



Product: [BE43802](#)

Railtuff ® 7, 4PR #24 Str TC, XLPE ins, S/FTP, LSNH Jkt, EN 45545 HL 1-3, ECE R118.03

Product Description

Railtuff ® 7, 4 Pair AWG 24 Tinned Copper - Stranded, XLP/XLPO, XLPE insulation, S/FTP - Overall Braid + Foil shielding, Crosslinked e-beam LSZH / FRNC jacket, EN 45545-2 HL 1-3, ECE R118.03

Technical Specifications

Product Overview

Suitable Applications:	For use in railway applications such as rolling stock, buses or other vehicles, cable meets the requirements of the relevant parts of international railway standards like DIN 5510-2, EN 50153, EN 50155, EN 50305 and EN 45545-2, ECE R118.03
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Construction Details

Conductor

Size	Stranding	Material	No. of Pairs	No. of Elements
24 AWG	19x36	TC - Tinned Copper	4	8

Insulation

Material	Color Code	Notes
PO - Polyolefin (Foam)	White & Blue, White & Orange, White & Green, White & Brown	eBeam Cross-Linked

Cable Core

Description
4 pairs twisted together

Inner Shield

Element	Shield Type	Material
Individual Shielded Pair	Tape	Bi-Laminate (Alum+Poly)

Table Notes:	Aluminium facing outside
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Outer Shield

Shield Type	Material	Coverage
Braid	Tinned Copper (TC)	80%

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant, Thermoset)	8.1 mm (0.32 in)

Table Notes:	e-Beamed to Cross-link, cable meets smoke test of LU 1-085
Overall Cable Diameter (Nominal):	8.1 mm (0.32 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Mutual Capacitance	Max. Capacitance Unbalance	Nom. Characteristic Impedance
95 Ohm/km	56 pF/m (17 pF/ft)	160 pF/100m	100 Ohm

Delay

Max. Delay Skew	Nom. Velocity of Prop.
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25 ns/100m	78%
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High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)
1	2.9 dB/100m
4	5.6 dB/100m
10	8.8 dB/100m
16	11.1 dB/100m
31.2	15.6 dB/100m
62.5	22.3 dB/100m
100	28.5 dB/100m
300	51.3 dB/100m
600	75.1 dB/100m
1000	100.4 dB/100m

Table Notes:	Limits below 4MHz are for information only. Values at 1000 MHz are for information only
Transfer Impedance Class:	Grade 1
Table Notes:	IEC 61156-5
Screening Class:	Type I
Table Notes:	Coupling attenuation

Voltage

Voltage Rating
300 V

Mechanical Characteristics

Temperature

Operating	Installation	Storage
-40°C to +90°C	-25°C To +50°C	-40°C to +90°C

Table Notes:	Operating temperature range for flexible installation : -5°C To +90°C
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Bend Radius

Stationary Min.	Installation Min.
32 mm (1.3 in)	64 mm

Standards and Compliance

Environmental Suitability:	Indoor, Oil Resistance
Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-2-25, UN ECE R118.03
Data Category:	Category 7
ISO/IEC Compliance:	ISO/IEC 11801-1
CENELEC Compliance:	EN 45545-2, Segregation class according EN50174-2 = d
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = Zero, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
European Directive Compliance:	EU CE Mark

History

Update and Revision:	Revision Number: 0.216 Revision Date: 01-09-2024
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Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
BE43802.00500	Blue	Reel	500 m	8719605026576

Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.