

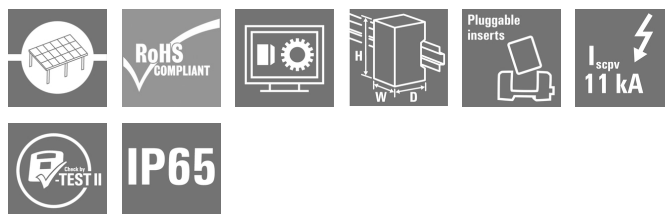
**PVN DC 3I 3O 2MPP SW SPD1R EVO 11****Weidmüller Interface GmbH & Co. KG**

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 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, 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 pc(s).  |

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

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## Technical data

### Dimensions and weights

|            |         |                 |             |
|------------|---------|-----------------|-------------|
| Depth      | 172 mm  | Depth (inches)  | 6.772 inch  |
| Height     | 240 mm  | Height (inches) | 9.449 inch  |
| Width      | 400 mm  | Width (inches)  | 15.748 inch |
| Net weight | 4,170 g |                 |             |

### Temperatures

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

### Approvals and norms

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

### Guarantee

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

### Electrical characteristics

Current per Maximum Power Point, max. 50 A

|                                     |                          |        |
|-------------------------------------|--------------------------|--------|
| Rated DC current per connection     | Current per string, max. | 37.5 A |
|                                     | Current per string, max. | 45 A   |
| Rated short-term current resistance | Rated current            | 50 A   |
|                                     | Rated current            | 67 A   |
| Rated DC voltage                    | 1,100 V                  |        |
| Switching disconnector capacity     | DC-PV1, IEC 60947-3      |        |

### Enclosure

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

### General data

|                       |                                       |                   |      |
|-----------------------|---------------------------------------|-------------------|------|
| Installation location | Protected outdoor area (Land and Sea) | Protection degree | IP65 |
|-----------------------|---------------------------------------|-------------------|------|

### Inputs

|                                |                 |   |                     |
|--------------------------------|-----------------|---|---------------------|
| Amount of maximum power points | 2 MPP           |   |                     |
| DC Input + & -                 | Wire connection | Wire cross-section, min.                  | 2.5 mm <sup>2</sup> |
|                                |                 | Wire cross-section, max.                  | 6 mm <sup>2</sup>   |
| Functional earth connector     | Cable entry     | Number of cable entries                   | 2                   |
|                                |                 | 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>  |

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**Technical data**

|                                    |  |   |  |
|------------------------------------|--|---|--|
| Fuse type                          | Neither fuse cartridge nor holder                      |   |  |
| Max. number of DC inputs           | per Maximum Power Point 3 inputs connected in parallel |   |  |
| 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                   | 2                                      |

**Outputs**

|                 |                 |                          |                             |
|-----------------|-----------------|--------------------------|-----------------------------|
| DC Output + & - | Wire connection | Type of connection       | Stäubli MC4-Evo 2 connector |
|                 |                 | Wire cross-section, min. | 2.5 mm <sup>2</sup>         |
|                 |                 | Wire cross-section, max. | 6 mm <sup>2</sup>           |

Max. number of DC outputs per Maximum Power Point 3 outputs connected in parallel

**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)                          | $\leq 3.8$ kV |
| Protection level $U_p$ (+/-)                         | $\leq 3.8$ kV      | Protection level $U_p$ (+/PE)                                      | $\leq 3.8$ kV |
| Protection level $U_p$ (-/PE)                        | $\leq 3.8$ kV      | Requirements class   | Type I/II     |
| Short-circuit current $I_{SCPv}$                     | 11,000 A           | 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            |  |               |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002928    | ETIM 7.0    | EC002928    |
| ETIM 8.0    | EC003857    | ETIM 9.0    | 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 |

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****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 Uoc:  
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) 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

**Environmental Product Compliance**

REACH SVHC

Lead 7439-92-1

SCIP

bdab5698-6a20-4370-8e28-8810d882d01a

**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

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Approvals

**Downloads**

|                         |   |
|-------------------------|---|
| Engineering Data        | <a href="#">CAD data – PV Next Schematic Diagram</a><br><a href="#">CAD data – STEP</a>   |
| Technical Documentation | <a href="#">2932710000_00_03-2023_DRILL-TEMP_PV-Next_20-40</a>  |
| User Documentation      | <a href="#">Manual PV Next String Combiner Box</a><br><a href="#">MANUAL PV NEXT IT/ES/FR</a><br><a href="#">Instruction leaflet PV NEXT MINI</a>   |
| White paper             | <a href="#">Fact Sheet DE PV CB Wie man Gebäude gegen Blitzeinschläge schützt</a><br><a href="#">Fact Sheet DE PV Wie man die Lebensdauer eines GAK verlängert</a><br><a href="#">Fact Sheet DE PV CB Wann Sicherungen zu installieren sind</a><br><a href="#">Fact Sheet DE CB PV NEXT</a><br><a href="#">Fact Sheet EN PV CB When DC fuses are mandatory to install</a><br><a href="#">Fact Sheet EN CB PV NEXT</a><br><a href="#">Fact Sheet EN PV How to protect buildings against lightning strikes</a><br><a href="#">Fact Sheet EN PV How to extend the life time of a Combiner Box</a><br><a href="#">Fact Sheet DE PV CB Lastentrennschalter</a><br><a href="#">Fact Sheet DE CB PV Strings kombinieren</a><br><a href="#">Fact Sheet DE PV CB Richtig verbinden</a><br><a href="#">Fact Sheet EN PV CB Load break switch</a><br><a href="#">Fact Sheet EN CB Combining PV strings</a><br><a href="#">Fact Sheet EN PV CB connection</a><br><a href="#">Fact Sheet EN PV Combiner Box earthing</a><br><a href="#">Fact Sheet DE PV Combiner Box Erdung</a> |
| Catalogues              | <a href="#">Catalogues in PDF-format</a>  |

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## Drawings



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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****PV Sun Covers****General ordering data**

|            |                            |               |
|------------|----------------------------|---------------|
| Type       | PV SUN COVER 56/30/21      | Version       |
| Order No.  | <a href="#">8000087025</a> | Photovoltaics |
| GTIN (EAN) | 4064675845188              |               |
| 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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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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 pc(s).                   |                          |

**Y-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       | PVHYM-M-XXXX6W+15          | Version   |
| Order No.  | <a href="#">2877850000</a> | Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x MC4 Male, |
| GTIN (EAN) | 4064675666417              | 6mm², 1500 V  |
| Qty.       | 1 pc(s).                   |   |
| Type       | PVHYM+M-XXXX6W-15          | Version   |
| Order No.  | <a href="#">2877860000</a> | Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x MC4 Female, |
| GTIN (EAN) | 4064675666424              | 6mm², 1500 V  |
| Qty.       | 1 pc(s).                   |   |



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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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).                   |  |

**External fixing lugs**

External attachment lugs 4-part set

**General ordering data**

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

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

**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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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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 1.0X5.5X150            | Version                  |
| Order No.  | <a href="#">9008350000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056316              |                          |
| Qty.       | 1 pc(s).                   |                          |
| Type       | SDS 0.6X3.5X100            | Version                  |
| Order No.  | <a href="#">9008330000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056286              |                          |
| Qty.       | 1 pc(s).                   |                          |

**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 pc(s).                 |                            |

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# Drawings

