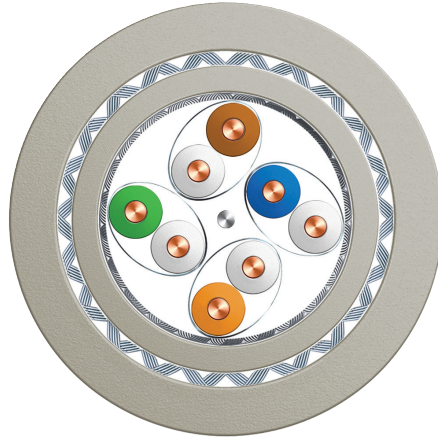


Armoured (GSWB) Cat.7 23/1awg S/FTP
Horizontal Cable SHF-1



Application

DNV-GL Approved Cat.7 for Offshore installations, Maritime Environment, High data rates, outdoor use, fixed installations, Ships, High speed & Light craft. Where mechanical protection is required. Certificate No: TAE0000456.

Cable Design

| | |
|---|---|
| Conductor AWG | Solid Annealed Bare Copper wire 23/1 AWG |
| Insulation Diameter | Cellular PO Ø 1,38 mm nom. |
| Formation Pair Identification | 2 cores twisted to a pair, 4 pairs total (4x2x23/1awg) Per TIA/EIA 568-B |
| Individual shield | Aluminium/polyester foil, 100% coverage |
| Drain Wire | Solid Annealed Tinned Copper 0,41 mm |
| Overall Shield | Annealed Tinned Copper Wire Braid, 55% nom. coverage |

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| | |
|---------------------|------------------------------------|
| Inner Jacket | FR-LSZH SHF-1 |
| Colour | Grey |
| Diameter | Ø 8.00 mm nom. |
| Armour | Galvanised Steel Wire Braid (GSWB) |
| Outer Jacket | FR-LSZH SHF-1 |
| Colour | Grey |
| Diameter | Ø 11,0 ± 0,20 mm nom. |

Performance

| | | |
|-------------------------------|---------|--------------|
| Frequency Range | 1 - 600 | MHz |
| Impedance | 100 | Ohm |
| Transfer Impedance | Grade 1 | |
| Coupling Attenuation | Type I | |
| DC Resistance | 73 | Ohm/km nom. |
| 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 | GOhm • km |
| Tensile Strength - Short Term | 130 | N max. |
| Min. Bend Radius | 80 | mm |
| Max. Operating Temperature | +85 | °C |
| Min. Operating Temperature | -40 | °C |
| UV resistance | YES | |

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Electrical Properties Cat. 7 Horizontal Cables *

| Fre- quency (MHz) | Attenuation (dB/100m) 20°C | | PS NEXT Loss (dB) | | NEXT Loss (dB) | | RL (dB) | | PS ANEXT (dB) | | PS ELFEXT (dB) | | ELFEXT (dB) | |
|-------------------------|----------------------------------|-------|----------------------|-------|-------------------|-------|------------|-------|------------------|-------|-------------------|-------|----------------|-------|
| | Typ. | Cat.7 | Typ. | Cat.7 | Typ. | Cat.7 | Typ. | Cat.7 | Typ. | Cat.7 | Typ. | Cat.7 | Typ. | 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 |

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

Standards

Applicable Standards

DNV-GL certified (TAE0000456), IEC 60092-359, IEC 60092-350, IEC 61156-5, IEEE 802.3at (PoE+), ISO/IEC 11801, RoHS-2 2011/65/EU

Flammability Rating

IEC 60332-1, IEC 60332-3-22, IEC 60332-3-24 , IEC 60754-2, IEC 61034-1/2,
UL 1581 VW-1

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Horizontal Cable SHF-1*

Specification

| Part Number | Construction | Shield Type | Armour | Outer Jacket |
|-------------------|--------------|-------------|--------|--------------|
| AML7-SFBS23-WBZF1 | 4x2x23/1 awg | S/FTP | GSWB | SHF1 |