Neckarsulm (Germany), 29 June 2023
707 series: M5 angled panel mount connectors
**Small in size, great in potential**

 **Compact, robust signal interfaces offering the greatest possible flexibility are particularly demanded in markets with pronounced miniaturization. M5 angled panel mount parts from binder support designers in space-critical applications in automation, robotics, metrology, and controls.**binder, a leading supplier of industrial circular connectors, presents compact angled panel mount parts in M5 size. The 3- or 4-pin connectors of the 707 series are equipped with dip solder contacts for PCB mounting, and screw locking ensures reliability of the connection. Mated and locked, the interface complies with protection degree IP68.

**Drones, cobots, metrology systems**

Within the expanding markets for Unmanned Aerial Vehicles (UAVs) and collaborative robots, as well as for machine vision cameras and linear encoders, the need for compact interfaces for signal transmission is continuously growing. In these and related areas of application, highly specialized and individually tailored systems are being engineered on the one hand. On the other, maximum reliability is a core aspect of engineering here. Customer demands upon the electromechanical interconnects therefore primarily address flexibility and robustness in use, as well as consistently high component quality. Here, the particularly space-saving M5 design with screw locking provides an extremely reliable connectivity solution. Within the binder 707 series, the components are now also available as angled panel mount variants.

**Special design features**

The M5 angled panel mount parts are equipped with slightly splayed positioning pins. Hardly visible to the naked eye, these ensure the best possible protection against twisting on the PCB even before the contacts are soldered. Another advantage is the deeper O-ring that seals the interface against the housing. When the panel mount parts are connected, the O-ring is pressed against the housing as far as the stop, thus optimizing the sealing effect. Destruction of the seal by overtightening is basically impossible. The M5 angled panel mount parts measure only 7.5 mm in width. This is significantly less than the usual dimensions for connectors, which facilitates use in confined spaces.

Guido Werner, product manager at binder for a decade, is convinced by the potential of the small circular connector design: "We have already registered numerous attempts by Asian manufacturers to replicate these connectors. However, apart from the benefit of lower costs, our customers realize once and again in practical use that 'Made in Germany' still plays in a different league." Some customers, Werner reports, have had their experience, but have returned and are now convinced not to compromise on quality and reliability – even for a small connector.

**Key figures at a glance**

The 707 series angled flange connectors from binder are rated to 60 V and 1 A and withstand impulse voltages of up to 1.5 kV. The brass contacts are plated in gold. Both the housing and the screw locking threaded ring are made of brass; the contact body is made of Liquid Crystal Polymer (LCP). In accordance to the IP68 protection degree, the interface is protected against dust and permanent immersion (1.8 bar for 24 hours) in water. Designed for operating temperatures of between -25 °C and +85 °C, it achieves a mechanical lifespan of more than 100 mating cycles.

**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:
M5 Series 707 – now also available as angled panel mount parts. Photo: binder

Fields of application:

* Automation technology
* Metrology and controls
* Sensor technology
* Machine vision
* Robotics

Features:

* Size: M5,
* Locking system: screw
* Termination: dip solder
* Pin count: 3-pin, 4-pin
* Protection degree: IP68 (mated and locked)
* Mating cycles: >100

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