Neckarsulm, 29. May 2024
Product optimization: M12 panel mount connector

**Compact design featuring assembled wires**

**An advanced sealing concept, safety features, and sustainable materials characterize latest enhancements to the binder panel mount connectors in M12 size. Users in process, sensor, and drive technology also benefit from optional shielding and customization.**

binder, a leading supplier of industrial circular connectors, is expanding its M12 portfolio to include panel mount connectors with a continuous M12x1 mounting thread, which are now equipped with assembled wires. In addition to the previously offered dip-soldered versions, this variant is now available in a second termination type. With these products, binder is targeting applications in automation technology, such as process automation, sensor and actuator technology, and robotics. Here, the panel mount part is particularly suitable for installation in confined spaces, as it can be attached directly from the front. Larger fastening threads for the coupling nut typical with M12, such as M16x1.5, are not required with this product.

**Sealing, fixation and anti-rotation device**

As part of the product redesign, the binder engineers have integrated a new type of sealing concept. The connector body is pressed into the panel mount connector sleeve on the connection side rather than the male connector side as before. Thus, the seal is made on the front side instead of on the rim of the male connector body, which ensures constant tightness of the design under industrial conditions.

The male panel mount sleeve made of lead-free brass is a sustainable solution from an ecological point of view. It has also been provided with a specific inner contour to securely fix the male receptacle. This contour also acts as a receptacle anti-rotation device.

**Options in design and manufacturing**

On request, the body of the male panel mount connector can be pressed into the sleeve in 45° increments according to customer specifications. Molding is possible, but not necessary. For use in electromagnetically exposed environments, a shield plate may also be attached to the sleeve on the connection side.

The panel mount connector can optionally be attached with an anti-rotation device by means of a flattening on the M12 thread.

**M12 background**

Since their market launch more than four decades ago, M12 connectors have maintained their leading role in automation field device connectivity. The classic use is for industrial sensor/actuator installations, now supplemented by robotics, industrial IoT, and 5G infrastructure.

M12 connectors are subject to the DIN EN IEC 61076-2 standard and, thanks to standardization, in principle replaceable across manufacturers. This interoperability is the key to the widespread acceptance of the M12 format in factory and process automation.

In addition to performance improvements in transmission rates and signal quality, current developments in the M12 format are focusing primarily on robust and reliable function, reduced dimensions, user-friendly handling, and sustainability. In this context, binder's product optimization represents an important step in the future-oriented expansion of the binder portfolio for industrial automation.

**About binder**
binder, headquartered in Neckarsulm, Germany, is a family-owned company characterized by traditional values and one of the leading specialists for circular connectors. Since 1960, binder has been synonymous with the highest quality. The company works with more than 60 sales partners on six continents and employs around 2,000 people worldwide.

The binder group includes the binder headquarters, 16 affiliated companies, two system service providers as well as an innovation and technology center. In addition to Germany, the binder sites are located in Austria, China, France, Hungary, the Netherlands, Singapore, Sweden, Switzerland, the UK, and the USA.

Figure caption:

Engineers at binder have developed an M12 panel mount connector variant with assembled wires. Photo: binder

Fields of application:

* Automation technology
* Robotics
* Process technology
* Sensor and actuator technology

Features:

* Mounting thread: M12x1, continuous
* Termination: assembled wires
* Molding and shielding plate as options
* Male panel mount connector may be pressed into the sleeve in 45° increments

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