

PVN DC 2I 1O 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 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, 2 Inputs / 1 Output per MPP, Surge protection I / II, MC4-Evo 2
Order No.	2866300000
Type	PVN DC 2I 1O 1MPP SPD1R EVO 11
GTIN (EAN)	4064675603986
Qty.	1 pc(s).
Replacement parts	2530530000

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Technical data

Dimensions and weights

Depth	132 mm	Depth (inches)	5.197 inch
Height	236 mm	Height (inches)	9.291 inch
Width	200 mm	Width (inches)	7.874 inch
Net weight	1,660 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. 30 A

Rated DC current per connection	Current per string, max.	30 A
Rated short-term current resistance	Rated current	37.5 A
Rated DC voltage	1,100 V	

Enclosure

Connection type string	Plug MC4-Evo 2	Enclosure attachment	Via mounting feet
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	no switch	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	Type of connection	Stäubli MC4-Evo 2 connector
		Compatible cable cross-section	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	1
		Type of connection	Tension clamp connection with actuator
	Wire connection	Flexible, max. H05(07) V-K	25 mm ²
		w. wire end ferrule, DIN 46228 pt 1, max.	16 mm ²

Creation date April 27, 2024 4:52:54 PM CEST

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Fuse type	Neither fuse cartridge nor holder		
Max. number of DC inputs	per Maximum Power Point 2 inputs connected in parallel		
Surge protection auxiliary contact	Cable entry	Number of cable entries	1
	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	Stäubli MC4-Evo 2 connector
		Wire cross-section, min.	4 mm ²
		Wire cross-section, max.	6 mm ²

Max. number of DC outputs per Maximum Power Point 1 output

Surge protection DC side

Discharge current I_n (8/20 μ s)	20 kA	Discharge current, max. (8/20 μ s)	40 kA
PV system voltage, max. U_{cpv}	1,100 V	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
Surge protection DC side	1000 V type I + II	Total discharge current I_{total} (8/20 μ s)	50 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:

2 inputs, connection via MC4-Evo 2 connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063

1 output, connection via MC4-Evo 2 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

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: 236x200x132 mm

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

Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

SCIP

bdab5698-6a20-4370-8e28-8810d882d01a

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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Technical data

Approvals

Approvals



Downloads

Approval/Certificate/Document of Conformity

[PV Next Mini EU Declaration of Conformity](#)

Engineering Data

[Application notes – Schematic Diagram for PV Next Mini](#)
[CAD data – STEP](#)

Technical Documentation

[Customer Drawing](#)
[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 CB PV Strings kombinieren](#)
[Fact Sheet DE PV CB Richtig verbinden](#)
[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


PVN 1 M2 I6 S0 F3 V1 Q1 TX PX 10									
Series PVN = PV Next VPU = PV Protect								Voltage 10 = 1kV 11 = 1.1kV 15 = 1.5kV	
Level 1 = DC trunk box (L1)								Power supply x = n/a	
Series 1 = 1 MPP supported 2 = 2 MPP supported 3 = 3 MPP supported 4 = 4 MPP supported 6 = 6 MPP supported								Monitoring x = n/a	
Inputs 1...12 inputs								Output Type 0 = CS 1 = VMAAC 2 = MC4-Evo 2	
Switch x = n/a 0 = manual switch 1 = remote switch								SPD 0 = TYP II 1 = TYP I+II X = No SPD	
								Fuses x = n/a 3 = only fuse holders	

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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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www.weidmueller.com**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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www.weidmueller.com**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).	

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).	

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www.weidmueller.com**Accessories****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.	2749910000	Screwdriver, Blade width (B): 3 mm, 150 mm, Blade thickness (A): 3
GTIN (EAN)	4050118897210	
Qty.	1 pc(s).	

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 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 pc(s).	
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 pc(s).	

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Accessories

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).	

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

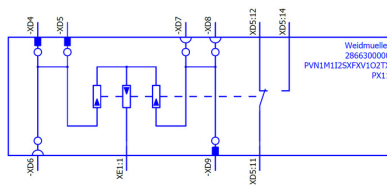
Type	CB-UVR 290/4,5 BK	Version
Order No.	2659350000	Cable ties, 4.5 x 290 mm, Polyamide 66, 220 N
GTIN (EAN)	4050118682816	
Qty.	100 pc(s).	

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Drawings



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