

**PVN DC 3IF 30 1MPP SW SPD1R CG 10**

**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 5 1643-32. 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, 1000 V, 1 MPP, 3 Inputs / 3 Outputs per MPP, With fuse holder, Surge protection I / II, Switch disconnecter, Cable gland
Order No.	<a href="#">2683050000</a>
Type	PVN DC 3IF 30 1MPP SW SPD1R CG 10
GTIN (EAN)	4050118699869
Qty.	1 items

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**Technical data**
**Approvals**

Approvals



ROHS Conform

**Dimensions and weights**

Depth	172 mm	Depth (inches)	6.7716 inch
Depth with add-on components	215 mm	Height	335 mm
Height (inches)	13.189 inch	Width	300 mm
Width (inches)	11.811 inch	Net weight	4130.72 g

**Temperatures**

Ambient temperature -40 °C...45 °C Humidity 5 - 90 %, no condensation

**Environmental Product Compliance**

RoHS Compliance Status Compliant  
 REACH SVHC Lead 7439-92-1  
 SCIP bdab5698-6a20-4370-8e28-8810d882d01a

**DC string monitoring**

Monitoring function Non monitored

**Included in delivery**

Included accessories	Article	Mounting foot
	Quantity	4
	Article	Sealing plug
	Quantity	5

**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 56.25 A
Current per Maximum Power Point, max.	45 A
Rated DC current per connection	Current per string, max. 45.00 A

**Enclosure**

Cover	with cover, removeable	Insulating material	Polyester glass-fibre reinforced, Polycarbonate
Type of mounting	Wall mounting, 4 screws	Impact resistance	IK08 in accordance with IEC 62208, IK10

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## Technical data

Enclosure attachment	Via mounting feet	Protection class	II
Connection type string	Internal terminal (with cable gland feed-through)		

in accordance with IEC 62262

### General data

Standards	EN 61643-31, IEC 61439-2 ed 3.0	Protection degree	IP65
Installation location	Protected outdoor area (Land and Sea)		

### Inputs

Cartridge fuse	10 x 38 mm		
Fused poles of string	+/-		
Fuse-link standard	IEC 60269-1, IEC 60269-6, gPV (EN 60269-6)		
Amount of maximum power points (MPP)	1		
Functional earth connector	Cable entry	Number of cable entries	1
		Cable diameter, min.	5 mm
		Cable diameter, max.	10 mm
		Cable gland	M 16
	Wire connection	Type of connection	PUSH IN with actuator
		Flexible, max. H05(07) V-K	25 mm <sup>2</sup>
	w. wire end ferrule, DIN 46228 pt 1, max.	16 mm <sup>2</sup>	
Number of conduit inlets	4		
DC Input + & -	Wire connection	Type of connection	PUSH IN with actuator
		Compatible cable	TÜV 2 Pfg1169/08.07 crosssection
		Wire cross-section, min.	2.5 mm <sup>2</sup>
		Wire cross-section, max.	16 mm <sup>2</sup>
	Cable entry	Number of cable entries	3
		Cable diameter, min.	5 mm
		Cable diameter, max.	10 mm
		Cable gland	M 25
Fuse type	Empty fuse holder		
Fuses	Yes		
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	1
		Cable diameter, min.	5 mm
		Cable diameter, max.	10 mm
		Cable gland	M 16
	Wire connection	Type of connection	PUSH IN with actuator
		Flexible, max. H05(07) V-K	1.5 mm <sup>2</sup>
	w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm <sup>2</sup>	
Number of inputs	3		

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**Technical data**

**Outputs**

Max. number of DC outputs	per Maximum Power Point 3 outputs connected in parallel		
DC Output + & -	Wire connection	Type of connection	PUSH IN with actuator
		Compatible cable cross-section	TÜV 2 Pfg1169/08.07
		Wire cross-section, min.	2.5 mm <sup>2</sup>
		Wire cross-section, max.	16 mm <sup>2</sup>

**Surge protection DC side**

Standards	EN 61643-31, IEC 61439-2 ed 3.0	Lightning test current Iimp (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 current ISCPV	11000 A
Total discharge current Itotal (8/20µs)	50 kA	Discharge current In (8/20 µs)	20 kA
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	1000 V
Surge protection DC side	1000 V type I + II with remote contact	Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/-PE	1100 V

**DC load break switch**

Voltage type	DC	Rated impulse withstand voltage	8 kV
Nominal voltage	1000 V	Nominal current	45 A
Number of contacts as NC contact	0	Switch disconnector execution	switch in cover
Switching disconnector capacity	DC-PV1, IEC 60947-3	Motor drive available	No
Rated short-circuit making current	1.4 A	Number of breaking operation cycles at rated current	300
Number of operating cycles	10000	Number of contacts as NO contact	4

**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 Fuses are not included

**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 M25 cable gland with 3x7mm Ø cable entry. PUSH IN connection / 2.5

## Technical data

- 6mm<sup>2</sup> single-wire, multi-wire, with/without ferrule.  
3 outputs, connection via M25 cable gland with 3x7mm Ø cable entry.  
PUSH IN connection / 2.5  
- 6mm<sup>2</sup> single-wire, multi-wire, with/without ferrule.  
Max. string voltage Uoc: 1000V  
1 class/type I + II combined arrester with signal contact  
Fuse holders for inputs and outputs (fuses 10x38 to be ordered separately)  
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: 1.5mm<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 glass fibre reinforced polyester housing. Dimensions HxWxD: 330x302x214 mm  
Approval according to low voltage switchgear and controlgear IEC 61439-1:2011 and EN 61439-2:2011

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Drawings

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PCB design

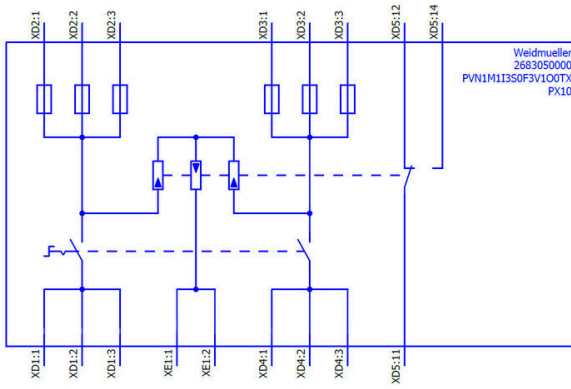


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## Accessories

### 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.	<a href="#">1157820000</a>	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.	<a href="#">1190490000</a>	Photovoltaics, Plug-in connector	
GTIN (EAN)	4032248973262		
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

Type	SDIK PH3 X 150	Version	
Order No.	<a href="#">2749910000</a>	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.	<a href="#">2749810000</a>	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.	<a href="#">2749850000</a>	Screwdriver, Blade width (B): 5.5 mm, Blade length: 125 mm, Blade thickness (A): 1 mm	
GTIN (EAN)	4050118897050		
Qty.	1 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

Type	MF TBF	Version	
Order No.	<a href="#">0360800000</a>	TBF (polyester empty enclosure), Mounting foot, Fixing lugs, Height: 72.5 mm, Width: 24 mm, Depth: 12 mm, Basic material: Polyamide, Polyamide 66, Deep black	
GTIN (EAN)	4008190108595		
Qty.	1 ST		

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## Accessories

### Sealing sets



### General ordering data

Type	SL SET PV NEXT	Version	
Order No.	<a href="#">2729230000</a>	Photovoltaics	
GTIN (EAN)	4050118804508		
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.	<a href="#">2659350000</a>	Cable ties, 4.5 x 290 mm, Polyamide 66, 220 N	
GTIN (EAN)	4050118682816		
Qty.	100 ST		

### 10x38 gPV

The gPV cylindrical fuse cartridges are designed to provide compact, safe and economical protection of photovoltaic modules (field protection) with voltages up to 1,500 DC. They provide protection against both overload and short circuit (gPV class according to the requirements of IEC60269-6 and UL248-19 standards). Made of a ceramic tube with high internal pressure and thermal shock resistance, allowing high switching capacity in a small space. The contacts are made of silver-plated copper and the fusible elements of pure silver to avoid ageing and thus keep the electrical characteristics invariable. They are available in the sizes 10x38 mm, 10x85 mm and 22x58 mm.

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**Accessories**

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**General ordering data**

Type	FUSE 10X38 10A 1000 VDC...	Version
Order No.	<a href="#">2783230000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 10 A
GTIN (EAN)	4064675059950	
Qty.	10 ST	
Type	FUSE 10X38 12A 1000 VDC...	Version
Order No.	<a href="#">2783240000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 12 A
GTIN (EAN)	4064675059967	
Qty.	10 ST	
Type	FUSE 10X38 15A 1000 VDC...	Version
Order No.	<a href="#">2783250000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 15 A
GTIN (EAN)	4064675059974	
Qty.	10 ST	
Type	FUSE 10X38 16A 1000 VDC...	Version
Order No.	<a href="#">2783260000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 16 A
GTIN (EAN)	4064675059981	
Qty.	10 ST	
Type	FUSE 10X38 1A 1000 VDC ...	Version
Order No.	<a href="#">2783160000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 1 A
GTIN (EAN)	4064675059684	
Qty.	10 ST	
Type	FUSE 10X38 20A 1000 VDC...	Version
Order No.	<a href="#">2783280000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 20 A
GTIN (EAN)	4064675060000	
Qty.	10 ST	
Type	FUSE 10X38 2A 1000 VDC ...	Version
Order No.	<a href="#">2783170000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 2 A
GTIN (EAN)	4064675059691	
Qty.	10 ST	
Type	FUSE 10X38 3A 1000 VDC ...	Version
Order No.	<a href="#">2783180000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 3 A
GTIN (EAN)	4064675059905	
Qty.	10 ST	
Type	FUSE 10X38 4A 1000 VDC ...	Version
Order No.	<a href="#">2783190000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 4 A
GTIN (EAN)	4064675059912	
Qty.	10 ST	
Type	FUSE 10X38 5A 1000 VDC ...	Version
Order No.	<a href="#">2783200000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 5 A
GTIN (EAN)	4064675059929	
Qty.	10 ST	
Type	FUSE 10X38 6A 1000 VDC ...	Version
Order No.	<a href="#">2783210000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 6 A
GTIN (EAN)	4064675059936	
Qty.	10 ST	
Type	FUSE 10X38 8A 1000 VDC ...	Version
Order No.	<a href="#">2783220000</a>	Photovoltaics, Cartridge fuse, 1000 V, 10x38, gPV, 8 A
GTIN (EAN)	4064675059943	
Qty.	10 ST	

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## Accessories

### PV Sun Covers



#### General ordering data

Type	PV SUN COVER 37/30/18	Version	
Order No.	<a href="#">8000087024</a>	Photovoltaics	
GTIN (EAN)	4064675845171		
Qty.	1 ST		

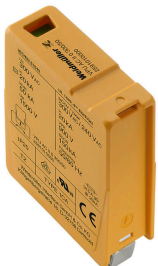
### Sealing sets



#### General ordering data

Type	BLINDPLUG SET5 7X28MM	Version	
Order No.	<a href="#">3077670000</a>	Photovoltaics, Blind plug	
GTIN (EAN)	4099987081894		
Qty.	1 ST		
Type	BLINDPLUG SET50 7X28MM	Version	
Order No.	<a href="#">3077650000</a>	Photovoltaics, Blind plug, Accessories, Blind plug, 50 pieces	
GTIN (EAN)	4099987081870		
Qty.	1 ST		

### Spare Arrester



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## Accessories

### General ordering data

Type	VPU PV I+II O 1000	Version	
Order No.	<a href="#">2530600000</a>	Surge voltage arrester, Low voltage, Accessories, Surge protection I /	
GTIN (EAN)	4050118540819	II, Spare arrester	
Qty.	9 ST		
Type	VPU PV I+II OM 1000	Version	
Order No.	<a href="#">2534300000</a>	Surge voltage arrester, Low voltage, Surge protection I / II, Spare	
GTIN (EAN)	4050118545906	arrester	
Qty.	9 ST		