

Copper Structured Cabling, Cable, CAT7, SFTP, Outdoor

Features and benefits

- Category 7/Class F compliant
- Outdoor rated jacket material
- Overall PE jacket
- Braided screen for improved immunity
- Reliable performance
- Super-standard performance margin



Description

Opterna Category 7 4-pair S/FTP copper cable forms the foundation of 10 Gigabit Ethernet networks. The cable exceeds Category 7 performance ensuring reliability in delivering 10G network speed and high data throughput.

Opterna 4 pair shielded category 7 solid cables (S/FTP) has been designed for outdoor applications fully supporting the more demanding industrial communications requirements including voice, data, VoIP, Video Conferencing, security, IP based cameras and other demanding real-time applications. The cable covers the category 7 requirements for shielded twisted pair cables of 100 Ω and is characterized up to 600 MHz suitable for transmitting data over local area networks (LANs).

The cable's 8 conductors (4-Pairs) are of solid bare copper with skin-foam polyethylene (PE) insulation and an inner PVC/LSZH jacket with an overall PE jacket. The two insulated conductors are twisted together to form a pair and the four pairs with its unique pair lay are bundled up to form the basic cable unit. Each twisted pair is shielded with an aluminium foil to add physical separation between the four pairs and prevent internal cross talk. All four pairs are covered with an overall braided screen to provide immunity from electromagnetic interferences. Category 7 S/FTP cables provides better immunity and covers a wider spectrum of low frequency with the braided shield and high frequency immunity with the foil shield.

Applications

- Horizontal Distribution and Backbone Cabling
- 4/16 Mbps Token Ring (IEEE 802.5)
- 10/100/1000/10G BASE-T (IEEE 802.3)
- 155 Mbps/1.2G 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 F
- CENELEC EN 50173-1:2011
- IEC 61156-5-2
- EN 50288-4-1

Technical data

Mechanical data	Value
Dimensions (W x D x H)	See technical drawing
Material	Conductive material - Solid bare copper Conductive insulation - Skin Foam PE Inner shielding material - Aluminium tape for each pair Outer shielding material - Overall Tinned Copper Braid Inner cable jacket - PVC/LSZH Outer cable jacket - PE
Conductor diameter	23 AWG
Insulated conductor diameter	1.33 ± 0.05 mm
Outer cable diameter	7.5 ± 0.3 mm
Jacket thickness	0.55mm ± 0.05 mm
Pulling strength	110N
Minimum bend-radius	8 times outer diameter during installation 4 times outer diameter in service
Fire rating	
PVC jacket	IEC60332-1-2
LSZH jacket	IEC 60332-1-2, IEC 60754-1,2 & IEC 61034-2

Electrical data

Frequency (MHZ)	RL (≥dB)	ATT 20°C (≤dB)	NEXT (≥dB)	NEXT PS NEXT (≥dB)	ELFEXT (≥dB)	PSELFEXT (≥dB)
1	20.0	1.90	78.0	75.0	78.0	75.0
4	23.0	3.74	78.0	75.0	78.0	75.0
8	24.5	5.24	78.0	75.0	75.9	72.9
10	25.0	5.86	78.0	75.0	74.0	71.0
16	25.0	7.41	78.0	75.0	69.9	66.9
20	25.0	8.29	78.0	75.0	68.0	65.0
25	24.3	9.29	78.0	75.0	66.0	63.0
31.25	23.6	10.41	78.0	75.0	64.1	61.1
62.5	21.5	14.88	75.5	72.5	58.1	55.1
100	20.1	19.02	72.4	69.4	54.0	51.0
200	18.0	27.47	67.9	64.9	48.0	45.0
250	17.3	30.97	66.4	63.4	46.0	43.0
300	16.8	34.19	65.2	62.2	44.5	41.5
600	15.9	50.10	60.7	57.7	38.4	35.4

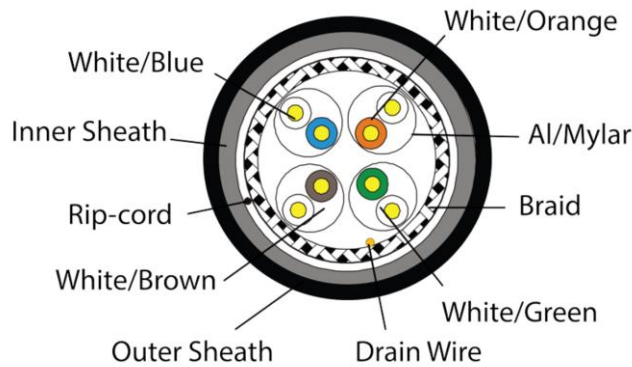
Electrical characteristics	Value
DC resistance max	9.38 Ohm/100m
DC resistance unbalance	Max 2%
Mutual capacitance	Max 5.6 nF/100m
Capacitance unbalance pair	Max 330pF/100m
Impedance	1-100 MHz – 100 ± 15Ω 100-250 MHz – 100 ± 18Ω 250-600 MHz – 100 ± 25Ω
Propagation delay	Max. 534 ns/100m
Dielectric strength	DC KV/sec. 2.5/2
Propagation delay skew	Max 45 ns/100m

Insulation resistance - MΩ/km	Min.5000
-------------------------------	----------

Environmental data

Temperature range	Value
Operation	-20° C to +70° C
Installation	-10° C to +60° C

Technical drawing



Ordering information

Description	Part code
Shielded Twisted Pair Cable (S/FTP), Category 7, 4 Pairs, inner PVC + outer PE jacket, 500m drum	SCS-SFTP-C7-PVC-PE-BK
Shielded Twisted Pair Cable (S/FTP), Category 7, 4 Pairs, inner LSZH + outer PE jacket, 500m drum	SCS-SFTP-C7-LSZH-PE-BK