Weidmüller: Your partner for electrical cabinet construction

Innovative products and sound advice
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Tailored to your applications

Weidmüller has a reputation throughout the world as the leading manufacturer of solutions for electrical connectivity. Our innovations set benchmarks and represent genuine milestones in modern electrical cabinet construction: from the first plastic-insulated rail-mounted terminal in 1948 to the latest Industrial Ethernet solutions.

We take an innovative and practical approach. We are familiar with the market and speak the same language as our customers. That’s why each and every product is designed to make your work easier. The quality is spot on and mounting poses no problems. Hence, we help you meet your deadlines, save money and further improve workflows, all of which strengthens your position and gives you a competitive edge!

But good products are just one aspect of a successful partnership, which is why we also support you with comprehensive service. In concrete terms, that means: sound advice in line with your needs provided by a personal contact. And that goes for everything to do with your application. In this way, your requirements form the basis for our work. That is our philosophy of a perfect partnership right from day one. Judge us by the results!
The concept of partnership is at the heart of everything we do. That’s why we always bear the task in mind when we look at a product, viewing it as part of a conceptual whole – systematically taking account of your individual needs:

- **Easy mounting**
  When choosing products, one of the most important considerations for electrical cabinet construction is fast installation. That’s why we develop our products based on your needs, taking into account quick mounting.

- **Fast and safe**
  Safety also takes utmost priority for us and you, which is why all components are subject to stringent quality control procedures and have been granted all international approvals. So you’re always on the safe side.

- **Expert advice**
  We are committed to achieving the perfect result by offering you expert advice right from day one – with visits on your site to analyse your demands. As result, we present you solutions which are based on what you really need: practical products which suit the application in question and can be mounted easily.
As the leading provider in terms of innovation and quality, we have the whole portfolio of modern connection technology at our fingertips. Our variety allows you to make flexible decisions.

The choice is yours:

## Connection technology

| **Screw clamp** | The screw clamp system combines the specific properties of steel and copper in the ideal way. The hardened steel screw clamp pushes the conductor onto the busbar, which is made of copper or high-grade brass. This establishes a gasproof, vibration resistant connection between the conductor and the busbar. |
| **Tension clamp** | This connection type also separates the mechanical and electrical components. The tension clamp is made of anti-rust, acid-resistant steel and pulls the conductor onto the galvanised copper busbar. The surface-treated busbar results in low transition resistance and a high level of corrosion resistance. This establishes a maintenance-free, vibration resistant connection. |
| **Push In technology** | All you have to do here is insert the stripped, solid conductor into the clamping point as far as it will go – that’s it! No tools are necessary. A reliable, vibration resistant and gasproof connection is established in no time. A stainless steel pressure spring in a separate enclosure ensures high contact force between the conductor and the busbar. The spring and conductor stoppers guarantee a fault-free connection. |
| **IDC technology** | No conductor preparation is required for this system. During connection, the conductor’s insulation is penetrated, establishing contact between the conductor and the busbar. A stainless steel spring pushes the busbar onto the conductor to guarantee low transition resistance and a gasproof, vibration resistant connection. This also separates the mechanical and electrical functions. |
The right products for the best results

What you see here is just a selection from our product portfolio, but all our solutions make your work easier and can be used for the various aspects of electrical cabinet construction.

Signal processing and power supply

Industrial Ethernet
- Slimline switches for assembly on the mounting rail
- Complete range of Ethernet components, copper and fibre-optic cables, plug-in connectors and converters

Power supply concepts
- ConnectPower: secure hold and easy to snap on and off
- Integrated fault indicator contact
- Very slimline, compact design
- WAVEGUARD electronic fuse for selective protection of 24 Vdc circuits

Conductor connection and power distribution

Z-series – tension clamp connection
- More space on the mounting rail: 30% less mounting width on a 3.5 mm pitch
- Power distribution from different conductor cross-sections can also be implemented via standard cross-connectors
- Reduced wiring time

W-series – screw clamp connection
- Maximum contact force
- Vibration resistant and maintenance-free
- Varied marking options
- Various terminal sizes can be connected using cross-connection bridges
- Large cross-connection range

I-series – IDC technology
- Takes up to 76% less time than screw terminals
- No stripping, no crimping, no special tools
- Visibly safe contact
- Maximum contact safety thanks to an external spring

P-series – Push In technology
- The simplest and fastest way to connect a terminal
- No need for tools – just insert the conductor, that’s it
- Ideal for solid conductors and conductors with wire end ferrules

Overvoltage protection
- Maximum protection for controls via overvoltage protection terminals just 6 mm wide for an array of signal types
- Earth connection by simply snapping onto the mounting rail

Signal processing
- MICROSERIES for isolating and coupling signals
- The slimline design with a width of just 6.1 mm saves precious space in electrical cabinets
- Fast and safe power distribution possible using pluggable cross-connectors
### Cable and conductor preparation

#### Cutting tools
- KT 8 cutting tool for crush-free cutting of copper and aluminium cables with a diameter of up to 8 mm
- For clean, straight cuts without deforming the conductor
- The specific construction reduces manual forces to a minimum

#### Automatic machines
- Crimpfix 2.5 for processing wire end ferrules and diameters from 0.5 to 2.5 mm²
- Time-saving and efficient processing without changing tools
- Other machines are available for time-saving, efficient processing of wire end ferrules with and without plastic collars from 0.5 to 10

#### Crimping tools
- PZ 6 roto crimping tool for wire end ferrules from 0.14 to 6 mm² with and without plastic collars
- You only need one tool because one die is suitable for the whole range of cross-sections
- Easy to use because it can be inserted from the front or side

#### Stripping tools
- Stripax® stripping tool in an ergonomic design for working without fatigue
- Stripping tools from 0.08 to 16 mm² for PVC insulations
- duro-stripax® and multi-stripax® for Teflon, silicone and other problematic insulations

### Conductor marking and cable insertion

#### Printing system
- PrintJet ink-jet printer for use with plastic markers in MultiCard format
- High information density on the markers
- No damaged plotter pens or long drying times
- Smudgeproof and scratchproof results

#### Markers
- Markers for terminals, conductors, cables and devices
- Customer-specific printing possible
- Available in different colours
- Can be snapped on in rows
- Can be marked using all Weidmüller marking systems for MultiCards

#### Heavy-duty connectors
- For quick mounting
- Pre-wiring prevents mistakes
- For supporting modular manufacturing concepts

#### Cable entry system
- Cabtite cable entry system with high packing density
- Insert prefabricated plug-in connectors in the tightest of spaces
- Quick and easy mounting
- Integrated VDE 0619 strain relief
Controls for the machine industry

Automation processes and higher standards of monitoring and operating data compilation are becoming increasingly important for controls, resulting in a growing number of sensor and actuator signals which need to be transmitted quickly and, above all, flawlessly. Rise to these important forward-looking tasks and master them easily with our innovative products.

Profit from the advantages:

- **Individual signal processing**
  We can supply you with a wide range of signal converters and coupling modules as well as connectors for connecting controls – customised versions are also available on request.

- **Safe transmission**
  Not only are all available connections quick and easy to use – they are also 100% safe. A must for signal transmission.

- **Space-saving construction**
  From terminals with an extremely narrow width of just 3.5 mm to multi-level terminals with cross-connection options on several layers, our products enable you to save an incredible amount of space. Even our MICROSERIES relay and optocouplers are just 6 mm wide.

“**It is a pleasure to work with Weidmüller: if we place an order today, the products arrive tomorrow.**”
Fritz Schwienboth, head of the electrical cabinet construction group, HAVER & BOECKER

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**Industrial Ethernet media converter**
- For converting quickly between copper and fibreglass media
- Different connections, e.g. RJ45 copper and fibreglass with SC or ST connectors

**PLC interface**
- For time-saving control connection
- Minimises wiring faults thanks to pluggable, prefabricated connection
- For all standard controls

**FrontCom®**
- The easy way to connect external equipment without opening the electrical cabinet door
- Lockable lid
- Adaptor, e.g. for USB, RJ45, Sub-D interfaces or 230 V socket
- Stable enclosure with IP65-level protection
Electrical cabinet for a packaging machine

I/O module developed for specific customer needs with PCB plug-in connectors using tension clamp technology.

PLUGSERIES relays couple and isolate the signals sent to the machine by the I/O module.

Terminal with 4 connections using tried and tested tension clamp technology; just 5 mm wide. This saves a lot of space and simplifies power distribution.
Power distribution in building technology

Building technology means safety first and foremost: transmitting energy and signals across large distances without faults is particularly important for the system concept. Cost-effective solutions are also crucial when it comes to maintaining and servicing electrics. We rise to these challenges. The result is a broad product portfolio which offers you a whole host of advantages:

- **Effective protection**
  Incorporate our lightning conductors straight into the power supply! Should lightning strike, residents are protected from damage caused by fire.

- **Reliable signal processing**
  Our signal converters and coupling modules are supplied in top quality with international approvals.

- **Top marking options**
  Make the most of our supply terminals! Their good marking options ensure that the current flow can be easily identified even after years of use.

“Since we started using Weidmüller’s Push In technology, everything has sped up enormously. It really reduces our workload.”

Joachim Aschentrup, team leader/project manager for energy technology, Kesselhut Schaltanlagen GmbH & Co.KG

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**Crimpfix LS**
- For efficient processing of loose wire end ferrules with plastic collars
- Stripping and crimping in one go
- For conductor cross-sections from 0.5 to 2.5 mm²

**Time relay**
- Various functions such as pick-up delay, pulse emitter, star and delta change-over possible
- Screw or tension clamp connection
- Standardised, compact design for decentralised controls

**ConnectPower Insta**
- 24 W switched-mode power supplies with an output voltage of 12 to 28 V
- For universal use: wide-ranging input from 85 to 265 Vac
- Output protection thermal cut-out
Distribution panel for an airport building

Minimum wiring time with Push In terminals. Just insert the conductor directly – no need for tools!

Overvoltage protection for the power supply: low running costs due to remote monitoring and pluggable varistors.

W-series supply terminal with up to 300 mm² connection cross-section. For quick and easy power distribution.
Control cabinet in process technology

In the process industries reliability and environmental protection are among the highest priorities, e.g. resisting high vibration in the power industry, or hazardous (Ex) areas in the oil and gas, or chemical sectors. Weidmüller is accustomed to providing the highest quality electrical connectivity solutions into prestige international projects.

Profit from our expertise:

- **Innovations for special applications**
  Weidmüller has developed electrical terminals and junction boxes for use inside the containment area of a nuclear reactor – and to date is the only manufacturer of terminals with IEEE Class 1E (Wylie) Nuclear Equipment Qualification. Other developments include terminal ranges for power monitoring via current and voltage transformers. Such fiscal metering applications rely on the ultimate component quality, reliability, and ease-of-use – delivered fully by Weidmüller.

- **International approvals**
  As a truly international supplier, Weidmüller offers a wide range of recognised manufacture, quality and safety approvals, including those for hazardous (Ex) area installations. Many of our products are approved to multiple standards such as ATEX, CSA, UL, GL Deluge.

“With Weidmüller, we have found a highly committed expert supplier who offers us sound advice any time.”

T.J. Vonk, manager, Aqualectra

**Nuclear terminals**
- For use inside and outside nuclear reactor containment
- Terminals and enclosure assemblies
- Worldwide references available

**MICROINTERFACE**
- I/O process coupling for control systems
- Analogue input of thermo-elements: DC, thermocouples and PT100
- Mechanical or optoelectronic relay for digital interfaces
- 8 channels for analogue or digital modules

**Thermocouple terminals**
- With thermocouple compensating material
- Various types available
- Insulating material is Wemid
- Optional marking on both sides
Signal processing for a sewage plant

Power supply and voltage monitoring – for a safe and efficient energy supply.

MICROANALOG analogue signal converter with electrical isolation. Easy to set using a DIP switch.

Fuse terminals with an LED display for visual fault notification.
Low-voltage switchgear for the power industry

Low-voltage switchgear takes care of energy distribution in large buildings and industrial plants. The energy consumption and load distribution are monitored using field bus systems and intelligent controls. Perfection is a prime consideration! And that’s what makes Weidmüller a reliable partner in this segment too – with professional connection technology and monitoring aids.

Make the most of crucial advantages:

- **Reliable and safe**
  Our heavy duty connectors ensure safe contact between individual modules and the electrical cabinet.

- **Useful accessories**
  Our test adaptors for terminals make your work easier and speed up the process of checking the system.

“Weidmüller’s products are 100% reliable and therefore comply fully with our high standards.”
Ralf Barg, head of production, NATUS GmbH & Co. KG

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<th><strong>CST stripping tool</strong></th>
<th><strong>SwitchMark</strong></th>
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<td>- For high-density wiring: 4 potentials with a width of 5 mm</td>
<td>- For coaxial cables and other round, shielded data lines</td>
<td>- For producing customised appliance tags quickly</td>
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<td>- Tension clamp technology on one side, crimp contacts on the other</td>
<td>- Adjustable, interchangeable screw holder for fast changeovers</td>
<td>- Make your own tags to suit you</td>
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<td>- Wires can be prefabricated</td>
<td>- Quick pre-set depths of cut</td>
<td>- Highly resilient printing quality with the PrintJet instead of engraving</td>
</tr>
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<td>- All potentials can be checked with a test adaptor at the same time</td>
<td>- Cutter cassettes can be used on both sides</td>
<td>- No need to stock standard tags</td>
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Motor Control Centre for a desalination plant

Two-tier tension clamp terminal: for space-saving power distribution.

Modular heavy duty connectors from the ConCept range are assembled individually. Extremely compact and easy to mount.

Weidmüller’s professional tools are durable and easy to use: for high-quality results and work without fatigue.
Outstanding quality for your safety

Top quality is not an end in itself – it is an economic factor. That’s why we also prioritise outstanding quality control. This process starts with strict product quality management based on ISO 9000 ff. and goes right the way through to comprehensive monitoring by independent institutions who check our production plants, our quality management and our inhouse laboratory.

And you benefit:

- from maximum reliability and durability
- from improved servicing and handling

This bears testimony to our corporate commitment to supply you with reliable products at all times. Our international approvals offer you the assurance that you can use our products anywhere in the world. Because that is the only long-term guarantee for your success.
The service you want

Nothing beats one-to-one consultation! That’s why our engineers are available in more than 80 branches worldwide to answer your questions concerning connectivity.

And to make sure everything goes smoothly from the moment you place an order to delivery, we have set up a state-of-the-art logistics centre which helps us to perfectly synchronise your deliveries in line with your requirements. And it goes without saying that deliveries are made efficiently and just in time!

Help and support: online catalogue

You can find further information about our products in our online catalogue at http://catalog.weidmueller.com. A clear structure with all the product groups helps you to navigate quickly and easily and find what you’re looking for, supported by various search functions.

Printable data sheets have been compiled with all the relevant details and sketches. Suitable accessories or similar products are listed as options. And should you ever have trouble finding what you want, an online assistant will help with your specific query.

Software solutions for even greater efficiency

Our M-Print® PRO software makes marking jobs easier for you. It offers the following options:

- Printing and ordering Weidmüller labels and markers
- Designing labelling material: with texts, borders, lines, graphics, bar codes, serial numbers and photos
- Incorporating all configured data – e.g. from your CAE system

RailDesigner® configuration and purchasing software is the perfect tool for:

- Configuring mounting rails and enclosures
- Optimum planning safety, drawing up clear designs and simplifying the ordering process
Weidmüller is the leading manufacturer of components for electrical connection technology. The Weidmüller product portfolio ranges from terminal blocks, PCB connectors and terminals, protected components, Industrial Ethernet components and relay sockets to power supply and overvoltage protection modules suitable for all applications. Electrical installation and marking material, basic I/O components and a variety of tools round off the range. As an OEM supplier, the company sets global standards in the field of electrical connection technology.