

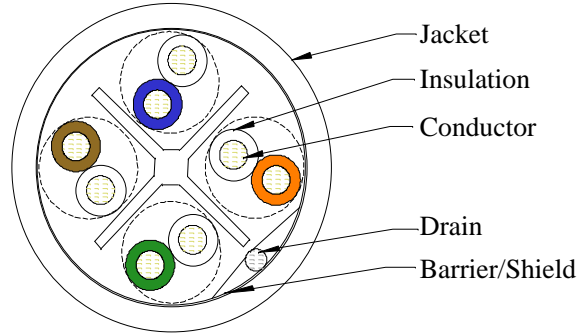
MASTER SPECIFICATION
XGO™ F/UTP CABLE
4 PAIR #23 AWG CATEGORY 6A NON-PLENUM

Design Number:
LT56319

DESCRIPTION

SCREENED TWISTED PAIR (F/UTP) XGO(TM) CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER ANSI/TIA-568-C AND ISO/IEC 11801:2002 CLASS EA. THE CABLE IS ETL COMPONENT COMPLIANT TO ANSI/TIA-568-C.2 CATEGORY 6A ELECTRICAL CHARACTERISTICS. THE CABLE CONSISTS OF #23 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A FLEXWEB® CORE SEPARATOR, WITH AN OVERALL FOIL SHIELD & DRAIN, UNDER AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0. SEE BELDEN.COM/P FOR ANY/ALL APPLICABLE PATENT DETAILS.

THE CABLE IS RISER (NON-PLENUM) RATED 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 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: 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
- BARRIER:** OVERALL POLYESTER TAPE, 25% OVERLAP
- DRAIN:** #26 AWG SOLID TINNED COPPER
- SCREEN (SHIELD):** OVERALL ALUMINUM/POLYESTER TAPE, ALUM SIDE FACING IN, 25% OVERLAP, 100% COVERAGE
- JACKET:** NO LEAD FLAME RETARDANT THERMOPLASTIC
JACKET COLOR: SEE TABLE 2
NOMINAL CABLE OD: .303" (7.7 mm)
- LISTING:** C(UL)US OR C(ETL)US TYPE CMR
UL OR ETL VERIFIED CAT 6A

TABLE 1

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

TABLE 2

MOHAWK PART NUMBER	MOHAWK DESIGN NUMBER	JACKET COLOR
M58817	LT56321	WHITE
M58816	LT56320	BLUE
M58896	LT57014	PINK
M58894	LT57012	YELLOW
M58895	LT57013	GRAY
M58897	LT57015	GREEN
M58898	LT57016	RED
M58899	LT57017	ORANGE
M58900	LT57018	BLACK
M58901	LT57019	VIOLET

PHYSICAL CHARACTERISTICS

- CABLE WEIGHT w/reel:** 45 lbs/1000ft (67 kg/km)
- BENDING RADIUS:** 1.2" (30 mm) MIN
- PULLING TENSION:** 25 lbf (110 N) MAX
- OPERATING TEMP.:** -20°C to +60°C (-4°F to +140°F)
- 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.



MOHAWK
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Rev	Description	Date	Init.
F	UPD DESC, WGT, LISTING, BEND; ADD ICEA TO STDS	10/28/11	JS
G	ADD ISO/IEC TO STDS; ADD SWEEP TESTING NOTE	04/04/12	JS
H	UPDATE FOOTER, ELECS & PATENT INFO	04/25/14	JS
I	UPDATE DESC & PATENT INFO	02/08/16	JS
Date: 09/13/07		Page 1 of 2	
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Mohawk reserves the right to change any specification in the interest of product enhancement.
 This cable complies with the EU-RoHS directive 2002/95/EC (restrictions on hazardous substances) regulations.

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4 PAIR #23 AWG CATEGORY 6A NON-PLENUM

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ELECTRICAL CHARACTERISTICS (REF TABLE 3)
STANDARDS: EXCEEDS ANSI/TIA-568-C.2 CAT 6A,
 ICEA S-90-661-1997 CAT 6 &
 ISO/IEC 11801 ed 2.0 AMEND 1 CLASS EA
 HORIZONTAL CABLE

CONDUCTOR DCR: 9.38 Ω/100m (28.6 Ω/Mft) MAX
DCR UNBALANCE: 3% MAX

MUTUAL CAPACITANCE: 46 pF/m NOM

CAPACITANCE UNBALANCE PAIR/GROUND: 90 pF/100m MAX

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

INPUT IMPEDANCE: 100 Ω ± 15% (1-100 MHz)
 100 Ω ± 18% (>100-250 MHz)
 100 Ω ± 32% (>250 MHz)

RETURN LOSS (RL): 20 + 6 log₁₀(f) dB MIN (1-10 MHz)
 26 dB MIN (>10-20 MHz)
 26 - 7 log₁₀(f/20) dB MIN (>20 MHz)

PROPAGATION DELAY: 534+36 / √f ns/100m MAX
PROPAGATION DELAY SKEW: 45 ns/100m MAX

NOMINAL VELOCITY OF PROPAGATION (NVP): 66%

INSERTION LOSS (ATTENUATION): 1.82√f + .00091f + .25/√f dB/100m MAX

NEAR END CROSSTALK (NEXT): 44.3 - 15 log₁₀(f/100) dB/100m MIN

POWER SUM NEAR END CROSSTALK (PS NEXT): 42.3 - 15 log₁₀(f/100) dB/100m MIN

ATTENUATION TO CROSSTALK RATIO FAR END (ACRF): 27.8 - 20 log₁₀(f/100) dB/100m MIN

POWER SUM ATTENUATION TO CROSSTALK RATIO FAR END (PS ACRF): 24.8 - 20 log₁₀(f/100) dB/100m MIN

TCL: 30 - 10 log₁₀(f/100)

ELTCL: 35 - 20 log₁₀(f) 1 ≤ f ≤ 30 MHz

COUPLING ATTENUATION: 55 - 20 log₁₀(f/100) 30 ≤ f ≤ 500 MHz

POWER SUM ALIEN NEAR END CROSSTALK (PS ANEXT): 62.5 - 15 log₁₀(f/100) dB/100m MIN

POWER SUM ALIEN ATTENUATION TO CROSSTALK RATIO FAR END (PS AACRF): 38.2 - 20 log₁₀(f/100) dB/100m MIN
 77 dB MAX

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)
1.0	max	min	min	min	min	min	max	min	min
2.1	2.1	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	7.5	56.2	54.2	43.7	40.7	25.0	543.0	67.0	54.1
20.0	8.4	54.8	52.8	41.8	38.8	25.0	542.0	67.0	52.2
25.0	9.4	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	15.0	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	24.1	41.4	39.4	24.0	21.0	18.8	536.9	59.6	34.4
200.0	27.6	39.8	37.8	21.8	18.8	18.0	536.5	58.0	32.2
250.0	31.1	38.3	36.3	19.8	16.8	17.3	536.3	56.5	30.2
300.0	34.3	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	40.1	35.3	33.3	15.8	12.8	15.9	535.8	53.5	26.2
500.0	45.3	33.8	31.8	13.8	10.8	15.2	535.6	52.0	24.2

SWEEP TESTED TO 500 MHz



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