



**Product:** [BE43769](#)

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

[Request Sample](#)

## 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
------------------------	---

### 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
--------------	-------------------

#### 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
--------------	---------

#### 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
--------------	------------------------

Overall Cable Diameter (Nominal):	6.7 mm (0.26 in)
-----------------------------------	------------------

### Electrical Characteristics

#### Electricals

Max. Conductor DCR	Nom. Characteristic Impedance
--------------------	-------------------------------

57.1 Ohm/km	100 Ohm
-------------	---------

#### 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: 0.279 Revision Date: 04-29-2024

## Part Numbers

#### Variants

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

© 2024 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product 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.