

TrueNet®

CopperTen™ Category 7 4PR S/FTP Cable

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.



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

TECHNICAL DATA

Features

- Specified up to 600 MHz
- Outstanding electrical characteristics
- Wire colours: white/blue, white/orange, 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



Technical Assistance:
Europe & Middle East
+32 2 712 6542
euro.tac@adckrone.com

www.adckrone.com

South Africa
+27 11 466 3333
infos@adckrone.com

United Kingdom
0800 960236
contactuk@adckrone.com

Ordering information

Description	Catalogue number
S/FTP AWG23 4P LSZH , Orange, 1000m	7053 3 762-55
S/FTP Duplex, Orange, 500m	7053 3 062-54

Electrical Characteristics at 20°C

Frequency in 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)

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
Mutual capacity	43 pF/m
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

TECHNICAL DATA



Web Site: www.adckrone.com

UK Office: ADC Communications (UK) Ltd., Runnings Road, Kingsditch Trading Estate, Cheltenham, Gloucestershire GL51 9NQ, United Kingdom • Phone: +44 (0) 1242 264 400 Fax: +44 (0) 1242 264 488 Email: contactuk@adckrone.com

South African Office: ADC Telecommunications (Africa) PTY Ltd., 16 Brand Hatch Close, Kyalami Business Park, Midrand, 1685 Johannesburg, South Africa • Phone: +27 11 466 3333 Fax: +27 11 466 3300 Email: infos@adckrone.com

EMEA Office: ADC GmbH, Beeskowdamm, 3-11, 14167 Berlin, Germany • Phone: +49 30 8453 1818 Fax: +49 30 8453 1703. For a listing of all ADC KRONE's global sales office locations, please refer to our web site.

Specifications published here are current as of the date of publication of this document. Because we are continuously improving our products, ADC KRONE reserves the right to change specifications without prior notice. At any time, you may verify product specifications by contacting ADC GmbH headquarters in Berlin. ADC Telecommunications, Inc. views its patent portfolio as an important corporate asset and vigorously enforces its patents.

Part Number 200008BE Jul 07 Original © 2007 ADC Communications (UK) Ltd. All Rights Reserved