Implement successful long-term photovoltaic systems
With connectivity solutions tailored to your requirements
Let’s connect.
Since 2007 development, manufacture and supply of combiner boxes for large-scale photovoltaic projects

35,000,000 panels with an output of over 7.5 GWp

Local support in nearly 100 countries

More than 90,000 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. We develop and produce key components and technologies for the solar industry. Our designs, products and processes, having proven themselves over decades, are used globally.

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, characterized 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.
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.

Our solutions ensure that your systems run efficiently with consistent output – and for less than 1% of the total cost.
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 Weidmuller 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 Weidmuller 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.
Intelligently bundled and perfectly matched
The best connections for your photovoltaic system

High Voltage Disconnect

Disconnect shutdowns are standard on all DC combiner boxes. Weidmuller’s system shutdown provides the user the ability to locally shutdown the PV supply at the source. This provides a safe and fast way to remove a single combiner box from the DC input supply while leaving the system operational and allowing testing or maintenance to be performed on a single combiner.

Lightning and surge protection

Surge protection systems from Weidmuller have proven themselves in many different industries and are therefore a standard feature in our combiner boxes.

Optimum protection for each specific application is carefully selected by our application engineers and incorporated in the design.

The products used comply with current standards and have been developed specifically for, amongst other things, the DC side of photovoltaic systems.
Arc Fault Protection

Weidmüller’s Arc Fault Protection technology features status indication, reset functions, self-test options and complete box/electrical shut down – all from a small, compact, easy-to-use device.

String fuses

With fuses on the positive side of each string, we guarantee the highest security for your system and peripherals.

Perfectly combined: our installation accessories

From plug-in connectors to tools: our installation accessories are tested for quality and perfectly matched. This enables us to guarantee top quality and optimal functioning.

On request, we can provide you with pre-assembled cables, ready for installation and fitted with our proven connectors. This makes your work easier and streamlines operational procedures.
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.

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**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.
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 Centers in Richmond, Virginia and Barcelona, Spain 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.

**Know-how and flexibility**

The guaranties of our global quality promise

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**Design**
- Development of individual designs at the Global Application Centers in Richmond and Barcelona
- Detailed coordination of the components used
- Functional testing and design validation prior to 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

Service

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

Our solutions already support more than 7.5 GWp worldwide
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 CTDP 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.
Weidmuller – Your partner in Industrial Connectivity

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.