

Optimal data access to field devices in the process industry

Weidmüller enhances OMNIMATE® Data with new Ethernet-APL technology

Devices in the industrial environment become smaller, more powerful and more cost-effective. They should also be safe and easy to use. Currents, signals and data should be transmitted to the printed circuit board with as little loss as possible and with maximum reliability. This also applies to the process industry. Here, the number of plant components that need to be connected via internal data infrastructures or the IIoT is growing rapidly. Weidmüller is addressing the specific challenges in the process industry with OMNIMATE® Data Ethernet-APL.

Ethernet-compatible interfaces are increasingly required in the process industry to access data from the field. The new Ethernet-APL (Advanced Physical Layer) technology enables direct access down to the field and device level. Ethernet-APL provides high data transmission rates over long distances, transmits power and communication signals over a single two-wire cable, and supports safe operation in hazardous areas. The devices used must have APL-qualified interfaces to exploit the advantages of the new technology. Weidmüller already has a large number of products that are qualified for the Ethernet-APL standard. These include OMNIMATE® PCB components. The connectors can be mounted on a panel and installed and assembled in the field, therefore enabling a reliable connection to field devices using two-wire technology. This makes plant data available in real time. The components are available with proven connection technologies and can be installed quickly and error-free with colour-coded elements.

Fast data transmission

Weidmüller's products are qualified based on the Ethernet-APL standard and meet the high requirements of the process industry. They allow reliable data transmission at 10 Mbit/s with simultaneous power supply via twisted pair cable up to 1,000 metres.

Wide range of applications

Ethernet-APL is suitable for all IIoT devices and is compatible with all common protocols such as PROFINET, EtherNet/IP or EtherCAT. The APL PCB components are a cost-effective alternative to conventional RJ45 and M12 connections. The portfolio is constantly being expanded.

Proven connection technologies

OMNIMATE® PCB components are available with various proven connection technologies. Whether with PUSH IN, SNAP IN, clamping yoke or tension spring connections: all built for high contact and vibration safety. Colour-coded markings facilitate error-free installation.

Successful appliance development made easy

Fast and reliable data transmission is becoming increasingly important in the process industry. Meticulously designed components with a high degree of future security are required to develop suitable IIoT devices. Weidmüller has identified this need and provides high-quality components that promise clear added value in device design with OMNIMATE® Data. The entire design-in process is supported with all the important information on the products, possible applications, technical details and product data. In addition, an online catalogue, a free sample service and an innovative AppGuide help appliance manufacturers find suitable solutions. Weidmüller therefore combines many decisive advantages in device development for the process industry.

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Image caption: Complete: the OMNIMATE® Data Ethernet-APL portfolio from Weidmüller



Image caption: High demands: use in the process industry



Image caption: Cost-effective alternative: APL PCB components



Image caption: Versatile: a selection of proven connection technologies

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Weidmüller - Your Partner in Industrial Connectivity

The Weidmüller Group has production facilities, marketing companies and representative offices in more than 80 countries. Together with our customers, we shape the digital transformation – with products, solutions and services for Smart Industrial Connectivity and the Industrial Internet of Things. In the fiscal year of 2021, Weidmüller reached sales of 960 million euros with around 5,300 employees.

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