

## CAT7A S/FTP

**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 70kg/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:** Bare copper, 23 AWG

**Insulation:** PE

**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

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

**Outer jacket OD:** 8.2 ± 0.50 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

### 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%

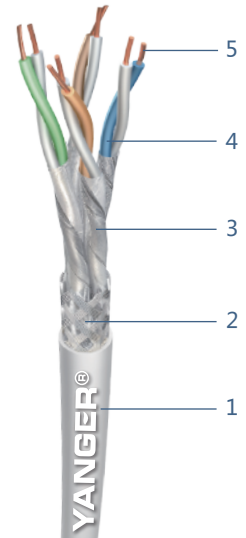
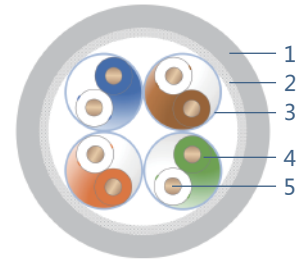
**Conductor resistance unbalance between pair:** ≤4.0%

**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  | 500  | 600  | 1000 |
|----------------------------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Attenuation dB/100m (Max.) | —    | 3.7  | 5.8  | 7.3  | 8.2  | 10.3  | 14.6 | 18.5 | 26.5 | 29.7 | 32.7 | 42.8 | 47.1 | 61.9 |
| NEXT dB (Min.)             | 78.0 | 78.0 | 78.0 | 78.0 | 78.0 | 78.0  | 78.0 | 75.4 | 70.9 | 69.4 | 68.2 | 64.9 | 63.7 | 60.4 |
| PS-NEXT (Min.)             | 75.0 | 75.0 | 75.0 | 75.0 | 75.0 | 75.0  | 75.0 | 72.4 | 67.9 | 66.4 | 65.2 | 61.9 | 60.7 | 57.4 |
| 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 | 17.3 | 15.1 |



1. Outer jacket
2. Outer shield
3. Shield pair to pair
4. Insulation
5. Conductor



Halogen free  
IEC 60754



Low smoke  
IEC 61034



Flame retardant  
IEC 60332-3-22



UV resistant  
UL 1581