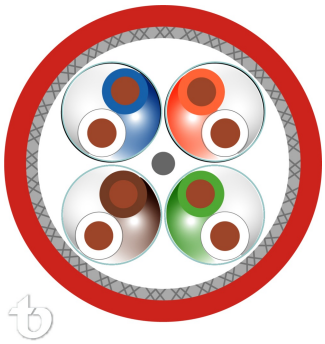
Cat. 7 4x2x23/1 AWG S/FTP LSZH-SHF2 Fire Resistant
COMPUTER & LAN
P/N 9MGF009103

INDUSTRY

Applications

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



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

General Construction

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

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 (AWG)	23
Conductor Construction	Solid
Insulation Material	PO + Fire Resistant Tape
Insulation O.D. (mm nom)	1.3
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 (% nom)	55
Overall Drain-wire Material	Annealed Tinned Copper

TELDOR
Cables & Systems Ltd.

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Overall Drain-wire size (mm)	0.41
Overall Drain-wire Construction	Solid
Outer Jacket Color	Red
Marking	Teldor Standard|Per request

Performance

Frequency Range (MHz)	1 - 600
Impedance (Ω)	100
Transfer Impedance (mΩ/meter)	100
Transfer Impedance Grade	Grade 1
Coupling Attenuation	Type I
Max. DC Resistance (Ω/km@20°C)	78
Max. Resistance Unbalance (%)	2
Capacitance (pF/m)	47
Capacitance Unbalance (pF/m max)	1.6
Velocity of Propagation (% nom)	65
Dielectric Strength (V/minute)	700
Dielectric Strength to Shield (V/minute)	700
Min. Insulation Resistance (MΩ•km)	8
Min. Insulation Resistance (GΩ•km)	4
Voltage Rating (V)	300V not to be used as LF main power supply
Max. Installation Tensile Load (N max.)	80
Min. Bend Radius (mm)	120
Min. Operating Temperature (°C)	-40
Max. Operating Temperature (°C)	+65
UV Resistance	Yes
Fire Resistance	Yes

Standards

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

Applicable Standards
DNV 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

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

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