Neckarsulm (Germany), 28 April 2022

Product launch: overmoulded cable connectors of the 770 NCC series
**Efficient device connection in healthcare and industry

The presence of liquids and demanding hygienic requirements dominate the application field of medical device technology. Product developers are faced with the task of balancing functionality, protection and design at a top level. The miniature connectors of the binder 770 NCC series are an exemplary success – which also benefits industrial users.**binder, a leading supplier of industrial circular connectors, presents overmoulded cable connectors of the 770 NCC (Not Connected Closed) series. When mated, the products meet the requirements of protection degree IP67 and are thus dust-tight and protected against temporary submersion. When unplugged, they offer IP54 protection against contact, dust and splashing water from all sides. The series is mainly designed for use in industrial and healthcare environments where liquid media typically occur. The connectors are equipped with an easy-to-use but reliable bayonet locking system that ensures quick and safe mating and unmating.

**Background: NCC – Not Connected Closed**
Typically, connectors only comply with the protection degree specified in their data sheet when mated. When unplugged, covers or flaps are often used to protect them from environmental influences. However, these elements may affect ease of handling or interfere with the visual appearance of the system design. NCC is different: here, as a special design element, a spring-loaded plastic cover is located inside the connector housing. It encloses the pins in a contact-proof manner, protects them from particles, dust and splash water and protects against mechanical impact from the outside.

**Design meets functionality**
The use in medical engineering applications particularly challenges the design and manufacture of circular connectors. On the one hand, smooth product surfaces are required for hygiene reasons. They prevent the accumulation of dirt and reduce the risk of contamination. On the other hand, in clinical applications, for example, mobile devices often have to be connected to others on site – in as little time as possible and without the risk of contaminating the unmated flange part of the connection. Furthermore, medical device manufacturers demand a visually attractive design that fits seamlessly into the typical colour and shape schemes of this market segment. In addition, the connector manufacturer is faced with the task of using one and the same tool for producing the black and white versions – despite the different materials – while maintaining tight tolerances. Similar requirements apply to applications in industrial measurement and control technology, where the products have to withstand harsh process or climatic conditions. With the overmoulded cable connectors of the 770 NCC series, the developers and production specialists at binder have succeeded in meeting these challenges comprehensively.

**770 NCC series specifications**
The 770 NCC series of 8-pin cable connectors with bayonet lock – in straight design – are equipped with moulded, UL-approved PUR or PVC cables, making field assembly unnecessary. They are offered with standard cable lengths of 2 m and 5 m; other lengths are available on request. The cable cross-section is 8 x 0.25 mm² and the cable jacket diameter is 6.0 mm. The bending radius of the cables in move is at least ten times the cable diameter – and at least five times the diameter for fixed cables. The maximum resistance of wire amounts to 79 Ω/km. The overmoulded cable connectors are designed for a rated voltage of 175 V at a rated current of 2 A and withstand impulse voltages of up to 1750 V. Their operating temperature range extends from -25 °C to +85 °C; the mechanical service life is specified at 5000 or more mating cycles.

**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:
Overmoulded cable connectors with bayonet lock of the 770 NCC series are optimised for fast, reliable mating in harsh environments as well as for demanding hygiene requirements. Photo: binder

Fields of application:

* Medical device engineering
* Industrial applications
* Measurement and control technology

Features:

* Termination: PVC/PUR cable
* Locking system: Bayonet
* Pin count: 8-pin
* Protection degree: IP67 when mated
* EMI capability: unshielded
* Bayonet ring: black (colours upon request)
* Mating cycles: > 5000

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