

**PVN DC 3I 3O 1MPP SPD1R WM4 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, 1 MPP, 3 Inputs / 3 Outputs per MPP, Surge protection I / II, WM4C
Order No.	<a href="#">2890440000</a>
Type	PVN DC 3I 3O 1MPP SPD1R WM4 11
GTIN (EAN)	4064675878285
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	234 mm	Height (inches)	9.2126 inch
Width	200 mm	Width (inches)	7.874 inch
Net weight	1869 g		

**Temperatures**

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

**Environmental Product Compliance**

RoHS Compliance Status	Compliant
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 62.81 A
Current per Maximum Power Point, max.	50.25 A
Rated DC current per connection	Current per string, max. 35.00 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 WM4C

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**General data**

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

**Inputs**

Amount of maximum power points (MPP)	1		
Functional earth connector	Cable entry	Number of cable entries	2
	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	Compatible cable cross-section	EN 50618:2015
		Wire cross-section, min.	4 mm <sup>2</sup>
		Wire cross-section, max.	6 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
		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	WM4C plug-in connector
		Compatible cable cross-section	TÜV 2 Pfg1169/08.07
		Wire cross-section, min.	4 mm <sup>2</sup>
		Wire cross-section, max.	6 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
Requirements class	Type I/II	Total discharge current Itotal (10/350 μs)	12.5 kA
Protection level Up (-/PE)	≤ 3.8 kV	Protection level Up (+/-)	≤ 3.8 kV

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## Technical data

Protection level Up (+/PE)	≤ 3.8 kV	PV system voltage, max. Ucpv	1100 V
Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/PE		1100 V	

### DC load break switch

Switch disconnecter execution	no switch
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### 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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### 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 1 MPP tracker, suitable for protecting the DC side of a photovoltaic system according to EN 51543-32. MPP1: 3 inputs, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063</p> <p>3 outputs, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063</p> <p>Max. string voltage Uoc: 1100V</p> <p>1 class/type I + II combined arrester with signal contact</p> <p>Connection of the signal contact via cable glands (8-12mmØ) max. conductor cross-section: 1.5mm<sup>2</sup></p> <p>Connection of the functional earth via cable glands (8-12mmØ) Conductor cross-section: 16-25mm<sup>2</sup></p> <p>Protection class: IP65</p> <p>All built into a glass fibre reinforced polyester housing. Dimensions HxWxD: 234x200x132 mm</p> <p>Approval according to low voltage switchgear and controlgear IEC 61439-1:2011 and EN 61439-2:2011</p>
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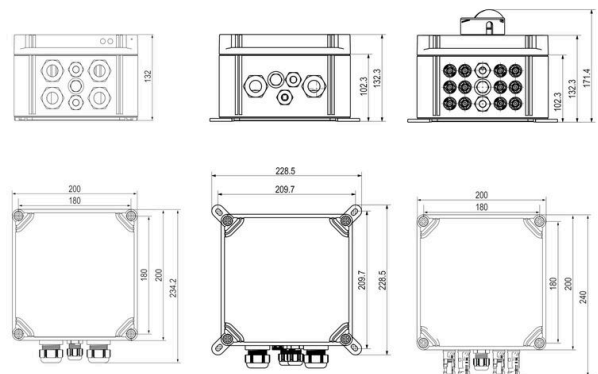
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Drawings

PCB design

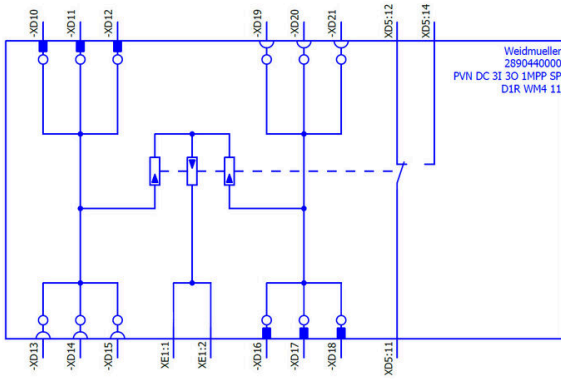


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# Drawings

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## Accessories

### PV Sun Covers



#### General ordering data

Type	PV SUNCOVER 20/20/13	Version	
Order No.	<a href="#">8000143243</a>	Photovoltaics, Sun cover	
GTIN (EAN)	4099987 111829		
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

### PV-Stick field connectors



Faster is better. This also applies to the cabling of solar systems. Our handy connectors stay firmly in your grip even in frosty temperatures and can be installed very quickly and easily without a crimping tool.

You don't need crimp contacts and crimping tools and you avoid assembly errors. This saves up to 50% installation time – without affecting quality. The new photovoltaic connectors are TÜV-approved and comply with IEC 62852.

Our "SNAP IN" technology enables safe connections with minimal effort – insert, turn: current!

- 1.500 V DC (DE) / 1,500 V DC (EN)
- SNAP IN technology
- Standard-compliant quality in accordance with IEC 62852
- Ergonomic, prize-winning design
- Fastest PV connector currently available
- Reliable latching

### General ordering data

Type	PV-STICK+ VPE10	Version	
Order No.	<a href="#">1303450000</a>	Photovoltaics, Plug-in connector, DC version	
GTIN (EAN)	4050118102468		
Qty.	10 ST		
Type	PV-STICK- VPE10	Version	
Order No.	<a href="#">1303490000</a>	Photovoltaics, Plug-in connector, DC version	
GTIN (EAN)	4050118102529		
Qty.	10 ST		

### 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		

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**Accessories**

**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.

**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		

**External fixing lugs**



External attachment lugs 4-part set

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**Accessories**

**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	

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

**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		

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## Accessories

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### Spare Arrester



### General ordering data

Type	VPU PV I+II O 1000 E	Version	
Order No.	<a href="#">2530530000</a>	Surge voltage arrester, Low voltage, Accessories, Surge protection I /	
GTIN (EAN)	4050118540741	II, Spare arrester	
Qty.	9 ST		