



Product: [50106AFLS](#)

BELDEN Industrial Ethernet CAT6A cable, F/UTP LSZH SWA LSZH, Outdoor

Product Description

BELDEN Industrial Ethernet CAT6A,F/UTP, 4x2x 23AWG, Solid Bare Copper Conductors,HDPE Insulation, PET+Al-Mylar (Aluminium facing outside)shield, LSZH JacketUV Resistance cable

Technical Specifications

Product Overview

Suitable Applications:	Industrial Ethernet cables are used for interconnecting Industrial Ethernet Switches, IP controllers, media convertors, distributed control system, programmable logic controller and transmitting industrial protocol data signals. These are Cat 6A highly durable & ruggedized cables for outdoor use meeting ISO/IEC 11801 ed. 2.0 , IEC61156-5 CAT6A , IEC 60332-1-2
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Construction Details

Conductor

Element	Size	Stranding Class	Material	No. of Pairs	No. of Elements
Pair(s)	23 AWG	Class 1	BC - Bare Copper	4	8

Insulation

Material	Nom. Insulation Diameter	Color Code
PE - Polyethylene	1.14 mm (0.0449 in)	1. Blue & Blue / White, 2. Orange & Orange / White, 3. Green & Green / White, 4. Brown & Brown / White

Inner Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	9.1 mm (0.36 in)

Outer Shield

Material
Bi-Laminate (Alum+Poly)

Armor

Armor Type & Material	Armor Material Diameter
SWA - Steel Wire Armor	0.8 mm (0.031 in)

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	12.5 mm (0.492 in)

Overall Cable Diameter (Nominal):	12.50 mm (0.4921 in)
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Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Mutual Capacitance	Max. Capacitance Unbalance
95 @ 20 Ohm / km	56 pF/m (17 pF/ft)	1,600 pF/km

High Frequency

Frequency [MHz]	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. TCL [dB]	Min. ELTCL [dB]
1	75.3	72.3	73.2	70.2	68.0	65	20.0	40.0	35.0

4	66.3	63.3	62.5	59.5	56.0	53	23.0	34.0	23.0
10	60.3	57.3	54.4	51.4	48.0	45	25.0	30.0	15.0
16	57.2	54.2	49.7	46.7	43.9	40.9	25.0	28.0	10.9
31.3	52.9	49.9	42.4	39.4	38.1	35.1	23.6	25.1	5.1
62.5	48.4	45.4	33.4	30.4	32.1	29.1	21.5	22.0	
100	45.3	42.3	26.2	23.2	28	25	20.1	20.0	
125	43.8	40.8	22.3	19.3	26.1	23.1	19.4	19.0	
200	40.8	37.8	13.2	10.2	22	19	18.0	17.0	
250	39.3	36.3	8.2	5.2	20	17.0	17.3	16.0	
350	37.1	34.1			17.1	14.1	17.3	16	
500	34.8	31.8			14.0	11.0	17.3		

Transfer Impedance Class: Grade 2

Voltage

UL Voltage Rating
72 V DC

Mechanical Characteristics

Temperature

UL Temperature
-30°C To +60°C

Standards and Compliance

Environmental Suitability:	Outdoor, Sunlight Resistance, UV Resistance
Flammability / Reaction to Fire:	IEC 60332-1-2
ISO/IEC Compliance:	IEC 61156-5

History

Update and Revision: Revision Number: 0.18 Revision Date: 02-16-2025

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