Data sheet

PVN DC 3I 3O 1MPP 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, PV Next, 1100 V, 1 MPP, 3 Inputs / 3 Outputs per MPP, Surge protection I / II, MC4-Evo 2
Order No.	2890320000
Type	PVN DC 3I 3O 1MPP SPD1R EVO 11
GTIN (EAN)	4064675877967
Qty.	1 items

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Technical data

Approvals

Approvals	CE
ROHS	Conform

Dimensions and weights

Depth	132 mm	Depth (inches)	5.1968 inch
Height	236 mm	Height (inches)	9.2913 inch
Width	200 mm	Width (inches)	7.874 inch
Net weight	1886 g		

Temperatures

Ambient temperature	-40 °C...50 °C	Humidity	5...95 %, 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

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.	50.25 A	
Rated DC current per connection	Current per string, max.	45.00 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 foots
Protection class	II	Connection type string	Plug MC4-Evo 2

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Technical data

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 mm²
		w. wire end ferrule, DIN 46228 pt 1, max.	16 mm²
Number of conduit inlets	2		
DC Input + & -	Wire connection	Type of connection	Stäubli MC4-Evo 2 connector
		Compatible cable crossection	TÜV 2 Pfg1169/08.07
		Wire cross-section, min.	2.5 mm²
		Wire cross-section, max.	16 mm²
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 mm²
		w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm²
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	Stäubli MC4-Evo 2 connector
		Compatible cable crossection	TÜV 2 Pfg1169/08.07
		Wire cross-section, min.	2.5 mm²
		Wire cross-section, max.	16 mm²

Surge protection DC side

Standards	EN 61643-31	Lightning test current limp (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 curent ISCPV	11000 A
Total discharge current Itotal (8/20µs)	50 kA	Discharge current In (8/20 µs)	20 kA

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Requirements class	Type I/II	Total discharge current Itotal (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. Ucpv	1100 V
Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/PE	1100 V		

DC load break switch

Switch disconnector execution	no switch

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

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	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 MC4-Evo 2 connector, compatible with cable type TÜV 2 Pfg1169/08.07 / EN 50618:2063 3 outputs, connection via MC4-Evo 2 connector, compatible with cable type TÜV 2 Pfg1169/08.07 / EN 50618:2063 Max. string voltage Uoc: 1100V 1 class/type I + II combined arrester with signal contact Connection of the signal contact via cable glands (8-12mmØ) max. conductor cross-section: 1.5mm² Connection of the functional earth via cable glands (8-12mmØ) Conductor cross-section: 16-25mm² Protection class: IP65 All built into a glas fibre reinforced polyester housing. Dimensions HxWxD: 236x200x132 mm Approval according to low voltage switchgear

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Technical data

and controlgear IEC 61439-1:2011 and EN 61439-2:2011

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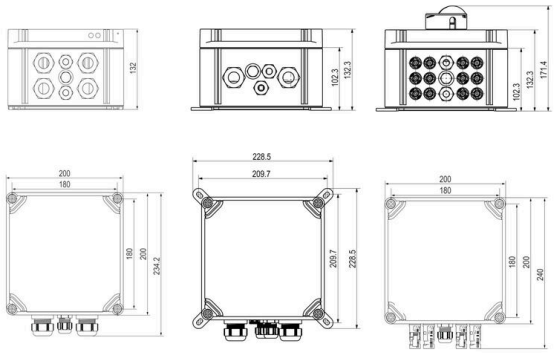
Drawings

PCB design









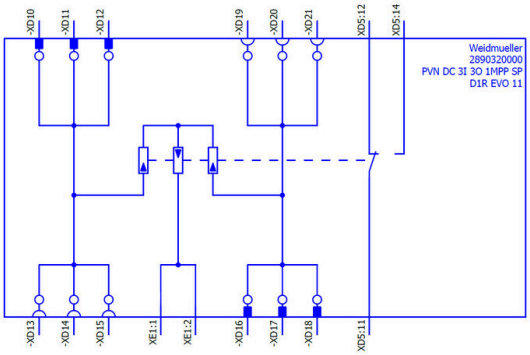
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Drawings



Data sheet

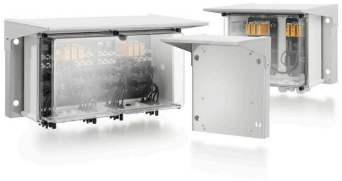
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Accessories

PV Sun Covers



General ordering data

Type	PV SUNCOVER 20/20/13	Version
Order No.	8000143243	Photovoltaics, Sun cover
GTIN (EAN)	4099987111829	
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



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.	9008500000	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.	9008330000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056286	
Qty.	1 ST	

Type	SDS 1.0X5.5X150	Version
Order No.	9008350000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056316	
Qty.	1 ST	

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Accessories

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	

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

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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.	2877850000	Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x MC4 Male,
GTIN (EAN)	4064675666417	6mm², 1100 V
Qty.	1 ST	
Type	PVHYM+M+XXXX6W-11	Version
Order No.	2877860000	Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x MC4 Female,
GTIN (EAN)	4064675666424	6mm², 1100 V
Qty.	1 ST	

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	

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Accessories

Spare Arrester



General ordering data

Type	VPU PV I+II 0 1000 E	Version
Order No.	2530530000	Surge voltage arrester, Low voltage, Accessories, Surge protection I /
GTIN (EAN)	4050118540741	II, Spare arrester
Qty.	9 ST	