ADC Structured Cabling Solutions

Category 7 4PR S/FTP Cable

Issue 2

The S/FTP AWG23 cable is designed for applications up to 600 MHz and provides transmission performance meeting Category 7 specifications ISO/IEC 11801 (2002) and EN 50173-1 (2002). Likewise it is suitable for the transmission of digital data signals for future applications to 10Gigabit Ethernet (10GigE) in accordance with IEEE 802.3an.

These cables are low skew products, i.e. the difference in propagation delay between the individual pairs is very low. This is increasingly being requested for 10 Gigabit Ethernet. The suitability of the cable for high-bit-rate transmission systems ensures a high degree of future proofing. Additional features are the slim design and low weight of the cables. Each pair is individually shielded with foil (FTP). The twisted pairs are additionally enclosed as a group in a braided shield (S/FTP) to provide superior shielding performance.

The cable thus exceeds the requirements for EN 55022 Class B emission and EN 55024 immunity, enabling networks to be built which are compliant with the standards on electromagnetic compatibility.

Features:

- Specified up to 600 MHz
- Outstanding electrical characteristics
- Wire colours: white/blue, white/orange, and white/green, white/brown
- LSZH (Low Smoke Zero Halogen)
- Flame retardant to IEC 60332-1 and EN 50266-2-1
- Non corrosive to IEC 60754-2 and EN 50267
- Low smoke to IEC 61034 and EN 50268

Benefits:

- Covered by the TrueNet® System Warranty
- Each pair is wrapped with a metal foil (PimF) and all of the pairs are screened with tinned copper wire; this level of protection ensures error free data transmission even in harsh environments
- The shielding eliminates alien crosstalk allowing more cables to be bundled close together
- Smaller nominal diameter than unshielded Category 6_A cable allows for a higher number of cables in a run

SPEC SHEET

ADC Structured Cabling Solutions

Category 7 4PR S/FTP Cable

Design Characteristics

Type designation	S/FTP AWG23 4PR LSZH
Category	7
Copper conductor	AWG 23
Number of pairs	4
Fire rating (MJ/m)	0.57
Halogen-free	Yes
Tensile strength for installation (N)	179
Outside-ø (mm)	7.3
Weight (kg/km)	52

Ordering Information

Description	Length	Colour	Product No.
S/FTP AWG23 4P LSZH	1000m	Orange	7053 3 762-55

Electrical Characteristics at 20°C

Frequency MHz	1	10	16	20	31.25	62.5	100	300	600
Attenuation in dB/100 m per standard *	2.0	5.7	7.2	8.1	10.1	14.5	18.5	33.3	48.9
Typical data dB/100 m	1.9	5.6	7.1	8	9.9	13.9	17.5	31.7	47
Near-end crosstalk loss in dB per Standard*	80.0	80.0	80.0	80.0	80.0	75.1	72.4	65.3	60.8
Typical data dB/100 m	95	95	95	95	95	94	94	85	73
PSNEXT in dB/100 m per Standard *	77.0	77.0	77.0	77.0	77.0	72.5	69.4	62.3	57.8
Typical data dB/100 m	92	92	92	92	92	91	91	82	70
ELFEXT in dB/100 m per Standard *	80.0	74.0	69.9	68.0	64.1	58.1	54.0	44.5	38.4
Typical data dB/100 m	85	85	85	85	84	83	80	64	45
PSELFEXT in dB/100 m per Standard	77.0	71.0	66.9	65.0	61.1	55.1	51.0	41.5	35.4
Typical data dB/100 m	82	82	82	82	81	80	77	61	42
ACR in dB/100m per Standard*	78.0	74.3	72.8	71.9	69.9	60.6	53.9	32.0	11.9
ACR in dB	93	89.4	87.9	87	85.1	80.1	76.5	53.3	26

*Standard: Requirements on 100 m installed Category 7 cable (in accordance with EN 50288-4-1)

ADC Structured Cabling Solutions

Category 7 4PR S/FTP Cable

Max. Loop resistance	135 Ω/km
Max. Resistance difference	2%
Insulation resistance	> 5000 MΩ x km
Impedance Zo at 0.064 MHz	-125 Ω ± 20%
Impedance Zo at 1 up to 100 MHz	100 Ω ± 15%
Impedance Zo at 101 up to 250 MHz	100 Ω ± 18%
Impedance Zo at 251 up to 600 MHz	100 Ω ± 25%
Transfer impedance	< 10 mΩ per metre at 10 MHz
Longitudinal conversion loss dB/ref. Length = 1000m	> 46 dB at 64 kHz
Longitudinal conversion loss dB/ref. Length = 100m	> 40 dB at 1 MHz
Longitudinal conversion loss dB/ref. Length = 100m	> 20 dB at 100 MHz
Max. Capacitance at 0.001 MHz	1000 pF/km
Propagation velocity > 10 MHz (NVP*c)	0.79 c
Propagation delay > 10 MHz: 4.2 ns/m; Skew	10 ns/100m

Mechanical Characteristics

Wire insulation	Foam/skin PE insulation
Sheath material	Zero halogen, flame-retardant
Deployment area	Dry and damp rooms
Max. Temperature range during installation	0°C up to +50°C
Max. operating temperature	-20°C up to +60°C
Min. bend radius during operation	40 mm
Min. bend radius during installation	60 mm

SPEC SHEET

*KRONE Communications Ltd. is now ADC India Communications Ltd.

www.adc.com/in
10C, II Phase Peenya Industrial Area
Bangalore 560 058
Sales Support: 1800 425 8232

ADC Telecommunications, Inc., P.O. Box 1101, Minneapolis, Minnesota USA 55440-1101

7053 3 762-55IN / Issue 2