

PVN DC 3I 3O 3MPP SPD1R CG 11

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
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 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, 3 MPP's, 3 Inputs / 3 Outputs per MPP, Surge protection I / II, Cable gland |
| Order No. | 2890580000 |
| Type | PVN DC 3I 3O 3MPP SPD1R CG 11 |
| GTIN (EAN) | 406467587842 1 |
| Qty. | 1 items |

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Technical data

Approvals

Approvals



ROHS Conform

Dimensions and weights

| | | | |
|------------------------------|--------------|----------------|-------------|
| Depth | 132 mm | Depth (inches) | 5.1968 inch |
| Depth with add-on components | 132 mm | Height | 336 mm |
| Height (inches) | 13.2283 inch | Width | 400 mm |
| Width (inches) | 15.748 inch | Net weight | 4578 g |

Temperatures

| | | | |
|---------------------|----------------|----------|----------------------------|
| Ambient temperature | -40 °C...40 °C | Humidity | 5 to 95 % (non-condensing) |
|---------------------|----------------|----------|----------------------------|

Environmental Product Compliance

| | |
|------------------------|----------------|
| RoHS Compliance Status | Compliant |
| REACH SVHC | Lead 7439-92-1 |

DC string monitoring

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

Included in delivery

| | | |
|----------------------|----------|---------------|
| Included accessories | Article | Mounting foot |
| | Quantity | 4 |
| | Article | Sealing plug |
| | Quantity | 2 |

Guarantee

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

Electrical characteristics

| | | |
|--|--------------------------|---------|
| Rated DC voltage | 1100 V | |
| Rated short-term current resistance | Rated current | 52.5 A |
| Current per Maximum Power Point, max. 42 A | | |
| Rated DC current per connection | Current per string, max. | 42.00 A |

Enclosure

| | | | |
|------------------|---------------|---------------------|--|
| Cover | removeable | 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 |

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| | | | |
|------------------------|---|------------------|----|
| Enclosure attachment | Via mounting feets | Protection class | II |
| Connection type string | Internal terminal (with cable gland feed-through) | | |

General data

| | | | |
|-----------------------|---------------------------------------|-------------------|------|
| Standards | EN 61643-31, IEC 61439-2 ed 3.0 | Protection degree | IP65 |
| Installation location | Protected outdoor area (Land and Sea) | | |

Inputs

| | | | | |
|--------------------------------------|--|---|-----------------------|--|
| Amount of maximum power points (MPP) | 3 | | | |
| Functional earth connector | Cable entry | Number of cable entries | 2 | |
| | | Cable diameter, min. | 4 mm | |
| | | Cable diameter, max. | 9 mm | |
| | | Cable gland | M 25 | |
| | Wire connection | Type of connection | PUSH IN with actuator | |
| | | Flexible, max. H05(07) V-K | 25 mm ² | |
| | | w. wire end ferrule, DIN 46228 pt 1, max. | 16 mm ² | |
| | | Number of conduit inlets | 9 | |
| DC Input + & - | Wire connection | Type of connection | PUSH IN with actuator | |
| | | Wire cross-section, min. | 4 mm ² | |
| | | Wire cross-section, max. | 16 mm ² | |
| | Cable entry | Number of cable entries | 24 | |
| | | Cable diameter, min. | 4 mm | |
| | | Cable diameter, max. | 9 mm | |
| | | Cable gland | M 25 | |
| | 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 | 1 | |
| | | Cable diameter, min. | 4 mm | |
| | | Cable diameter, max. | 9 mm | |
| | | Cable gland | M 25 | |
| | Wire connection | Type of connection | PUSH IN with actuator | |
| | | Flexible, max. H05(07) V-K | 1.5 mm ² | |
| | | w. wire end ferrule, DIN 46228 pt 1, max. | 1.5 mm ² | |
| | | Number of inputs | 9 | |

Outputs

| | | | |
|---------------------------|---|--------------------------|-------------------|
| Max. number of DC outputs | per Maximum Power Point 3 outputs connected in parallel | | |
| DC Output + & - | Wire connection | Type of connection | PUSH IN |
| | | Wire cross-section, min. | 4 mm ² |
| | | Wire cross-section, max. | 6 mm ² |

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Technical data

Surge protection DC side

| | | | |
|---|---------------------------------|---|--------------------|
| Standards | EN 61643-31, IEC 61439-2 ed 3.0 | 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 |
| Short-circuit current ISCPV | 11000 A | Total discharge current Itotal (8/20µs) | 50 kA |
| Discharge current In (8/20 µs) | 20 kA | Requirements class | Type I/II |
| Total discharge current Itotal (10/350µs) | 6.25 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. Ucpv | 1100 V | Surge protection DC side | 1000 V type I + II |
| Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/PE | 1100 V | | |

DC load break switch

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

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 3 MPP tracker, suitable for protecting the DC side of a photovoltaic system according to DIN CLC/TS 51643-32. MPP1: 3 inputs, connection via M25 cable gland with multiple sealing inserts. PUSH IN connection / single-wire, multi-wire, with/without ferrule. 3 outputs, connection via M25 cable gland with multiple sealing inserts. PUSH IN connection / single-wire, multi-wire, with/without ferrule. MPP2 to 3: identical to MPP1 Max. string voltage Uoc: 1100 VDC</p> <p>1 class/type I + II combined arrester with signal contact</p> <p>Connection of the signal contact via M16 cable glands (Clamping range 5-10 mmØ) max. conductor cross-section: 1.5 mm²</p> <p>Connection of the functional earth via M16 cable glands (Clamping range 5-10 mmØ) Conductor cross-section: ≥ 16 mm²</p> <p>Protection class: IP65</p> |
|--------------------|---|

Technical data

All built into a glas fibre reinforced polyester housing. Dimensions HxWxD: 336x400x132 mm
Approval according to low voltage switchgear and controlgear IEC 61439-1 and EN 61439-2

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Drawings

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Accessories

PV Weather protection



General ordering data

| | | | |
|------------|----------------------------|--------------------------|--|
| Type | PV SUNCOVER 30/40/13 | Version | |
| Order No. | 8000143253 | Photovoltaics, Sun cover | |
| GTIN (EAN) | 4099987 111928 | | |
| 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. | 1157820000 | 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. | 1190490000 | 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. | 2749910000 | Screwdriver, Blade width (B): 3 mm, 150 mm, Blade thickness (A): 3 | |
| GTIN (EAN) | 4050118897210 | | |
| Qty. | 1 ST | | |

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. | 2749810000 | 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. | 2749850000 | Screwdriver, Blade width (B): 5.5 mm, Blade length: 125 mm, Blade thickness (A): 1 mm | |
| GTIN (EAN) | 4050118897050 | | |
| Qty. | 1 ST | | |

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Accessories

External fixing lugs



External attachment lugs 4-part set

General ordering data

| | | | |
|------------|----------------------------|--|--|
| Type | MF FPC | Version | |
| Order No. | 9536040000 | 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



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. | 1254870000 | Photovoltaics, Flat design | |
| GTIN (EAN) | 4050118047479 | | |
| Qty. | 100 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.

General ordering data

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

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Accessories

Sealing sets

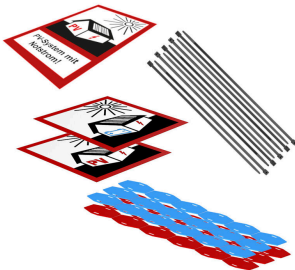


General ordering data

| | | | |
|------------|----------------------------|---------------------------|--|
| Type | BLINDPLUG SET5 7X28MM | Version | |
| Order No. | 3077670000 | Photovoltaics, Blind plug | |
| GTIN (EAN) | 4099987081894 | | |
| Qty. | 1 ST | | |

| | | | |
|------------|----------------------------|---|--|
| Type | BLINDPLUG SET50 7X28MM | Version | |
| Order No. | 3077650000 | Photovoltaics, Blind plug, Accessories, Blind plug, 50 pieces | |
| GTIN (EAN) | 4099987081870 | | |
| Qty. | 1 ST | | |

PV marking sets



General ordering data

| | | | |
|------------|----------------------------|--|--|
| Type | PV MARKER 1-3 MPP | Version | |
| Order No. | 8000149520 | Photovoltaics, Device markers, Accessories, Conductor and cable markers, Cable ties, Marking set, Warning label, Cable marker, Self-adhesive | |
| GTIN (EAN) | 4099987229197 | | |
| Qty. | 1 ST | | |