

**NP 126E**

Belden® Introduces a New Data Cable for Railway and Mass Transit Communication Applications



**A New Highly Flexible, High Performance Ethernet Data Cable for Mission Critical Railway and Mass Transit Applications**

Building on the success of its data cable range for industrial automation, Belden has introduced a new cable product specifically developed for the railway and mass transportation industry. New Belden BE43769 is a shielded, halogen-free Cat 5e data cable designed to support ethernet based network applications. Meeting or exceeding the highest railway industry standards, this highly specialized ethernet data cable reliably delivers 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 appropriateness for 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 is a reliable solution from Belden, a world-class provider of high performance single sourced industrial data solutions.

**A New Highly Flexible, High Performance Data Cable**

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

### Applications

The Belden data cable is 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. This versatile new cable joins 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.
- An outer diameter of 6.70 mm (+/-0.3 mm) and embedded conductor pairs for a perfectly rounded cable ensures ease of termination and installation (Fast-connect).
- Halogen-free, oil and flame resistant with a black cross linked premium FRNC cable jacket.
- Superior constructional stability allows the cable to withstand vibration and movement whilst maintaining electrical performance over its lifetime.
- Wide operating temperature -40°C to +90°C for use in a variety of applications.
- Fully compatible with M12 connectors for field installable or pre-moulded cable assemblies.

BE43769 is constructed for reliable Cat 5e transmission performance. The 4xAWG 22 quad twist conductor design gives enhanced communication performance, and the 19 strand conductor provides added flexibility and flex life.

## Meeting International Railway Standards

Belden BE43769 has been designed and manufactured in accordance with the following international railway standards:

- EN 50155:2007
  - Railway applications
- CEN/TS 45545-2:2009
  - Fire protection on railway vehicles

- DIN 5510-2
  - Preventive fire protection in railway vehicles
- ISO/IEC 11801 2nd edition
- EN50155
  - Class TX (-40°C +85°C)
- CEN/TS 45545-2
  - Class R14
  - IEC 60332-1-2
  - EN 50305:2002 par. 9.1.1
  - EN 61034-2
  - NF-X 70-100-1 & 2
- DIN5510-2
  - Protection Level 1-4
  - IEC 60332-1-2
  - IEC 50266-2-5 Cat D
- ISO/IEC 11801
  - Class D (Cat 5e)

## Ethernet Based Solutions

Belden railway approved data cable used in conjunction with Lumberg Automation™ M12 D coded connectors broadens the ethernet based solution from Belden. Available as field attachable cable and connectors for flexibility in application or as complete assemblies with moulded connectors for ease of installation, the Belden railway and mass transit communications solution offers:

- Improved safety and security in and around trains
- Increased service-levels and customer satisfaction
- Improved reliability and installation time due to the integrated design and assembly
- Reduced operational costs due to more efficient maintenance and more effective operations
- Improved flexibility for adding specific applications in the future

## Ethernet Based Solutions

### Product Data

Belden Item Code	Item Description	Transmission Performance	AWG	Conductor Type	Cable Jacket	Cable Jacket Colour	Outer Diameter
BE43769	Ethernet Rail Transit Cable	Category 5e	22	Stranded (19)	Cross-linked Premium FRNC	Black	6.70 mm (+/- 0.3 mm)

### 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](http://www.beldensolutions.com) for more information.