

**PVN DC 3I 3O 3MPP SW SPD1R CG 11**

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

www.weidmuller.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, Switch disconnecter, Cable gland
Order No.	<a href="#">2890610000</a>
Type	PVN DC 3I 3O 3MPP SW SPD1R CG 11
GTIN (EAN)	4064675878452
Qty.	1 items

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**Technical data**

**Approvals**

Approvals



ROHS Conform

**Dimensions and weights**

Depth	226 mm	Depth (inches)	8.8976 inch
Depth with add-on components	226 mm	Height	336 mm
Height (inches)	13.2283 inch	Width	400 mm
Width (inches)	15.748 inch	Net weight	5990 g

**Temperatures**

Ambient temperature	-40 °C...40 °C	Humidity	5 to 95 % (non-condensing)
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**Environmental Product Compliance**

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

**DC string monitoring**

Monitoring function	Non monitored
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**Included in delivery**

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

**Guarantee**

Time interval	5 years
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**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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### Technical data

Enclosure attachment	Via mounting feet	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	26 mm <sup>2</sup>	
		w. wire end ferrule, DIN 46228 pt 1, max.	16 mm <sup>2</sup>	
		Number of conduit inlets	9	
DC Input + & -	Wire connection	Type of connection	PUSH IN with actuator	
		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	18	
		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 <sup>2</sup>	
		w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm <sup>2</sup>	
		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 with actuator
		Wire cross-section, min.	4 mm <sup>2</sup>
		Wire cross-section, max.	9 mm <sup>2</sup>

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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	Rated impulse withstand voltage	8 kV
Nominal voltage	1100 V	Nominal current	42 A
Number of contacts as NC contact	0	Switch disconnector execution	switch in cover
Switching disconnector capacity	DC-PV1	Motor drive available	No
Rated short-circuit making current	1.4 kA	Number of contacts as NO contact	6

### 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>With lockable DC load break switch for safe separation of the string lines according to DIN EN IEC 60947-3</p> <p>Connection of the signal contact via M16 cable glands (Clamping</p>
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## Technical data

range 5-10 mmØ) max.  
conductor cross-section:  
1.5 mm<sup>2</sup>  
Connection of the  
functional earth via M16  
cable glands (Clamping  
range 5-10 mmØ)  
Conductor cross-section: ≥  
16 mm<sup>2</sup>  
Protection class: IP65  
All built into a glas fibre  
reinforced polyester  
housing. Dimensions  
HxWxD: 336x400x226  
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 Sun Covers



#### General ordering data

Type	PV SUNCOVER 30/40/18 SW	Version	
Order No.	<a href="#">8000144192</a>		Photovoltaics, Sun cover, Switch disconnecter
GTIN (EAN)	4099987 126588		
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		

**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		

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**Accessories**

**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**



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		

**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 ST		

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## Accessories

### Sealing sets

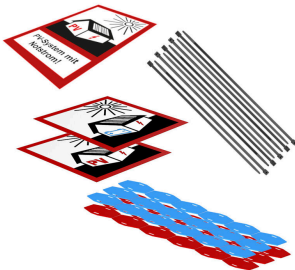


#### General ordering data

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		

### PV marking sets



#### General ordering data

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