

Water and Wastewater Treatment

Application-specific solutions for the water and wastewater industry



Weidmüller – Your Partner in Industrial Connectivity

For over 160 years our name has been synonymous with performance, competence and reliability in the fields of machinery, process industry, device manufacturing, energy sector and transportation. In over 80 countries, we support our customers and partners with innovative solutions and services in an equal partnership.



Global competition calls for plants and installations that combine maximum automation and availability, with minimal maintenance and servicing costs. Security is a key competitive factor and has utmost priority. A long service life and the lowest possible energy consumption are also in high demand – in full compliance with the most exacting environmental regulations and standards. Increasingly complex systems and rapidly changing technologies place extremely high demands on signal conversion and transmission, connectivity and energy management.



Treating wastewater efficiently

Holistic solutions for the wastewater industry

The wastewater from every household eventually ends up in the sewer system. From here it is channelled to the nearest treatment plant, where it is purified – first mechanically, then biologically, and finally chemically. Progressive urbanization, persistent water pollution and the growing demands placed on treatment quality necessitate powerful and innovative technical treatment solutions.

As a technology partner to the process industry, we support you with newly built and converted water treatment plants. We provide for optimal networking between machines, components and users, facilitate compliance with environmental protection and safety standards and help establish energy management systems. Efficient control voltage distributors, smart condition monitoring and effective solutions to ensure system availability, are just some of the tools at our disposal.

Secure and simple remote maintenance with u-link

Establishing a remote maintenance solution for machines and systems is often a complex and time-consuming task. For many users, this makes system networking a major hurdle. Thanks to its intuitively operable interface and the particularly reliable server platform, u-link forms the perfect basis for cost-effectively and safely setting up remote maintenance topologies of any size.



The u-link platform adheres to ISO 27001 standards and features robust security functionalities, including:

- Multi-factor authentication (MFA)
- User role and rights management
- Secure VPN communication
- Logging of user activities

Connect, Protect and Optimize

Our experience in the water and wastewater industry means that our solutions have been designed, applied and tested to meet the many and diverse applications in the water treatment industry.



System Operators

With a network of water industry specialists, we partner with you, your consultants, contractors and systems integrators to assist in the design of robust, reliable and safe solutions.

Design Engineers

Achieve planning and project deadlines for your water company clients. Our water industry solutions will enable you to help reduce engineering and start-up time, in combination with easily maintained, high-performance diagnostics and monitoring tools. Our innovative Industrial Ethernet, serial, and wireless communications solutions can help drive efficiency and economies of scale through reduced infrastructure systems.

System Integrators

Reduce your assembly and build time and achieve panel design innovation with Weidmuller. From Intelligent MCC build, to PLC and SCADA applications, our solutions will maximize your end-client uptime with quick switchovers and expansion opportunities.

Original Equipment Manufacturers

Weidmuller's water and process industry solutions, including pluggable push-in and screw clamp terminals to heavy duty connectors, are designed for quick onsite installation to reduce assembly and commissioning time. We will work in partnership with you to design enclosures, rail assemblies or panels to help innovate and speed up assembly of packaged plant solutions.



Benefits of our water treatment solutions

Critical Power Back-up Systems

Battery back-up control solutions for DC power applications provide a 70% savings in panel space and the highest level of 24/7 uninterruptable power control for:

- Instruments providing EPA data
- Radio telemetry
- PLC/PAC and DCS control panels
- Remote I/O panels
- Visualization systems

Increased Safety Protection for Wastewater Hazardous Area Applications

Signal converters for Ex zone applications protect devices and controls while saving 50% in panel space and reducing system downtime for:

- Sanitary Sewers, Lift Stations, Master Stations and Head Works
- Storm Sewers and Collection Pits
- Combined Storm/Sanitary Sewage Systems
- Transportation related runoff (below-grade)
- Underground paved area runoff systems

Provide Connectivity Solutions for EPA Compliance

Wireless solutions reduce remote installation costs by up to 70% and communicate reliable, secure EPA compliance data for system locations including:

- Head Works, Main Lift Stations, Remote Lift or Pumping Stations
- Storm Sewer Overflow, Sanitary Sewers and Collection Pits
- Effluent Discharge Points: River, Lake and Wetlands Re-use
- Transportation and Paved Runoff Areas
- Potable Water Storage and Processing

Asset Surge Protection with Performance Verification

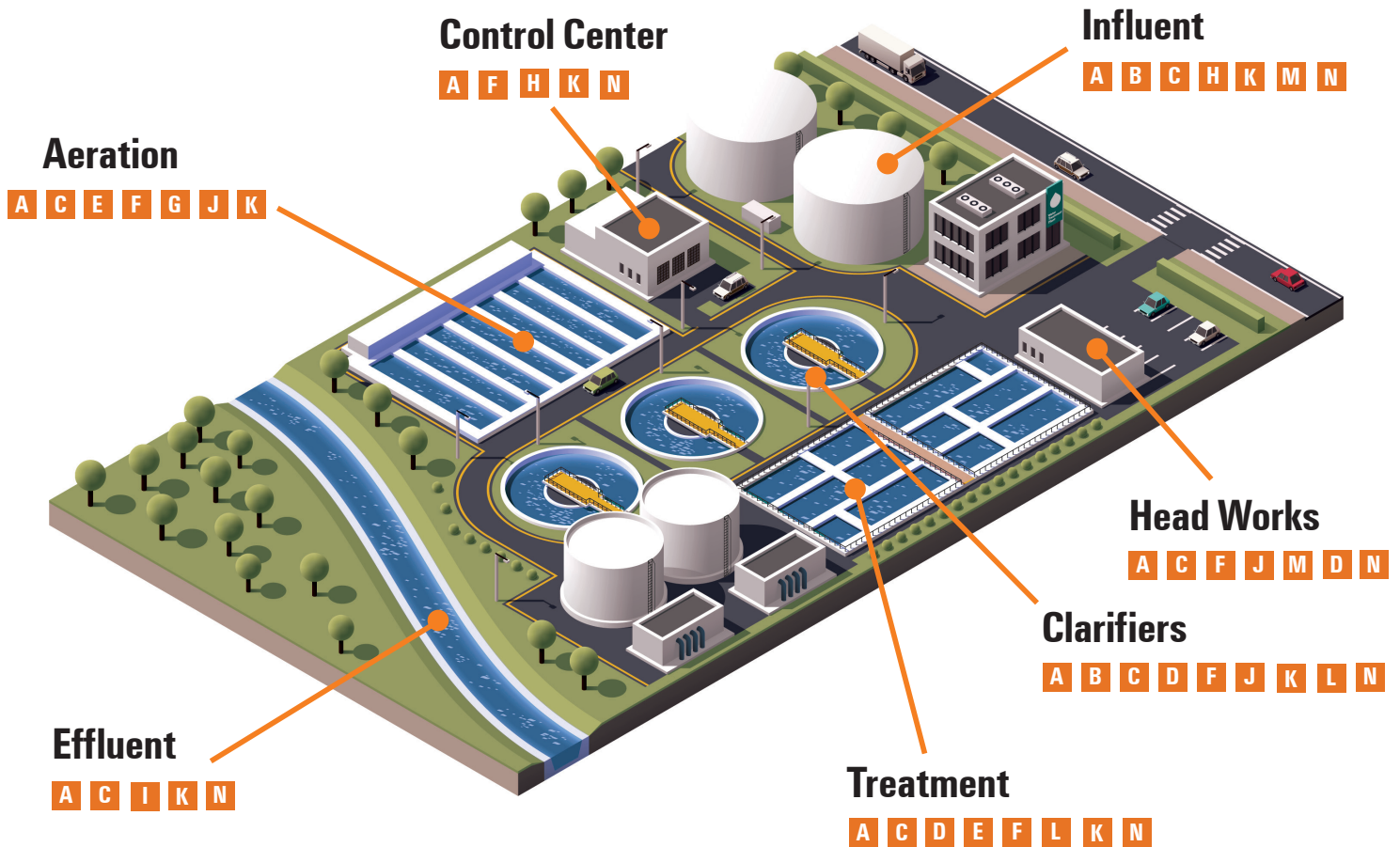
Surge protection for digital and analog I/O circuits, and digital communication devices in the panel and the field offers 100% functional validation, reliable performance, and continuous diagnostics for:

- Field I/O terminations in the Control Panel
- Communication Entry/Exit Points
- Field Sensors, Loggers, Recorders, etc.



Approvals





Efficient water treatment

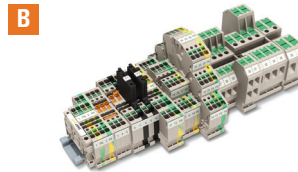
Application-specific solutions for the water and wastewater industry

We develop application-specific products for the automation of water treatment plants with a wide range of solutions to help you with new builds, conversion and retrofitting. We use intelligent process data processing and analysis to increase efficiency. We also offer products for early error detection (condition monitoring) and minimization of wear to protect your plants.



A Industrial Ethernet Networks

- Designed for applications in the water industry.
- Support all standard functions for easy installation, handling and safe operation.



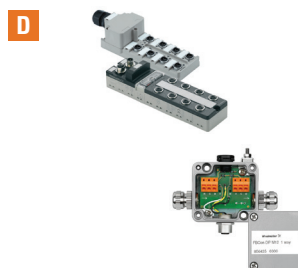
B SNAP IN - Terminal blocks

- Fast, simple, Safe and ready to Robot.
- Connection range from 0,5 mm² to 16 mm².
- Intuitive and simple handling of SNAP IN technology.
- Low mating forces due to simple insertion of the stripped conductor.
- Quick and easy connection even without ferrule.



C Power Supplies & Battery Backup

- High efficiency, minimal form factor.
- High performance for increased availability.
- Power-fail relay and redundancy for increased functionality.



D Distribution Boxes

- PROFIBUS PA, ATEX field bus distribution boxes.
- Range of options based on outlet and connector requirements.
- Overvoltage protection and current limiting options.
- IP68 M12 & M8 Sensor Actuator Distribution hubs are perfect for field signal consolidation.

E

Signal Conversion & Isolation

- 3-way isolation and conversion in 6mm wide housing.
- Universal, analog trip-transmitter.

F

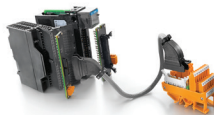
Intrinsic Safety (IS)

- Isolated digital barriers convert and isolate signals to and from hazardous areas.
- Suitable for -4 °F to 140 °F (-20 °C to 60 °C) Div. 2 or Zone 2 locations.
- Isolation for analog and digital Class 1 Div. 1 sensors or devices.

G

Printing/Marking Systems

- Industry leading printing solutions.
- Marking solution for all your requirements from terminals, wire, cables, devices and more.

H

Migration & Interface Solutions

- Field Wiring termination and control system marshalling for DCS or PLC's.
- Universal conversion/migration platform for updating legacy DCS/PLC to new systems.
- Standard and customized pre-assembled cables and Field Termination Assemblies.
- Integrated components (fuses, disconnect).
- Compact, space and time-saving.



Precision Tools

- Professional tools that optimize workflow and efficiency.
- Provide a secure connection using our UL certified ferrules with our UL hand tools or machines.

I

Mechanical & Solid State Relays

- Wear-free solution to switch digital signals
- High reliability, frequency and inductive loads.
- Electromechanical relays.

J

Circuit & Surge Protection

- Class I, II and III control and instrumentation surge protection.
- Circuit breakers.
- Overcurrent protection.
- Surge protection for signals and power.

M

Industrial Field Connectivity Solutions

- Field attachable RJ45, M12 and M8 connectors - easy in field installation.
- FrontCom® Service interfaces - Safe through cabinet access to data, signal, and power.
- IP65/68 Heavy duty connectors for power, signal & data.
- IP67 cables and cord sets -Standard and custom solutions available.
- IP67 LED Industrial lighting solution - Robust, low voltage and low heat.

L

Engineered Enclosures

- ATEX, UL, CSA, C1D2 and NEMA certifications.
- Wireless assemblies.
- Custom junction boxes.
- Design, assembly and wired solutions.

N

Automation and Digitalization

- Combine hardware and software to communicate in real time.
- From data acquisition to data pre-processing, data communication and data analysis.
- Monitor your process anytime, anywhere.



K



Vibration sensors for efficient condition monitoring

In industrial plants, unexpected failures are costly and lead to production downtime. The Weidmüller u-CBM enable precise vibration analysis and effective condition monitoring. Thanks to wireless technology, they are easy to retrofit. The wired sensors enable continuous monitoring. The straight forward installation process and intuitive software interface ensure that the system can be set up and managed without any required advanced expertise in vibration analysis.



VIB1

Wireless sensor for easy retrofitting

- Wireless time and frequency domain vibration analysis in 3 axes.
- Easy installation thanks to battery operation with wireless communication.
- Interoperability in local automation, as well as on-premise and cloud platforms.
- Approved for harsh environments (IP66/67, Ex Zone 2).

VIB24

Robust wired sensors

- Continuous wired vibration analysis.
- Compact design with robust stainless steel housings (V2A, V4A).
- Analog, IO-Link, switching output.
- Extensive approvals (Ex, SIL).

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