

**Implement successful long-term photovoltaic systems**  
**With connectivity solutions tailored to your requirements**  
Let's connect.

Photovoltaics

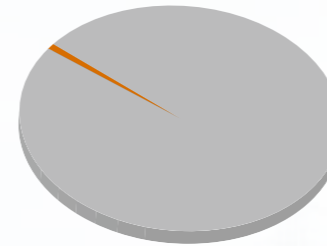


## Long-term effectively running systems Thanks to reliable solutions

Construct photovoltaic systems efficiently and operate them over the long-term economically and without downtime. We achieve this through reliable electrical connectivity and combiner boxes individually assembled for your application.

This combination enables your system to be quickly installed and cost-effectively maintained. Our monitoring systems give you maximum transparency of all system functions. We offer viable, complete solutions of the highest quality comprising connection technology, monitoring and communication, backed by years of experience in the project business.

1 %



**Our solutions ensure that your systems run efficiently with consistent output – and for less than 1 percent of the total cost.**

90 million panels  
with an output of over 17 GWp

Local support in nearly 100 countries

Since 2007 development, production and supply of combiner boxes for photovoltaic projects

More than 185,000 combiner boxes worldwide

## Put your trust in a reliable partner

We impress with expertise and experience

You know Weidmüller to be a renowned supplier of products and solutions for electrical connectivity, electronics and automation. As a traditional family-owned company we develop and produce key components for the industry. Our designs, products and processes have proven themselves over decades and are used all over the world.

We can also support you in the planning and installation of your photovoltaic systems thanks to our many years of experience and strong commitment. We develop and manufacture tailor-made connection and monitoring solutions, characterised by superb reliability, cost-efficiency and quality, all of which is confirmed by international approvals and country-specific as well as application-specific certificates.

As a customer you benefit from our many years of experience in the photovoltaics industry, our expertise, comprehensive range of services and our global presence. Our photovoltaic specialists accompany your projects in a responsible manner – from initial planning right through to the operation of your system.

With Weidmüller you can put your trust in one of the world's most successful providers of communication and monitoring solutions for industrial photovoltaic systems.

**Let's connect.**

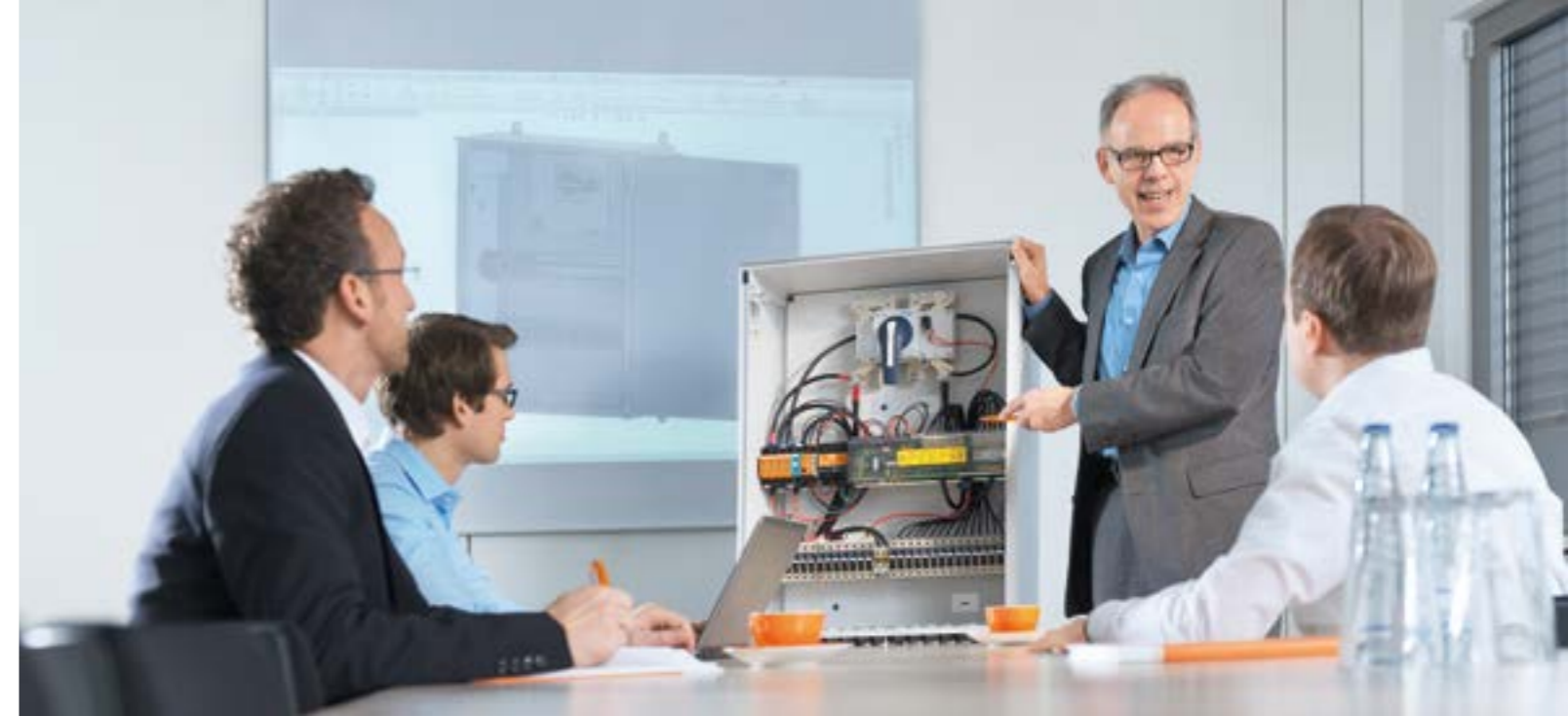
## Intelligently bundled and perfectly matched

### The best connections for your photovoltaic system

When you buy cheaply, you often end up with higher costs in the long run. This is especially true for the components used in photovoltaic systems. They need to withstand high loads day in, day out, which is why the reliability of even the smallest components are crucially important for the efficiency of the overall system. For example, the premature wear of individual contacts can quickly lead to malfunctions or failures of the entire system, resulting in significant additional costs.

With Weidmüller combiner boxes you significantly reduce the risk of disruptions and failures. We bundle high-quality components to provide innovative solutions which can be individually adapted to your needs. This begins at the system planning stage, because at Weidmüller you get all connection components from a single source.

Once your system is up and running, you benefit from a high level of reliability and access to important information about the status and functioning of your system. This enables you to achieve maximum availability for your systems and carry out maintenance tasks in a targeted and cost-effective manner.



#### Customer-specific design according to your requirements

Our international project work has made us very familiar with the requirements of the global market. We are well versed in all the standards and guidelines and address each situation according to specific local requirements. From planning to delivery: you receive comprehensive advice and direct support around the globe.

National standards and requirements for photovoltaic systems can vary enormously. This is why our combiner boxes were designed from the outset by our application engineers to comply with country-specific standards.

Based on the requirements profile, a variety of components can be easily integrated into the design. We attach great importance to efficiency and precision. Everything is implemented with the aim of meeting the highest standards of quality.



Our specialists from the Global Application Center strive to ensure that components are perfectly matched

## In line with your specific needs: Smart solutions for all levels in the photovoltaic park

We develop and produce the appropriate combiner boxes for all levels of your photovoltaic system. All functional areas, from transmission and fuse protection to monitoring, are matched according to the specific application and covered with our quality products. This provides you with a consistently reliable infrastructure. Rapid and precise error detection and rectification are possible in the event of an emergency.

### Communication level



Communication boxes are the link between the individual components of the network and ensure that all collected information is queried and collated. The boxes are usually placed in the vicinity of the inverter and are also able to pool and transmit signals from other devices, such as camera systems or weather stations.

### Level 1 Combiner boxes

Combiner boxes bundle the output lines of individual strings and connect them to the inverter or, optionally, with the level-2 combiner box. Protection and monitoring functions can also be integrated. The individual strings can be monitored for performance and all components individually protected against surge damage.



1,500 V  
ready

### Level 2 Combiner boxes

The combiner boxes on this level bundle the lines from the first level into a single outgoing line. This is connected to the inverter. Here again, protection against surge voltage and external influences is integrated and the operational status can be monitored.



# You want to improve your photovoltaic systems' profitability

We provide solutions for system voltages up to 1,500 V

As a full-range supplier Weidmüller provides a holistic portfolio of specific components, combiner boxes and accessories for PV applications, from standard components to tailor-made solutions.



AC combiner boxes

Classic combiner boxes

Transclenic string monitoring devices

Installation tools

Surge protection devices

PV Next for string inverters

DC/DC power supplies

PV connectors

Crimp free PV connectors

## System-specific solutions to generate higher added value

Our customised classic combiner boxes –  
also as standard boxes up to 1,500 V



### High degree of protection

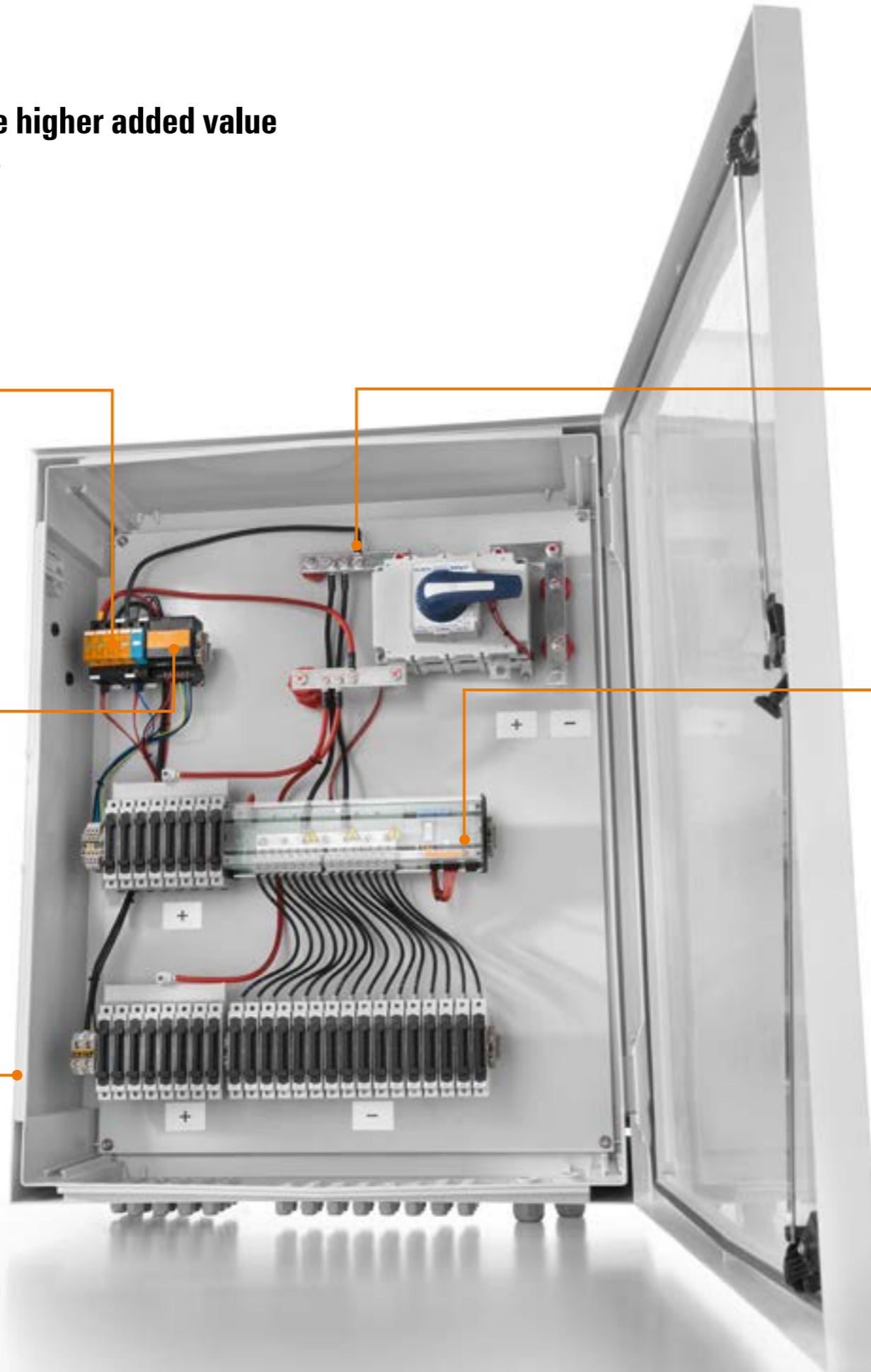
Ultra-modern protection mechanisms are used to guarantee the best surge protection. The system meets the requirements of the current photovoltaic standard EN 50539-11.

### Simplified field wiring

The combiner box is supplied as a ready-to-connect solution to simplify field installations and to save time and money. The integrated Transclinic 16i+ 1K5 monitoring module enables a direct supply from the DC string as an option. A separate feed line is not required.

### Long service life

All components are optimised to ensure a long service life. This is achieved through compliance with IP standards and certification according to DIN EN 61439-2. A housing made of glass fibre reinforced polyester provides additional safety and UV resistance.



### Developed for easy maintenance

While developing the new combiner box designed for rated voltages of up to 1,500 V, we attached a great deal of importance to reliability and cost effectiveness. Maintenance work is easy to carry out, even after many years of use in the field.

### Monitored and non-monitored solutions

We recommend monitoring each and every string to ensure that your photovoltaic system delivers optimum performance. However, we also provide non-monitored solutions upon request.

### Why is string monitoring so important in a system?

The PID effect occurs more and more frequently in photovoltaic modules. In order to be able to quickly detect a drop in the system's performance, it is advisable to have each and every string reliably monitored. Appropriate countermeasures can be taken at an early stage as a result. Also, faulty switching problems can only be detected if continuous string voltage monitoring is ensured.

As many function-critical components are used in photovoltaic modules and solar inverters, a reliable monitoring system should be implemented from the first commissioning of these products. This helps to ensure preventative system maintenance and to avoid malfunctions during operation.

## For photovoltaic large scale systems with string inverters

### Our tailor made AC combiner boxes portfolio



Weidmüller presents a new range of PV AC Combiner Boxes for large scale systems to fulfil new market trends. This new product portfolio based on tailor-made solutions covers the needs to join and protect from 2 up to 8 string inverters with individual output powers between 33 kW and 80 kW.

AC Combiner Boxes bundle the output lines of the inverter and connect them to the transformer station. Optionally configurations allow earth leakage protection or energy monitoring.

#### High protection class

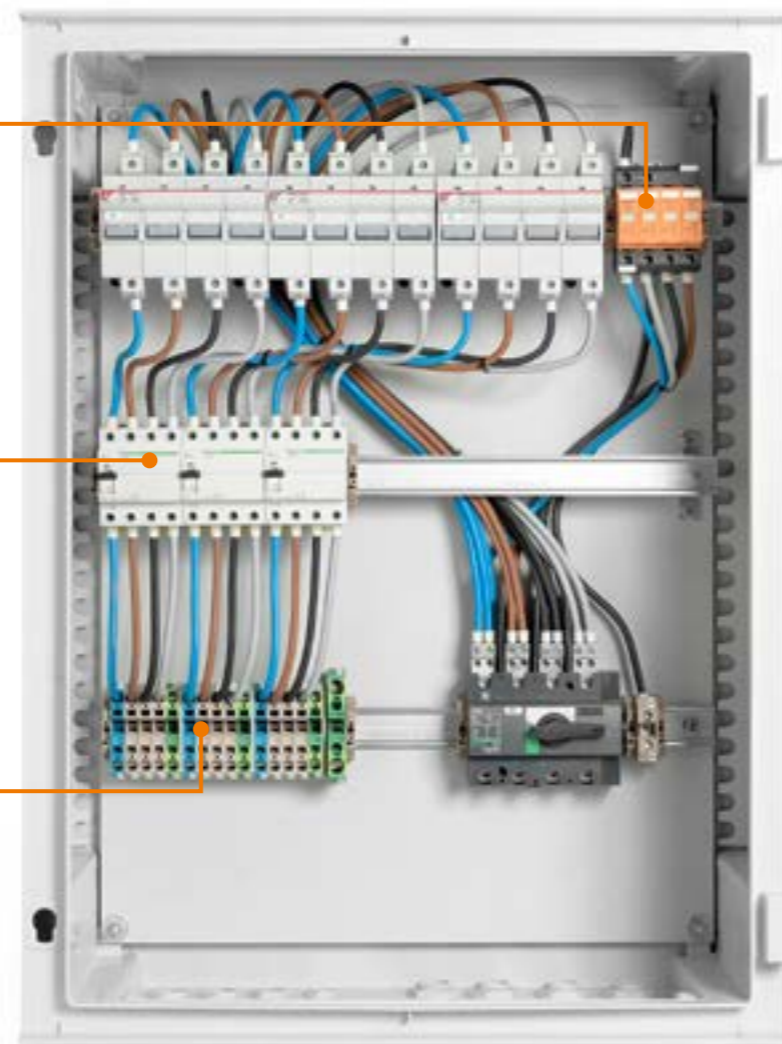
Pluggable surge protection devices (SPD); type I or II depending on project needs. Optional for 3p or 4p protection.

#### Overcurrent protection

High performance of overcurrent protections.

#### Tailor made

Customer specific solutions to collect and protect the output power of 2 to 8 string inverters to ensure optimal performance and long-term profitability.



#### Monitored and non-monitored solutions

Energy monitoring with communication interfaces for third-party certification of correct energy production of the system and to implement alarms.

#### Long service life

All components are optimised to ensure a long service life. This is achieved through compliance with IP standards and certification according to DIN EN 61439-2. A housing made of glass fibre reinforced polyester provides additional safety and UV resistance.

# More efficient wiring of photovoltaic systems

## PV Next combiner boxes: Easy. Fast. Safe.

Economy and safety during installation and operation are central requirements in photovoltaics. PV Next is the new generation of standardised, highly scalable combiner boxes for private and commercial photovoltaic applications.

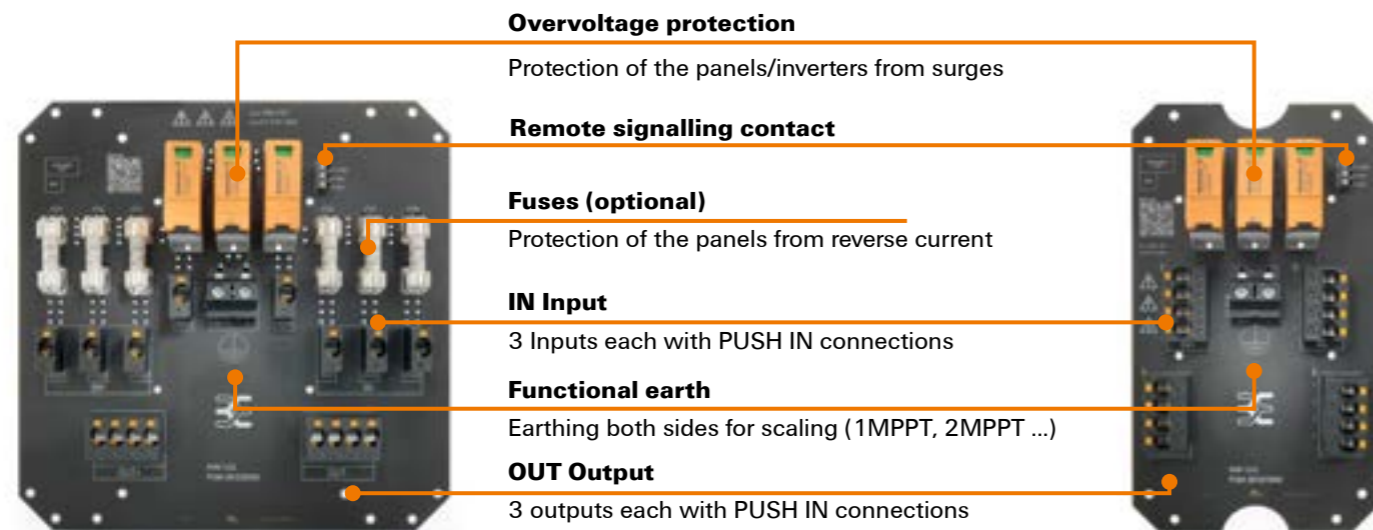
With PV Next, Weidmüller offers the world's first combiner box concept based on a standardised printed circuit board design. The advantages: simplicity, safety, time savings, and cost reduction. The innovative concept covers approximately 75 % of today's standard requirements, enabling PV installers to work faster and more cost-effectively. The integrated PUSH IN technology reduces assembly times and minimises the risk of errors and the resulting consequences.

### Your special advantages

- Scalable and extensible design
- Easy installation without crimping and without special tools
- Avoidance of wrong connections and reduction of risks
- 5 years standard warranty

### More information:

[www.weidmueller.com/pvnext](http://www.weidmueller.com/pvnext)



### Easy

Simple operation with PUSH IN technology. Intuitive and maintenance free.



### Fast

Plug & Play with the optional WM4C connections. The alternative are cable glands.



### Safe

The remote signalling contact enables safe monitoring. Always inside.





# Performant string monitoring with a robust design

## Weidmüller Transclinic – reliable even under extreme conditions

Integrated power monitoring provided by the Transclinic monitoring system enables errors to be diagnosed accurately. This means you can optimise specific parts of your system and reduce maintenance costs considerably.

### Open data protocol

The open Modbus RTU-RS485 protocol makes it easier to integrate Transclinic into SCADA systems.

### Integrated RS-485 SPD protection

Onboard surge protection and field replaceable RS485 transceiver.

### Quick error analysis

Status LEDs allow for the rapid checking of the system status. Time-consuming error analyses are things of the past.

### User-friendly setup

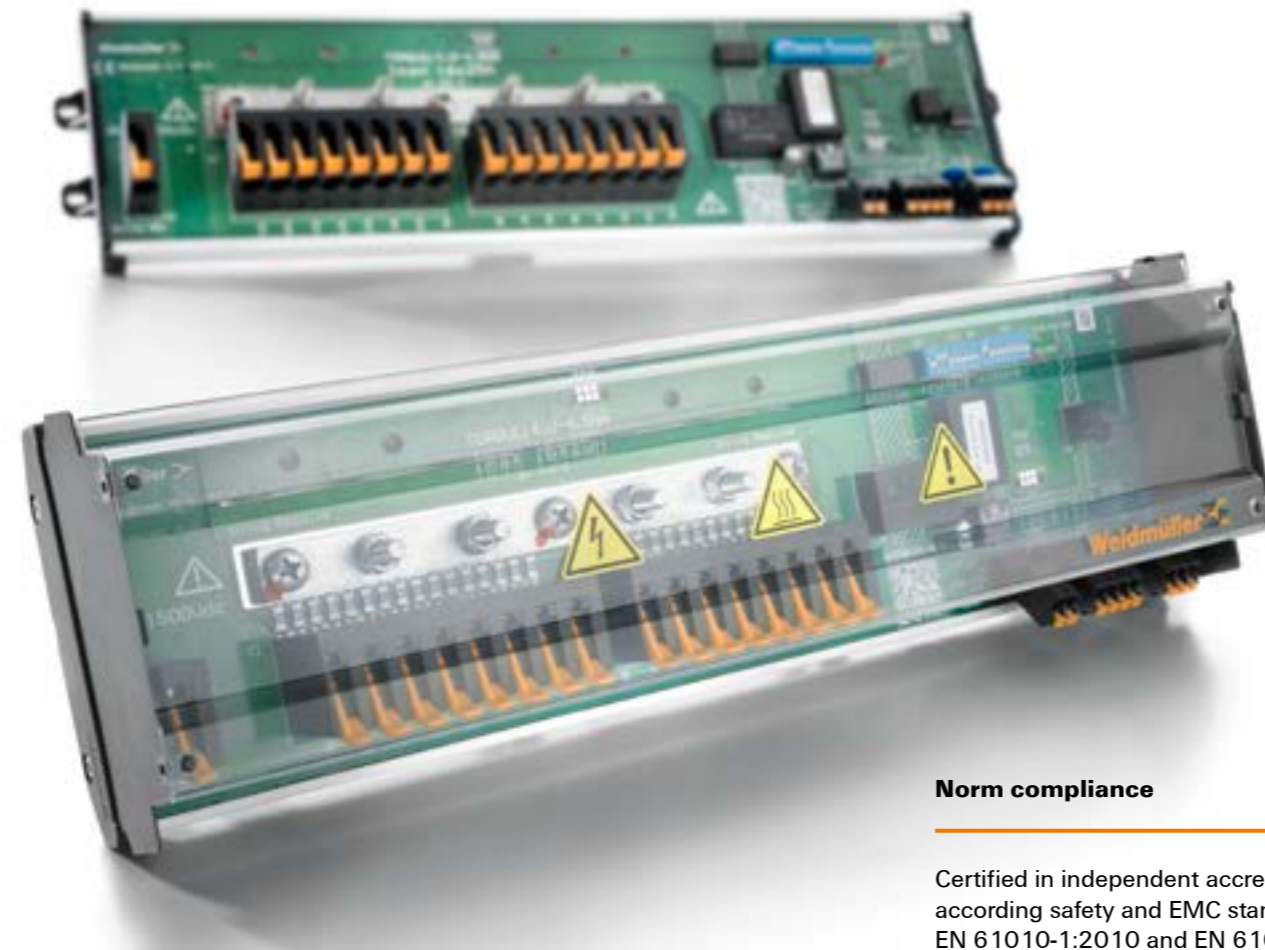
No Computer or special tools are required to set up the devices in the field. Setup uses RS485-parameters.

### Two digital inputs

Permanent surveillance of other equipment such as Over-voltage protections or DC Switches.

### Suitable for use in harsh conditions

Designed to work under hard temperature conditions (-25°C to +70°C), high humidity level and at height altitudes above sea level.



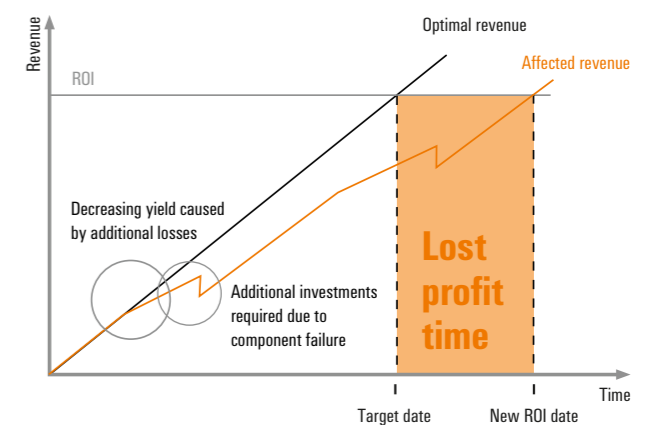
### Norm compliance

Certified in independent accredited laboratories according safety and EMC standards EN 61010-1:2010 and EN 61010-2-030:2010.

## Does string monitoring pay off? Secure your ROI

Financial and technical security play an important role on the long term evaluation of a Photovoltaic site. String monitoring helps to reach your financial targets giving detailed performance insights.

Every deviation on the planned yield may postpone your break-even date significantly due to long term performance losses caused by e.g. PID or cell breakage, but also necessary new investments to replace failing components. Measurement technology on string level will detect smallest deviations and enable you to take early countermeasures.



# Advanced surge protection for photovoltaic systems

## Improved plant performance with VARITECTOR surge protection

Modern photovoltaic energy generation is streamlined to efficiency. Reliable surge protection with future-proof performance is a must to maximise system uptime and profitability. The VARITECTOR PU PV series is designed for use in PV string combiner boxes for generator voltages up to 1,500 V and complies with latest UL and EN standards for global application.

### Type I and II protection

Type I and II protection is supported for 1,000 V and 1,500 V systems fully compliant to latest EN/IEC standards.

1.000 V  
1.500 V

### Maximum short-circuit capability

PV plants, which combine many panels in a string, are efficiently protected up to 11 kA of the prospective short-circuit current. Additional fuses for the SPD are not required.

$I_{scpv}$   
11 kA



### Slim and pluggable arresters

The surge protection devices are easily pluggable and enable a tool-free, fast and cost-effective replacement.

Steckbare  
Einsätze



### Safe operation up to 4,000 m

PV plants, also such located in high altitude regions, are reliably protected. An additional risk analysis of deratings is not required for extraordinary locations.

bis zu  
4.000 m

## Crimp-free wiring

### Connections made easy with the PV-Stick

#### Plug in, twist, power: the easiest way to wire up solar panels

Faster is better. Thanks to the unique PUSH IN technology, our easy-to-handle PV-Stick with its "Type 4" connector face can be installed extremely quickly and easily without the need for a crimping tool. The PV-Stick avoids potential assembly errors by being free of crimp contacts and the need for crimping tools. This cuts installation time by at least 50 % – without any loss of quality.

#### Crimp-free connection

A click tells you the connection has been made. This audible feedback indicates a secure connection.



#### Simple insulation stripping

The notches in the screw cap indicate how much insulation to strip off.



#### Ergonomic

The easy-grip design makes assembly easy, even under difficult conditions.



#### Standards-conformant quality

The PV-Stick is manufactured with proven Weidmüller quality, certified by TÜV and complies with IEC 62852.



#### Award-winning design

The PV-Stick's impressive blend of form and function has been recognised by three international juries of experts.



## Classic connection system

### WM4 C with conventional connector face and proven Weidmüller quality

#### Our classic system for rapid crimp connections: effective and standard-compliant

The WM4 C is our modern crimp connector. It combines outstanding quality with ease of handling and is available as a field or housing connector. The standard "Type 4" connector face allows it to be used with Weidmüller's entire range of connectors. As you would expect, the WM4 C is offered with accessories and suitable, high-quality tools to permit safe and reliable wiring.



Let's connect.

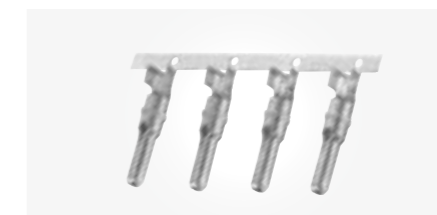
#### Optimally positioned

The twist protection of the WM4 C housing connector prevents twisting of the plug during the installation in the enclosure.



#### Wide range of cross-section

4 mm<sup>2</sup> and 6 mm<sup>2</sup> cables are handled with one crimp contact.



#### One-stop shopping

Weidmüller offers a wide range of reliable components for installing photovoltaic plants.



#### High current rating

Loads with a rated current of up to 35 A are possible.

#### Standards-conformant quality

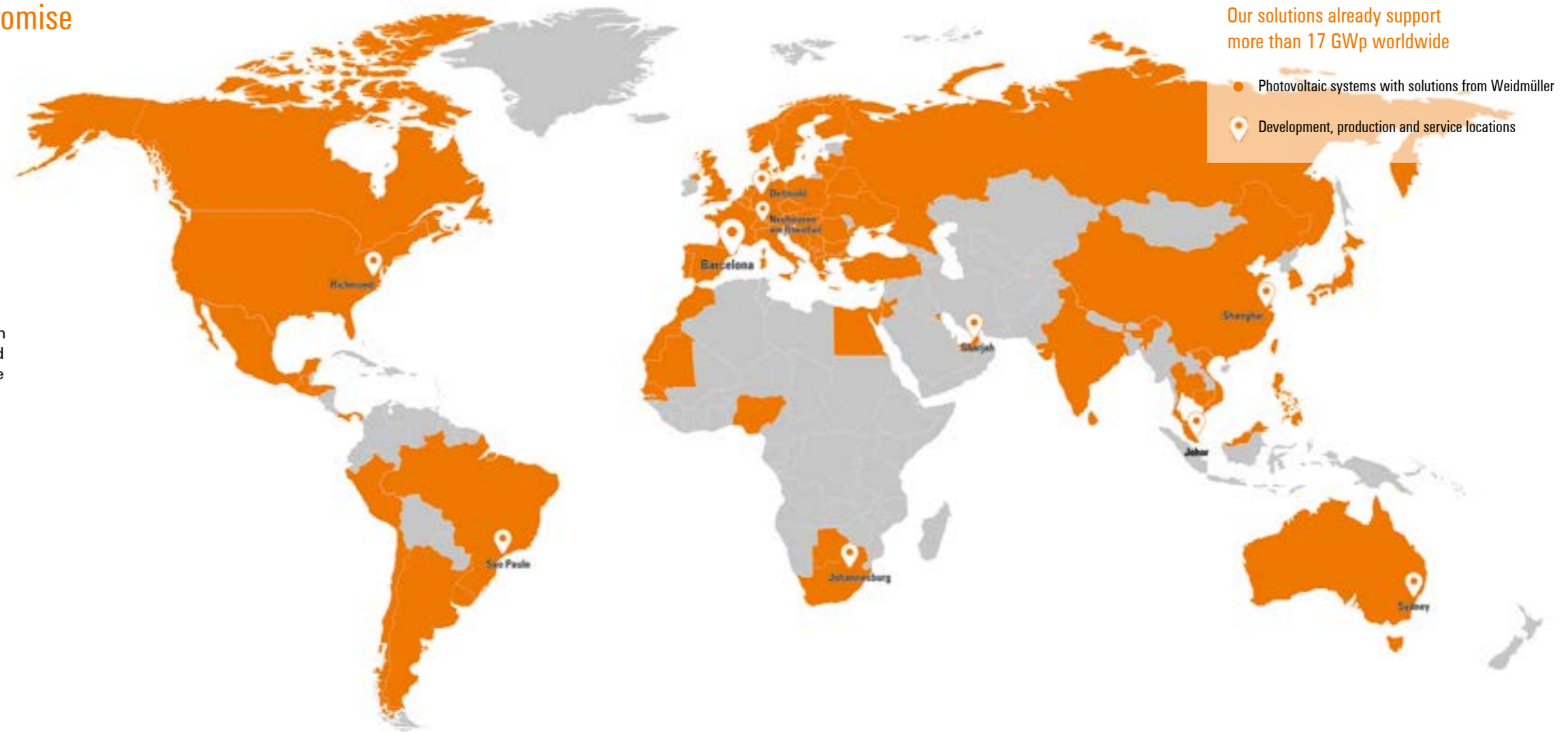
The PV-Stick is manufactured with proven Weidmüller quality, certified by TÜV and complies with DIN IEC 62852.

## Know-how and flexibility

### The guaranties of our global quality promise

We have been supplying combiner boxes for photovoltaic systems since 2007. As an international company we have development and production sites around the world.

At our Global Application Center in Barcelona we coordinate and test the design of your combiner boxes. Our current design and manufacturing standards are guaranteed around the world by the highest quality standards. Sophisticated logistics ensure maximum punctuality for deliveries. Throughout the project, local specialists provide you with professional and reliable support. This helps us to remain competitive and ensures that your systems are a success.



#### Design

- Development of individual designs at the Global Application Center in Barcelona
- Detailed coordination of the components used
- Functional testing and design validation prior to mass production



#### Production

- Installation at a site in the global manufacturing network
- Optimum processes through automatic testing equipment
- Transparency and traceability provided by serial number on each housing



#### Quality

- Development and assembly process in accordance with the latest requirements of the IEC standard
- Highest standard of quality through 100% inspection of shipped goods
- Each combiner box is delivered with a certificate of quality



#### Customer benefits

- Just-in-time production and the option of individual delivery agreements
- Straightforward commissioning through comprehensive documentation
- Local service and support from our regional contacts

## Your photovoltaic systems should be profitable in the long term

We help you throughout your system's entire lifecycle

Your photovoltaic systems should be built as efficiently as possible and be operated cost-effectively in the long term without any downtime. We achieve this with reliable connectivity, outstanding services and combiner boxes individually assembled for your application.

As a customer, you benefit from our expertise and many years of experience in the photovoltaics industry, the comprehensive range of services and our global presence. Our photovoltaic specialists responsibly support your project from the initial planning meeting to the end of the system lifetime.

### Training sessions and consulting services

Our experts help you to plan, commission and maintain your photovoltaic system. Your employees are comprehensively trained by Weidmüller specialists in our online and local workshops. The knowledge shared about products, installation, commissioning and maintenance guarantees a smooth commissioning process.



### A service that goes further

We want you to be – and remain – satisfied with your customised solution for a long time. That's why we continue to provide support long after the project is complete. If necessary, our aftersales service provides you with a wide package of measures that offers you the greatest possible benefits.

- Support with commissioning
- Provision of assembly instructions in several languages
- On-site system analyses
- Remote diagnostics and support during troubleshooting
- Warranty processing
- Spare parts service



### Support during commissioning

Our engineers on site provide you with support in the form of valuable information and test procedures to ensure you get perfect performance and reliability out of your systems and to ensure the maximum combiner box lifetime. A valuable range of support services mean you can also rest assured that you'll benefit from an extended warranty.



### Qualified error analyses

Our Transclinic Monitoring System ensures that the performance of your photovoltaic system is optimally monitored. Our system specialists also provide you with support in the form of remote diagnostics and on-site analyses to ensure that your system is ready to operate from a mechanical, electrical and electronic standpoint – and to effectively minimise potential downtimes.

## International references

Weidmüller solutions – used around the world



## The harshest environmental conditions dryness and an extreme installation height



Rijn Capital Chile operates a complex consisting of six photovoltaic systems that work reliably even under extreme conditions. The substantial level of dryness and extraordinary installation height at 2,600 metres above sea level turn what would otherwise be standard technological requirements into a real challenge.

We have further developed our Transclinic 16i+ monitoring system for use at heights of up to 3,000 metres to meet these requirements. So, together with its extended temperature range of  $-25\text{ }^{\circ}\text{C}$  to  $+70\text{ }^{\circ}\text{C}$ , our system solution withstands even the harshest environmental conditions.

**Location:** Chile, Antofagasta  
**Size:** 100 MWp



Let's connect.

## Quality prevails

A high degree of reliability for challenging markets



Even in the challenging Japanese market, we are helping customers to install photovoltaic systems with our high-performance products.

Photovoltaic solutions from Weidmüller are already being put to use in all of Japan's geographical regions. With an average output of approximately 200 to 300 MWp per region and a total output of more than 2.0 GWp, they cut an

impressive figure even when faced with particularly high quality and reliability requirements. Quality prevails.

**Location:** Japan  
**Size:** 2.0 GWp

## Powerful "sunroof"

Connected to the grid in no time at all



Just under a year separated the initial idea and the grid connection of Switzerland's most powerful rooftop photovoltaic system. Weidmüller's expertise and experience helped achieve this record-breaking time.

To keep to the ambitious schedule, Weidmüller supplied the first ready-to-connect solutions – including an initial sample – within just two weeks.

Thanks to our knowledge of technical regulations in Switzerland, we were able to develop solutions for Helion Solar that are fully standard-compliant and carefully configured for the planned system architecture.

**Location:** Switzerland, Zuchwil  
**Size:** 5.6 MWp



Let's connect.



## You can rely on longevity and resilience

Our laboratory ensures the highest product quality

The components of a photovoltaic system must be able to withstand extreme climatic fluctuations. These include rapid temperature changes, severe weather conditions and constant heat and cold. In all cases, it comes down to guaranteeing availability without compromise over a long period of time and protecting sensitive components from external influences.

During product development, we begin by examining materials, components and systems in terms of their suitability for a specific application.

Special environmental conditions are simulated in our laboratory. These include prolonged UV radiation and weathering as well as reliability and functional tests that match real conditions. Tests include a comprehensive examination of insulation and dielectric strength in order to determine clearance and creepage distances, behaviour under high operating temperatures and much more.

All combiner boxes are constructed on the basis of the test results and assembled for the specific application. This ensures that each of the requirements of the target application is fully met.

Our laboratory is accredited according to international standards. This confirms its independence and recognition by institutions, registration services and other authorities. As a member of the CTD program Weidmüller is regularly audited by UL with regard to its test methods, quality management and documentation.

IP testing procedures ensure that the housing is able to withstand external influences such as dust and physical contact and is protected against water jets.



Deutsche  
Akkreditierungsstelle  
D-PL-12095-01-00

## Customer-specific design

### PV DC combiner box



#### Technical data

Main application features	
Inputs	From 8 to 32
Outputs	1-2
Operating temperature range	-50 °C up to +50 °C
DC earthing system	Floating, negative grounded or positive grounded
Installation location	Protected outdoors (< 1 km from the sea)
Altitude above sea level	up to 2000 m (standard) higher altitudes on-demand
Main electrical features	
Rated DC voltage	≤ 1000 V DC or ≤ 1500 V DC
Rated DC current per input	≤ 25 Amps (single or double string connection)
Maximum fuse size	≤ 30 Amps (for 10 x 85 mm) and ≤ 400 A (for NH type)
Protection against overcurrent	gPV fuse-links according IEC 60269-6
Fuses	Both poles or one pole fuses
Switch disconnecter	Yes (optional)
Switch disconnecter breaking & making capacity (acc. to IEC 60947-3)	≤ 500 A (other options under demand)
Enclosure	
Enclosure material	GFRP (Glass Fiber Reinforced Polyester)
Enclosure shape	Portrait or Landscape
Enclosure fixing system	Wall mounted or pedestal
Degree of protection (according IEC 60529)	IP65
Form factor	Cabinet with hinged door
Polycarbonate protection plate	Yes (optional)
Surge protections	
Surge protection device	Type I or Type II
Auxiliary contacts	Yes (optional)
Surge protection on EIA-RS485 ports	Yes (optional)
String monitoring	
String monitoring device	Yes (optional)
Main monitored parameters	Voltage, current, temperature, DI status and auxiliary alarms
Voltage measurement	≤ 1000 V DC or ≤ 1500 V DC
Communications port	RS-485
Protocol	Modbus/RTU
Power supply for string monitoring device	AC/DC or DC/DC (for self-powered string monitoring)
Others	
Input connectors	WM4 C connectors or Cable glands
Standards	
Standards	IEC 61439-2 ed 2.0 / EN 61439-2:2011

### PV AC combiner box



#### Technical data

Main application features	
Inputs	From 2 to 8 (string inverters)
Inverter	3 phase string inverters
Outputs	From 25 kW to 80 kW
Operating temperature range	-10 °C up to +50 °C
Installation location	Protected outdoors (< 1 km from the sea) Protected outdoors (> 1 km from the sea)
Altitude above sea level	up to 2000 m (standard) higher altitudes on-demand
Main electrical features	
Earthing system	IT, TT, TN-S, TN-C and TN-C-S
Rated operational AC voltage	≤ 690 V AC (standard) Other options on demand
Short-circuit and over-current protections	Circuit Breakers (3p or 4p) or Fuse blocks
Rated AC current per input	≤ 125 A
Breaking capacity	≤ 40 kA with circuit breakers ≤ 80 kA with fuses
Enclosure	
Enclosure material	GFRP (Glass Fiber Reinforced Polyester)
Enclosure shape	Portrait or Landscape
Enclosure fixing system	Wall mounted or pedestal
Degree of protection (according IEC 60529)	IP65
Form factor	Cabinet with hinged door
Polycarbonate protection plate	Yes (optional)
Surge protections	
Surge protection device	Type I or Type II
Auxiliary contacts	Yes (optional)
Surge protection on EIA-RS485 ports	Yes (optional)
Optionals	
Power analyser / energy monitoring	0.5% accuracy for voltage and current RS485 or TCP/IP communications Temperature monitoring (optional)
Earth-leakage protection	300 mA Type AC (standard) Other options on-demand
Main switch disconnecter	Optional
Standards	
Standards	IEC 61439-2 ed 2.0 / EN 61439-2:2011

All variants on request.

## Order directly

### Classic combiner boxes



#### Monitored 1500 V DC CB

##### Technical data and ordering data

Typ	Inputs	Enclosure type and size	Temperature range	Fuse protection	Qty	Order No.
PV 216SDFV003T7P015PWW	16	Portrait 1035x835x300	-20 °C bis +50 °C	Both poles	10	8000050555
PV 216SDFV003T7P015PJP	16	Portrait 835x635x300	-20 °C bis +45 °C	Both poles	10	8000050566
PV 224SDFV003T7P015PWW	24	Portrait 1035x835x300	-20 °C bis +50 °C	Both poles	10	8000050559
PV 224SDFV003T7P015LWW	24	Landscape 788x1250x320	-20 °C bis +50 °C	One pole	10	8000050560
PV 232SDFV003T7P015LWW	32	Landscape 788x1250x320	-20 °C bis +50 °C	One pole	10	8000050564

#### Non Monitored 1500 V DC CB

##### Technical data and ordering data

Typ	Inputs	Enclosure type and size	Temperature range	Fuse protection	Qty	Order No.
PV 216SDFV003TXPX15PWW	16	Portrait 835x635x300	-20 °C bis +50 °C	Both poles	10	8000050556
PV 216SDFV003TXPX15LJP	16	Landscape 500x1000x320	-20 °C bis +45 °C	Both poles	10	8000050568
PV 218SDFV003TXPX15PWW	18	Portrait 835x635x300	-20 °C bis +50 °C	Both poles	10	8000050557
PV 220SDFV003TXPX15LWW	20	Landscape 788x1250x320	-20 °C bis +50 °C	Both poles	10	8000050558
PV 220SDFV003TXPX15PJP	20	Portrait 835x635x300	-20 °C bis +45 °C	Both poles	10	8000050569
PV 220SDFV003TXPX15LJP	20	Landscape 500x1000x320	-20 °C bis +45 °C	Both poles	10	8000050570
PV 224SDFV003TXPX15PWW	24	Portrait 835x635x300	-20 °C bis +50 °C	One pole	10	8000050561
PV 224SDFV003TXPX15PWW	24	Portrait 1035x835x300	-20 °C bis +50 °C	Both poles	10	8000050562
PV 224SDFV003TXPX15LWW	24	Landscape 788x1250x320	-20 °C bis +50 °C	Both poles	10	8000050563
PV 224SDFV003TXPX15PJP	24	Portrait 835x635x300	-20 °C bis +45 °C	Both poles	10	8000050571
PV 232SDFV003TXPX15PWW	32	Portrait 1035x835x300	-20 °C bis +50 °C	One pole	10	8000050565

#### All designs contain

- Cable glands for input wires from 6 to 8 mm
- Cable glands for output wires from 22 to 32 mm
- Overvoltage protection Type II (Imax = 40 kA, Up ≤ 5.0 kV, aux. contact)
- Conformity with norm IEC 61439-2 ed 2.0 / EN 61439-2:2011
- Rated DC current per input (Inc) 9,4 A
- Rated DC current per input (10h short-circuit at main output) 1.2 x Inc
- Switch disconnecter breaking & making capacity (acc. to IEC 60947-3) 400 A (DC21B 1500 V)
- 15 A fuses (10 x 85 mm)
- Self Powered Monitoring device measuring currents per string, voltage and temperature

#### Options on request

- WM4C connector compatible with cable type TUV 2 Pfg1169/08.07 / EN 50618:2015
- Overvoltage protection Type I+II (Imax = 40 kA, Up ≤ 5.0 kV, aux. contact)
- Fuse alternatives: 16 A, 20 A, 25 A (10 x 85 mm)
- Document keeper



# PV Next combiner boxes



## 3 IN / 3 OUT fused

Description	Arrester	Connection	Switch	Fuses	MPPT	Dimension	Order No.
PVN1M1I3SXF3V100TXPX10	1R	CG	-	FH	1	302x302x175 mm	2683030000
PVN1M2I6SXF3V100TXPX10	1R	CG	-	FH	2	558x302x210 mm	2683040000
PVN1M1I3SOF3V100TXPX10	1R	CG	SW	FH	1	302x302x175 mm	2683050000
PVN1M2I6SOF3V100TXPX10	1R	CG	SW	FH	2	558x302x210 mm	2683060000
PVN1M1I3SXF3V101TXPX10	1R	WM4C	-	FH	1	302x302x175 mm	2683070000
PVN1M2I6SXF3V101TXPX10	1R	WM4C	-	FH	2	558x302x210 mm	2683080000
PVN1M1I3SOF3V101TXPX10	1R	WM4C	SW	FH	1	302x302x175 mm	2683090000
PVN1M2I6SOF3V101TXPX10	1R	WM4C	SW	FH	2	558x302x210 mm	2683100000

Note: All items are available from stock.

## 3 IN / 3 OUT non-fused

Description	Arrester	Connection	Switch	Fuses	MPPT	Dimension	Order No.
PVN1M1I3SXF3V100TXPX10	1R	CG	-	-	1	186x302x175 mm	2683110000
PVN1M2I6SXF3V100TXPX10	1R	CG	-	-	2	372x302x175 mm	2683120000
PVN1M3I9SXF3V100TXPX10	1R	CG	-	-	3	558x302x210 mm	2683130000
PVN1M1I3SOF3V100TXPX10	1R	CG	SW	-	1	186x302x175 mm	2683140000
PVN1M2I6SOF3V100TXPX10	1R	CG	SW	-	2	372x302x175 mm	2683150000
PVN1M3I9SOF3V100TXPX10	1R	CG	SW	-	3	558x302x210 mm	2683160000
PVN1M1I3SXF3V101TXPX10	1R	WM4C	-	-	1	186x302x175 mm	2683170000
PVN1M2I6SXF3V101TXPX10	1R	WM4C	-	-	2	372x302x175 mm	2683180000
PVN1M3I9SXF3V101TXPX10	1R	WM4C	-	-	3	558x302x210 mm	2683190000
PVN1M1I3SOF3V101TXPX10	1R	WM4C	SW	-	1	186x302x175 mm	2683200000
PVN1M2I6SOF3V101TXPX10	1R	WM4C	SW	-	2	372x302x175 mm	2683210000
PVN1M3I9SOF3V101TXPX10	1R	WM4C	SW	-	3	558x302x210 mm	2683220000

Note: All items are available from stock.

## 3 IN / 3 OUT SPD Type 2 fused

Description	Arrester	Connection	Switch	Fuses	MPPT	Dimension	Order No.
PVN1M1I3SXF3V200TXPX10	2R	CG	-	FH	1	302x302x175 mm	2683230000
PVN1M2I6SXF3V200TXPX10	2R	CG	-	FH	2	558x302x210 mm	2683240000
PVN1M1I3SOF3V200TXPX10	2R	CG	SW	FH	1	302x302x175 mm	2683250000
PVN1M2I6SOF3V200TXPX10	2R	CG	SW	FH	2	558x302x210 mm	2683260000
PVN1M1I3SXF3V201TXPX10	2R	WM4C	-	FH	1	302x302x175 mm	2683270000
PVN1M2I6SXF3V201TXPX10	2R	WM4C	-	FH	2	558x302x210 mm	2683280000
PVN1M1I3SOF3V201TXPX10	2R	WM4C	SW	FH	1	302x302x175 mm	2683290000
PVN1M2I6SOF3V201TXPX10	2R	WM4C	SW	FH	2	558x302x210 mm	2683300000

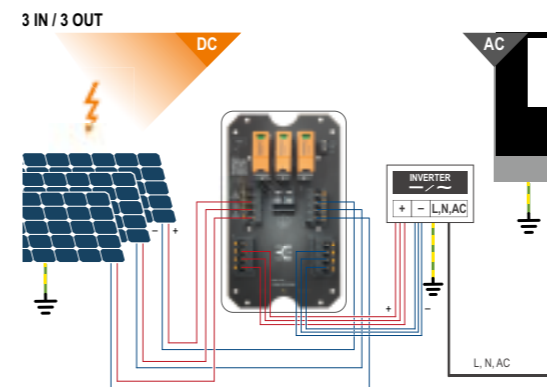
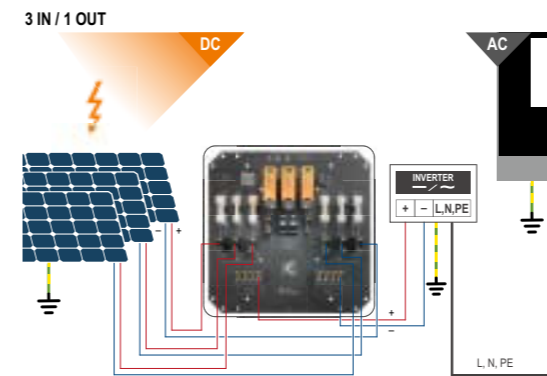
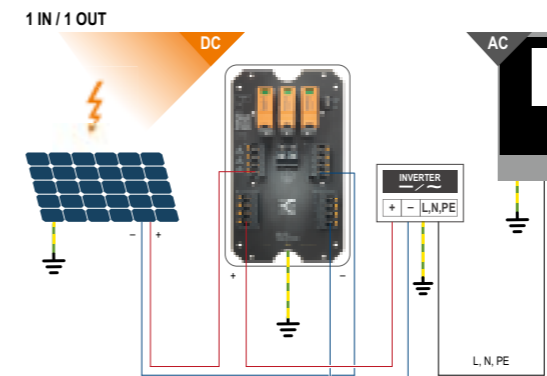
Note: All items are available from stock.

## 3 IN / 3 OUT SPD Type 2 non-fused

Description	Arrester	Connection	Switch	Fuses	MPPT	Dimension	Order No.
PVN1M1I3SXF3V200TXPX10	2R	CG	-	-	1	186x302x175 mm	2683310000
PVN1M2I6SXF3V200TXPX10	2R	CG	-	-	2	372x302x175 mm	2683320000
PVN1M3I9SXF3V200TXPX10	2R	CG	-	-	3	558x302x210 mm	2683330000
PVN1M1I3SOF3V200TXPX10	2R	CG	SW	-	1	186x302x175 mm	2683340000
PVN1M2I6SOF3V200TXPX10	2R	CG	SW	-	2	372x302x175 mm	2683350000
PVN1M3I9SOF3V200TXPX10	2R	CG	SW	-	3	558x302x210 mm	2683360000
PVN1M1I3SXF3V201TXPX10	2R	WM4C	-	-	1	186x302x175 mm	2683370000
PVN1M2I6SXF3V201TXPX10	2R	WM4C	-	-	2	372x302x175 mm	2683380000
PVN1M3I9SXF3V201TXPX10	2R	WM4C	-	-	3	558x302x210 mm	2683390000
PVN1M1I3SOF3V201TXPX10	2R	WM4C	SW	-	1	186x302x175 mm	2683400000
PVN1M2I6SOF3V201TXPX10	2R	WM4C	SW	-	2	372x302x175 mm	2683410000
PVN1M3I9SOF3V201TXPX10	2R	WM4C	SW	-	3	558x302x210 mm	2683420000

Note: All items are available from stock.

## Connection examples



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# Transclenic 16I+ 1K5 H

## Technical data

Maximum number of strings	16
Rated Voltage	≤ 1500 V DC
Maximum current per string	25 A
Operating temperature	-25 °C...70 °C
Number of digital inputs	2
Communication	RS485 (Modbus/RTU)
Connection type	PUSH IN

## Ordering data

Type	Order No.
TRANSCLINIC 16I+ 1K5 H	2502520000




# Varitector

## Technical data

Requirements class	Type I/II + Type II
PV system voltage, max. Ucpv	1000V / 1500 V
Short-circuit current I	11,000 A
Altitude	≤ 4000 m
Arrestor type	Pluggable
Certifications	EN 50539-11:2013+A1:2014, UL 1449 Ed.4
Remote contact	Optional


## Ordering data – DC protection in 1,000 V applications

Type	Classification	Order No.
VPU PV I+II 3 R 1000	Type I/II	2530620000
VPU PV I+II 3 1000	Type I/II	2530610000
VPU PV I+II 0 1000	Type I/II	2530600000
VPU PV I+II 0M 1000	Type I/II	2534300000
VPU PV II 3 R 1000	Type II	2530180000
VPU PV II 3 1000	Type II	2530550000
VPU PV II 0 1000	Type II	2530660000



## Ordering data – DC protection in 1,500 V applications

Type	Classification	Order No.
VPU PV I+II 3 R 1500	Type I/II	2530590000
VPU PV I+II 3 1500	Type I/II	2530580000
VPU PV I+II 0 1500	Type I/II	2530570000
VPU PV I+II 0M 1500	Type I/II	2534330000
VPU PV II 3 R 1500	Type II	2530650000
VPU PV II 3 1500	Type II	2530640000
VPU PV II 0 1500	Type II	2530630000






More information in the Weidmüller online catalogue

# PV-Stick

## Technical data

Continuous operating temperature	-40 °C to +85 °C
Protection class (plugged/open)	IP 65 / IP 2x
Rated current	30 A
Rated voltage	1,500 V DC
Cable diameter	4 mm <sup>2</sup> / 6 mm <sup>2</sup>
Cable exterior diameter	5.5 mm to 7.5 mm
Cable as per standard	2PIG1169/08.07 & EN 50618:2014
Pollution degree	II
Approval	TÜV (IEC 62852)
Connection system	PUSH IN (Spring terminal connection)

## Ordering data

Female	Type	Qty.	Order No.
	PV-STICK+ VPE10	10	1303450000
	PV-STICK+ VPE50	50	1303460000
	PV-STICK+ VPE200	200	1303470000
Male			
	PV-STICK- VPE10	10	1303490000
	PV-STICK- VPE50	50	1303500000
	PV-STICK- VPE200	200	1303510000
PV-Stick set			
	PV-STICK SET		
	Female connector	1	
	Male connector	1	1422030000

# WM4 C

## Technical data


	WM4 C field connector	BOX WM4 C housing connector
Continuous operating temperature	-40 °C to +85 °C	-40 °C to +85 °C
Protection class (plugged/open)	IP 65 & IP 67 / IP 2x	IP 65 & IP 67 / IP 2x
Rated current	35 A	35 A
Rated voltage	1,500 V DC	1,500 V DC
Cable diameter	4 mm <sup>2</sup> / 6 mm <sup>2</sup>	4 mm <sup>2</sup> / 6 mm <sup>2</sup>
Cable exterior diameter	5.5 ...7.0 mm	5.5 ...7.0 mm
Cable as per standard	2PIG1169/08.07 & EN 50618:2014	2PIG1169/08.07 & EN 50618:2014
Thread	M16	M12
Pollution degree	II	II
Approvals	TÜV (DIN IEC 62852)	TÜV (DIN IEC 62852)

## Ordering data


### WM4 C field connector


Type	Qty.	Order No.
 BUGH WM4 C BT		
Female housing	100 (in bag)	1530690000


### BOX WM4 C housing connector


Type	Qty.	Order No.
 BUGH BOX WM4 C BT		
Female housing	100 (in bag)	1530630000

### Crimp contacts

Type	Qty.	Order No.
 BUKO WM4 C BT		
Female contact	100 (in bag)	1530670000
BUKO WM4 C RL		
Female contact	1,500 (on roll)	1530770000

Type	Qty.	Order No.
 SFGH WM4 C BT	100 (in bag)	1530700000

Type	Qty.	Order No.
 SFGH BOX WM4 C BT	100 (in bag)	1530640000

Type	Qty.	Order No.
 SFKO WM4 C BT	100 (in bag)	1530680000
Male contact		
SFKO WM4 C RL	1,500 (on roll)	1530780000
Male contact		

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