



Product: [BE43769](#)

RailTuff Cat 5e, PROFINET, AWG 22 (19), EN 45545 HL 1-3, ECE R118.03

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Product Description

RailTuff Railway Approved Cat 5e, PROFINET, AWG 22(19), HiFlex, Premium Cross-linked LSNH Insulation and Jacket, Heavy Shielded, DIN 5510-2 level 1 to 4, EN 50155 Flame Resistance acc EN 45545-2, IEC 60332-1-2, EN 50305 & IEC 60332-3-25 cat D, EN 45545-2 (Class R15 and R16 HL3), Oil Resistance,, ECE R118.03

Technical Specifications

Product Overview

Suitable Applications:	PROFINET Cat5e. 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
22 AWG	19x0.15 mm	TC - Tinned Copper	2	4

Table Notes:	IEC 60228 class 5
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Insulation

Material	Nom. Insulation Diameter	Color Code
PO - Polyolefin	1.57 mm (0.0618 in)	White & Blue & Yellow & Orange
		1 Quad

Cable Core

Description
1 quad with center filler

Inner Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant, Thermoset)	4.3 mm (0.17 in)

Table Notes:	Bedding
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Outer Shield

Shield Type	Material	Coverage
Tape	Bi-Laminate (Alum+Poly)	
Braid	Tinned Copper (TC)	80%

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant, Thermoset)	6.7 mm (0.26 in)

Table Notes:	e-Beamed to Cross-link
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Overall Cable Diameter (Nominal):	6.7 mm (0.26 in)
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Electrical Characteristics

Electricals

Max. Conductor DCR	Nom. Characteristic Impedance
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57.1 Ohm/km	100 Ohm
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Delay

Max. Delay	Nom. Velocity of Prop.
530 ns/100m	66%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. FEXT [dB]
1	2.1 dB/100m	65.3	64
4	4.1 dB/100m	56.3	52
10	6.5 dB/100m	50	43.8
16	8.3 dB/100m	47	40
31.25	11.7 dB/100m	42.9	33.9
62.5	17 dB/100m	38.4	28
100	22 dB/100m	35.3	24

Table Notes: EN 50288-2-2 and ISO/IEC 11801 ed. 2.0, Cat. 5e

Transfer Impedance

Frequency	Max. Transfer Impedance
10 Mhz	Max. 10 mOhm/m

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

Bend Radius

Stationary Min.	Installation Min.
33.5 mm (1.32 in)	67 mm

Bulk Cable Weight: 68 kg/km

Standards and Compliance

Environmental Suitability:	Indoor
Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-3-25, UN ECE R118.03
Data Category:	Category 5e
ISO/IEC Compliance:	IEC 61034-2 - Smoke Density Min Transmittance = 70%
CENELEC Compliance:	EN 45545-2
European Halogen Free Standards:	IEC 62821-1 Halogen Free Compliance = Yes, 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: 0.274 Revision Date: 02-08-2024

Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
BE43769.00305	Black	Reel	305 m	8719605026507
BE43769.00500	Black	Reel	500 m	8719605026514

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