

CAT5E 4x2x24/1 AWG Solid F/UTP LSZH-SHF1

Application: Shipboard installations, Maritime Environment, Fixed or portable installations, Indoor use, fixed installations, High data rates, Ships, High speed & Light craft.

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: 70 kg/km

Standards: ISO/IEC 11801 , IEC 61156-1, IEC 61156-5, IEC 60092-350, IEC 60092-360, RoHS-2 2011/65/EU, UL1581



Design & Construction

Conductor: Soft annealed bare copper wire

Conductor size: 24 AWG

Insulation: HDPE

Insulation OD: Normal $\varnothing 1.05 \pm 0.05$ mm

Insulation thickness: 0.25 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

Outer shield: Aluminum Foil-Polyester Tape

Outer shield Coverage: 100%

Drain wire: Solid Tin Copper

Outer jacket: LSZH SHF1

Nominal outer sheath thickness: 0.75 ± 0.30 mm

Outer jacket OD: 6.8 ± 0.50 mm

Marking: YANGER® CAT5E 4x2x24/1 AWG Solid F/UTP 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: $\leq 145 \Omega/\text{km}$

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

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

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

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

Velocity factor: 67%

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	8	10	16	20	25	31.25	62.5	100
Attenuation dB/100m (Max.)	—	4.1	5.8	6.5	8.2	9.3	10.4	11.7	17	22
NEXT dB (Min.)	65.3	56.3	51.8	50.3	47.2	45.8	44.3	42.9	38.4	35.3
PS-NEXT (Min.)	62.3	53.3	48.8	47.3	44.2	42.8	41.3	39.9	35.4	32.3
ELFEXT dB (Min.)	64	52	45.9	44	39.9	38	36	34.1	28.1	24
Return Loss dB (Min.)	20	23	24.5	25	25	25	24.3	23.6	21.5	20.1
PSELFEXT dB (Min.)	61	49	42.9	41	36.9	35	33	31.1	25.1	21

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