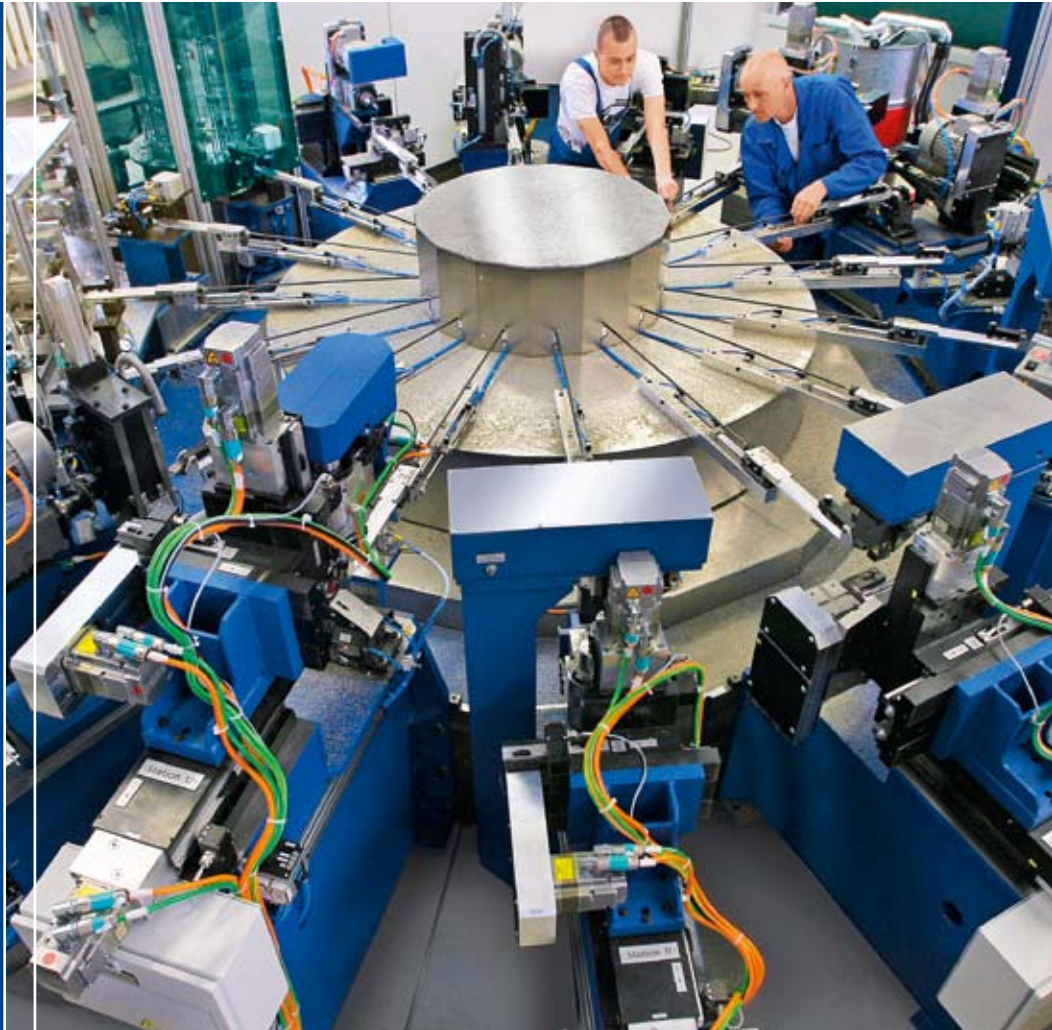


Solutions for assembly and handling



With today's modern factory automation, connection technology is facing a multitude of challenges. Belden, with its wide range of products for assembly and handling applications, is your ideal single-source supplier.

Modern assembly and handling technology is not just a question of integration but also of costs and flexible expansion possibilities.

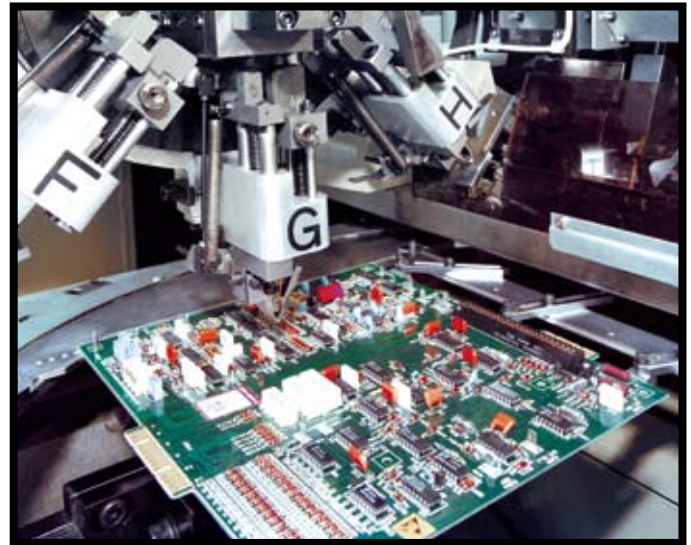
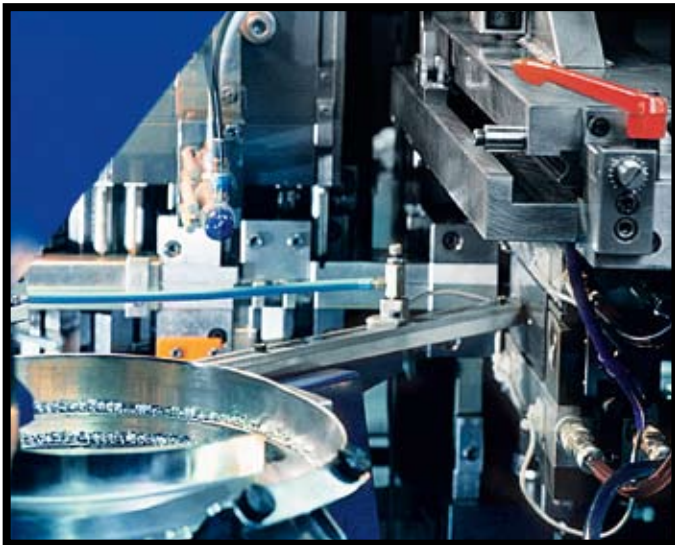
With their high flexibility and individuality, the solutions from Belden ensure optimum implementation of every conceivable assembly and handling technology application.



Assembly and handling – all from a single source

In assembly and handling applications in production, highly available and extremely cost-effective, integrated solutions are decisive – along with a high degree of customization and variable extension options for the future.

Belden's wide product spectrum delivers the best solutions for all assembly and handling requirements: from cables and connectors, all the way through to Industrial Ethernet switches, routers and firewalls. With its Hirschmann™ and Lumberg Automation™ brands, Belden offers proven, top-quality products as well as comprehensive service and support. It is the ideal partner to address all your connection and network solution needs – today and tomorrow.

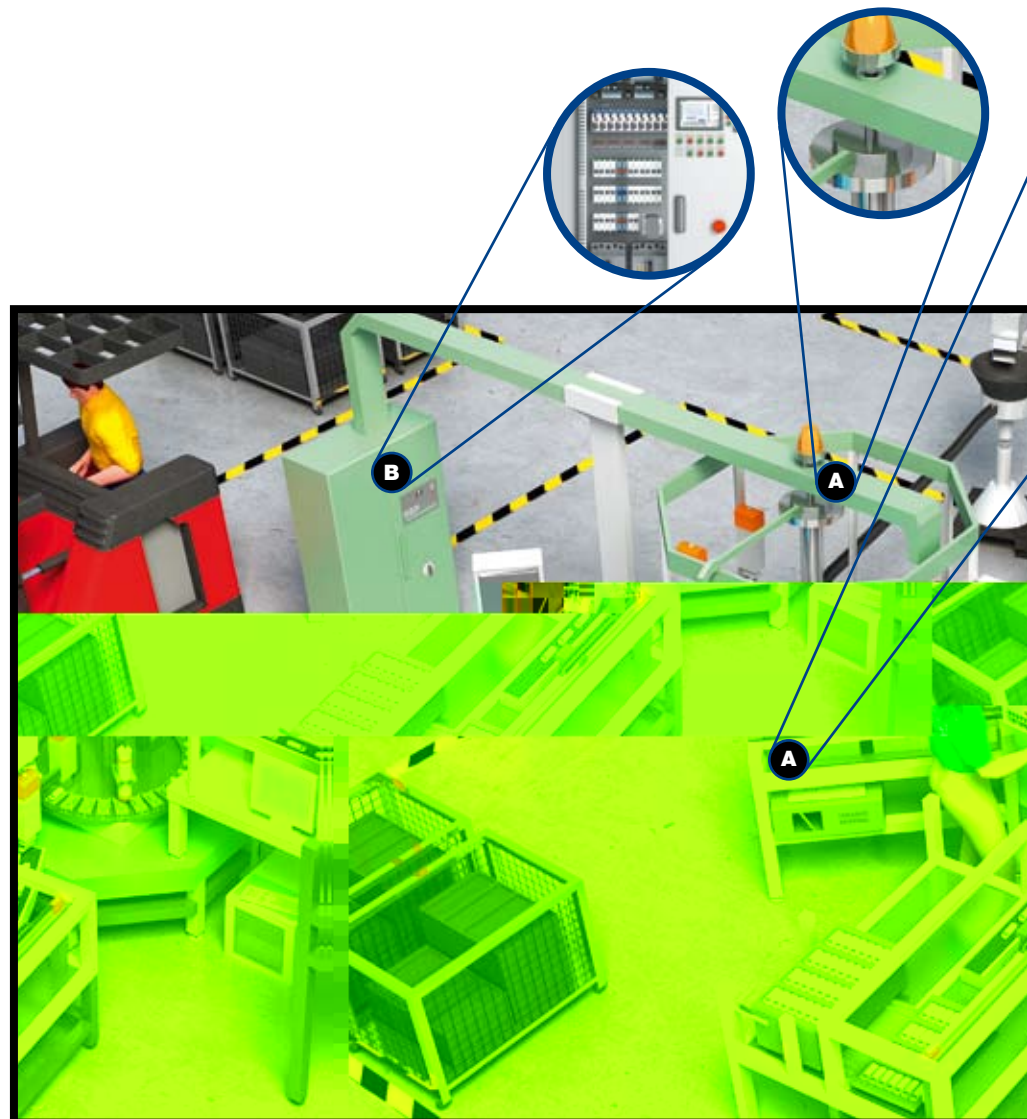


Perfect handling in the manufacturing cell

For automatic parts feeding, assembled in star-shaped manufacturing cells, every single move counts. The products from Belden, Hirschmann™ and Lumberg Automation™ can support you all along the line – with outstanding reliability and availability, as well as a finely tuned modular concept with flexible expansion possibilities and compact design.

These strengths are especially decisive in the case of modularly built machines and plants with distributed I/O concentration and limited available space. For example, with the LioN-Link system, which provides the connection between the entire fieldbus system and the fieldbus independent I/O modules. The wiring of the LioN-Link modules uses simple standard wiring components.

The wide range of solutions from Belden along the conveyor line enable maximum reliability and availability in the production cells.





A Workstation

Connectivity solutions

- AS-Interface flat and round cable modules
- actuator/sensor connecting and interconnecting cables
- valve connectors
- IP67 protection class



BAT Client

- rugged metal DIN rail mount housing
- single LAN – IEEE802.11b/g and 802.11a/h
- up to 108Mbps bandwidth
- redundant 24VDC power inputs (incl. IEEE802.3af PoE support)



LioN-M/LioN-S

- universal I/O functionality
- unlimited combinations of inputs and outputs
- saving of I/O memory
- exact diagnostics



B Cabinet

Fieldbus repeaters

- for the most common fieldbus protocols
- protocol specific fieldbus repeaters available



MICE family

- modular switch system
- extensive range of hot-swappable media modules
- maximum flexibility by comprehensive selection of connectors
- Gigabit router option



RS PoE switches

- Power over Ethernet (PoE) technology
- Industrial Ethernet switches
- redundant power inputs
- available with conformal coating
- extended temperature range: -40°C up to +60°C



OpenRail family

- Industrial Ethernet switches
- redundant power inputs
- available in customized versions
- available with conformal coating
- extended temperature range: -40°C up to +70°C



BAT family

- wireless access points and clients
- bridge functionality
- redundant WLAN links for reliable data transfer
- IP67 protection class



FiberExpress Systems

- FiberExpress Manager easy patch cords routing and management on a minimum space
- FiberExpress Bar: a compact, modular and resilient linking panel
- Optimax connectors for fast, secure and reliable field installable fiber termination



Industrial Ethernet Connectivity

- superior performance and excellent reliability in the industrial environment
- withstands harsh industrial environments and conditions
- quick installation
- increased flexibility with stranded conductors



C Control room

EAGLE20

- high-speed VPN, firewall and routing solution
- transparent and routing mode
- various media connection options
- 9.6V up to 60VDC redundant inputs



MACH100

- modular fanless Industrial Ethernet rack mount switch
- hot-swappable modules
- optional redundant power supply



Network Management Software

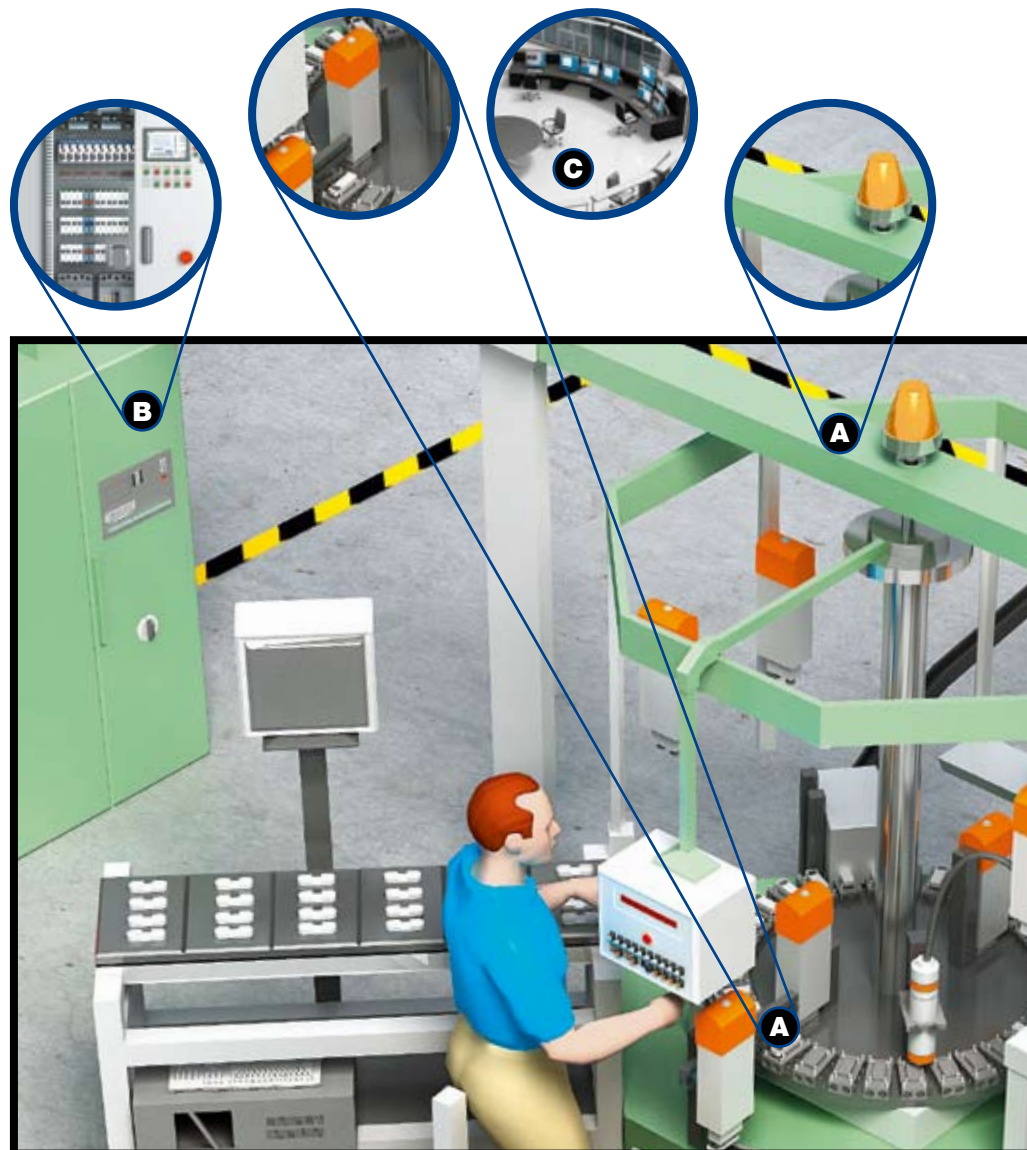
- operator edition for network supervision
- engineering edition for device configuration
- OPC and ActiveX for SCADA integration



Complete cabling and network solutions

- rail switches for the control cabinet
- protection of manufacturing cells
- reliable network monitoring
- extensive range of connectors, suitable for limited-space environments
- state-of-the-art bus technology through field bus components (central and decentralized)
- LioN-Link system for reduced cable volume, easy assembly and start-up

Belden's range of solutions meets the high demands in production cells. For example where confined spaces, state-of-the-art network technologies or DIN rail assembly are concerned.





A Signal transmission

B BAT Client

- rugged metal DIN rail mount housing
- single LAN – IEEE802.11b/g and 802.11a/h
- up to 108Mbps bandwidth
- redundant 24VDC power inputs (incl. IEEE802.3af PoE support)



BAT family

- wireless access points and clients
- bridge functionality
- redundant WLAN links for reliable data transfer
- IP67 protection class



Fieldbus repeaters

- for the most common fieldbus protocols
- protocol specific fieldbus repeaters available
- predictive maintenance



MICE family

- modular switch system
- extensive range of hot-swappable media modules
- maximum flexibility by comprehensive selection of connectors
- Gigabit router option



RS PoE switches

- Power over Ethernet (PoE) technology
- Industrial Ethernet switches
- redundant power inputs
- available with conformal coating
- extended temperature range: -40°C up to +60°C



OpenRail family

- Industrial Ethernet switches
- redundant power inputs
- available in customized versions
- available with conformal coating
- extended temperature range: -40°C up to +70°C



LioN-M/LioN-S

- universal I/O functionality
- unlimited combinations of inputs and outputs
- saving of I/O memory
- exact diagnostics



Connectivity solutions

- AS-Interface flat and round cable modules
- actuator/sensor connecting and interconnecting cables
- valve connectors
- IP67 protection class



e2c 67

- modular field bus station, IP67
- bus-neutral, compact and up to 128 signals in a very small space
- safety through the backplane concept
- bushead for Profibus, Interbus and DeviceNet



Attachable connectors

- M8, M12, 7/8", M23 male and female connectors
- straight and angled versions
- 4-, 5-, 8-, 12- and 19-poles
- good chemical and oil resistance
- IP65/67 protection class



FiberExpress Systems

- FiberExpress Manager easy patch cords routing and management in a minimum space
- FiberExpress Bar: a compact, modular and resilient linking panel
- Optimax connectors for fast, secure and reliable field installable fiber termination



Industrial Ethernet Connectivity

- superior performance and excellent reliability in the industrial environment
- withstands harsh industrial environments and conditions
- quick installation
- increased flexibility with stranded conductors



C Control room

EAGLE20

- high-speed VPN, firewall and routing solution
- transparent and routing mode
- various media connection options
- 9.6V up to 60VDC redundant inputs



MACH100

- modular fanless Industrial Ethernet rack mount switch
- hot-swappable modules
- optional redundant power supply



Network Management Software

- operator edition for network supervision
- engineering edition for device configuration
- OPC and ActiveX for SCADA integration

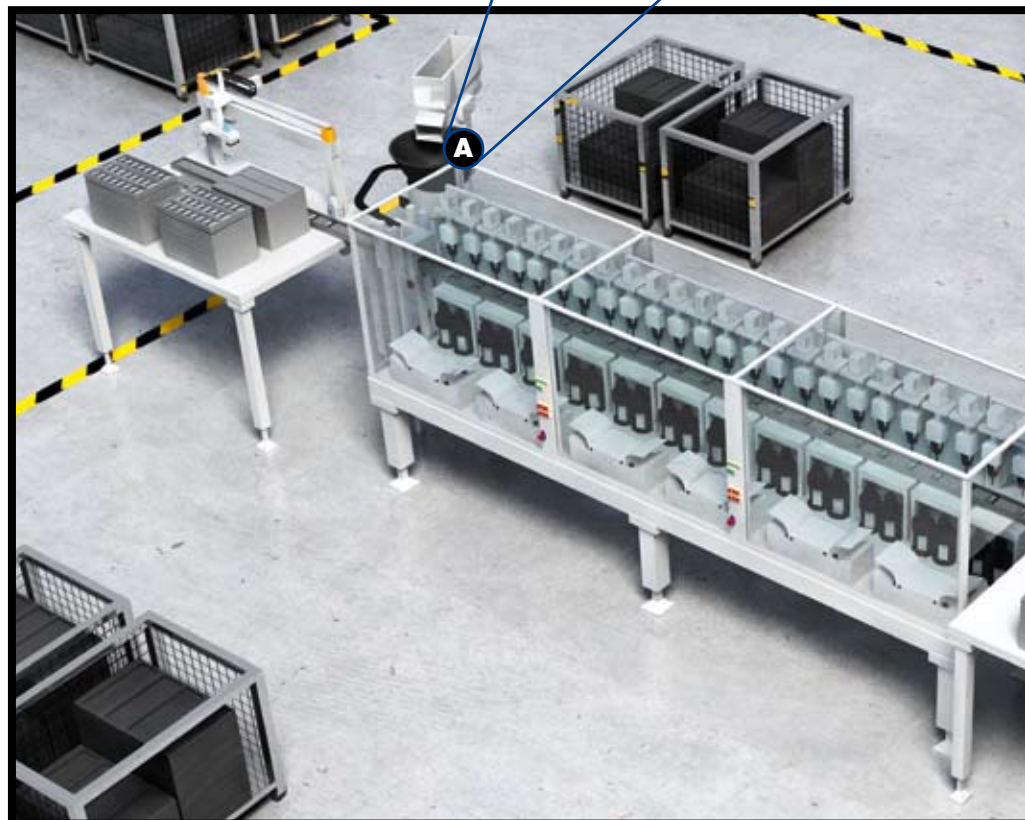


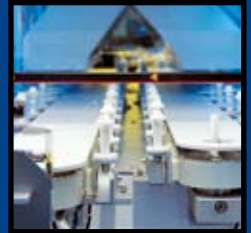
Multifaceted possibilities in linear assembly

For assembling, packing, transferring, conveying, palletizing, adjusting, cutting and sorting at robot-supported and manual workstations, machine-compatible cabling based on a comprehensive product spectrum is essential. Working with worldwide available products from Belden, Hirschmann™ and Lumberg Automation™, with their innovative technology and high-level flexibility, pays off equally in special and standard machine-building applications.

- variable cabling possibilities
- integrated installation concept
- fast, cost-effective cabling
- extremely handling and user-friendly
- easily extendable
- easy integration to existing plants
- reliability through high quality

Versatile solutions for linear assembly: Belden offers integrated, low-cost concepts which ensure high reliability.





A Signal transmission

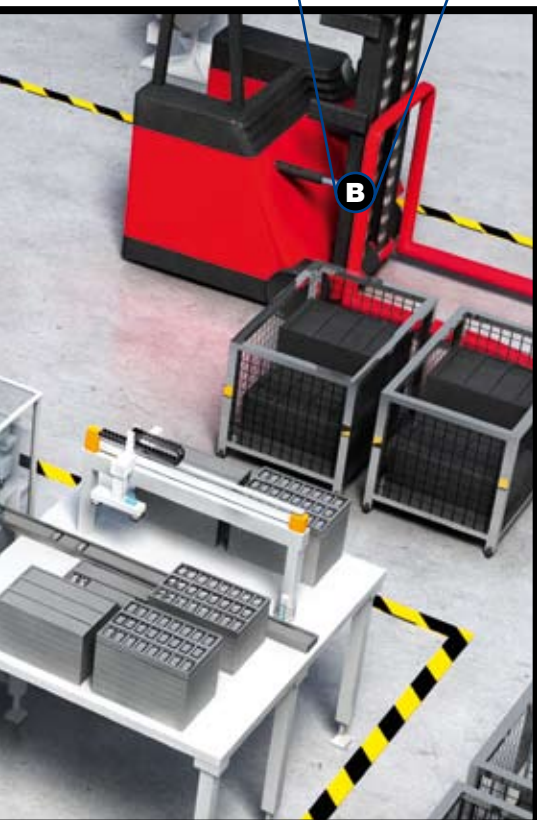
Actuator/sensor distribution boxes

- 4, 6, 8, 10 and 10 port distribution box
- space saving design
- shock and vibration proof
- IP67 protection class



Actuator/sensor connectors

- good chemical and oil resistance
- vibration and shock resistance
- M8, M12, 7/8", M23



B Forklift

BAT Client

- rugged metal DIN rail mount housing
- single LAN – IEEE802.11b/g and 802.11a/h
- up to 108 Mbps bandwidth
- redundant 24VDC power inputs (incl. IEEE802.3af PoE support)



Attachable connectors

- M8, M12, 7/8", M23 male and female connectors
- straight and angled versions
- 4-, 5-, 8-, 12- and 19-poles
- good chemical and oil resistance
- IP65/67 protection class



LioN-M/LioN-S

- universal I/O functionality
- unlimited combinations of inputs and outputs
- saving of I/O memory
- exact Diagnostics



Connectivity solutions

- AS-Interface flat and round cable modules
- actuator/sensor connecting and interconnecting cables
- valve connectors
- IP67 protection class



e2c 67

- modular field bus station, IP67
- bus-neutral, compact and up to 128 signals in a very small space
- safety through the backplane concept
- bushead for Profibus, Interbus and DeviceNet



GLOBAL LOCATIONS

For worldwide Industrial Sales
and Technical Support, visit:
www.belden.com/industrial

