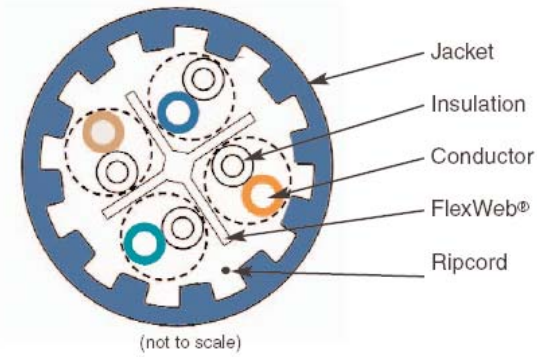
XGO™

4 Pair #23 AWG UTP
Augmented Category 6



DESCRIPTION

UNSHIELDED TWISTED PAIR (UTP) XGO CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER TIA 568-C.2 AND ISO/IEC 11801 2.1. THE CABLE IS ETL COMPONENT COMPLIANT TO TIA 568-C.2 AND ISO/IEC 11801 CATEGORY 6A ELECTRICAL CHARACTERISTICS. THIS PATENTED CABLE CONSISTS OF #23 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A FLEXWEB® CORE SEPARATOR, WITH A RIPCORD, UNDER A FLUTED JACKET WHICH MITIGATES ALIEN CROSSTALK. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0 ON EACH 1000 FT REEL. THIS PRODUCT AND/OR ITS MANUFACTURE IS COVERED BY US PATENT NOS. 7135641, 6596944, 6074503, 5424491 AND PATENT PENDING.

THE PLENUM RATED CABLE IS FOR USE IN AIR HANDLING DUCTS AND SPACES IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING NFPA 262 (FT6 OR PREVIOUSLY UL 910 STEINER TUNNEL) TEST.

THE RISER (NON-PLENUM) RATED CABLE IS FOR USE AS A VERTICAL RUN IN A SHAFT AND FOR GENERAL PURPOSE COMMUNICATIONS USE IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING THE UL 1666 RISER CABLE FLAMMABILITY TEST. THE CABLE ALSO PASSES THE CSA FT4 VERTICAL FLAME TEST - CABLES IN CABLE TROUGH FROM CLAUSE 4.11.4 OF CSA C22.2 NO. 0.3.

SUPPORTED APPLICATIONS

IEEE 802.3an 10GBASE-T (10 GIGABIT ETHERNET), 1000BASE-T (GIGABIT ETHERNET), 100BASE-T (FAST ETHERNET), AND IEEE 802.3 10BASE-T (ETHERNET), IEEE 802.3af POWER OVER ETHERNET FOR VoIP, ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, ATM UP TO 1.2 Gbps, 550 MHz BROADBAND VIDEO AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 2.4 AND 4.8 Gbps.

CONSTRUCTION

PRIMARIES:	CONDUCTOR: 23 AWG (.6 mm) SOLID BARE COPPER INSULATION: PL: FEP NP: THERMOPLASTIC POLYOLEFIN
PAIR ASSEMBLY:	2 PRIMARIES TWISTED IN VARIED LAYS
COLOR CODE:	SEE TABLE 1
CABLE ASSEMBLY:	4 PAIRS CABLED TOGETHER WITH A FLEXWEB CORE SEPARATOR
JACKET:	PL: NO LEAD PLENUM RATED THERMOPLASTIC NP: NO LEAD FLAME RETARDANT THERMOPLASTIC JACKET COLOR SEE TABLE 2 NOMINAL CABLE OD: .340" (8.64 mm)
LISTINGS:	PL: C(UL)US TYPE CMP NP: C(UL)US TYPE CMR

TABLE 1

PAIR NUMBER	PAIR COLOR CODE	
1	WHITE	BLUE
2	WHITE	ORANGE
3	WHITE	GREEN
4	WHITE	BROWN

TABLE 2

PLENUM		NON-PLENUM	
PART NUMBER	JACKET COLOR	PART NUMBER	JACKET COLOR
M58865	BLUE	M58876	BLUE
M58866	WHITE	M58877	WHITE
M58867	YELLOW	M58878	YELLOW
M58868	GRAY	M58879	GRAY
M58869	PINK	M58880	PINK
M58870	GREEN	M58881	GREEN
M58871	RED	M58882	RED
M58873	ORANGE	M58883	ORANGE
M58874	BLACK	M58884	BLACK
M58875	VIOLET	M58885	VIOLET

PHYSICAL CHARACTERISTICS

CABLE WEIGHT:	PL: 69 lbs/1000ft (103 kg/km) NP: 57 lbs/1000ft (84 kg/km)
BENDING RADIUS:	1.4" (35mm) MIN (4 X CABLE OD)
PULLING TENSION:	25 lbf (110 N) MAX
OPERATING TEMP.:	-20ºC to +60ºC (-4ºF to +140ºF)
STORAGE TEMP.:	-20°C to +75°C (-4°F to +167°F)
INSTALLATION TEMP.*:	0°C to +60°C (+32°F to +140°F)

*THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE *CABLE* WHILE BEING INSTALLED OR PULLED. DO NOT INSTALL CABLE BELOW 0°C (+32°F).

PL = PLENUM
NP = NON-PLENUM

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ELECTRICAL CHARACTERISTICS (REF TABLE 3)

CONDUCTOR DCR: PL: 6.6 Ω/100m (20.0 Ω/Mft) MAX
NP: 7.8 Ω/100m (23.8 Ω/Mft) MAX

DCR UNBALANCE: 3% MAX

MUTUAL CAPACITANCE: 46 pF/m (14 pF/ft) NOM

CAPACITANCE UNBALANCE PAIR/GROUND: 33 pF/100m (100 pF/Mft) MAX

CHARACTERISTIC IMPEDANCE: 100 Ω ± 7% (10-550 MHz)

INPUT IMPEDANCE: 100 Ω ± 10% (1-100 MHz)
100 Ω ± 15% (>100-350 MHz)
100 Ω ± 22% (>350 MHz)

RETURN LOSS (RL): $20 + 5 \log_{10}(f)$ dB MIN (1-10 MHz)
25 dB MIN (>10-20 MHz)
$25 - 7 \log_{10}(f/20)$ dB MIN (>20 MHz)

INSERTION LOSS: (ATTENUATION) $1.82 \sqrt{f} + .0091f + .25/\sqrt{f}$ dB/100m MAX

NEAR END CROSSTALK (NEXT): $44.3 - 15 \log_{10}(f/100)$ dB/100m MIN

POWER SUM NEAR END CROSSTALK (PS NEXT): $42.3 - 15 \log_{10}(f/100)$ dB/100m MIN

ATTENUATION TO CROSSTALK RATIO FAR END (ACRF): $27.8 - 20 \log_{10}(f/100)$ dB/100m MIN

POWER SUM ATTENUATION TO CROSSTALK RATIO FAR END (PS ACRF): $24.8 - 20 \log_{10}(f/100)$ dB/100 MIN

POWER SUM ALIEN NEAR END CROSSTALK (PS ANEXT): $62.5 - 15 \log_{10}(f/100)$ dB/100 MIN
67 dB MIN

POWER SUM ALIEN ATTENUATION TO CROSSTALK RATIO FAR END (PS AACRF): $38.2 - 20 \log_{10}(f/100)$ dBm/100m MIN
67 dB MIN

PROPAGATION DELAY: $534 + 36 / \sqrt{f}$ ns/100m MAX

PROPAGATION DELAY SKEW: 45 ns/100m MAX

NOMINAL VELOCITY OF PROPAGATION (NVP): 72% PLENUM
68% NON-PLENUM

NOTE: Attenuation To Crosstalk Ratio Far End (ACRF) was previously referred to as Equal Level Far End Crosstalk (ELFEXT).

WHERE f = FREQUENCY IN MHz from 1 to 500 MHz.

TABLE 3
REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m)	NEXT (dB/100m)	PS NEXT (dB/100m)	ACRF (dB/100m)	PS ACRF (dB/100m)	RETURN LOSS (dB)	PROP. DELAY (ns/100m)	ALIEN CROSSTALK	
								PS ANEXT (dB/100m)	PS AACRF (dB/100m)
	max	min	min	min	min	min	max	min	min
1.0	2.0	74.3	72.3	67.8	64.8	20.0	570.0	67.0	67.0
4.0	3.8	65.3	63.3	55.8	52.8	23.0	552.0	67.0	66.2
8.0	5.3	60.8	58.8	49.7	46.7	24.5	546.7	67.0	60.1
10.0	5.9	59.3	57.3	47.8	44.8	25.0	545.4	67.0	58.2
16.0	7.4	56.2	54.2	43.7	40.7	25.0	543.0	67.0	54.1
20.0	8.3	54.8	52.8	41.8	38.8	25.0	542.0	67.0	52.2
25.0	9.3	53.3	51.3	39.8	36.8	24.3	541.2	67.0	50.2
31.25	10.5	51.9	49.9	37.9	34.9	23.6	540.4	67.0	48.3
62.5	14.9	47.4	45.4	31.9	28.9	21.5	538.6	65.6	42.3
100.0	19.1	44.3	42.3	27.8	24.8	20.1	537.6	62.5	38.2
155.0	24.0	41.4	39.4	24.0	21.0	18.8	536.9	59.6	34.4
200.0	27.5	39.8	37.8	21.8	18.8	18.0	536.5	58.0	32.2
250.0	31.0	38.3	36.3	19.8	16.8	17.3	536.3	56.5	30.2
300.0	34.2	37.1	35.1	18.3	15.3	16.8	536.1	55.3	28.7
350.0	37.2	36.1	34.1	16.9	13.9	16.3	535.9	54.3	27.3
400.0	40.0	35.3	33.3	15.8	12.8	15.9	535.8	53.5	26.2
500.0	45.2	33.8	31.8	13.8	10.8	15.2	535.6	52.0	24.2
550.0	47.7	33.2	31.2	13.0	10.0	14.9	-	-	-
600.0	50.0	32.6	30.6	12.2	9.2	14.7	-	-	-
650.0	52.3	32.1	30.1	11.54	8.5	14.4	-	-	-
750.0	56.6	31.2	29.2	10.3	7.3	14.0	-	-	-

VALUES ABOVE 500 MHz ARE FOR ENGINEERING INFORMATION ONLY.

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