

Copper Structured Cabling, Cable, CAT6 U/UTP, Outdoor

Features and benefits

- Category 6/Class E compliant
- PE jacket material
- Compliant to ISO/IEC 11801 Ed 2.2, ANSI/TIA-568-C.2, EN 50173-1
- IEC 61156-5, EN 50288-6-1
- Reliable performance
- Super-standard performance margin



Description

Opterna 4-pair unshielded category 6 solid cables (U/UTP) has been designed for outdoor applications and is suitable for outdoor duct installations. The cable supports 1G 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 6 requirements for unshielded twisted pair cables of 100 Ω and is characterized up to 250 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. The four pairs are wrapped with an overall polyester tape for extra protection.

Applications

- Outdoor Cabling
- 4/16 Mbps Token Ring (IEEE 802.5)
- 10/100/1000 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 E
- IEC 61156-5
- CENELEC EN 50173-1:2011
- EN50288-6-1

Technical data

Mechanical data	Value
Dimensions (W x D x H)	See technical drawing
Material	Conductive material - Solid bare copper Conductive insulation - HDPE Inner screening material - Polyester Cable jacket - PE
Conductor diameter	23 AWG
Insulated conductor diameter	1.02 ± 0.03 mm
Outer cable diameter	6.7 ± 0.5 mm
Jacket thickness	0.60mm ± 0.05 mm
Pulling strength	110N
Minimum bend-radius	4 times outer diameter

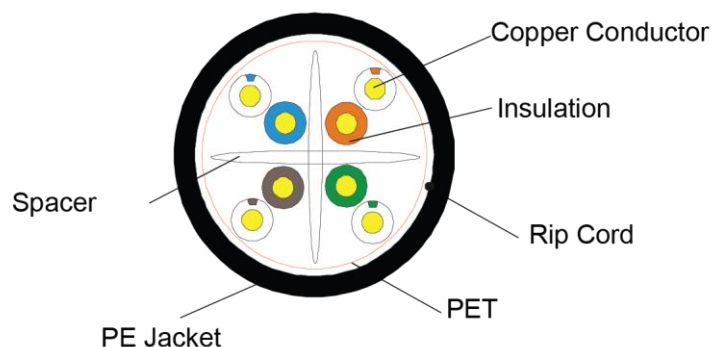
Electrical data

Frequency (MHZ)	RL (≥dB)	ATT 20°C (≤dB)	NEXT (≥dB)	NEXT PS NEXT (≥dB)	ELFEXT (≥dB)	PSELFEXT (≥dB)
1	20.0	2.03	74.3	72.3	67.8	64.8
4	23.0	3.78	65.3	63.3	55.8	52.8
8	24.5	5.32	60.8	58.8	49.7	46.7
10	25.0	5.95	59.3	57.3	47.8	44.8
16	25.0	7.55	56.2	54.2	43.7	40.7
20	25.0	8.47	54.8	52.8	41.8	38.8
25	24.3	9.51	53.3	51.3	39.8	36.8
31.25	23.6	10.67	51.9	49.9	37.9	34.9
62.5	21.5	15.38	47.7	45.4	31.9	28.9
100	20.1	19.80	44.3	42.3	27.8	24.8
200	18.0	29.98	39.8	37.8	21.8	18.8
250	17.3	32.85	38.3	36.3	19.8	16.8

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. 536 ns/100m @ 250 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	69%

Environmental data

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

Technical drawing

Ordering information

Description	Part code
Unshielded Twisted Pair Cable (U/UTP), Category 6, 4 Pairs, solid PE, 305m reel	SCS-UTP4-C6-PE-BK