

NP 126E

**Belden® Introduces New Railway Approved Ethernet Data Cables**

For Reliable Communications and Enhanced System Performance in Railway, Transportation and City Transit Systems



**Enhancing Passenger Comfort, Improving Communications and Increasing System Functionality**

Building on the success of its data cable range for industrial automation, Belden has introduced two new cable products specifically developed for the railway and mass transportation industry. New Belden BE43769 and BE43800 are shielded, halogen-free data cables designed to support 100 Mbps and Gigabit ethernet based network applications. Meeting or exceeding the highest railway industry standards, these highly specialized ethernet data cables reliably deliver real time information for operators and passengers, on-board as well as in terminals and control rooms.

**Uncompromising Safety and 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 ethernet based systems, however, to meet the stringent needs of the industry, ethernet cables need to be fully compliant with high standards for safety, fire performance, quality and reliability.

Rail transport operators and manufacturers, as well as system integrators, rail transport designers and service providers looking to refurbish and/or design rolling stock, will want to ensure that ethernet data cables meet or exceed rail industry standards and deliver uncompromising safety as well as the highest availability. Belden BE43769 and BE43800 provide a reliable solution from Belden, a world-class provider of high performance single sourced industrial data solutions.

**New Highly Flexible, High Performance Data Cables**

- International railway standards
- Superior flex life
- Cat 5e transmission performance
- Halogen-free, oil and flame resistant
- Improved safety and security

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

## Applications

Belden Railway approved ethernet cables are particularly suited for ethernet based connectivity, signal transmission, monitoring, recording and control in on-board communications applications. These include passenger information and entertainment, security, surveillance and operational train controls (TCN = Train Control Network), fare collection and ticket validation, location-based services (LBS) and/or any required combination of data, voice, video-streaming, conferencing and monitoring, tracking, intercom and system control on one single network. These versatile new cables join the extensive Belden portfolio which extends from a comprehensive range of cables and connectors, through rugged Ethernet switches, to routers and firewalls – all harmonized to work seamlessly together.

With top-quality products from the Belden, Hirschmann™ and Lumberg Automation™ brands, Belden offers complete, integrated communication solutions backed by the right service and support.





## Product Features

- SF/UTP (Overall Foil Braided/Unshielded Twisted Pair)
- High screen coverage (>80% coverage) in combination with Belden's Beldfoil® technology to enhance electromagnetic interference (EMI) performance and maintain signal integrity.
- Gigabit transmission speed with BE43800 for enhanced system performance and greater passenger travel experience.
- Halogen-free, oil and flame resistant with a black cross linked premium FRNC cable jacket.
- Superior durability allows the cable to withstand vibration and movement whilst maintaining electrical performance over its lifetime.
- Wide operating temperature -40°C to +90°C for confident use in a variety of applications.
- Fully compatible with M12 connectors for field installable or pre-moulded cable assemblies.

BE43769 and BE43800 are constructed for reliable Cat 5e transmission performance. The high 19 strand conductor provides added flexibility and flex life and the small bend radius allows optimal installation within limited space applications.

## 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 to +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 and security and reliability
- Reduced installation and maintenance time
- Lower operational costs
- Flexibility for adding specific applications in the future

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## Ethernet Based Solutions

### 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 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.