Product: BE83805

CAT7 Ethernet Railcable 4PR AWG26/7 S/FTP X-FRNC/LSZH

Product Description

CAT7 4 Pair 26AWG Stranded Tinned Copper Conductor, Foam Polyolefin Insulated, Individually Pair shielded with AL-mylar tape binder & Overall Shieled with Al-mylar + ATC wire braid & Overall E-Beam Cross Linked/LSZH Jacket Ethernet RailCable.

Technical Specifications

Product Overview

Suitable Applications:	For railway Ethernet Networking:10Base-T, 100Base-TX, 1000Base-T, 10GBase-T.

Construction Details

Conductor

Size	Stranding	Material	No. of Pairs	No. of Elements
26 AWG	7x0.16 mm	TC - Tinned Copper	4	8

Insulation

Element	Material	Nom. Insulation Diameter	Color Code
Pair(s)	PO - Polyolefin (Foam)	1.08 mm (0.0425 in)	White, Blue, Orange, Green, Brown

Inner Shield

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

Outer Shield

Shield Type	Material	Coverage	Notes
Tape	Bi-Laminate (Alum+Poly)		
Braid	Tinned Copper (TC)	80%	A layer of Flame retardant tape wrapped over outer shield

Outer Jacket

Separator	Material
Tape	LSZH - Low Smoke Zero Halogen (Flame Retardant)

Table Notes:	E-Beam Cross Linked/LSZH as Jacket material
Overall Cable Diameter (Nominal):	7.0 mm (0.28 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Mutual Capacitance
145 Ohms @ 20 Deg C	56 pF/m (17 pF/ft)

High Frequency

Frequency	Max. Insertion Loss (Attenuation) [dB/100m]	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. FEXT [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted) [Ohm]
4	5.6	78	75	70	23	115.2/86.8
10 MHz	8.8	78	75	70	25	111.9/88.8
20 MHz	12.4	78	75	70	25	111.9/89.4
25 MHz	13.9	78	75	70	25	113.2/88.3
31.25 MHz	15.6	78	75	70	23.3	114.6/81.2

62.5 MHz	22.3	75.5	72.5	70	20.7	120.2/83.2
100 MHz	28.5	72.4	69.4	70	19	125.3/79.8
250 MHz	46.5	66.4	63.4	70	15.6	140/71.4
300 MHz	51.3	65.2	62.2	70	15.6	139.98 /71.5
600 MHz	75.1	60.7	57.7	70	15.6	139.8/71.5

Voltage

Voltage Rating	Breakdown Voltage
300 V	1 KV DC/min

Mechanical Characteristics

Temperature

Operating
-40°C to +80°C

Standards and Compliance

Flammability / Reaction to Fire:	IEC 60332-3-25, IEC 60332-1-2
Data Category:	Category 7
ISO/IEC Compliance:	IEC 61156-6, IEC 61034-2 - Smoke Density Min Transmittance = 70%
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = 0.5%, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
Other Standard Compliance(s):	EN 45545-2 Hazard Level HL1-HL3, TJ/CL 313

History

Update and Revision:	Revision Number: 0.16 Revision Date: 08-12-2024