

CAT6A 4x2x23/1 AWG Solid S/FTP LSZH-SHF1

Application: Telecom systems, High data rates, High bandwidth digital applications with low BER, Indoor use, fixed installations

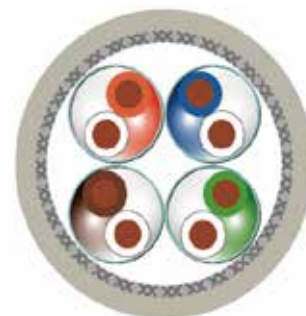
Install at: 0°C to + 60 °C, Bend minimum: 20 times O.D.

Operate at: -30°C to + 75 °C, Bend minimum: 10 times O.D.

Pull maximum: 110 N

Weight: 78 kg/km

Standards: ISO/IEC 11801 , IEC 61156-1, IEC 61156-5, IEC 60092-350, IEC 60092-360, RoHS-2 2011/65/EU, UL 1581



Design & Construction

Conductor: Soft annealed bare copper wire

Conductor size: 23 AWG

Insulation: PE-Foam/skin-PE

Insulation OD: Normal $\varnothing 1.35 \pm 0.05$ mm

Insulation thickness: 0.39 mm

Pair: 2 insulated conductors stranded together into a pair

Color code: 1. White/blue + Blue 2. White/orange + Orange
3. White/green + Green 4. White/brown + Brown

Shield pair to pair: Aluminum Foil-Polyester Tape

Shield pair to pair coverage: 100%

Outer shield: Solid Tinned Copper Braid

Outer shield coverage: Nom 80%

Outer jacket: LSZH SHF1

Nominal outer sheath thickness: 0.75 ± 0.30 mm

Outer jacket OD: 8.0 ± 0.50 mm

Marking: YANGER® CAT6A 4x2x23/1 AWG Solid S/FTP LSZH-SHF1 <batch no.> <meter marking>

Outer jacket color: Grey

Environmental properties and Fire Performances

Degree of acidity of gases: IEC 60754-1/2

Halogen acid gas: IEC 60754-1/2

Smoke Emission: IEC 61034-1/2

Flame retardant: IEC 60332-1-2

UV resistance: UL 1581

Fire retardant: IEC 60332-3-22

Electrical characteristics

Resistance of the conductor@20°C: $\leq 93.8 \Omega/\text{km}$

Insulation resistance: $\geq 5000 \text{ M}\Omega/\text{km}$

Average characteristic impedance@ 100 MHz: $100 \pm 5\Omega$

Transfer impedance: $< 100 \text{ m}\Omega/\text{m} @ 10 \text{ MHz}$

Delay skew (4~100 MHz): $\leq 45 \text{ ns}/100 \text{ m}$

Velocity factor: 69%

Conductor resistance unbalance within pair: $\leq 2.0\%$

Conductor resistance unbalance between pair: $\leq 4.0\%$

capacitance unbalance to earth at 800 Hz or 1000 Hz: $\leq 160 \text{ pF}/100 \text{ m}$

Mutual capacitance: $\leq 56 \text{ nF}/\text{km}$

Electrical Properties

| Frequency (MHz): | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 | 200 | 250 | 400 | 500 |
|----------------------------|------|------|------|------|------|-------|------|------|------|------|------|------|
| Attenuation dB/100m (Max.) | — | 3.8 | 5.9 | 7.5 | 8.4 | 10.5 | 15.0 | 19.1 | 27.6 | 31.1 | 40.1 | 45.3 |
| NEXT dB (Min.) | 74.3 | 65.3 | 59.3 | 56.2 | 54.8 | 51.9 | 47.4 | 44.3 | 39.8 | 38.3 | 35.3 | 33.8 |
| PS-NEXT (Min.) | 72.3 | 63.3 | 57.3 | 54.2 | 52.8 | 49.9 | 45.4 | 42.3 | 37.8 | 36.3 | 33.3 | 31.8 |
| ELFEXT dB (Min.) | 67.8 | 55.8 | 47.8 | 43.7 | 41.8 | 37.9 | 31.9 | 27.8 | 21.8 | 19.8 | 15.8 | 13.8 |
| Return Loss dB (Min.) | 20.0 | 23.0 | 25.0 | 25.0 | 25.0 | 23.6 | 21.5 | 20.1 | 18.0 | 17.3 | 15.9 | 15.2 |
| PSELFEXT dB(Min.) | 64.8 | 52.8 | 44.8 | 40.7 | 38.8 | 34.9 | 28.9 | 24.8 | 18.8 | 16.8 | 12.8 | 10.8 |

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