



Product: [50106ASFR](#)

BELDEN Industrial Ethernet CAT6A cable, S/FTP, LSZH, Anti Rodent, Anti Termite, 4 Pair, AWG 23,Indoor

Product Description

BELDEN Industrial Ethernet CAT6A, S/FTP, 4x2x 23AWG, Solid Bare Copper Conductors, Foam Polyolefin Insulation, Individually foil shielded pairs & Overall tinned copper braid shield, LSZH Jacket, Anti Rodent & Anti Termite cable.

Technical Specifications

Product Overview

Suitable Applications:	Ethernet: 10GBase-T, 100Base-TX, 1000Base-T
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Construction Details

Conductor

Element	Size	Stranding Class	Material
Pair(s)	23 AWG	Class 1	BC - Bare Copper

Insulation

Material	Nom. Insulation Diameter	Color Code
PO - Polyolefin (Foam)	1.35 mm (0.0531 in)	White, Blue, Orange, Green, Brown

Inner Shield

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

Outer Shield

Shield Type	Material	Coverage
Braid	Tinned Copper (TC)	30%

Outer Jacket

Material	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	Yes

Overall Cable Diameter (Nominal):	7.8 ± 0.3 mm
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Electrical Characteristics

Electricals

Max. Conductor DCR	Nom. Characteristic Impedance
95 Ω/km @ 20°C	100 Ohm

Table Notes:	Nominal Velocity of Propagation: 0.77
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High Frequency

Frequency	Max. Insertion Loss (Attenuation) [dB/100m]	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Min. PSANEXT [dB]	Min. PSAACRF [dB]	Min. TCL [dB]	Min. ELTCTL [dB]	Min. Coupling Attenuation [dB]
1	2.1	75.3	72.3	73.2	70.2	68	65	20	67	67	40	35	
4 MHz	3.8	66.3	63.3	62.5	59.5	56	53	23	67	66.2	34	23	
10 MHz	5.9	60.3	57.3	54.4	51.4	48	45	25	67	58.2	30	15	
16 MHz	7.5	57.2	54.2	49.7	46.7	43.9	40.9	25	67	54.1	28	10.9	
31.3 MHz	10.5	52.9	49.9	42.4	39.4	38.1	35.1	23.6	67	48.3	25.1	5.1	55

62.5 MHz	15	48.4	45.4	33.4	30.4	32.1	29.1	21.5	65.6	42.3	22		55
100 MHz	19.1	45.3	42.3	26.2	23.2	28	25	20.1	62.5	38.2	20		55
125 MHz	21.5	43.8	40.8	22.3	19.3	26.1	23.1	19.4	61	36.3	19		53
200 MHz	27.6	40.8	37.8	13.2	10.2	22	19	18	58	32.2	17		49
250 MHz	31.1	39.3	36.3	8.2	5.2	20	17	17.3	56.5	30.2	16		47
350 MHz	37.3	37.1	34.1			17.1	14.1	17.3	54.3	27.3			44
500 MHz	45.3	34.8	31.8			14	11	17.3	52	24.2			41

Transfer Impedance

Frequency	Max. Transfer Impedance
1	50
10	100
30	200
100	1000

Voltage

Voltage Rating	Breakdown Voltage
72 V DC	2500V DC/2Sec.

Mechanical Characteristics

Temperature

Operating	Storage
-30°C to + 60°C	-20°C to + 50°C

Bend Radius

Installation Min.
62.4 mm (2.46 in)

Bulk Cable Weight:	67 kg/km (45 lbs/1000ft)
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Standards and Compliance

Environmental Suitability:	Indoor
Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-3-22
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 6A
TIA/EIA Compliance:	ANSI/TIA 568.2-D
ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.0:2002/A2:2010/C1:2011IEC 61156-5, IEC 61034-2 - Smoke Density Min Transmittance = 60%
European Halogen Free Standards:	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 Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2)
APAC Compliance:	China RoHS II (GB/T 26572-2011)

History

Update and Revision:	Revision Number: 0.13 Revision Date: 04-29-2024
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