

Product: [50106FLS](#) 

CAT 6 4P23AWG, F/UTP, SWA, LSZH Jkt, Indoor/Outdoor



Product Description

CAT 6 4PR x 23AWG F/UTP, Solid Bare Copper Conductor, PO Insulation, Overall Foil Shield, LSZH Inner Jacket, Steel Wire Armoring, LSZH Outer Jacket, Indoor/Outdoor

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 cables are suitable for transmitting 1000BASE-TX Gigabit Ethernet, 100BASE-T Ethernet, 100BaseVG ANYLAN, 155ATM, 622ATM, RS-422, 250MHz Category 6, EtherCAT. These are highly durable & ruggedized cables for both indoor and outdoor use meeting IEC 60332-3-24 and IEC 60754-1 & 2
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
23	Solid	BC - Bare Copper	4

Insulation

Material
PO - Polyolefin

Color Chart

Number
Pair #1
Pair #2
Pair #3
Pair #4

Outer Shield

Type	Material	Drainwire Material
Tape	Bi-Laminate (Alum+Poly)	TC-Tinned Copper

Outer Jacket

Material	Nominal Diameter	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	12.3 mm	Yes

Construction and Dimensions

Aarmor

Type of Armor
Steel Wire Armoring

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]
93.8 Ohm/km	5 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
330 pF/100m	56 pF/m

Impedance

Nominal Characteristic Impedance
100 Ohm

Delay

Max. Delay	Max. Delay Skew
538 ns/100m	45 ns/100m

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]
1 MHz	2 dB/100m	74.3 dB	72.3 dB	67.8 dB	64.8 dB	20 dB
4 MHz	3.8 dB/100m	65.3 dB	63.3 dB	55.8 dB	52.8 dB	23 dB
8 MHz	5.3 dB/100m	60.8 dB	58.8 dB	49.7 dB	46.7 dB	24.5 dB
10 MHz	6 dB/100m	59.3 dB	57.3 dB	47.8 dB	44.8 dB	25 dB
16 MHz	7.6 dB/100m	56.2 dB	54.2 dB	43.7 dB	40.7 dB	25 dB
20 MHz	8.5 dB/100m	54.8 dB	52.8 dB	41.8 dB	38.8 dB	25 dB
25 MHz	9.5 dB/100m	53.3 dB	51.3 dB	39.8 dB	36.8 dB	24.3 dB
31.25 MHz	10.7 dB/100m	51.9 dB	49.9 dB	37.9 dB	34.9 dB	23.6 dB
62.5 MHz	15.4 dB/100m	47.4 dB	45.4 dB	31.9 dB	28.9 dB	21.5 dB
100 MHz	19.8 dB/100m	44.3 dB	42.3 dB	27.8 dB	24.8 dB	20.1 dB
155 MHz	25.2 dB/100m	41.4 dB	39.4 dB	24 dB	21 dB	18.8 dB
200 MHz	29 dB/100m	39.8 dB	37.8 dB	21.8 dB	18.8 dB	18 dB
250 MHz	32.8 dB/100m	38.3 dB	36.3 dB	19.8 dB	16.8 dB	17.3 dB

Voltage

Voltage Rating [V]
300V RMS

Temperature Range

Operating Temp Range:	-20°C to +75°C
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Mechanical Characteristics

Oil Resistance:	Yes
Bulk Cable Weight:	282 kg/km
Max. Pull Tension:	110 N
Min. Bend Radius During Installation:	98.0 mm

Standards

ISO/IEC Compliance:	ISO/IEC 11801
Data Category:	Category 6
ANSI Compliance:	TIA/EIA 568-C.2 Cat 6

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
EU Directive 2011/65/EU (RoHS 2):	Yes

Suitability

Suitability - Burial:	Yes
Suitability - Indoor:	Yes
Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LSOH, Toxicity Testing

IEC 60754-1 - Halogen Amount:	Zero
IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity:	10 µS/mm
IEC 60754-2 - Halogen Acid Gas Amount - Min. pH:	4.3
IEC 61034-2 - Smoke Density Min. Transmittance:	60%

Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length
50106FLS 010305M	Black	Reel	305 m
50106FLS 006305M	Blue	Reel	305 m
50106FLS 008305M	Grey	Reel	305 m

History

Update and Revision:	Revision Number: 0.47 Revision Date: 01-20-2022
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