

ECE R118 - Approved Data, Coax and Microphone Cable

Keep bus and coach passengers safe in the event of a fire with tested, flame-resistant industrial cabling.



Meets required standards – adhere to Europe's new safety and fire standards for the transportation industry with cabling that is tested and approved according to the ECE R118 standard.



Balances safety and speed – protect passengers in the event of fire with flame resistant data cables that deliver on the expected data speed demands of today's customers.



Installs easily – speed up installation and maintenance time with more flexible cabling that can bend around tighter corners in small spaces.

Benefits at a Glance

- Compliant with ECE R118 standard for bus coach systems
 - Jacket material resistant to flame propagation
 - No harmful toxins emitted
- Data transmission rates of 100 Mbit/s (Cat5e, 2-pair), 1 Gb/s (Cat5e, 4-pair) and 10 Gb/s (Cat7)
- Video and microphone applications (50 Ohm Coax transmission cable and star quad microphone cable)
- More flexibility options (tighter bend radius) via 19-strand copper conductors, to bend around corners without affecting signal transmission
- Easily identifiable after installation through a distinctive blue cable jacket (10 Gb/s only)
- Halogen-free and oil-resistant options
- Customized cable design to withstand vibration, EMI and mechanical stress for maximum reliability
- Options also approved to international railway standards
 - EN 50155, Class TX
 - EN 45545, Class R15 and R16
 - DIN 5510-2
 - ISO/IEC 11801, 2nd edition



Belden's data, coax and microphone cables meet the stringent fire protection requirements outlined by the United Nations' Economic Commission for Europe (ECE) for use in motor vehicles.

**Be certain.
Belden.**

Belden's data, coaxial and microphone cables meet the strict requirements outlined by the ECE R118 standard in Europe. This standard was put in place to prevent or reduce the spread of flames in case of a fire within an individual transportation vehicle, such as a bus or coach.

You can feel confident knowing these cables were put to the test and passed the rigorous requirements of the ECE.

Applications

The cabling is ideal for any transportation setting where passenger safety, fast and reliable data communication and video and microphone signal quality are a priority. Bus manufacturers and suppliers looking for cabling to install in passenger areas will benefit from these cables' ruggedness and flexibility.

The cables are specifically useful in small spaces, such as individual transportation vehicles (e.g. buses or coaches) given their more flexible nature. The tighter bend radius is a direct result of finer stranding within the cables (19 strands), when compared to less flexible, competitive ECE R118-rated cables.

Belden ECE R118 Range

- **BE43769:** 100 Mbit/s transmission performance, AWG 22/19, premium LSZH jacket, cross-linked (by e-beam), approved for bus/coach and rail systems
- **BE43885:** 100 Mbit/s transmission performance, AWG 22/7, LSZH jacket, approved for bus/coach systems
- **BE43886:** 1 Gb/s transmission performance, AWG 26/7, LSZH jacket, approved for bus/coach systems
- **BE43802:** 10 Gb/s transmission performance, AWG 24/19, premium LSZH jacket, cross-linked (by e-beam), approved for bus/coach and rail systems
- **BE43887:** 10 Gb/s transmission performance, AWG 23/1, LSZH jacket, approved for bus/coach systems
- **H155A00:** 50 ohm low loss coaxial transmission cable, PVC jacket, approved for bus/coach systems
- **H155A02:** 50 ohm low loss coaxial transmission cable, LSZH jacket, approved for bus/coach systems
- **Y64695:** star quad microphone cable, PVC jacket, approved for bus/coach systems



- LED display
- Camera
- Doors control
- Ticketing
- On board entertainment and information system
- Wireless network
- Lighting system and front door control

Part Number	BE43769	BE43802	BE43885	BE43886	BE43887	H155A00	H155A02	Y64695
Product Type	PROFINET Cat5e, 2-pair	Cat7, 4-pair	PROFINET Cat5e, 2-pair	Cat5e, 4-pair	Cat7, 4-pair	50 Ohm transmission cable	50 Ohm transmission cable	Star quad microphone cable
Data Rates	100 Mbit/s	10 Gb/s	100 Mbit/s	1 Gb/s	10 Gb/s			
Conductor	AWG 22 (19)	AWG 24 (19)	AWG 22 (7)	AWG 26 (7)	AWG 23 (1)	1.41 mm 19 x 0.28 mm	1.41 mm 19 x 0.28 mm	AWG 26 (30)
Shielding	Overall Foil + 80% Braid	Overall Foil + 80% Braid	Overall Foil + 85% Braid	Overall Foil	> 30% Braid	Overall Foil + 80% Braid	Overall Foil + 80% Braid	> 95% Braid
Jacket Type	Premium LSZH jacket cross-linked (by e-beam)	Premium LSZH jacket cross-linked (by e-beam)	LSZH	LSZH	LSZH	PVC	LSZH	PVC
Bus Applications	ECE R118.02							
Rail Applications	Yes	Yes	–	–	–	–	–	–
Flame Resistance	ECE R118 EN 45545 IEC 60332-1-2 Toxicity test: EN 50305 Flame test: EN 50266-2-5 IEC 60332-3-25 Cat D	ECE R118 EN 45545 IEC 60332-1-2 Toxicity test: EN 50305 Flame test: EN 50266-2-5 IEC 60332-3-25 Cat D	ECE R118 IEC 60332-1-2 UL AWM Style 21286	ECE R118 IEC 60332-1-2	ECE R118 IEC 60332-1-2	ECE R118 IEC 60332-1-2	ECE R118 IEC 60332-1-2	ECE R118
Oil Resistance	IEC 60811:404	IEC 60811:404	IEC 60811:404	–	–	–	–	–

Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who add value to your business. When it comes to signal transmissions, Belden is the No. 1 solutions provider. We know your business and want to understand your specific challenges and goals to show how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our five leading brands, Belden, GarrettCom, Hirschmann, Lumberg Automation and Tofino Security, we are able to offer the integrated solution you need. Today, it may be a single cable, switch or connector, to solve a specific issue; tomorrow, it can be a complex range of integrated applications, systems and solutions. With the rise in smart, connected devices brought on by the Industrial Internet of Things (IIoT), together, we can make sure your infrastructure is ready to handle and make sense of the influx of data. Transform your business now with instant access to information, and make your vision a reality. Visit info.belden.com/iiot to learn more.

About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us at www.belden.com and follow us on Twitter [@BeldenIND](https://twitter.com/BeldenIND).

