

## PVN DC 2I 2O 4MPP SPD1R CG 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, 4 MPP's, 2 Inputs / 2 Outputs per MPP, Surge protection I / II, Cable gland |
| Order No.  | <a href="#">2737610000</a>  |
| Type       | PVN DC 2I 2O 4MPP SPD1R CG 11   |
| GTIN (EAN) | 4050118824889   |
| Qty.       | 1 items   |

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**Technical data**

**Approvals**

Approvals



ROHS Conform

**Dimensions and weights**

|            |        |                 |             |
|------------|--------|-----------------|-------------|
| Depth      | 132 mm | Depth (inches)  | 5.1968 inch |
| Height     | 235 mm | Height (inches) | 9.252 inch  |
| Width      | 400 mm | Width (inches)  | 15.748 inch |
| Net weight | 3897 g |                 |             |

**Temperatures**

Ambient temperature -40 °C...45 °C Humidity 5 - 90 %, 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             |
|                      | Article  | Sealing plug  |
|                      | Quantity | 9             |

**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 67 A               |
| Current per Maximum Power Point, max. | 53.6 A                           |
| Rated DC current per connection       | Current per string, max. 53.60 A |

**Enclosure**

|                     |  |                      |                         |
|---------------------|--|----------------------|-------------------------|
| Insulating material | Polyester glass-fibre reinforced, Polycarbonate                      | Type of mounting     | Wall mounting, 4 screws |
| Impact resistance   | IK08 in accordance with IEC 62208, IK10 in accordance with IEC 62262 | Enclosure attachment | Via mounting feet       |

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## Technical data

|                  |    |                        |   |
|------------------|----|------------------------|---|
| Protection class | II | Connection type string | Internal terminal (with cable gland feed-through) |
|------------------|----|------------------------|---|

### General data

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

### Inputs

|                                      |  |   |  |
|--------------------------------------|--|---|--|
| Amount of maximum power points (MPP) | 4  |   |  |
| Functional earth connector           | Cable entry  | Number of cable entries                   | 1                                      |
|                                      |  | Cable diameter, min.                      | 5 mm                                   |
|                                      |  | Cable diameter, max.                      | 10 mm                                  |
|                                      |  | Cable gland                               | M 16                                   |
|                                      | Wire connection  | Type of connection                        | Screw 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                        | PUSH IN                                |
|                                      |  | Compatible cable cross-section            | EN 50618:2015                          |
|                                      |  | Wire cross-section, min.                  | 2.5 mm <sup>2</sup>                    |
|                                      |  | Wire cross-section, max.                  | 16 mm <sup>2</sup>                     |
|                                      | Cable entry  | Number of cable entries                   | 8                                      |
|                                      |  |   |  |
| 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 string inputs per MPP      | ≤ 2  |   |  |
| Surge protection auxiliary contact   | Cable entry  | Cable diameter, min.                      | 5 mm                                   |
|                                      |  | Cable diameter, max.                      | 10 mm                                  |
|                                      |  | Cable gland                               | M 16                                   |
|                                      | 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>                    |
| Number of inputs                     | 8  |   |  |

### Outputs

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

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### Technical data

#### 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 I <sub>total</sub> (8/20µs)                | 50 kA       | Discharge current I <sub>n</sub> (8/20 µs)            | 20 kA    |
| Requirements class   | Type I/II   | Total discharge current I <sub>total</sub> (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   |
| Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/-PE | 1100 V      |   |          |

#### DC load break switch

|                               |           |
|-------------------------------|-----------|
| Switch disconnecter execution | no switch |
|-------------------------------|-----------|

#### Important note

|                     |  |
|---------------------|--|
| Product information | <p>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:<br/>         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</p> |
|---------------------|--|

#### 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 | <p>Combiner box for inverters with 4 MPP tracker, suitable for protecting the DC side of a photovoltaic system according to EN 51543-32. MPP1:<br/>         2 inputs, connection via M25 cable gland with 3x7mm Ø cable entry. PUSH IN connection / 2.5 - 6mm<sup>2</sup> single-wire, multi-wire, with/without ferrule.<br/>         1 output, connection via M25 cable gland with 3x7mm Ø cable entry. PUSH IN connection / 2.5 - 6mm<sup>2</sup> single-wire, multi-wire, with/without ferrule.<br/>         MPP2 to 4:<br/>         identical to MPP1 Max. string voltage U<sub>oc</sub>: 1000V<br/>         1 class/type I + II combined arrester with signal contact<br/>         Connection of the signal contact via cable glands (8-12mmØ) max. conductor cross-section: 1.5mm<sup>2</sup><br/>         Connection of the functional earth via</p> |
|--------------------|---|

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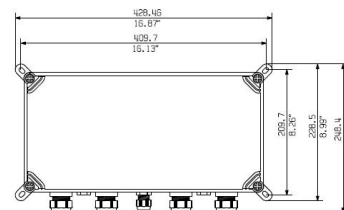
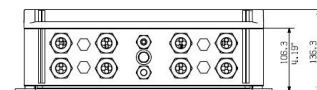
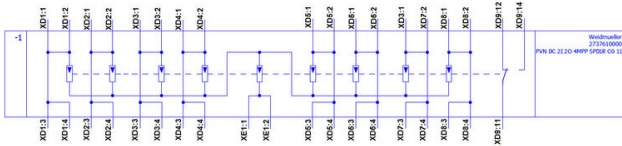
cable glands (8-12mmØ)  
Conductor cross-section:  
16-25mm<sup>2</sup>  
Protection class: IP65  
All built into a glas fibre  
reinforced polyester  
housing. Dimensions  
HxWxD: 330x372x175  
mm  
Approval according to  
low voltage switchgear  
and controlgear IEC  
61439-1:2011 and EN  
61439-2:2011

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**Drawings**

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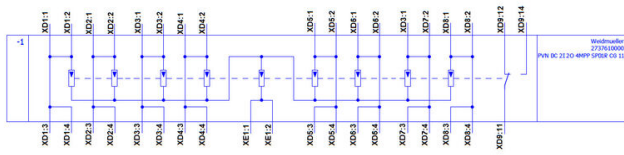


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## Accessories

### PV Weather protection



#### General ordering data

|            |                            |                          |  |
|------------|----------------------------|--------------------------|--|
| Type       | PV SUNCOVER 20/40/13       | Version                  |  |
| Order No.  | <a href="#">8000143247</a> | Photovoltaics, Sun cover |  |
| GTIN (EAN) | 4099987 111867             |                          |  |
| 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

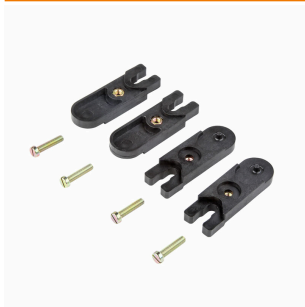


VDE insulated crosshead screwdriver, for Phillips screws, SDIK PH DIN 7438, ISO 8764/2-PH, output to ISO 8764-PH, SoftFinish grip

### General ordering data

|            |                            |  |  |
|------------|----------------------------|--|--|
| Type       | SDIK PH3 X 150             | Version  |  |
| Order No.  | <a href="#">2749910000</a> | Screwdriver, Blade width (B): 3 mm, 150 mm, Blade thickness (A): 3 |  |
| GTIN (EAN) | 4050118897210              |  |  |
| Qty.       | 1 ST                       |  |  |

### 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, Basic material:     |  |
| Qty.       | 1 ST                       | Polyamide, Polyamide 66, Light Grey                              |  |

**Accessories**

**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 ST                       |   |  |

|            |                            |   |  |
|------------|----------------------------|---|--|
| 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 ST                       |   |  |

**Sealing sets**



**General ordering data**

|            |                            |               |  |
|------------|----------------------------|---------------|--|
| Type       | SL SET PV NEXT             | Version       |  |
| Order No.  | <a href="#">2729230000</a> | Photovoltaics |  |
| GTIN (EAN) | 4050118804508              |               |  |
| Qty.       | 1 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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**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                     |         |   |

**Sealing sets**



**General ordering data**

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

**Spare Arrester**



**General ordering data**

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