

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26 D-32758 Detmold Germany

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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, 1000 V, 6 MPP's, 2 Inputs / 1 Output per MPP, Surge protection II, WM4C
Order No.	<u>2791900000</u>
Туре	PVN1M6I12SXFXV2O1TXPX10
GTIN (EAN)	4064675072942
Qty.	1 items
Delivery status	Discontinued
Available until	2024-12-31T00:00:00+01:00
Alternative product	PVN1M6I4SXFXV101TXPX10





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# **Technical data**

Approvals
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Approvals



## **Dimensions and weights**

Depth	210 mm	Depth (inches)	8.2677 inch
Height	334 mm	Height (inches)	13.1496 inch
Width	558 mm	Width (inches)	21.9685 inch
Net weight	8593 g	<u> </u>	

## **Temperatures**

Ambient temp	erature	-40 °C50 °C	Humidity	5 - 90 %, 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

## **Approvals and norms**

Approvals	EN 61439-2, IEC 61439-2

## Guarantee

Time interval	5 years	

## **Electrical characteristics**

Rated DC voltage	1000 V			
Rated short-term current resistance	Rated current	37.5 A		
Current per Maximum Power Point, max. 30 A				
Rated DC current per connection	Current per string, max.	30.00 A		

## **Enclosure**

Insulating material	Polyester glass-fibre reinforced, Polycarbonate	Type of mounting	Wall mounting, 4 screws
Impact resistance	IKO8 in accordance with IEC 62208, IK10 in accordance with IEC 62262	Enclosure attachment	Via mounting foots
Connection type string	Plug WM4C		

## **General data**

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

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Amount of maximum power points	6			
MPP) Functional earth connector	Cable entry		Number of cable	1
	\\\/:		entries	C
	Wire connection		Type of connection Flexible, max. H05(07) V-K	Screw connection 7) 25 mm <sup>2</sup>
			w. wire end ferrule, DIN 46228 pt 1, max	16 mm²
Number of conduit inlets	12			
DC Input + & -	Wire connection		Type of connection	WM4C plug-in connector
			Compatible cable crossection	EN 50618:2015
			Wire cross-section, min.	4 mm²
			Wire cross-section, max.	6 mm²
	Cable entry		Number of cable entries	12
Fuse type	Neither fuse cartridge no	r holder		
Fuses	No			
Max. number of DC inputs	per Maximum Power Poi	nt 2 inputs connected in	parallel	
Number of string inputs per MPP	≤ 2			
Number of inputs	12			
Outputs				
· · · · · · · · · · · · · · · · · · ·	per Maximum Power Poi	nt 1 output	Turnetion	VANAAC orbonoine
· · · · · · · · · · · · · · · · · · ·	per Maximum Power Poi Wire connection	nt 1 output	Type of connection	WM4C plug-in connector
· · · · · · · · · · · · · · · · · · ·		nt 1 output	Compatible cable crossection	connector TÜV 2 Pfg1169/08.07
· · · · · · · · · · · · · · · · · · ·		nt 1 output	Compatible cable crossection Wire cross-section, min.	connector TÜV 2 Pfg 1169/08.07 4 mm²
· · · · · · · · · · · · · · · · · · ·		nt 1 output	Compatible cable crossection Wire cross-section,	connector TÜV 2 Pfg1169/08.07
DC Output + & -		nt 1 output	Compatible cable crossection Wire cross-section, min. Wire cross-section,	connector TÜV 2 Pfg1169/08.03 4 mm²
OC Output + & - Surge protection DC side	Wire connection		Compatible cable crossection Wire cross-section, min. Wire cross-section, max.	connector TÜV 2 Pfg1169/08.03 4 mm² 6 mm²
Surge protection DC side  Discharge current, max. (8/20 µs)	Wire connection  40 kA	Standby power co	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.	connector TÜV 2 Pfg1169/08.07 4 mm² 6 mm²
Surge protection DC side  Discharge current, max. (8/20 µs)  Short-circuit curent ISCPV	Wire connection  40 kA 11000 A	Standby power co Total discharge cu	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.	connector TÜV 2 Pfg1169/08.07 4 mm² 6 mm²
Surge protection DC side  Discharge current, max. (8/20 µs)  Short-circuit curent ISCPV  Discharge current In (8/20 µs)	Wire connection  40 kA 11000 A 20 kA	Standby power co Total discharge cu Requirements clas	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.  nsumption PC rrent Itotal ( 8/20µs)	connector TÜV 2 Pfg1169/08.0 4 mm² 6 mm² <0.2 W 50 kA Type II
Surge protection DC side  Discharge current, max. (8/20 µs) Short-circuit curent ISCPV Discharge current In (8/20 µs) Protection level Up (-/PE)	Wire connection  40 kA 11000 A 20 kA ≤ 3.8 kV	Standby power co Total discharge cu Requirements clas Protection level Up	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.  Insumption PC  I	connector  TÜV 2 Pfg1169/08.0  4 mm²  6 mm²  <0.2 W  50 kA  Type II ≤ 3.8 kV
Surge protection DC side  Discharge current, max. (8/20 µs) Short-circuit curent ISCPV Discharge current In (8/20 µs) Protection level Up (-/PE) Protection level Up (+/PE) Maximum continuous operating volta	40 kA 11000 A 20 kA ≤ 3.8 kV ≤ 3.8 kV	Standby power co Total discharge cu Requirements clas	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.  Insumption PC  I	connector TÜV 2 Pfg 1169/08.07 4 mm² 6 mm²
Surge protection DC side  Discharge current, max. (8/20 µs) Short-circuit curent ISCPV Discharge current In (8/20 µs) Protection level Up (-/PE) Protection level Up (+/PE) Maximum continuous operating volta DC UCPV mode +/-, -/PE, +/PE	40 kA 11000 A 20 kA ≤ 3.8 kV ≤ 3.8 kV	Standby power co Total discharge cu Requirements clas Protection level Up	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.  Insumption PC  I	connector  TÜV 2 Pfg1169/08.07  4 mm²  6 mm²  <0.2 W  50 kA  Type II  ≤ 3.8 kV
Surge protection DC side  Discharge current, max. (8/20 µs) Short-circuit curent ISCPV Discharge current In (8/20 µs) Protection level Up (-/PE) Protection level Up (+/PE) Maximum continuous operating volta DC UCPV mode +/-, -/PE, +/PE  DC load break switch	40 kA 11000 A 20 kA ≤ 3.8 kV ≤ 3.8 kV	Standby power co Total discharge cu Requirements clas Protection level Up	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.  Insumption PC Insump	connector  TÜV 2 Pfg1169/08.07  4 mm²  6 mm²  <0.2 W  50 kA  Type II  ≤ 3.8 kV
Max. number of DC outputs DC Output + & -  Surge protection DC side  Discharge current, max. (8/20 µs) Short-circuit curent ISCPV Discharge current In (8/20 µs) Protection level Up (-/PE) Protection level Up (+/PE) Maximum continuous operating volta DC UCPV mode +/-, -/PE, +/PE  DC load break switch  Voltage type  Important note	40 kA 11000 A 20 kA ≤ 3.8 kV ≤ 3.8 kV ge 1100 V	Standby power co Total discharge cu Requirements clas Protection level Up PV system voltage	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.  Insumption PC Insump	connector  TÜV 2 Pfg1169/08.07  4 mm²  6 mm²  <0.2 W  50 kA  Type II  ≤ 3.8 kV  1100 V
Surge protection DC side  Discharge current, max. (8/20 µs) Short-circuit curent ISCPV Discharge current In (8/20 µs) Protection level Up (-/PE) Protection level Up (+/PE) Maximum continuous operating volta DC UCPV mode +/-, -/PE, +/PE  DC load break switch  Voltage type	40 kA 11000 A 20 kA ≤ 3.8 kV ≤ 3.8 kV ge 1100 V	Standby power co Total discharge cu Requirements clas Protection level Up PV system voltage  Switch disconnect	Compatible cable crossection Wire cross-section, min. Wire cross-section, max.  Insumption PC  I	connector  TÜV 2 Pfg1169/08.0  4 mm²  6 mm²  <0.2 W  50 kA  Type II  ≤ 3.8 kV  1100 V

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# **Technical data**

#### Classifications

ETIM 6.0	EC002928	ETIM 7.0	EC002928
ETIM 8.0	EC003857	ETIM 9.0	EC003857
ETIM 10.0	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	ECLASS 14.0	22-57-02-92
ECLASS 15.0	22-57-02-92		

#### **Tender specification sheets**

Long specification

Combiner box for inverters with 6 MPP tracker, suitable for protecting the DC side of a photovoltaic system according to EN 51543-32. MPP1: 2 inputs, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1169/08.07 / EN 50618:2063 1 output, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1169/08.07 / EN 50618:2063 MPP2 to 6: identical to MPP1 Max. string voltage Uoc: 1000V 1 class/type II arrester with signal contact Connection of the signal contact via cable glands (8-12mmØ) max. conductor cross-section: 1.5mm<sup>2</sup> Connection of the functional earth via cable glands (8-12mmØ) Conductor cross-section: 16-25mm<sup>2</sup> Protection class: IP65 All built into a glas fibre reinforced polyester housing. Dimensions HxWxD: 334x558x210 mm Approval according to low voltage switchgear and controlgear IEC 61439-1:2011 and EN

61439-2:2011

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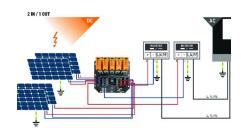
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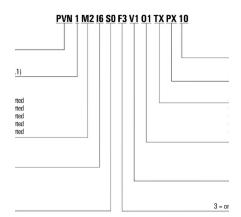
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# **Drawings**

## **PCB** design









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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 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

## **General ordering data**

Type MULTI-STRIPAX PV Version Order No. 1190490000 Photovoltaics Plug-in connector		<u>-</u>	
Order No. 1190490000 Photovoltaics Plug-in connector	Туре	MULTI-STRIPAX PV	Version
	Order No.	<u>1190490000</u>	Photovoltaics, Plug-in connector
GTIN (EAN) 4032248973262	GTIN (EAN)	4032248973262	
Oty. 1 ST	Qty.	1 ST	

## **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



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## Accessories

## **General ordering data**

Туре	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 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
GTIN (EAN)	4050118897012	thickness (A): 0.6 mm
Qty.	1 ST	
Туре	SDIS 1.0X5.5X125	Version
Type Order No.	SDIS 1.0X5.5X125 2749850000	Version Screwdriver, Blade width (B): 5.5 mm, Blade length: 125 mm, Blade
• •		

## **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	ieral ordering data		
Туре	PV-STICK+ VPE10	Version	
Order No.	1303450000	Photovoltaics, Plug-in connector	
GTIN (EAN)	4050118102468		
Qty.	10 ST		

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## **Accessories**

Order No.         1303490000         Photovoltaics, Plug-in connector           GTIN (EAN)         4050118102529	Type	PV-STICK- VPE10	Version
GTIN (EAN) 4050118102529	Order No.	<u>1303490000</u>	Photovoltaics, Plug-in connector
	GTIN (EAN)	4050118102529	
Qty. 10 ST	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**

Туре	VSSO WM4 C	Version
Order No.	<u>1254870000</u>	Photovoltaics, Flat design
GTIN (EAN)	4050118047479	
Qty.	100 ST	

#### **External fixing lugs**



The enclosures of the TBF series are made of extremely tough glass fibre-reinforced polyester. These enclosures are ideal for applications that call for low weight coupled with high shock resistance. The weather-resistant TBF enclosures are designed for a wide range of applications. Together with their comprehensive range of accessories, they provide universal solutions for accommodating built-in items such as regulators, measuring instruments, valves and other equipment.

## Features:

- 9 sizes in 2 versions, with grey and transparent lids
- · Cover with nylon screws
- Fixing holes outside the sealed area
- Thread for fitting to terminal rails and mounting plates
- Comprehensive accessories
- Weidmüller can manufacture and supply this enclosure to match customer specifications, fitted with all necessary terminals and cable glands.

## **General ordering data**

Туре	MF TBF	Version
Order No.	0360800000	TBF (polyester empty enclosure), Mounting foot, Fixing lugs, Height:
GTIN (EAN)	4008190108595	72.5 mm, Width: 24 mm, Depth: 12 mm, Basic material: Polyamide,
Qty.	1 ST	Polyamide 66, Deep black

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# **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

Order No. <u>2659350000</u> GTIN (EAN) 4050118682816

Qty. 100 ST

Version

Cable ties, 4.5 x 290 mm, Polyamide 66, 220 N

## **PV Sun Covers**



## **General ordering data**

Type PV SUN COVER 56/30/21
Order No. 8000087025

GTIN (EAN) 4064675845188

Qty. 1 ST

Version Photovoltaics

## **Spare Arrester**



## **General ordering data**

 Type
 VPU PV II 0 1000
 Version

 Order No.
 2530660000
 Surge

GTIN (EAN) 4050118540871

Qty. 9 ST

Surge voltage arrester, Low voltage, Accessories, Spare arrester

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# Counterpart

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- 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**

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