Neckarsulm (Germany), 27 January 2022
D-coded M8 circular connectors
**Ethernet connectivity for sensors in confined spaces**

**Data rates of up to 100 Mbit/s and almost a third less space required than M12: the D-coded M8 circular connectors of binder's 818 series ensure the space-saving and cost-efficient connection of miniaturized sensors in Ethernet networks.**

binder, a leading supplier of industrial circular connectors, offers connectors with D-coding in the M8 form factor as part of its 818 product series. The products are ideal for Industrial Ethernet applications with communication protocols such as EtherCAT, EtherNet/IP or PROFINET according to IEEE 802.3 via twisted-pair cables of the Cat-5e category. Accordingly, the 4-pin connectors enable the network connection of actuators and sensors of particularly small size with data rates of up to 100 Mbit/s.

**Optimized for space-saving industrial sensor installations**Today, high-bandwidth Ethernet connectivity, beyond the field level and into the corporate data infrastructure, is a core component of automated processes in all branches of industry. In the Ethernet communication of modern production facilities, for example in drives control, properties such as clock synchronism, real-time capability and determinism, but also reliability and robustness are in demand. Use cases in such environments place special demands on the connection technology, both from a technological and an economic point of view. Connectivity solutions should be designed to be variable and scalable, and above all support users in machine and plant engineering in saving space and time during installation. In addition, secure locking and protection categories appropriate to the field of application are required. M8 circular connectors with screw locking, in accordance with the DIN EN 61076-2-114 standard, are optimized for such application conditions. Here, the M8 form factor in particular has proven itself in installations where space is critical; the use with miniaturized sensors is exemplary for this area of application. **Rugged hybrid connectors with PoE+**The binder series 818 products meet the requirements of data transmission in industrial Ethernet networks. Equipped with screw locking, the electromechanical connection meets the specifications of protection degree IP67 when mated and locked. It thus offers adequate protection against the influences of harsh industrial environments.

Beyond data communication, the hybrid D-coded M8 connectors take on the task of power supply in accordance with the IEEE 802.3at standard (Power-over-Ethernet-Plus, PoE+) to the connected devices.

**Overmolded and shielded or screw termination**The 4-pin D-coded M8 connectors are equipped with gold-plated and symmetrically arranged contacts and are designed for more than 100 mating cycles. A rated voltage of 63 V(DC), a rated current of 4 A, and a rated surge voltage of 1500 V are specified for the products. The operating temperature range extends from -25 °C to +85 °C (idle state).

Shieldable products with screw termination and shielded, molded cable connectors are available. While the former have a 4.0 to 5.5 mm cable outlet and are designed for 0.14 to 0.50 mm2 conductors, the wire gauge of the molded variants is 0.34 mm2 (AWG 22).

In addition to straight male and female connectors, shieldable, angled flange versions are also available from binder.

**About binder**binder is a family-owned business that is shaped by traditional values. Based in Neckarsulm, Germany, it is one of the leading specialists in the area of circular connectors. binder has been synonymous with the highest quality since 1960. We work with 45 distribution partners on five continents and employ 1,800 staff worldwide. The binder group is comprised of the binder headquarters, 16 affiliated companies, two systems providers and an Innovation and Technology Centre.

Figure caption:

The M8 series 818 with D-coding and screw locking is suitable for data transmission in the Industrial Ethernet. Foto: binder

Fields of application:

* Industrial data communication, Industrial Ethernet
* Automation technology, factory automation, smart factories, robotics, Industry 4.0
* Constrained installation spaces

Features:

* Circular connectors for data connectivity
* M8 form factor
* D coding
* Pin count: 4-Pin
* Locking technology: Screw locking
* Termination: screw clamp or molded
* Protection degree: IP67

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