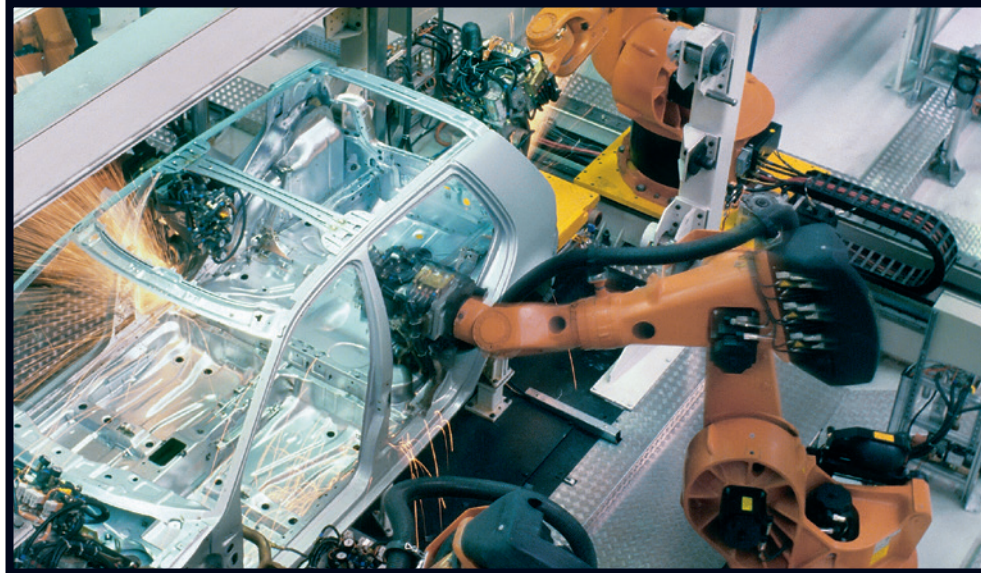


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Belden® Solution Enables a Major German Automobile Manufacturer to Increase Productivity by Around 50%



Ready Made Welding Spark Resistant Cables for Durable Connectivity

- Cost reduction due to easier installation and lower maintenance requirements
- Highly resistant against welding sparks, oils, coolants and grease, as well as shock and vibration resistance ensures highest reliability

To ensure secure data communications under extreme conditions, the connectors and cables used in industrial automation applications must withstand external aggression such as welding sparks. To fulfill these requirements for a major German automobile manufacturer, Belden developed welding spark resistant double-ended cord-sets from its Lumberg Automation™ brand.

Your Benefits

Using Lumberg Automation welding spark resistant cord sets, the automobile manufacturer obtained a 50% increase in productivity with respect to the downtime previously caused by spark damage. This solution significantly reduced its overall installation and maintenance costs.

Application Requirements

The automobile manufacturer requires the use of industrial grade connectors in robot welding applications to process axles, steering assemblies and other automobile parts. Automated manufacture by industrial robots places very high demands on the reliability of the cables and connectors used to connect the sensors and actuators, as the cables must withstand vibration, flexing, twisting and in many cases welding sparks.

In the past, defective cabling could not withstand welding sparks due to their poor thermal resistance and this often caused technical malfunctions in the plants' electrical systems. Replacing defective components was time-consuming and cost-prohibitive.

**Be certain.
Belden.**

Belden® Solution



In the past, connectors were assembled with additional cable protection conduits...

Our connectivity experts developed the easy-to-install double-ended cordsets with molded five-poles M12 circular connectors. The molded bodies and the outer jacket of the cable are made of polyurethane (PUR), which is highly resistant to welding sparks, oil, coolants and grease. By using our solution, the need for additional cable protection (conduits) is eliminated. Self-locking threaded joints of the circular connectors ensure reliable electrical contact between male and female connectors.

The temperature rating for the cord sets (completed assembly) range from -25°C to +80°C. When properly installed they fulfill the requirements of protection class IP 67 and are extremely resistant to vibration and torsion. Lumberg Automation™ supplies fifteen 15 different designs with various cable lengths and combinations of male and female connectors (straight and right angled) to ensure there are optimum solutions for all kinds of installation situations. The cables carry four 0.34 mm diameter cores and one 0.5 mm diameter core and come in 0.6-, 1-, 1.5-, 2- and 5-meter lengths. Finally, we offer these cord sets with light – emitting diode (LED's) for operation and function indicators too.



... but the durability was often compromised.

Why Belden

These welding spark resistant cord sets have proven themselves in the day-to-day production operations of the German automobile manufacturer. The key to their success is Lumberg Automation™'s breadth of experience in industrial connectivity solutions. Another important factor was our vast experience in execution of customers' projects, because in addition to our technical expertise a high degree of flexibility and fast response times was needed – in this case, four months from signing the initial development contract to receiving the first connection leads.



The Solution: M12 male and (angled) female connectors (with and without LED operation and function indicator) in combination with STL 458 ensures a durable connectivity.

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.