Bus and Ethernet Solutions Keep Your Automated Facility Connected

LAPP GROUP

Automation today.

Automation and networking technology continue to play a vital role in the manufacturing industry, especially mechanical and plant engineering. Along with enabling greater energy efficiency, flexible production capabilities, and digital manufacturing, the Internet of Things is one of the guiding trends shaping the future of automation. This includes the connectivity of physical and smart devices, buildings, and other devices and locations embedded with electronics, software, sensors, actuators, and networks. These "Smart Factories" feature connections that enable devices and locations within facilities to collect and exchange data at unprecedented rates of speed.

With fully automated and networked processes, Smart Factories are capable of realizing greater productivity, and as a result, can offer customers improved manufacturing efficiency. All sectors of manufacturing are relying on increased automation to remain competitive on regional and global levels. Lapp Group is playing a critical role in future-proofing automation capabilities by providing an array of data transmission products that are designed not just for today, but for ever-evolving communications needs.

Meeting the future needs of automation
Moving forward, cabling and connection systems within

manufacturing applications will need to transmit greater amounts of data. The most effective and dominant communication protocol is Ethernet, which is well established for its information technology applications. The challenge for industrial data network cables lies in providing reliably high data rates within harsh and challenging industrial environments, such as those where the cables are repeatedly bent and flexed in cable tracks, or exposed to corrosive materials and fluids, and high temperatures.

Lapp Group meets this challenge head-on by providing our customers with a wide range of products and complete solutions for factory, building, process, and mobile automation. We do so as a single source known for high quality, durability, greater product availability, and unrivaled customer service. Our solutions include complete cabling and connection systems for integrated networking at the sensor/actuator and control levels, right through to inventory management systems.

Solutions that meet the automation needs of today and tomorrow.
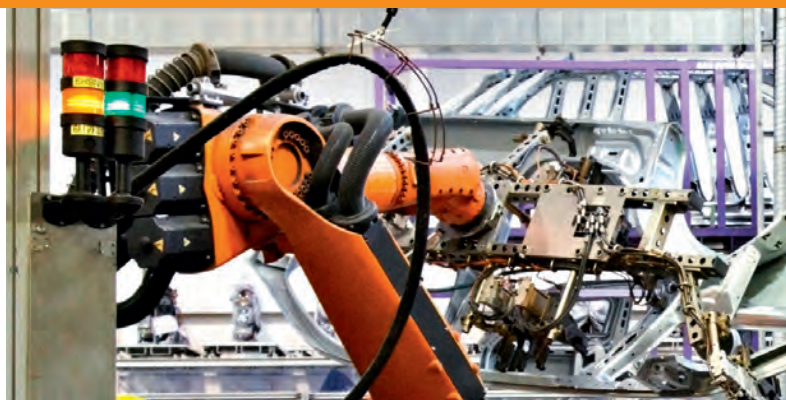
UNITRONIC® bus cables and connectors

Lapp Group's high-quality UNITRONIC® bus components provide a reliable solution for all applications in industrial machinery and plant engineering, as well as manufacturing facilities and warehousing systems. From the transmission of simple control signals to Fieldbus signals in complex network structures — Lapp offers dependable cabling and connection solutions for virtually every situation.

UNITRONIC® bus cables excel in factory automation within a wide array of industries and provide dependable connections of field or machine-level applications. They are designed for connecting devices such as sensors, actuators, panels, and programmable logic controllers. Additionally, our cables and connectors for popular Fieldbus systems enable effective information exchanges between virtually all devices within the facility.

The most common bus systems include:

DeviceNet™

Developed by Allen-Bradley® (Rockwell Automation®), DeviceNet is based on the CAN bus protocol and is one of the premier Fieldbus systems in North America. DeviceNet is a digital, multi-drop network that connects and serves as a communication network between industrial controllers and I/O devices.

PROFIBUS®

Developed by Siemens®, PROFIBUS is the leading bus system in process automation. This system dominates worldwide, with bit rates of 1.5 Mbit/s up to 12 Mbit/s.

AS-Interface (AS-i)

This product group has been developed to be an inexpensive alternative on the lower Fieldbus level (sensor/actuator). It is often used in connection with Ethernet, PROFIBUS, CAN, and DeviceNet.

CAN/CANopen

Originally developed for vehicle applications, it is now used in a wide of array of industries in an extremely broad range of applications.

INTERBUS

This was also first used in the automotive industry, and today, typical applications include the general sensor/actuator in system production and process engineering.

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ETHERLINE® industrial Ethernet cables, connectors, and tools

More and more companies are taking advantage of Ethernet, specifically Lapp Group's ETHERLINE®, for their machine and plant control. Our Ethernet systems like EtherNet/IP™, PROFINET®, and EtherCAT®, were specifically developed for industrial applications and allow you to use one communication system throughout all areas of your facility, thereby requiring fewer interfaces to connect unlimited numbers of locations. Lapp Group's ETHERLINE® products offer more advantages for commercial fieldbus systems, including:

- High data transmission rate for fast information exchange

- Improved efficiency and work flow

- Company-wide access to data and applications

- Better monitoring and control for optimized manufacturing processes

- Simple, unlimited expansion possibilities

- Fast assembly due to connection technology with RJ45 or M12

- Dynamic bandwidth adjustment with 10/100 Mbit/s, 1 Gbit up to a current 10 Gbit/s

Lapp Group's ETHERLINE® products are designed to provide secure, fast and reliable solutions for today's most demanding Ethernet needs. However, they are also crafted to meet developing Ethernet requirements that will be become more prevalent within future automation applications.

ETHERLINE® product lines provide dependable real-time control within automated industrial facilities of all types and sizes. ETHERLINE® is more than up to the task in environments requiring more rugged and robust connectors and cables, greater flexibility, and faster response times. Our systems are comprised of durable and robust cables and connection components for passive network technology, and deliver an effective solution for virtually any application.

ETHERLINE® offers a full range of CAT.5 to CAT.7 cable and connection options across multiple protocols. These are also available in everything from stationary cable, flexible, and continuous flexing, to torsion-rated cables.

The most common industrial Ethernet protocols include:

Ethernet / IP™
Ethernet/IP™ was developed by Rockwell Automation and is owned and maintained by ODVA (Open DeviceNet Vendors Association).

PROFINET®
PROFINET® was developed by Siemens and is an Industrial ETHERNET Standard from the PI (PROFIBUS & PROFINET International) organization, and is based on proven TCP/IP and IT standards.

EtherCAT®
EtherCAT® was developed by Beckhoff and is a powerful real-time ETHERNET system with an open protocol and offers short cycle times, low jitter values and different network topologies.

LAPP GROUP

We know what's important to you.

Unrivaled durability and dependability that saves money
Lapp Group knows that dependable performance and communications are your top priorities. Every connection. Every time. You could choose any manufacturer, but why would you compromise? Today's sophisticated automation installations demand durability, and Lapp's products have proven to be more than up to the task at countless facilities within a range of applications. Our products provide optimum performance as they resist fluids, chemicals, and extreme temperatures often found on automated production lines. You could pay less, but with Lapp products, you get more. More durability and performance which, in the end, saves you time and money.

Customer support that never lets you down
Lapp Group knows that customer support plays a critical role in your operation. We'll always have your back. Our sales group will make you feel like you have a supporting team right there with you at your facility. A team that never lets you down. And with localized distribution, you'll have the products you want when you need them.

Industry expertise
Lapp Group's UNITRONIC® and ETHERLINE® products can be found hard at work within numerous automation applications including automotive, chemical and pharmaceutical. Our expertise within these sectors allows us to provide data solutions that increase communication abilities and productivity.

Greater peace of mind
Lapp Group's unique combination of product durability, technical innovation, competitive pricing, and support provides our customers with the confidence that our products will provide enhanced operational efficiencies and greater peace of mind.
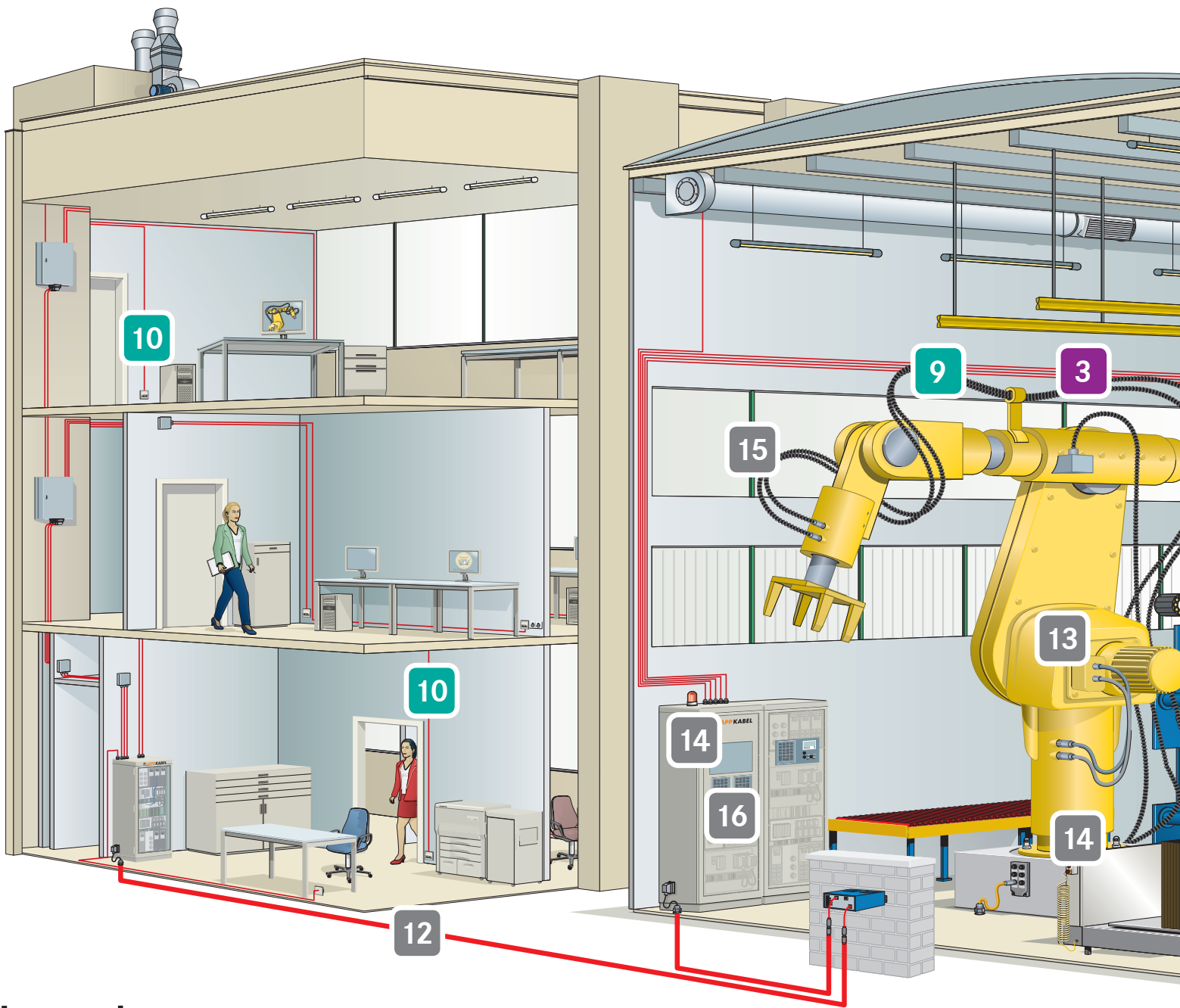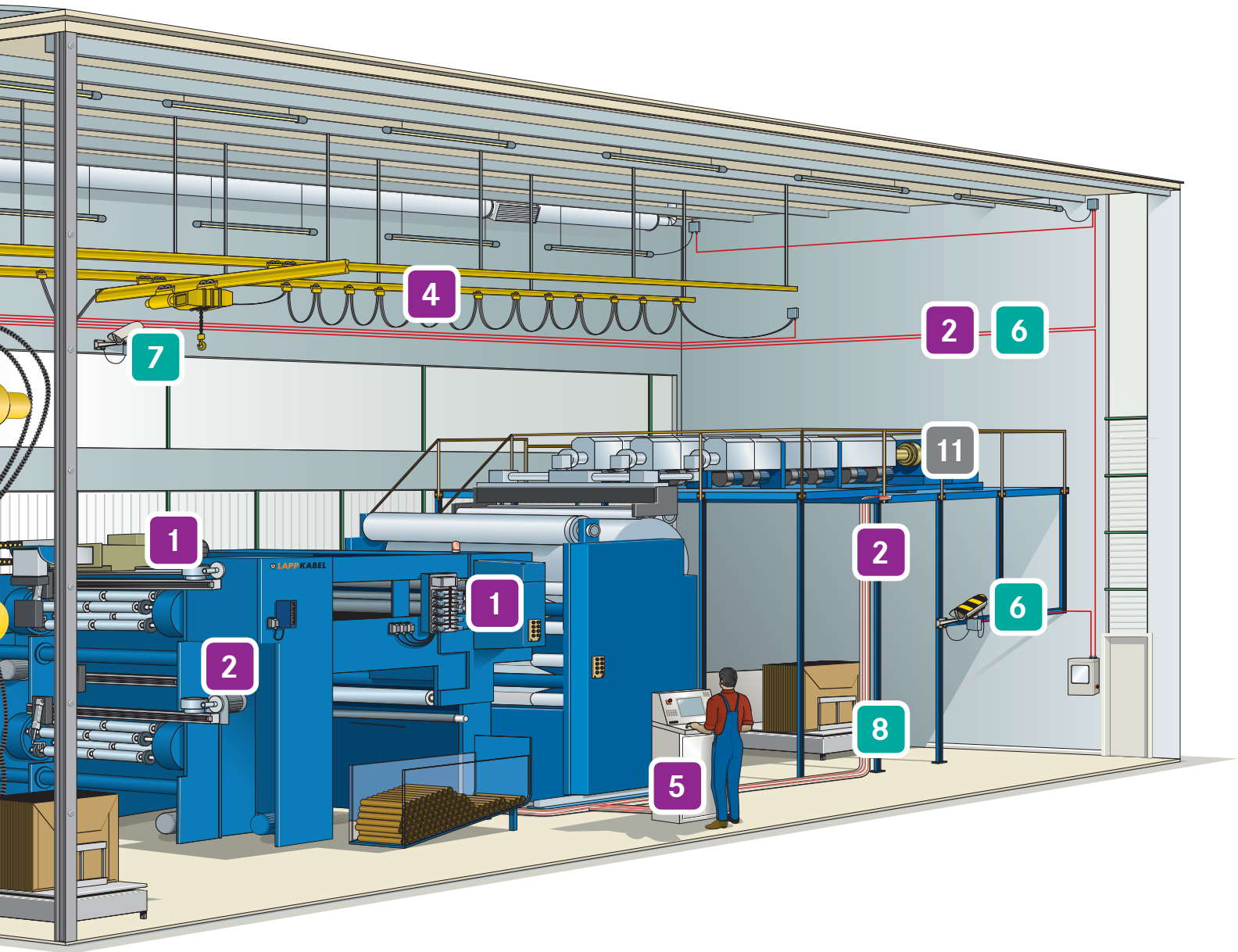
Legend

1	UNITRONIC® BUS FD continuous flex bus cable	**4**	UNITRONIC® BUS PB FESTOON PROFIBUS cable for cable trolleys	**7**	ETHERLINE® CAT.6A cabling for camera systems
2	UNITRONIC® BUS TRAY Fieldbus cable for stationary tray applications	**5**	UNITRONIC® BUS Fieldbus cabling for controllers like PLCs	**8**	ETHERLINE® TRAY Industrial Ethernet cable for flexible tray applications
3	UNITRONIC® BUS PB TORSION PROFIBUS cable for torsion movement	**6**	ETHERLINE® data cable & connectors		

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9	ETHERLINE® TORSION industrial Ethernet cable for torsion movement
10	UNITRONIC® LAN Ethernet cable for structured building cabling
11	ÖLFLEX® power & control cable
12	HITRONIC® optical fiber cable
13	EPIC® rectangular & circular connectors
14	SKINTOP® strain relief cable glands
15	SILVYN® protective cable conduit systems
16	FLEXIMARK® cable marking systems

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