 kA  |
| Discharge current, max. (8/20 μs)        | 40 kA       | Protection level Up (+/-, -/PE, +/PE)   | ≤ 3.8 kV |
| Standby power consumption PC             | <0.2 W      | Short-circuit current ISCPV             | 11000 A  |
| Total discharge current Itotal (8/20 μs) | 50 kA       | Discharge current In (8/20 μs)          | 20 kA    |

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### Technical data

|                            |                    |  |          |
|----------------------------|--------------------|--|----------|
| Requirements class         | Type I/II          | Total discharge current I <sub>total</sub><br>(10/350µs)             | 12.5 kA  |
| Protection level Up (-/PE) | ≤ 3.8 kV           | Protection level Up (+/-)  | ≤ 3.8 kV |
| Protection level Up (+/PE) | ≤ 3.8 kV           | PV system voltage, max. U <sub>cpv</sub>                             | 1100 V   |
| Surge protection DC side   | 1000 V type I + II | Maximum continuous operating voltage<br>DC UCPV mode +/-, -/PE, +/PE | 1100 V   |

#### DC load break switch

|                                    |                     |   |                 |
|------------------------------------|---------------------|---|-----------------|
| Rated impulse withstand voltage    | 8 kV                | Switch disconnecter execution                           | switch in cover |
| Switching disconnecter capacity    | DC-PV1, IEC 60947-3 | Motor drive available                                   | No              |
| Rated short-circuit making current | 1.4 A               | Number of breaking operation cycles at<br>rated current | 300             |
| Number of operating cycles         | 10000               |   |                 |

#### 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

#### Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 8.0    | EC003857    | ETIM 9.0    | EC003857    |
| ETIM 10.0   | EC003857    | ECLASS 14.0 | 22-57-02-92 |
| ECLASS 15.0 | 22-57-02-92 |             |             |

#### Tender specification sheets

**Long specification**  
 Combiner box for inverters  
 with 2 MPP tracker,  
 suitable for protecting the  
 DC side of a photovoltaic  
 system according to EN  
 51543-32. MPP1:  
 3 inputs, connection via  
 MC4-Evo 2 connector,  
 compatible with cable type  
 TÜV 2 Pfg1 169/08.07 /  
 EN 50618:2063  
 3 outputs, connection via  
 MC4-Evo 2 connector,  
 compatible with cable type  
 TÜV 2 Pfg1 169/08.07 /  
 EN 50618:2063  
 MPP2:  
 identical to MPP1  
 Max. string voltage U<sub>oc</sub>:  
 1100V  
 1 class/type I + II  
 combined arrester with  
 signal contact  
 With load break switch  
 for safe separation of the  
 string lines  
 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)

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## Technical data

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Conductor cross-section:  
16-25mm<sup>2</sup>  
Protection class: IP65  
All built into a glas fibre  
reinforced polyester  
housing. Dimensions  
HxWxD: 240x200x172  
mm  
Approval according to  
low voltage switchgear  
and controlgear IEC  
61439-1:2011 and EN  
61439-2:2011

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**Drawings**





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## Accessories

### PV Sun Covers



#### General ordering data

|            |                            |   |  |
|------------|----------------------------|---|--|
| Type       | PV SUNCOVER 20/40/13 SW    | Version                                       |  |
| Order No.  | <a href="#">8000143248</a> | Photovoltaics, Sun cover, Switch disconnecter |  |
| GTIN (EAN) | 4099987 111874             |   |  |
| Qty.       | 1 ST                       |   |  |

### 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 ST                       |  |  |

### 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

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## Accessories

### General ordering data

|            |                            |                                  |  |
|------------|----------------------------|----------------------------------|--|
| Type       | MULTI-STRIPAX PV           | Version                          |  |
| Order No.  | <a href="#">1190490000</a> | Photovoltaics, Plug-in connector |  |
| GTIN (EAN) | 4032248973262              |                                  |  |
| Qty.       | 1 ST                       |                                  |  |

### 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 PH3                    | Version                  |  |
| Order No.  | <a href="#">9008500000</a> | Screwdriver, Screwdriver |  |
| GTIN (EAN) | 4032248056491              |                          |  |
| Qty.       | 1 ST                       |                          |  |

### Slotted screwdriver



Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

### General ordering data

|            |                            |                          |  |
|------------|----------------------------|--------------------------|--|
| Type       | SDS 0.6X3.5X100            | Version                  |  |
| Order No.  | <a href="#">9008330000</a> | Screwdriver, Screwdriver |  |
| GTIN (EAN) | 4032248056286              |                          |  |
| Qty.       | 1 ST                       |                          |  |
| Type       | SDS 1.0X5.5X150            | Version                  |  |
| Order No.  | <a href="#">9008350000</a> | Screwdriver, Screwdriver |  |
| GTIN (EAN) | 4032248056316              |                          |  |
| Qty.       | 1 ST                       |                          |  |

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## Accessories

### Accessories



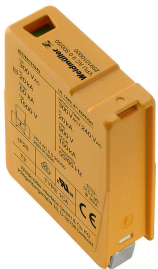
The dust protection cap "Dustcap VSSO" protects the Weidmüller and type 4 solar connectors against dust and dirt.

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

### General ordering data

|            |                            |                            |  |
|------------|----------------------------|----------------------------|--|
| Type       | VSSO WM4 C                 | Version                    |  |
| Order No.  | <a href="#">1254870000</a> | Photovoltaics, Flat design |  |
| GTIN (EAN) | 4050118047479              |                            |  |
| Qty.       | 100 ST                     |                            |  |

### Spare Arrester



### General ordering data

|            |                            |  |  |
|------------|----------------------------|--|--|
| Type       | VPU PV I+II O 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 ST                       |  |  |
| 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 ST                       |  |  |

### 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.

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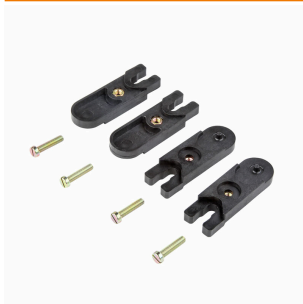
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**Accessories**

**General ordering data**

|            |                            |         |   |
|------------|----------------------------|---------|---|
| Type       | CB-UVR 290/4,5 BK          | Version |   |
| Order No.  | <a href="#">2659350000</a> | Version | Cable ties, 4.5 x 290 mm, Polyamide 66, 220 N |
| GTIN (EAN) | 4050118682816              |         |   |
| Qty.       | 100 ST                     |         |   |

**External fixing lugs**



External attachment lugs 4-part set

**General ordering data**

|            |                            |         |  |
|------------|----------------------------|---------|--|
| Type       | MF FPC                     | Version |  |
| Order No.  | <a href="#">9536040000</a> | Version | FPC (polycarbonate empty enclosure), Mounting foot, Fixing lugs, |
| GTIN (EAN) | 4032248009442              | Version | Height: 40 mm, Width: 19 mm, Depth: 35.5 mm, Basic material:     |
| Qty.       | 1 ST                       | Version | Polyamide, Polyamide 66, Light Grey                              |

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

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