



Part Number: BE43769
INDUSTRIAL ETHERNET BAHNKABELS

Product Description

RAIL CAT 5e 100 OHM

Product Specifications

Technical Specifications

Application 1:	For use in railway applications such as rolling stock, buses or other vehicles, cable meets the requirements of the relevant part of international railway standards like DIN 5510-2, EN 50153, EN 50155, EN 50305 and CEN/TS 45545
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Construction and Dimensions

Conductor:

Element	AWG	Stranding	Material	Construction n x D	No. of Conductors
	22	Stranded	Tinned copper	19x0.15 mm	4
IEC 60228 class 5					

Insulation:

Material	Nominal Diameter	Diameter +/- Tolerance
Polyolefin	1.63 mm	0.05 mm

Color Chart 1:

Number	Color
Quad 1	White & Blue & Yellow & Orange

Innerjacket:

Material	Nominal Diameter
FRNC / LSNH Bedding	4.3 mm

Cabling 1:

Lay Length
1 quad with center filler

Outersheild 1:

Type	Material	Thickness of Foil	Min. Coverage [%]
Tape	Aluminum / Polyester	50 / 23 μ m	
Braid	Tinned copper		80 %

Outerjacket 1:

Material	Color	Nominal Diameter	Diameter +/- Tolerance	Min. Wall Thickness
Cross-linked FRNC / LSNH	Black	6.7 mm	0.3 mm	0.8 mm

Electrical Characteristics

Conductor DCR:

Max. Conductor DCR
57.1 Ohm/km

Impedance:

Frequency [MHz]	Nominal Characteristic Impedance	Nominal Characteristic Tolerance
1 - 100	100 Ohm	15 Ohm

Delay:

Max. Delay	Nominal Velocity of Propagation (VP) [%]
530 ns/100m	66 %

High Freq:

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

Voltage:

Voltage Rating [V]
300 V

Transfer Impedance:

Frequency [MHz]	Transfer Impedance
10 Mhz	Max. 10 mOhm/m

Use

Oil Resistance:	IEC 60811-2-1
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Safety

ISO/IEC Flammability:	IEC 60332-1-2 and IEC 60332-3-25
Other Flammability:	DIN 5510 protection level 1 to 4 ; EN 50305
Amt of Halogen IEC 60754-1 / EN50267-1:	Zero
Amt of Halogen Acid Gas; MaxConductivity:	10 μ S/mm
Amt of Halogen Acid Gas; Min pH:	4.3
Fire Resistance (CI, Time to Failure):	DIN 5510-2 protection level 1 to 4
Smoke Density; Min Transmittance:	70 %

Temperature Range

Installation Temp Range:	-5 to +50 °C
Operating Temp Range:	-40 to +90 °C
Storage Temp Range:	-40 to +90 °C

Mechanical Characteristics

Min Bend Radius (W/o Pulling Strength):	67 mm
Min Setting Radius:	33.5 mm
No Adherence Wire to Wire/Wire to Jacket:	No adherence

Part Number

Standards

Other Specification:	EN 50306 par 4.8 + 4.9 + 4.10 (1,5 kV/1min); Toxicity index to NF X70-100 CITc Max. 0.7 CEN/TS 45545 (Class R14 HL 3)
CENELEC Compliance:	EN 50153, EN 50155 and EN 50305

History

Revision Date:	2015-07-06
Revision Number:	5

Product Variants

Part Number	Color	Put-Up Type	Length
BE43769.00305	BLACK	Reel	305 m
BE43769.00500	BLACK	Reel	500 m
BE43769.01500	BLACK	Reel	500 m

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