

Cat. 7 4x2x23/1 AWG S/FTP LSZH-SHF2 Fire Resistant

Part Number: 9MGF009103

Applications: Offshore installations, Maritime Environment, Optimized for IEEE 802.3bt 4PPoE, Enhanced thermal performance for all PoE applications, Outdoor installations in harsh environments, Telecom systems, High bandwidth digital applications with low BER, Indoor/Outdoor use, fixed installations, Ships, High speed & Light craft, Data transmission during fire

General Construction: Four individually foil-shielded twisted pairs with solid conductors, cabled together, braid shielded and outer jacketed.

Detailed Schematic:

Outer Jacket Material: XL-HFFR
Outer Diameter: 9.0 mm nom.
Weight: 84 kg/km



Design & Materials

Detailed Construction:

The cable design and structure comply with the circuit integrity performance during a fire of the relevant requirements of IEC 60331-23 and allows data transmission during the fire.

For more details regarding transmission properties during fire as well as the test procedure used, please go to >>Support>>White Papers on our website - www.teldor.com.

Conductor Material:	Annealed Bare Copper
Conductor Size:	23 AWG
Conductor Construction:	Solid
Insulation Material:	PO + Fire Resistant Tape
Insulation O.D.:	1.3 mm nom.
Conductor unit identification:	Solid Color
Conductor Color Code:	White/Blue, White/Orange, White/Green, White/Brown
Ind. Shield Material:	Aluminum/Polyester Foil
Ind. Shield Design:	Helically applied aluminum foil, 100% coverage
Conductor unit lay-up:	Pairs
Overall Shield Material:	Tinned-copper braid
Overall Braid Shield:	Yes
Braid Coverage:	55 % nom.
Overall Drain-wire Material:	Annealed Tinned Copper
Overall Drain-wire size:	0.41 mm
Overall Drain-wire Construction:	Solid
Outer Jacket Color:	Black
Marking:	Per request, Teldor Standard

Standards

Applicable Standards:	DNV-GL certified, ABS certified, LLOYDS certified, RMRS certified, IEC 60092-360, IEC 60811-2-1, IEC 61156-5, IEEE 802.3af (PoE), IEEE 802.3at (PoE+), IEEE 802.3bt (4PPoE), ISO/IEC 11801-1, TIA/EIA-568, ASTM G154, RoHS 3 2015/863/EU
Flammability Rating:	IEC 60331-23, IEC 60332-1, IEC 60332-3, IEC 60332-3-24, IEC 60754-1/2, IEC 61034-1/2, UL 1581 VW-1

Electrical Properties:

Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ANEXT dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7
1	2.0	2.0	105.0	75.0	108.0	78.0	22.0	20.0	68.0	N/A	95.0	75.0	98.0	78.0
4	3.6	3.7	98.0	75.0	101.0	78.0	25.0	23.0	68.0	N/A	90.0	75.0	93.0	78.0
10	5.6	5.8	95.0	75.0	98.0	78.0	28.0	25.0	68.0	N/A	86.0	71.0	89.0	74.0
20	7.9	8.3	90.0	75.0	93.0	78.0	28.0	25.0	68.0	N/A	80.0	65.0	83.0	68.0
30	9.7	10.2	85.0	75.0	88.0	78.0	27.0	23.8	68.0	N/A	76.0	61.5	79.0	64.5
100	18.0	19.0	80.0	69.4	83.0	72.4	24.0	21.1	68.0	N/A	66.0	51.0	69.0	54.0
150	22.4	23.6	78.0	66.7	81.0	69.7	22.0	18.8	65.0	N/A	63.0	47.5	66.0	50.5
200	26.0	27.5	78.0	65.0	81.0	68.0	21.0	18.0	65.0	N/A	60.0	45.0	63.0	48.0
250	29.4	31.0	75.0	63.4	78.0	66.4	20.0	17.3	62.0	N/A	58.0	43.0	61.0	46.0
300	32.5	34.2	75.0	62.2	78.0	65.2	19.0	17.3	62.0	N/A	52.0	41.5	55.0	44.5
400	38.0	40.0	70.0	60.4	73.0	63.4	19.0	17.3	62.0	N/A	49.0	38.9	52.0	41.9
500	43.0	45.2	70.0	58.9	73.0	61.9	19.0	17.3	62.0	N/A	47.0	37.0	50.0	40.0
600	47.6	50.1	70.0	57.7	73.0	60.7	19.0	17.3	62.0	N/A	45.0	35.4	48.0	38.4

Transmission data during fire - 100 Base-T

Performance

Frequency Range:	1 - 600 MHz
Impedance:	100 Ω
Transfer Impedance:	Grade 1
Coupling Attenuation:	Type I
Max. DC Resistance :	78 Ω/km@20°C
Max. Resistance Unbalance:	2 %
Capacitance:	47 pF/m
Capacitance Unbalance:	1.6 pF/m max.
Velocity of Propagation:	65 % nom.
Dielectric Strength:	700 V/minute
Dielectric Strength to Shield:	700 V/minute
Min. Insulation Resistance :	4 GΩ•km
Voltage Rating:	300V not to be used as LF main power supply V
Min. Bend Radius:	120 mm
Max. Operating Temperature:	+65 °C
Min. Operating Temperature:	-40 °C
UV Resistance:	Yes
Fire resistance:	Yes

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Ofer Solter	Ofer Solter	1.1	20-07-2022

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