

CAT7 S/FTP FR Armor

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

Operate at: -40°C to + 75°C, Bend minimum: 10~20 times O.D.

Weight: Approximately 170kg/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: Stranded bare copper, 23 AWG

Insulation: PE

Fire resistant layer: Mica tape

Pair: 2 insulated conductors stranded together into a pair

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

Shield pair to pair: Aluminum Foil-Polyester Tape

Outer shield: Tinned copper wire braid

Inner jacket (optional): LSZH-SHF1, LSZH-SHF2 or LSZH-SHF2-MUD

Armor: GSWB or TCWB

Outer jacket (optional): LSZH-SHF1, LSZH-SHF2 or LSZH-SHF2-MUD

Outer jacket OD: 13.2 ±1.5 mm

Marking (example): YANGER® CAT7 4x2x23/1 AWG S/FTP FR GSWB
LSZH-SHF1 <dd/mm/yy> <meter marking>

Outer jacket color: Grey (optional)

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, IEC 60332-3-22

UV resistance: UL 1581

Fire resistant: IEC 60331-2

Electrical characteristics

Resistance of the conductor@20°C: ≤93.8 Ω/km

Insulation resistance: ≥5000 MΩ/km

Average characteristic impedance @ 100 MHz: 100 ± 5 Ω

Transfer impedance: ≤100 mΩ/m @10 MHz

Delay skew (4~100 MHz): ≤25 ns/100 m

Velocity factor: 74%

Conductor resistance unbalance within pair: ≤2.0%

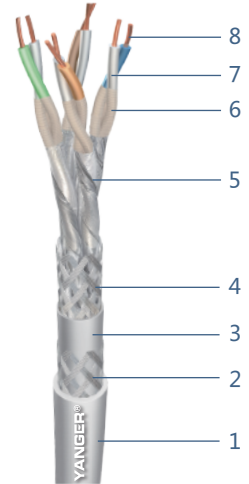
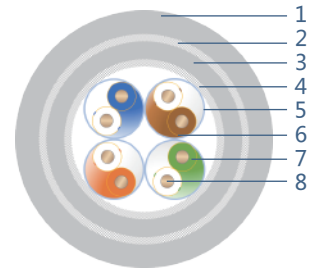
Conductor resistance unbalance between pair: ≤4.0%

Capacitance unbalance to earth at 800Hz or 1000Hz: ≤160 pF/100 m

Mutual capacitance: ≤56 nF/km

Electrical properties

Frequency (MHz):	1	4	10	16	20	31.25	62.5	100	200	250	300	600
Attenuation dB/100m (Max.)	—	3.7	5.9	7.4	8.3	10.4	14.9	19.0	27.5	31.0	34.2	50.1
NEXT dB (Min.)	78.0	78.0	78.0	78.0	78.0	78.0	75.5	72.4	67.9	66.4	65.2	60.7
PS-NEXT (Min.)	75.0	75.0	75.0	75.0	75.0	75.0	72.5	69.4	64.9	63.4	62.2	57.7
ELFEXT dB (Min.)	78.0	78.0	75.3	71.2	69.3	65.4	59.4	55.3	49.3	47.3	45.8	38.4
Return loss dB (Min.)	20.0	23.0	25.0	25.0	25.0	23.6	21.5	20.1	18.0	17.3	17.3	17.3
PSELFEXT (Min.)	75.0	75	72.3	68.2	66.3	62.4	56.4	52.3	46.3	44.3	42.8	35.4



1. Outer jacket
2. Armor
3. Inner jacket
4. Outer shield
5. Shield pair to pair
6. Fire resistant layer
7. Insulation
8. Conductor

