

PVN DC 3I 3O 1MPP SW 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 EN 51543-32. 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, 1100 V, 1 MPP, 3 Inputs / 3 Outputs per MPP, Surge protection I / II, Switch disconnecter, WM4C
Order No.	2890470000
Type	PVN DC 3I 3O 1MPP SW SPD1R WM4 11
GTIN (EAN)	4064675878315
Qty.	1 pc(s).
Replacement parts	2530530000

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Technical data
Dimensions and weights

Depth	172 mm	Depth (inches)	6.772 inch
Height	234 mm	Height (inches)	9.213 inch
Width	200 mm	Width (inches)	7.874 inch
Net weight	2,114 g		

Temperatures

Ambient temperature	-40 °C...+50 °C	Humidity	5...95 %, no condensation
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Approvals and norms

Approvals	EN 61439-2, IEC 61439-2
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Guarantee

Time interval	5 years
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Electrical characteristics

Current per Maximum Power Point, max. 37.5 A

Rated DC current per connection	Current per string, max.	35 A
Rated short-term current resistance	Rated current	50 A
Rated DC voltage	1,100 V	
Switching disconnecter capacity	DC-PV1, IEC 60947-3	

Enclosure

Connection type string	Plug WM4C	Enclosure attachment	Via mounting foots
Impact resistance	IK08 in accordance with IEC 62208, IK10 in accordance with IEC 62262	Insulating material	Polyester glass-fibre reinforced, Polycarbonate, Polycarbonate
Switch disconnecter execution	switch in cover	Type of mounting	Wall mounting

General data

Installation location	Protected outdoor area (Land and Sea)	Protection degree	IP65
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Inputs

Amount of maximum power points	1 MPP		
DC Input + & -	Wire connection	Compatible cable crossection	EN 50618:2015
		Wire cross-section, min.	4 mm ²
		Wire cross-section, max.	6 mm ²
Functional earth connector	Cable entry	Number of cable entries	2
		Type of connection	Screw connection
	Wire connection	Flexible, max. H05(07) V-K	25 mm ²
		w. wire end ferrule, DIN 46228 pt 1, max.	16 mm ²
Fuse type	Neither fuse cartridge nor holder		
Max. number of DC inputs	per Maximum Power Point 3 inputs connected in parallel		

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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 ²
		w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm ²

Outputs

DC Output + & -	Wire connection	Type of connection	WM4C plug-in connector
		Compatible cable crosssection	TÜV 2 Pfg 1169/08.07
		Wire cross-section, min.	4 mm ²
		Wire cross-section, max.	6 mm ²

Max. number of DC outputs per Maximum Power Point 3 outputs connected in parallel

Surge protection DC side

Discharge current I_n (8/20 μ s)	20 kA	Discharge current, max. (8/20 μ s)	40 kA
Lightning test current I_{imp} (10/350 μ s)	6.25 kA	Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/-PE	1,100 V
PV system voltage, max. U_{cpv}	1,100 V	Protection level U_p (+/-, -/PE, +/-PE)	≤ 3.8 kV
Protection level U_p (+/-)	≤ 3.8 kV	Protection level U_p (+/PE)	≤ 3.8 kV
Protection level U_p (-/PE)	≤ 3.8 kV	Requirements class	Type I/II
Short-circuit current I_{SCPv}	11,000 A	Standby power consumption P_C	<0.2 W
Total discharge current I_{total} (8/20 μ s)	50 kA	Total discharge current I_{total} (10/350 μ s)	12.5 kA

Classifications

ETIM 6.0	EC002928	ETIM 7.0	EC002928
ETIM 8.0	EC003857	ETIM 9.0	EC003857
ECLASS 9.0	22-57-92-03	ECLASS 9.1	22-57-02-90
ECLASS 10.0	22-57-02-90	ECLASS 11.0	22-57-02-92
ECLASS 12.0	22-57-02-92	ECLASS 13.0	22-57-02-92

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www.weidmueller.com**Technical data****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 WM4 C connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063

3 outputs, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063

Max. string voltage Uoc: 1100V

1 class/type I + II combined arrester with signal contact

With load break switch for safe separation of the string lines

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 glass fibre reinforced polyester housing. Dimensions HxWxD: 234x200x172 mm

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

Approvals

Approvals



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Technical data

Downloads

Approval/Certificate/Document of Conformity	Declaration of Conformity 3In/Out 1MPP New
Engineering Data	CAD data – PV Next Schematic Diagram CAD data – STEP
Technical Documentation	2932700000_00_03-2023_DRILL-TEMP_PV-Next_20-20
User Documentation	Manual PV Next String Combiner Box MANUAL PV NEXT IT/ES/FR Instruction leaflet PV NEXT MINI
White paper	Fact Sheet DE PV CB Wie man Gebäude gegen Blitzeinschläge schützt Fact Sheet DE PV Wie man die Lebensdauer eines GAK verlängert Fact Sheet DE PV CB Wann Sicherungen zu installieren sind Fact Sheet DE CB PV NEXT Fact Sheet EN PV CB When DC fuses are mandatory to install Fact Sheet EN CB PV NEXT Fact Sheet EN PV How to protect buildings against lightning strikes Fact Sheet EN PV How to extend the life time of a Combiner Box Fact Sheet DE PV CB Lastentrennschalter Fact Sheet DE CB PV Strings kombinieren Fact Sheet DE PV CB Richtig verbinden Fact-Sheet EN PV CB Load break switch Fact Sheet EN CB Combining PV strings Fact Sheet EN PV CB connection Fact Sheet EN PV Combiner Box earthing Fact Sheet DE PV Combiner Box Erdung
Catalogues	Catalogues in PDF-format

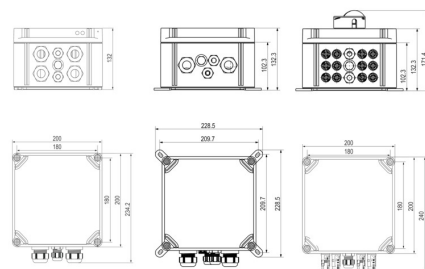
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Drawings

PCB design



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www.weidmueller.com**Replacement parts****Spare Arrester****General ordering data**

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

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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, Material: Polyamide,
Qty.	1 pc(s).	Light Grey

PV Sun Covers**General ordering data**

Type	PV SUN COVER 30/19/18	Version
Order No.	8000086576	Photovoltaics
GTIN (EAN)	4064675845164	
Qty.	1 pc(s).	

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Accessories

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 pc(s).	

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

- 1,500 V DC (DE) / 1,500 V DC (EN)
- PUSH 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.	1303490000	Photovoltaics, Plug-in connector, PUSH IN connection, male
GTIN (EAN)	4050118102529	
Qty.	10 pc(s).	

Type	PV-STICK+ VPE10	Version
Order No.	1303450000	Photovoltaics, Plug-in connector, PUSH IN connection, female
GTIN (EAN)	4050118102468	
Qty.	10 pc(s).	

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www.weidmueller.com**Accessories****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

General ordering data

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

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 pc(s).	

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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 pc(s).	

Y-Connector Cables



The Y or X cable is used to connect three or four elements of a PV system, such as the connection between PV panels, inverters and surge protection boxes. The cables are available in different connection variants.

General ordering data

Type	PVHYM-M-XXXX6W+15	Version
Order No.	2877850000	Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x MC4 Male,
GTIN (EAN)	4064675666417	6mm², 1500 V
Qty.	1 pc(s).	
Type	PVHYM+M-XXXX6W-15	Version
Order No.	2877860000	Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x MC4 Female,
GTIN (EAN)	4064675666424	6mm², 1500 V
Qty.	1 pc(s).	

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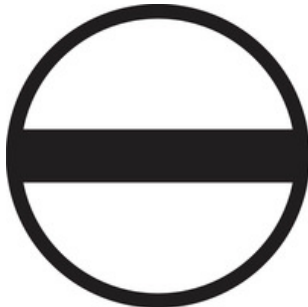
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www.weidmueller.com**Accessories****Spare Arrester****General ordering data**

Type	VPU PV I+II 0 1000	Version
Order No.	2530600000	Surge voltage arrester, Low voltage, Accessories, Surge protection I /
GTIN (EAN)	4050118540819	II, Spare arrester
Qty.	9 pc(s).	
Type	VPU PV I+II OM 1000	Version
Order No.	2534300000	Surge voltage arrester, Low voltage, Surge protection I / II, Spare
GTIN (EAN)	4050118545906	arrester
Qty.	9 pc(s).	

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

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www.weidmueller.com**Accessories****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 pc(s).	

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