

Product: 50106AFLS

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

Product Description

BELDEN Industrial Ethernet CAT6A,F/UTP, 4x2x23AWG, 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, IEC60332-3-22

Construction Details

Conductor

Element	Size	Material	No. of Pairs
Pair(s)	23 AWG	BC - Bare Copper	4

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 Shield

Element	Shield Type	Material	Drainwire Type
Overall	Tape	Bi-Laminate (Alum+Poly)	26 AWG (Solid) TC

Inner Jacket

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

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)

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]	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. TCL [dB]	Min. ELTCTL [dB]
1	2.1	75.3	72.3	73.2	70.2	68.0	65	20.0	40.0	35.0

4	3.8	66.3	63.3	62.5	59.5	56.0	53	23.0	34.0	23.0
10	5.9	60.3	57.3	54.4	51.4	48.0	45	25.0	30.0	15.0
16	7.5	57.2	54.2	49.7	46.7	43.9	40.9	25.0	28.0	10.9
31.3	10.5	52.9	49.9	42.4	39.4	38.1	35.1	23.6	25.1	5.1
62.5	15.0	48.4	45.4	33.4	30.4	32.1	29.1	21.5	22.0	
100	19.1	45.3	42.3	26.2	23.2	28	25	20.1	20.0	
125	21.5	43.8	40.8	22.3	19.3	26.1	23.1	19.4	19.0	
200	27.6	40.8	37.8	13.2	10.2	22	19	18.0	17.0	
250	31.1	39.3	36.3	8.2	5.2	20	17.0	17.3	16.0	
350	37.3	37.1	34.1			17.1	14.1	17.3	16	
500	45.3	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, IEC 60332-3-22
ISO/IEC Compliance:	IEC 61156-5
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = 5 mg/g, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3

History

Update and Revision:	Revision Number: 0.34 Revision Date: 05-07-2026

Part Numbers

Variants

Item #	Color	Length
50106AFLS 010305M	Black	305 m
50106AFLS 009305M	White	305 m

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