

Capabilities Bulletin

CB 001E

Belden Railway Approved Ethernet Data Cables

For reliable communications and enhanced system performance in railway, transportation and city transit systems.



These High Performance
Ethernet Data Cables
meet the Highest Railway
Industry Standards for
Assured Safety and Security

Uncompromising Safety and Highest Reliability

From high speed trains to local trams, there is a growing demand for high performance Ethernet based solutions to accommodate the expanding communication infrastructures used in passenger transport and mass transportation.

Technology has evolved and so has the implementation of higher speed ethernet based systems. Modern design and a more superior travel experience demands a comprehensive dependable solution with increased functionality.

Applications

Belden Railway approved ethernet cables provide an effective solution in both 100 Mbps and 1000 Mbps ethernet networks for:

- Multimedia passenger information and entertainment
- Monitoring, recording and control systems
- Train Control Management Systems
- Security, surveillance and operational train controls (TCN)
- Fare collection and ticket validation
- Location-based services (LBS)

Multiple Benefits

- 100 Mbps or 1000 Mbps cables according to system choice
- Gigabit cable can future proof network systems
- Highly stranded copper conductor for superior flex life with sustained data transmission
- High screen coverage in combination with Belden's Beldfoil technology to enhance electromagnetic interference (EMI) performance and maintain signal integrity
- Low toxicity, low smoke emissions and flame retardant for assured safety and security
- Small bend radius allows optimal installation within limited space applications
- Superior durability allows the cables to withstand vibration and movement whilst maintaining electrical performance over their lifetime
- Compatible with a broad range of connectors for wider application choice, the perfectly rounded cable ensures easy installation and termination







Meeting International Railway Standards

Belden BE43769 and BE43800 data cables are designed and manufactured in accordance with the following international railway standards:

- EN 50155:2007
 - Railway applications
 - Class TX (-40°C +85°C)
- EN/TS 45545-2:2009
 - Fire protection on railway vehicles
 - Class R14
 - IEC 60332-1-2
 - IEC 60332-3-25 Cat D
 - EN 50305:2002 par. 9.1.1
 - EN 61034-2
 - NF X70-100-1 & NF X70-100-2
- DIN 5510-2
 - Preventive fire protection in railway vehicles
 - Protection Level 1 4
 - IEC 60332-1-2
 - IEC 50266-2-5 Cat D
- ISO/IEC 11801 2nd edition

Ethernet Based Solutions

Belden cable used in conjunction with Lumberg Automation[™] connectors and Hirschmann[™] switches broadens the ethernet based solution from Belden for:

- Improved service-levels and system performance
- Superior safety, security and reliability
- Reduced installation and maintenance time
- Lower operational costs
- Flexibility for adding new applications in the future

Product Data

Belden Item Code	Transmission Performance	Conductor	Cable Jacket Material	Cable Jacket Colour	Cable Outer Diameter	Screen
BE43769	100 Mbps	AWG 22/19 Stranded	Cross-linked Premium FRNC	Black	6.70 +/- 0.3 mm	Foil and Braid (Aluminium / polyester)
BE43800	1000 Mbps	AWG 26/19 Stranded				

Always the Right Solution

Belden is one of the world's leading suppliers of signal transmission solutions including cable, connectivity and active components for mission-critical applications ranging from industrial automation and alternative power generation through to professional broadcasting. Belden offers an extensive portfolio of highly specialized products for management, control and field level, which the company produces and markets under its proprietary Belden®, Hirschmann™ and Lumberg Automation™ brands.

Visit www.beldensolutions.com for more information.