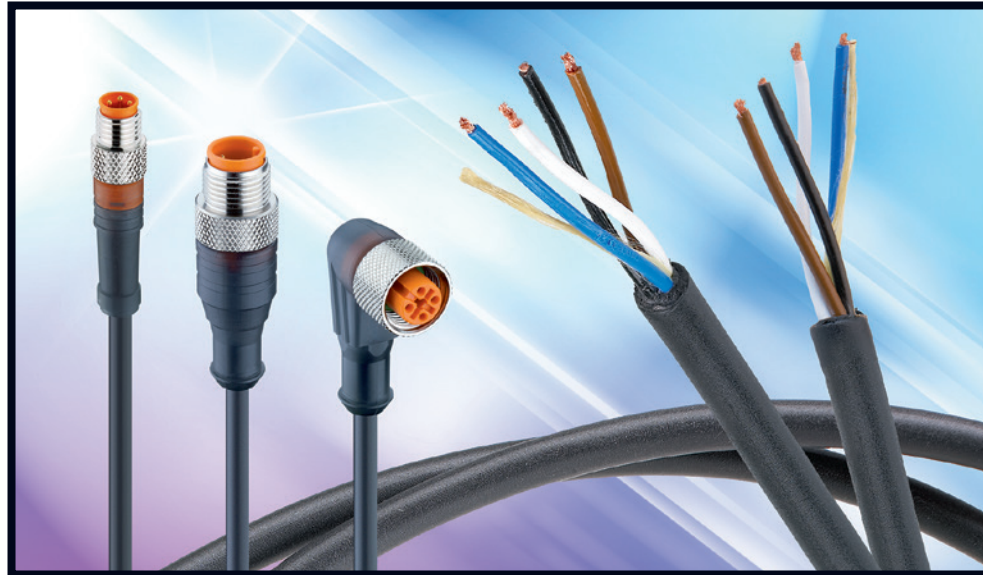


NP 1067LE**Connectors for Robotics**

The new Lumberg Automation™ robotic product program: Reliable, tried-and-tested connection technology for robotics applications with an excellent price-performance ratio.



Extremely High Torsional Strength is One of the Key Features of the New Robotic Product Program. This Makes it Ideal for Use with Industrial Robots and, Thanks to Excellent Functional Reliability, Also Helps to Reduce Operating Costs.

- High productivity even under harsh environmental conditions thanks to excellent torsional strength, suitability for use with drag chains, and resistance to welding sparks
- Maximum flexibility and efficiency due to custom cable lengths and standard versions with molded M8 and M12 connectors. Because one control cable is suitable for all robotics applications, costs for procurement and warehousing can also be reduced
- UL certification means that the Robotic product program can be used anywhere in the world, opening up new markets

Thanks to ultra-modern sensors and high-resolution imaging systems, industrial robots are increasingly developing into flexible automation tools for an enormous range of applications. To provide dependable connection technology to support this trend, we have developed a new 4-pole control cable, ideal for robotics applications, based on the tried-and-tested Lumflex program. Combined with our molded or field-attachable M8 and M12 connectors, straight or angled, we are now also able to offer a wide range of supply and connection cables. Products in the Robotic range feature excellent mechanical and thermal properties, high resistance to chemicals and, in the case of cordsets, secure connections.

Applications

The Robotic product program is suitable for almost any application that requires reliable wiring of industrial robots or electrical/electronic modules as part of automation equipment. The cables are capable of withstanding millions of bending cycles under high torsional stress as well as welding sparks, extreme temperatures and chemicals. The range of possible application scenarios is wide, from welding and painting processes in the automotive industry, and automatic placement machines for electronics engineering, right through to material handling and packaging.

Your Benefits

The new Robotic program can further enhance the productivity of industrial robots. This is because the cables are capable of withstanding even rigorous mechanical stress caused by torsion, bending cycles, strain or compression. They have high resistance to welding sparks, lubricants and chemicals, and are capable of withstanding heat and cold. This further ensures a high degree of operational reliability and helps to reduce your operating costs.

What's more, the Robotics program brings you optimum flexibility thanks to its wide variety of M8 and M12 connectors, already widely used in industrial environments. And if there's anything else you may need, just contact us to talk about a solution specific to your needs.

**A new product to
serve your needs.
Be certain.**

Lumflex® Robotic Control Cable Combined with Lumberg Automation™ Connectors

With a halogen-free jacket of black polyurethane (PUR), the Lumflex® Robotic STL 500 control cable has a diameter of 5.1 mm. The four copper conductors are color-coded brown, white, blue and black (in a clockwise direction) and each has a cross-section of 42 x 0.10 mm. The aramid core prevents the conductors from sticking to each other or to the jacket, so ensuring optimum strain relief. The control cable can carry an operating voltage of up to 500 V.

The STL 500 control cable can withstand welding sparks and a torsional stress of 720° per meter



Easy, Safe: Molded Robotic Connectors

Compliant with the IP67 protection class, the robust molded Lumberg Automation™ M8/M12 connectors offer patented product features such as self-locking threaded joints, rolled spring contacts and the so-called „piggyback circuit“, which ensures correct operation even if the LED display is damaged. The combination of Lumflex® Robotic control cable and molded connectors also guarantees secure connections – the junction between contacts and leads is completely enclosed in insulating plastic. This means that faults caused by depressed pins or any sporadic vibration-related short circuits are a thing of the past. What's more, the molding ensures robust, tight and resilient connections even when cables are subject to strain or compression.

Currently available in a 4-pole version, the M8/M12 connectors have a contact resistance of $\leq 5 \text{ m}\Omega$. Rated current is 4 A (at 40°C). Depending on the version, rated and test voltages are between 30 and 240 V or 0.8 and 2.5 kV (eff./60 s). Insulation resistance is $>10^9 \Omega$. The connectors' compact, translucent housings are made of TPU (thermoplastic polyurethane).





For Last-minute Decisions: Bulk-stock, Cordsets and Field-attachable Connectors

Field-attachable connectors are ideal in situations where configuration decisions about cable lengths or pin allocation may need to be made at the last minute. When wiring decisions are difficult to make in advance, due to unclear or changing circumstances, Lumflex® Robotic control cables with a molded connector at one end and a field-attachable variant at the other give users the necessary flexibility and planning certainty. Depending on the individual situation, users can create cables of different lengths and adapt them as necessary. They can choose from a broad portfolio of straight and angled field-attachable M8/M12 connectors with screw, soldered or spring-type termination. All IP67 connectors provide excellent protection against ingress by dirt and moisture.

Housings for M8 and M12 connectors are available in plastic or metal. Used in combination with the STL 500 control cable, the 4-pole field-attachable connectors have a rated current of 4 A (at 40°C). Depending on the version, rated and test voltages are between 30 and 240 V or 0.8 and 2.5 kV (eff./60 s). Insulation resistance is $>10^9 \Omega$.



One Cable, Multiple Variations: the Robotic Program

The STL 500 control cable is available on drums of 100 or 500 m and with molded M8 and M12 connectors. Variants of these standard versions (straight or angled connectors, with/without wiring) can be obtained with molded connectors at one end and in the standard lengths of 2, 5, 10, 15 and 20 m, as well as with molded connectors at both ends in combinations of M8/M8 and M12/M12 and with standard lengths of 0.3, 0.6, 1, 1.5, 2 and 5 m. Together with the field-attachable 4-pole M8 and M12 connectors, they add up to a comprehensive range of Robotic products that bring you maximum flexibility and the very highest levels of functional reliability.

Benefits at a Glance

- Torsion $\pm 720^\circ$ per meter
- Resistant to welding sparks
- Halogen-free (EN 50267-2-1) and fire-retardant (UL horizontal flame test/CSA FT2)
- UL certified
- Highly resistant to lubricants, acids, alkalis and UV radiation
- Operating temperature range of -45°C to $+80^\circ\text{C}$
- Maximum strain relief thanks to aramid core
- Designed to operate perfectly in combination with passive distributors in the ASB series and I/O modules in the LioN series (both from the Lumberg Automation™ portfolio), and with Hirschmann™ switches from the OCTOPUS family



Belden® Connectivity Center

Nowadays it is more important than ever to continuously increase the efficiency of production processes. Safe, cost-effective connectivity solutions for your machinery and plant play an important role in achieving this. Customized solutions tailored to your individual requirements enable you to substantially reduce your total cost of ownership. Thanks to the Belden Connectivity Center, the only one of its kind in the market, we are your worldwide partner when it comes to implementing such solutions, flexibly and rapidly, whether you need customized connectors and cable assemblies, or active and passive I/O modules for fieldbus or Ethernet networks – always in line with our motto “listen, understand, implement and deliver.” You will benefit both from the expertise of our knowledgeable specialists and from our extensive experience as a leading supplier of high-quality automation components. Let us utilize your challenges for our mutual success.

Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who are able to add value to your business. When it comes to signal transmissions, Belden is the number one solutions provider. We understand your business and want to know your specific challenges and targets to see how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our three leading brands, Belden®; Hirschmann™; and Lumberg Automation™, we are able to offer the solution you need. Today it may be a single cable, a switch or a connector, thus solving a specific issue; tomorrow it can be a complex range of integrated applications, systems and solutions.

We guarantee the superior performance of your mission-critical systems, even in the most demanding circumstances. If signal transmission is vital to your business, get in touch with the partner that delivers. Be certain. Belden.

Product Overview

