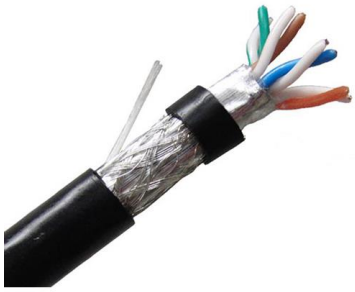
Copper Structured Cabling, Cable, CAT6A, S/FTP, Outdoor, PE

Features and benefits

- Category 6A/Class EA compliant
- Individual Pair foil with an overall braid for EMC protection
- Outdoor PE jacket material
- Compliant to ISO/IEC 11801 Ed 2.2, ANSI/TIA-568-C.2, EN 50173-1
- Reliable performance
- Super-standard performance margin



Description

Opterna 4 pair unshielded category 6A solid PE cables (S/FTP) has been designed for outdoor applications and is suitable for outdoor duct installations. The cable supports 10G Ethernet networking, fully supporting the more demanding office communications including voice, data, VoIP, Video Conferencing, security, IP based cameras and other demanding real-time applications.

The cable covers the category 6A requirements for unshielded twisted pair cables of 100 Ω and is characterized up to 500 MHz suitable for transmitting data over local area networks (LANs).

The cable's 8 conductors (4-Pairs) are of solid bare copper with high density polyethylene (HDPE) insulation and a UV stabilized polyethylene (PE) weather resistant jacket. Two insulated conductors are twisted together to form a pair and the four pairs with different twist ratio are laid up to form the basic cable unit. Each individual pair is wrapped in a foil and then protected with overall braided mesh.

Applications

- Horizontal Distribution and Backbone Cabling
- 4/16 Mbps Token Ring (IEEE 802.5)
- 10/100/1000/10G BASE-T (IEEE 802.3)
- 155/622 Mbps 1.2Gb ATM
- 100 Mbps TP-PMD
- Analogue Voice, ISDN, ADSL
- HVAC alarm systems and other signalling

Standards

- ANSI/TIA-568-C.2
- ISO/IEC 11801:2011 (Ed 2.2) Class EA
- CENELEC EN 50173-1:2011
- IEC 61156-5
- EN50288-10-1

Technical data

Mechanical data	**Value**
Dimensions (W x D x H)	See technical drawing
Material	Conductor material - Solid bare copper Conductor insulation - Skin-foam-skin PE Individual pair shield material - Aluminium foil Outer shielding material - Braided shield, TC Cable jacket - PE
Conductor diameter	23 AWG
Insulated conductor diameter	1.33 ± 0.05 mm
Outer cable diameter	7.6 ± 0.5 mm
Jacket thickness	0.55mm ± 0.05 mm
Pulling strength	110N
Minimum bend-radius	4 times outer diameter

Electrical data

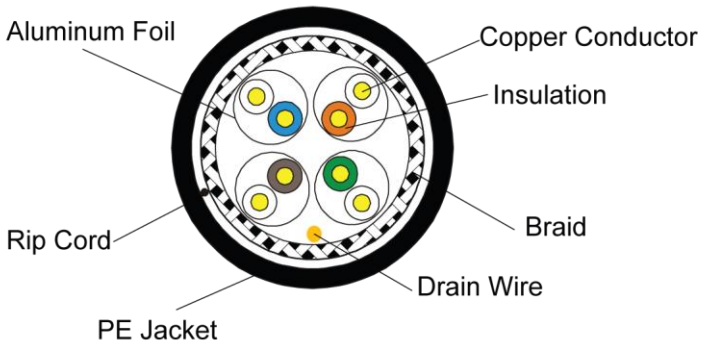
Frequency (MHZ)	**RL (≥dB)**	**ATT 20°C (≤dB)**	**NEXT (≥dB)**	**NEXT (≥dB)**	**ELFEXT (≥dB)**	**PSELFEXT (≥dB)**	**PSANEXT (≥dB)**	**PSAELFEXT (≥dB)**
1	20.0	1.9	74.3	72.3	68.0	65.0	67.0	67.0
4	23.0	3.8	65.3	63.3	56.0	53.0	67.0	66.2
8	24.5	5.3	60.8	58.8	49.9	46.9	67.0	60.1
10	25.0	5.9	59.3	57.3	48.0	45.0	67.0	58.2
16	25.0	7.5	56.2	54.2	43.8	40.9	67.0	54.1
20	25.0	8.4	54.8	52.8	42.0	39.0	67.0	52.2
25	24.3	9.4	53.3	51.3	40.0	37.0	67.0	50.2
31.25	23.6	10.5	51.9	49.9	38.1	35.1	67.0	48.3
62.5	21.5	15.0	47.4	45.4	32.1	29.1	65.6	42.3
100	20.1	19.1	44.3	42.3	28.0	25.0	62.5	38.2
200	18.0	27.6	39.8	37.8	22.0	19.0	58.8	32.2
250	17.3	31.1	38.3	36.3	20.0	17.0	56.5	30.2
300	16.8	34.3	37.1	35.1	18.5	15.5	55.3	28.7
400	15.9	40.1	35.3	33.3	16.0	13.0	53.5	26.2
500	15.2	45.3	33.8	31.8	14.0	11.0	52.0	24.2

Electrical characteristics	**Value**
DC resistance max	9.38 Ohm/100m
DC resistance unbalance	Max 5%
Mutual capacitance	Max 5.6 nF/100m
Capacitance unbalance pair	Max 330pF/100m
Impedance 1-250 MHz	100 ± 15Ω
Propagation delay	Max. 534 ns/100m@ 500 MHz
Dielectric strength	DC KV/sec. 2.5/2
Propagation delay skew	Max 45 ns/100m
Insulation resistance - MΩ/km	Min.5000
Nominal velocity of propagation	76%

Environmental data

Temperature range	Value
Operation	-20° C to +75° C

Technical drawing



Ordering information

Description	Part code
Shielded Twisted Pair Cable (S/FTP), Category 6A, 4 Pairs, solid, PE, 305m reel	SCS-SFTP-C6A-PE-BK