

Cat.6 4x2x24/1 S/FTP LSZH-SHF1

Part Number: **9MG0558101**

Applications: Offshore installations, Maritime Environment, Indoor use, fixed installations, High data rates, Ships, High speed & Light craft

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

Outer Jacket Material: FR-LSZH

Outer Diameter: 7.2 mm nom.

Weight: 58 kg/km



Design & Materials

| | |
|---------------------------------------|--|
| Conductor Material: | Annealed Bare Copper |
| Conductor Size: | 24 AWG |
| Conductor Construction: | Solid |
| Insulation Material: | Cellular PO |
| Insulation O.D.: | 1.04 mm nom. |
| 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 Shield: | Yes |
| Overall Braid Material: | Annealed Tinned Copper |
| Braid Coverage: | 55 % nom. |
| Overall Drain-wire Material: | Annealed Tinned Copper |
| Total number of conductors: | 8 |
| Outer Jacket Color: | Black |
| Marking: | Per request, Teldor Standard |

Standards

| | |
|------------------------------|--|
| Applicable Standards: | DNV-GL certified, ABS certified, LLOYDS certified, RMRS certified, IEC 60092-359, IEC 60092-360, IEC 60092-350, IEC 61156-6, IEC 61156, IEEE 802.3at (PoE+), IEEE 802.3af (PoE), IEEE 802.3bt (4PPoE), ISO/IEC 11801-1, RoHS 3 2015/863/EU |
| Flammability Rating: | IEC 60332-1, IEC 60332-3-22, IEC 60332-3, IEC 60754-1/2, IEC 61034-1/2, UL 1581 VW-1, EN 50575:2014 Dcas1d1a1 (CPR) |

Electrical Properties:

Cat. 6 Screened-Pair Work Area Cables*

| Freq. MHz | Attenuation dB/100m 20°C | | PS NEXT Loss dB | | NEXT Loss dB | | RL dB | | PS ELFEXT dB | | ELFEXT dB | |
|--------------|--------------------------------|-----------|--------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|
| | Typical Value | Cat. 6 | Typical Value | Cat. 6 | Typical Value | Cat. 6 | Typical Value | Cat. 6 | Typical Value | Cat. 6 | Typical Value | Cat. 6 |
| 1 | 3.0 | 3.1 | 90.0 | 72.3 | 93.0 | 75.3 | 22.0 | 20.0 | 90.0 | 65.0 | 93.0 | 68.0 |
| 4 | 5.6 | 5.8 | 85.0 | 63.3 | 88.0 | 66.3 | 25.0 | 23.0 | 90.0 | 53.0 | 93.0 | 56.0 |
| 10 | 8.7 | 9.0 | 85.0 | 57.3 | 88.0 | 60.4 | 28.0 | 25.0 | 80.0 | 45.0 | 83.0 | 48.0 |
| 20 | 12.4 | 12.8 | 85.0 | 52.8 | 88.0 | 55.8 | 28.0 | 25.0 | 80.0 | 39.0 | 83.0 | 42.0 |
| 30 | 15.3 | 15.8 | 85.0 | 50.1 | 88.0 | 53.1 | 27.0 | 23.8 | 70.0 | 35.5 | 73.0 | 38.5 |
| 100 | 29.0 | 29.9 | 80.0 | 42.3 | 83.0 | 45.3 | 24.0 | 21.1 | 63.0 | 25.0 | 66.0 | 28.0 |
| 150 | 36.2 | 37.4 | 80.0 | 39.7 | 83.0 | 42.7 | 22.0 | 18.8 | 60.0 | 21.5 | 63.0 | 24.5 |
| 200 | 42.5 | 43.8 | 80.0 | 37.8 | 83.0 | 40.8 | 21.0 | 18.0 | 58.0 | 19.0 | 61.0 | 22.0 |
| 250 | 48.2 | 49.7 | 77.0 | 36.3 | 80.0 | 39.3 | 20.0 | 17.3 | 55.0 | 17.0 | 58.0 | 20.0 |

*Supplied cables meet the minimum Cat. 6 transmission requirements as per **IEC 61156-6 Ed. 2**

Performance

| | |
|---------------------------------------|-----------------|
| Frequency Range: | 1 - 250 MHz |
| Impedance: | 100 Ω |
| Transfer Impedance: | Grade 1 |
| Coupling Attenuation: | Type I |
| DC Resistance: | 90 Ω/km nom. |
| Max. DC Resistance : | 120 Ω/km@20°C |
| Max. Resistance Unbalance: | 2 % |
| Capacitance Unbalance: | 1.2 pF/m max. |
| Velocity of Propagation: | 78 % nom. |
| Propagation Delay Skew: | 25 ns/100m max. |
| Dielectric Strength: | 700 V/minute |
| Dielectric Strength to Shield: | 700 V/minute |
| Min. Insulation Resistance : | 5 GΩ•km |
| Min. Bend Radius: | 87 mm |
| Max. Operating Temperature: | + 85 °C |
| Min. Operating Temperature: | - 40 °C |
| UV Resistance: | Yes |

| Prepared By | Revised By | Version Num | Modified on |
|-------------|---------------|-------------|-------------|
| Ofer Solter | Eyal Stroumza | 1.2 | 19-08-2020 |

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