

Cat.6 UTP Cable Double Sheath for Outdoor

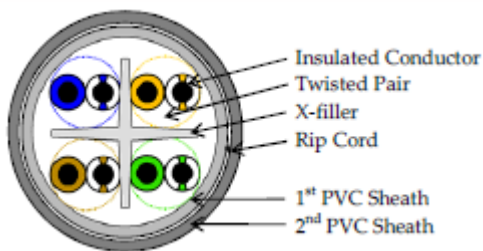


Table 3. Thickness of sheath and cable diameter(mm)

Nominal	Sheath thickness		Cable Diameter
	min.(each)	min.(average)	Max.
1.0	0.85	0.9	8.2

6. SHEATH(2st): The PVC sheath for outdoor purpose shall meet the UV performance specified in clause 1200 of UL1581. The sheath shall be uniform and shall not have any defects. The thickness of sheath and cable diameter shall be shown as Table 3.

Standard Compliances

This specification is based on the specifications of UL 444, ANSI/TIA/EIA-568-C.2 and ISO/IEC 11801 and covers the requirements for unshielded twisted pair(UTP) cables of 100Ω, enhanced category 6. Applicable cable size & type; 4 pairs, Double Sheath 1st and 2nd Jacket: PVC(CMX).

Product Facts

- CABLE CONSTRUCTION

- CONDUCTOR:** The conductors shall be solid, annealed and bare copper with a diameter of AWG 24 and minimum acceptable diameter shall be 0.485mm.
- INSULATION:** Each conductor shall be insulated with solid high density polyethylene. The insulation shall be uniform and shall not have any defects. The diameter over the insulation shall be maximum 1.22mm.

Table 1. Color code of insulation

Pair No.	a-wire		b-wire	
	Base	Stripe	Base	Stripe
1	White	Blue	Blue	-
2	White	Orange	Orange	-
3	White	Green	Green	-
4	White	Brown	Brown	-

* The stripe marking shall be applied on the white color.

- COLOR CODE:** The color code of insulation shall be shown as Table 1.
- CORE ASSEMBLY:** Two insulated conductors shall be twisted into a pair. Four twisted pairs shall be assembled into a cable core.
- SHEATH(1st):** The flame retardant PVC

Table 2. Thickness of sheath and cable diameter

Nominal	Sheath thickness (mm)	
	min.(each)	min.(average)
0.50	0.43	0.45

compound colored grey shall be applied over the cable core. The sheath shall be uniform and shall not have any defects.

The thickness of sheath shall be shown as Table 2.

- PHYSICAL PROPERTIES

- INSULATION:** The unaged tensile strength and elongation, measured in accordance with clause 7.3 of UL 444 shall be minimum 16.5MPa and 300%, respectively. The heat-aged tensile strength and elongation, measured in accordance with clause 7.3 of UL 444 shall be minimum 75% and 75% of unaged, respectively. The insulation shrinkage, measured in accordance with clause 7.4 of UL 444, shall not exceed 9.5mm. The insulation cold bend, measured in accordance with clause 7.5 of UL 444, shall show no visible cracks.
- SHEATH(1st & 2nd):** The un aged tensile strength and elongation, measured in accordance with clause 7.8 of UL 444 shall be minimum 17.24MPa and 100%, respectively. The heat-aged tensile strength and elongation, measured in accordance with clause 7.8 of UL 444 shall be minimum 75% and 50% of un-aged respectively. In case of 2nd sheath for outdoor purpose, the sunlight resistance, measured in accordance with clause 1200 of UL 1581 shall be minimum 85% at 300h and 80% at 720h in the tensile strength and elongation.
- CABLE COLD BEND:** All cables shall meet the requirements of clause 7.10 of UL 444.
- FLAME REQUIREMENTS:** A cable marked CMX shall comply with the VW-1 flame test specified in IEC 60332-1.
- TEMPERATURE RATING:** operating temperature is from -20°C to 75°C.
- PACKING:** Each length of completed cable shall be wound on reel. The standard delivery length is 500m.

- COMPLIANT TO CPR CLASS Eca

Ordering Guide

OC-211213-03 Cat.6 UTP Cable Double Sheath for Outdoor

• ELECTRICAL CHARACTERISTICS

Characteristics		Unit	Cat.6			
DC Resistance		$\Omega/100m$	Max. 9.38			
DC Resistance Unbalance		%	Max. 5.0			
Mutual Capacitance		nF/100m	Max. 5.6			
Capacitance Unbalance (Pair to Ground)		pF/100m	Max. 330			
Insulation resistance		M Ω -100m	Min. 500			
Dielectric Strength		DC KV/sec.	2.5 / 2			
Impedance - Zo	1 ~100MHz	Ω	100 \pm 15			
Return Loss (RL)		dB/100m	RL (Min.)	Att. (Max.)	NEXT (Min.)	PSNEXT (Min.)
Attenuation (Att.)	1MHz		20.0	2.0	74.3	72.3
	4MHz		23.0	3.8	65.3	63.3
Pair-to-Pair Near End Cross Talk (NEXT)	8MHz		24.5	5.3	60.8	58.8
	10MHz		25.0	6.0	59.3	57.3
Power Sum Near End Cross Talk (PSNEXT)	16MHz		25.0	7.6	56.2	54.2
	20MHz		25.0	8.5	54.8	52.8
Power Sum Near End Cross Talk (PSNEXT)	25MHz		24.3	9.5	53.3	51.3
	31.25MHz		23.6	10.7	51.9	49.9
Power Sum Near End Cross Talk (PSNEXT)	62.5MHz		21.5	15.4	47.4	45.4
	100MHz		20.1	19.8	44.3	42.3
Power Sum Near End Cross Talk (PSNEXT)	200MHz		18.0	29.0	39.8	37.8
	250MHz		17.3	32.8	38.3	36.3
Pair-to-Pair Equal Level Far End Cross Talk (ELFEXT)	1MHz		dB/100m	ELFEXT (Min.)	PSELFEXT (Min.)	
Power Sum Equal Level Far End Cross Talk (PSELFEXT)	4MHz	67.8		64.8		
	8MHz	55.8		52.8		
Power Sum Equal Level Far End Cross Talk (PSELFEXT)	10MHz	49.7		46.7		
	16MHz	47.8		44.8		
Power Sum Equal Level Far End Cross Talk (PSELFEXT)	20MHz	43.7		40.7		
	25MHz	41.8		38.8		
Power Sum Equal Level Far End Cross Talk (PSELFEXT)	31.25MHz	39.8		36.8		
	62.5MHz	37.9		34.9		
Power Sum Equal Level Far End Cross Talk (PSELFEXT)	100MHz	31.9		28.9		
	200MHz	27.8		24.8		
Power Sum Equal Level Far End Cross Talk (PSELFEXT)	250MHz	21.8		18.8		
	250MHz	19.8		16.8		
Propagation Delay	1MHz 250MHz	ns/100m		Max. 570 Max. 536		
Propagation Delay Skew	1MHz 250MHz	ns/100m	Max. 45 Max. 45			

 For more details please visit www.orcasystem.com

Specifications subject to change without prior notice