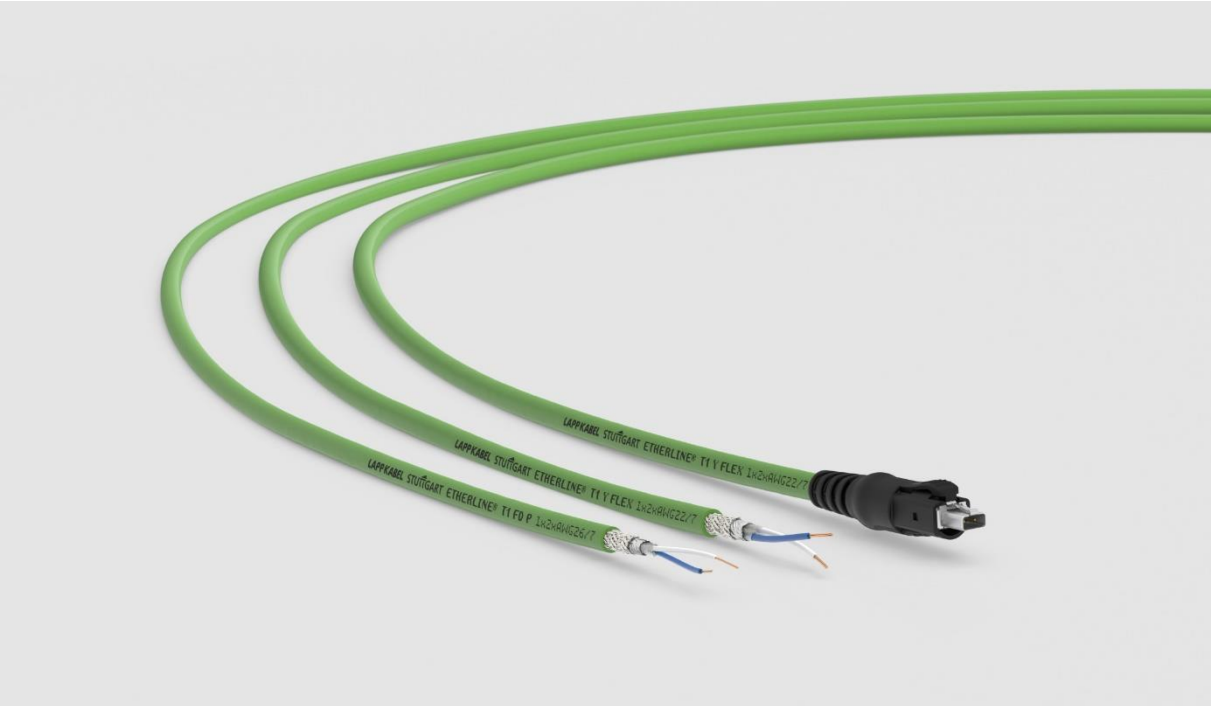
Press release

Lots of new products for Industrial Communication

LAPP expands its single-pair Ethernet range



The LAPP portfolio already includes single-pair Ethernet cables. The company has based the connector on the standardised connector face set out in IEC 63171-6. LAPP will provide the complete solution for single-pair Ethernet infrastructure in industry.

Stuttgart, March 30, 2021

Single-pair Ethernet (SPE) is a key technology on the way to the SmartFactory and Industry 4.0. It enables more consistent and more efficient Industrial Ethernet networks and only needs one pair of cores to transmit data. Previously, 2 and 4-pair Ethernet cables have been the standard. This saving enables new smart components to be integrated into the network, which were previously not networked via Industrial Ethernet. With the ETHERLINE® T1 product family, LAPP was ahead of the game in presenting prototype single-pair Ethernet cables for use in industrial machinery and systems. The first single-pair Ethernet cable is now available from stock. As part of its spring launch, LAPP will be introducing the new ETHERLINE® T1 Y Flex 1x2x22/7 AWG.

The ETHERLINE® T1 Y Flex 1x2x22/7 AWG is a UL-certified two-core data cable for high-speed information exchange that maintains the same high data rates while significantly reducing the setup required. Thanks to its small bending radius and small outer diameter, it is exceptionally lightweight and easy to install and is indispensable for connection at the field level.

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The new Power-Over-Data-Line compatible cable complies with IEEE 802.3bu and has been specially designed for transmitting digital signals in the frequency range up to 600 MHz over distances of up to 40 m. It enables a simultaneous power and data supply to SPE terminals with low energy consumption (up to 50 W). The design of the SPE cable guarantees ideal protection against electromagnetic interference. Thanks to an aluminium-laminated foil and copper braid screening with a high degree of coverage (SF/UTP), it is double shielded. In addition, the PVC outer sheath is resistant to acids and alkalis and is partially oil-resistant. UL/CSA certification enables the product to be used in North America. As a UL-listed Power Limited Tray Cable (PLTC), the new single-pair Ethernet cable can also be installed openly on cable trays.

The new ETHERLINE® T1 Y Flex 1x2x22/7 AWG thus opens up a host of future-proof possible applications in automation technology. The global market leader for integrated cable and connection technology solutions has defined a wide range of applications:

- Flexible use in dry and damp rooms, as well as for medium mechanical stress,
- For structured cabling in compliance with DIN EN 50173 and ISO/IEC 11801,
- For single-pair Ethernet applications - 1000Base-T1 in compliance with IEEE 802.3bp and 100Base-T1 in compliance with IEEE 802.3bw.

Explanation: The IEEE 802.3 bp standard describes a physical layer that permits 1 Gbit/s via single-pair twisted pair copper cables over a distance of 40 m with shielded cables or 15 m with unshielded cables. Possible applications in manufacturing automation include connection of Gigabit communication devices in the control cabinet or sensors with high data rates such as high resolution imaging systems. However, the IEEE 802.3 bw standard allows the same cable lengths for 100 Mbit/s. Particularly because of the reduced distance, this technology may also be of interest for connecting devices in the control cabinet.

"Single-pair Ethernet is an important technology for the future. But to achieve broad market penetration we need standardised and uniform connectors," says Christian Illenseer, Product Manager Industrial Communication at LAPP. He adds: "You need a single standard to ensure the compatibility of the components. We decided on the SPE Industrial Partner Network because we believe that this standard has the best prospects of success in the market."

Two further cables will be available soon: the ETHERLINE® T1 FD P, a shielded 26AWG cable for Gigabit Ethernet and use in cable chains, and the ETHERLINE® T1 P FLEX 18AWG for 10 Mbit/s and distances of 1000m.

LAPP will also be launching two more innovations in the field of Industrial Communication:

1. Highly flexible **ETHERLINE® FD Cat.6 patch cables** for continuous movement applications in cable chains. They are assembled with M12X connectors and enable fast data exchange at up to 10Gbit/s over 60 m thanks to Cat.6 Ethernet. A laminated aluminium foil and copper braiding provide optimum protection against electromagnetic interference. A cross separator is used to protect the core pairs, allowing maximum mechanical stress. The connector has integrated vibration protection. This prevents unintentional loosening of the connection. The IP67 protection rating means that the new patch cables are suitable for connecting devices outside the control cabinet.

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2. **ETHERLINE® CABINET CAT.6$_A$** for control cabinets in PROFINET® networks. Thanks to their small bending radii, Cat.6$_A$ patch cables can prove especially useful in confined spaces. They enable high speed exchange of information at up to 10 Gbit/s at 60 m. The connecting cables are assembled on both sides, saving time and eliminating the potential for errors when assembling them on site. The RJ45 connector is exceptionally narrow, meaning that the patch cables are ideally suited for devices with a very high port density. Thanks to UL/CSA certification, they are also approved for the North American market.

You can also find out about LAPP's new products at the digital edition of the Hanover Fair from 12 - 16 April 2021.

You can find the image in printable quality here

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About LAPP:
Headquartered in Stuttgart, Germany, LAPP is a leading supplier of integrated solutions and branded products in the field of cable and connection technology. The company's portfolio includes standard and highly flexible cables, industrial connectors and cable entry systems, customized system solutions, automation technology and robotics solutions for the intelligent factory of the future, as well as technical accessories. LAPP's core market is in the industrial machinery and plant engineering sector. Other key markets are in the food industry as well as the energy and the mobility sector.

LAPP has remained in continuous family ownership since it was founded in 1959. In the 2019/20 business year, it generated consolidated revenue of 1,128 million euros. LAPP (including also non-consolidated entities) currently employs approximately 4,575 people across the world, has 20 production sites and around 43 sales companies. It also works in cooperation with around 100 foreign representatives.

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