M12 Gigabit Ethernet Connectors Support Data Rates up to 10 Gbps

ERNI Electronics has extended its portfolio of M12 connectors. The new Gigabit Ethernet PCB connectors support data rates of up to 10 Gbps. Due to the eight-pin design, the new M12 connectors are compatible with RJ45 network cabling. X-Code connectors are distinguishable by the way in which the eight wires in the Ethernet cable are segmented into four shielded pairs, and a high EMC is guaranteed by the 360° shielding, according to the company. They are adapted to harsh industrial environments and even in the case of severe interference, the attenuation requirements are met and reliable data transmission is ensured. To comply with the requirements as per IEEE, the new Gigabit Ethernet connectors can withstand a test voltage of at least 1.5 kVAC. In addition, they exhibit a clearance and creepage distance of at least 1.6 mm and are also ideally suited for railway applications.

The PCB female connector and screw-locking form a two-part system. The PCB female connector is designed in the space-saving, proven SMT technology from ERNI. It is supplied in tape-and-reel packaging with suction foil for automatic assembly. The screw-locking is produced in standard M12 technology. This design also permits the cost-optimized integration of the screw-locking into injection-molded or die-cast customer housings. The connector face is X-coded according to IEC 61076-2-109. Other features include IP65/67-rated protection in conjunction with corresponding cable connectors and a wide temperature range of -55° to +125 °C. Typical applications include in particular the connection of IP cameras such as those used for infotainment systems in public transport, in the broadcasting industry and in industrial machinery increasingly defined by image processing.

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