

PVN DC 2I 1O 1MPP RD WM4 11

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
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Germany

www.weidmueller.com



For safe remote shutdown Rooftop photovoltaic systems can require a disconnection device at the point where the cables enter into the building, that is connected to the power grid in the building. This allows the fire brigade to carry out their work in an emergency without being unnecessarily endangered. When the power supply is restored, the PV Next Fireman Switch automatically reconnects the PV strings.

General ordering data

Version	Photovoltaics, Combiner Box, Fireman's switch, PV Next, 1 MPP, 2 Inputs / 1 Output per MPP, Remote disconnecter, WM4C, 1100 V
Order No.	2778860000
Type	PVN DC 2I 1O 1MPP RD WM4 11
GTIN (EAN)	4064675047612
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	370 mm	Height (inches)	14.5669 inch
Width	200 mm	Width (inches)	7.874 inch
Net weight	2264 g		

Temperatures

Ambient temperature -20 °C...50 °C Humidity 5...95 %, no condensation

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	bdab5698-6a20-4370-8e28-8810d882d01a

Included in delivery

Included accessories	Article	Mounting foot
	Quantity	4
	Article	Dustcap VSSO
	Quantity	2
	Article	Sealing plug
	Quantity	1

Approvals and norms

Approvals EN 61439-2, IEC
 61439-2, OVE-Directive R
 11-1:2022-05-01

Guarantee

Time interval 5 years

Electrical characteristics

Rated DC voltage	1100 V
Rated short-term current resistance	Rated current 43.75 A
Current per Maximum Power Point, max.	35 A
Rated DC current per connection	Current per string, max. 35.00 A
	Rated current 35 A

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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
Protection class	II	Connection type string	Plug WM4C

General data

Protection degree	IP65	Installation location	Protected outdoor area (>1 km from sea)
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Inputs

Amount of maximum power points (MPP)	1		
Number of conduit inlets	2		
DC Input + & -	Wire connection	Type of connection	WM4C plug-in connector
		Compatible cable crosssection	EN 50618:2015
		Wire cross-section, min.	4 mm ²
		Wire cross-section, max.	6 mm ²
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		
Number of inputs	2		

Outputs

Max. number of DC outputs	per Maximum Power Point 1 output		
DC Output + & -	Wire connection	Type of connection	WM4C plug-in connector
		Compatible cable crosssection	TÜV 2 Pfg1169/08.07
		Wire cross-section, min.	4 mm ²
		Wire cross-section, max.	6 mm ²

Remote disconnecter

Automatic reclosing after voltage drop	Yes		
Number of operating cycles	10000		
Control voltage	100 V AC - 250 V AC 50/60Hz		
Remote disconnecter auxiliary contact	Cable entry	Number of cable entries	1
		Type of connection	Screw terminal connectors
	Wire connection	Flexible, max. H05(07) V-K	1.5 mm ²
		w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm ²

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Remote disconnecter control contact	Cable entry	Number of cable entries	1
	Wire connection	Type of connection	Screw terminal connectors
		Flexible, max. H05(07) V-K	1.5 mm ²
		w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm ²
Type of power circuit disconnection	Under voltage tripping		
Turn-off time	1.5 s		
Current consumption of switch	Type of switch	Fireman switch	
	Current consumption, note	The Peak current only arises for a short time when the capacitors of the fireman switch were previously completely discharged.	
	Current consumption peak	300 mA	
	Current consumption continuous	30 mA	
Number of breaking operation cycles at rated current	300		
Switch disconnecter execution	Remote disconnecter inside enclosure		
Switching disconnecter capacity	IEC 60947-3, DC-PV1		

Important note

Product information

Intended use of the UPS: This UPS has been especially developed as a safety device for direct current (DC) photovoltaic installations. The DC disconnect switch is used to disconnect the connected strings of the installation in case of an emergency situation. Such an emergency situation could be in case of fire.

Normal operation: The UPS will automatically switch to the off position, breaking the DC connection between the solar panels and the inverter, after the AC power to the UPS is interrupted for longer than five seconds. The UPS will automatically switch to the on position, restoring the DC connection between the solar panels and the inverter, once the AC power to the UPS is restored longer than five seconds.

Special Operation: If the temperature inside the UPS enclosure exceeds the 100°C, the UPS will automatically switch to OFF to protect the internal components and create a safe situation. When the installation is checked and the UPS is not affected, the UPS can be switched ON again by removal and re-applying the AC voltage to the UPS. The UPS will also automatically switch to OFF if there is an internal failure. If this occurs please try to reset the UPS by removal and re-applying the AC voltage to the UPS.

Emergency switch not included. 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

Automatic ON and OFF switching fireman switch for the connection to 1 MPP tracker in the inverter. Suitable for remote disconnection of the DC side by the fire department.
 Max. string voltage Uoc: 1100V MPP1: 2 inputs, connection via WM4 C connector,

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Technical data

compatible with cable type
TÜV 2 Pfg 1 169/08.07 /
EN 50618:2063

1 output, connection
via WM4 C connector,
compatible with cable type
TÜV 2 Pfg 1 169/08.07 /
EN 50618:2063

DC fireman switch:
Switching off by
undervoltage tripping.
Automatic reconnection
after the control voltage
(230 V AC) is applied
again.

With signal contact.
Connection of the
fireman switch control
line 230 VAC via cable
glands (8-12mmØ) max.
conductor cross-section:
1.5mm².

Connection of the signal
contact 24 VDC via cable
glands (8-12mmØ) max.
conductor cross-section:
1.5mm².

Protection class: IP65.

All built into a glass
fibre reinforced
polyester housing.

Dimensions HxWxD:
370x200x132mm.

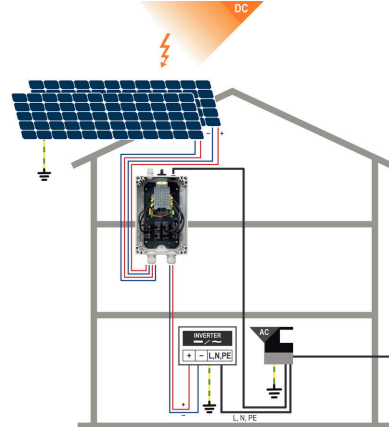
Approval according to low
voltage switchgear IEC
61439-1:2011 and EN
61439-2:2011

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Drawings



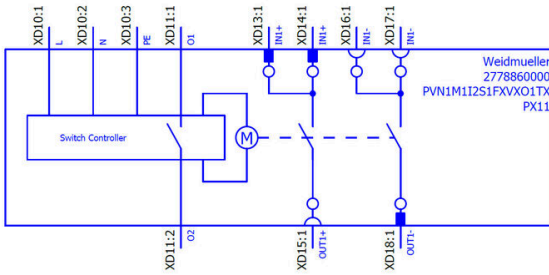
	PVN	1	M2	I6	S0	F3	V1	Q1	TX	PX	10
Series	PVN = PV Next VPU = PV Protect										
Level	1 = DC trunk box (L1)										
Series	1 = 1 MPPT supported 2 = 2 MPPT supported 3 = 3 MPPT supported 4 = 4 MPPT supported 6 = 6 MPPT supported										
Inputs	1...12 inputs										
Switch	x = n/a 0 = manual switch 1 = remote switch										
Voltage	10 = 1kV 11 = 1,1kV 15 = 1,5kV										
Powersupply	x = n/a										
Monitoring	x = n/a										
Output Type	0 = CG 1 = WM4C 2 = MC4-Evo 2										
SPD	2/0 = TYP II 1 = TYP I+II X = No SPD										
Fuses	x = n/a 3 = only fuse holders										

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Accessories

PV Sun Covers



General ordering data

Type	PV SUNCOVER 20/30/13	Version	
Order No.	8000143245	Photovoltaics, Sun cover	
GTIN (EAN)	4099987 111843		
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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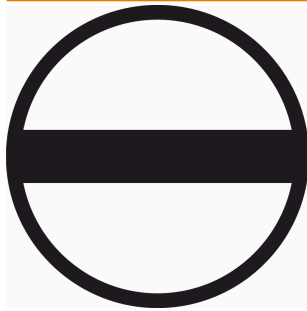
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Accessories

General ordering data

Type	MULTI-STRIPAX PV	Version	
Order No.	1190490000	Photovoltaics, Plug-in connector	
GTIN (EAN)	4032248973262		
Qty.	1 ST		

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		

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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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 SET	Version
Order No.	1422030000	Photovoltaics, Plug-in connector
GTIN (EAN)	4050118225723	
Qty.	1 ST	
Type	PV-STICK+ VPE10	Version
Order No.	1303450000	Photovoltaics, Plug-in connector
GTIN (EAN)	4050118102468	
Qty.	10 ST	
Type	PV-STICK- VPE10	Version
Order No.	1303490000	Photovoltaics, Plug-in connector
GTIN (EAN)	4050118102529	
Qty.	10 ST	
Type	PV-STICK+ VPE50	Version
Order No.	1303460000	Photovoltaics, Plug-in connector
GTIN (EAN)	4050118102383	
Qty.	50 ST	
Type	PV-STICK- VPE50	Version
Order No.	1303500000	Photovoltaics, Plug-in connector
GTIN (EAN)	4050118102536	
Qty.	50 ST	
Type	PV-STICK+ VPE200	Version
Order No.	1303470000	Photovoltaics, Plug-in connector
GTIN (EAN)	4050118102543	
Qty.	200 ST	
Type	PV-STICK- VPE200	Version
Order No.	1303510000	Photovoltaics, Plug-in connector
GTIN (EAN)	4050118102390	
Qty.	200 ST	

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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	6mm ² , 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	6mm ² , 1100 V	
Qty.	1 ST		

Emergency stop button



General ordering data

Type	AC SB E 5A 1POL PO 06KV	Version	
Order No.	3077660000	Photovoltaics, Emergency stop button, 1 pole, 600 V AC, 5 A,	
GTIN (EAN)	4099987081887	Complete enclosure	
Qty.	1 ST		

Sealing sets



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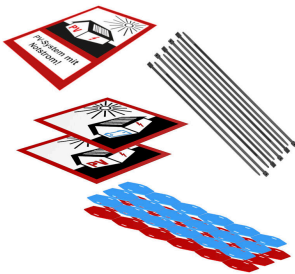
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Accessories

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	