

Cat. 7 4x2x23/1 S/FTP LSZH-SHF1
COMPUTER & LAN
P/N 9MG0543129

INDUSTRY

Applications

Offshore installations, Maritime Environment, Indoor/Outdoor use, fixed installations, High bandwidth digital applications with low BER, High data rates, Telecom systems, Ships, High speed & Light craft



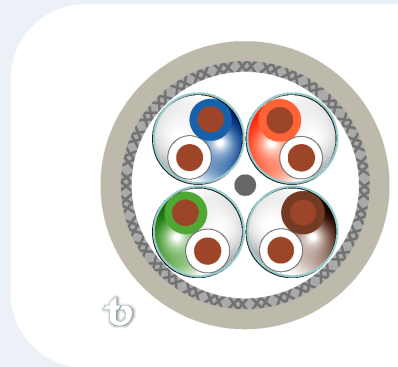
Outer Jacket Material
FR-LSZH



Outer diameter
7.9 mm nom.



Weight
70 kg/km



General Construction

4 individually foil-shielded twisted pairs with solid conductors, cabled together, overall braid-shield and jacketed.

Design & Materials

| | |
|---------------------------------|------------------------------------------------|
| Conductor Material | Annealed Bare Copper |
| Conductor Size (AWG) | 23 |
| Conductor Construction | Solid |
| Insulation Material | Cellular PO |
| Insulation O.D. (mm nom) | 1.38 |
| Conductor Unit Identification | Solid Color |
| Color Code | Per TIA/EIA 568-B |
| Ind. Shield Material | Aluminum/Polyester Foil |
| Ind. Shield Design | Helically applied aluminum foil, 100% coverage |
| Conductor Unit Lay-Up | Pairs |
| Overall Shield Design | Braid |
| Overall Braid Material | Annealed Tinned Copper |
| Braid Coverage (% nom) | 55 |
| Overall Drain-wire Material | Annealed Tinned Copper |
| Overall Drain-wire size (mm) | 0.41 |
| Overall Drain-wire Construction | Solid |
| Total Number Of Conductors | 8 |
| Outer Jacket Color | Light Gray |
| Other Jacket Colors Available | Yes |

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Marking

Teldor Standard|Per request

Performance

| | |
|------------------------------------------|---------------------------------------------|
| Frequency Range (MHz) | 1 - 1000 |
| Impedance (Ω) | 100 |
| Transfer Impedance Grade | Grade 1 |
| Coupling Attenuation | Type I |
| DC Resistance (Ω/km nom) | 73 |
| Max. Resistance Unbalance (%) | 2 |
| Capacitance Unbalance (pF/m max) | 1.2 |
| Velocity of Propagation (% nom) | 78 |
| Propagation Delay Skew (ns/100m max) | 25 |
| Dielectric Strength (V/minute) | 700 |
| Dielectric Strength to Shield (V/minute) | 700 |
| Min. Insulation Resistance (GΩ•km) | 5 |
| Voltage Rating (V) | 110V not to be used as LF main power supply |
| Max. Installation Tensile Load (N max.) | 130 |
| Min. Bend Radius (mm) | 6xD |
| Min. Operating Temperature (°C) | - 40 |
| Max. Operating Temperature (°C) | + 85 |
| UV Resistance | Yes |

Standards

Flammability Rating
IEC 60332-1
IEC 60332-3
IEC 60332-3-22
IEC 60754-2
IEC 61034-1/2
UL 1581 VW-1
UL 444
UL CMX
EN 50575:2014 D_{ca}s1d1a1 (CPR)

Applicable Standards

DNV certified
ABS certified
LLOYDS certified
RMRS certified
IEC 60092-351
IEC 60092-360
IEC 60092-379
IEC 61156-5
IEEE 802.3af (PoE)
IEEE 802.3at (PoE+)
IEEE 802.3an 10GBASE-T 10 Gigabit Ethernet
IEEE 802.3bt (4PPoE)
ISO/IEC 11801-1
ANSI/TIA-568-C.2
RoHS 3 2015/863/EU



Electrical Properties

Cat. 7 Horizontal Cables*

| 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 |

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| | | | | | | | | | | | | | | |
|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|
| 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 |

*Supplied cables meet the minimum Cat. 7 transmission requirements as per IEC 61156-5 Ed. 2

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