

SPECIFICATION
4 PAIR #23 AWG LAN-Trak OSP
CAT 6A OUTDOOR UTP
(SUITABLE FOR DUCT, BURIAL & AERIAL LASHING)

Design Number:
LT57976

DESCRIPTION

UNSHIELDED TWISTED PAIR (UTP) CATEGORY 6A CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER ANSI/TIA-568-C AND ISO/IEC 11801 ed 2.2 (2011) CLASS EA. THE CABLE EXCEEDS ANSI/TIA-568-C.2 & ISO/IEC 11801ed 2.2 (2011) CATEGORY 6A ELECTRICAL CHARACTERISTICS, VERIFIED/CHANNEL CAT 6A. THE CABLE CONSISTS OF #23 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A FLEXWEB® CORE SEPARATOR, FLOODED TO PREVENT MOISTURE INGRESS, INNER UV-RESISTANT POLYOLEFIN JACKET, BARRIER TAPE AND RIPCORD, UNDER AN OVERALL UV-RESISTANT POLYOLEFIN JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0 ON EACH 1000 FT REEL.

THE CABLE IS SUITABLE FOR OUTDOOR USE IN DUCT, BURIAL AND AERIAL LASHING. IT IS WATER BLOCKED AND HAS A BLACK SUNLIGHT RESISTANT JACKET. THE CABLE IS NOT UL OR CSA LISTED, SINCE IT IS NOT FLAME RETARDANT. CONSULT THE NATIONAL ELECTRICAL CODE (NEC) ARTICLE 800 FOR USE IN BUILDINGS. FOR OUTDOOR USE ACCORDING TO ANSI/ICEA S-56-434 AND BROADBAND OUTDOOR USE ACCORDING TO ANSI/ICEA S-99-689.

SUPPORTED APPLICATIONS

IEEE 802.3an 10BASE-T (10 GIGABIT ETHERNET), 1000BASE-T (GIGABIT ETHERNET), 100BASE-T (FAST ETHERNET) AND IEEE 802.3 10BASE-T (ETHERNET), IEEE 802.3af POE, IEEE 802.at-2009 POE+, ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, 550 MHz BROADBAND VIDEO, ATM UP TO 4.8 Gbps, AND 10G Wi-Fi ACCESS POINTS

CONSTRUCTION

- PRIMARIES:** CONDUCTOR: 23 AWG (.6 mm) SOLID BARE COPPER
INSULATION: 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
- NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION
- INNER JACKET:** MATERIAL: BLACK POLYETHYLENE
NOMINAL DIAMETER: .260 (6.6 mm)
- BARRIER:** ALIEN CROSSTALK BARRIER TAPE
- NOTE:** RIPCORD PROVIDED UNDER OUTER JACKET
- OUTER JACKET:** MATERIAL: POLYETHYLENE
NOMINAL DIAMETER: .355 (9.02 mm)
COLOR: SEE TABLE 2

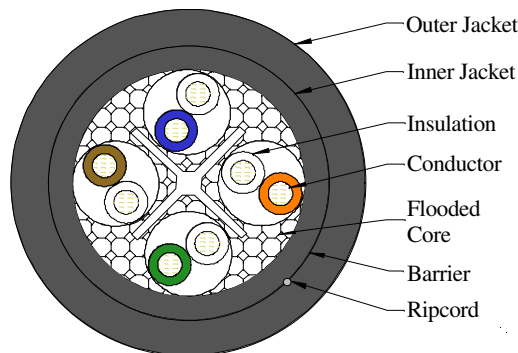


TABLE 1

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

TABLE 2

PART NUMBER	DESIGN NUMBER	JACKET COLOR
M59198	LT57976	BLACK
M59113	LT57767	TBA

PHYSICAL/MECHANICAL CHARACTERISTICS & STANDARDS

- CABLE WEIGHT w/reel:** 53 lbs/1000ft (79 kg/km)
- BEND RADIUS:** 3.6" (91 mm) MIN (10 x CABLE OD)
- PULLING TENSION:** 25 lbf (110 N) MAX
- OPERATING TEMP.:** -40°C to +75°C (-40°F to +167°F)
- STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)
- *INSTALLATION TEMP.:** -40°C to +60°C (-40°F to +140°F)
- * THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.**
- COLD BEND:** -40°C COMPLIANCE PER UL 1581
- WATER PENETRATION:** GR 421-CORE para. 4.3.5.1
ANSI/ICEA S-107-704 para. 8.2.1
ANSI/ICEA S-99-689
- OTHER STANDARDS:** OUTDOOR USE ANSI/ICEA S-56-434,
BROADBAND OUTDOOR USE ANSI/ICEA S-99-689



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Rev	Description	Date	Init.
B	UPDATE DIMAETERS, WGT, DESC W/SQ FT MKS	06/24/16	JS
C	UPD DESC, APPS, STDS, FTR, ELECS; ADD MECHS	10/09/17	JS
D	UPDATE DESC, STANDARDS, TABLE 3, FOOTER	12/05/17	JS/CC
E	UPDATE DESC, PHYS/MECHANICAL	12/13/17	CWC
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			Part Number: M59198

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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ELECTRICAL CHARACTERISTICS (REF TABLE 3)

STANDARDS: EXCEEDS ANSI/TIA-568-C.2 CAT 6A,
ANSI/ICEA S-116-732-2013 CAT 6A,
ANSI/NEMA WC-66 CATEGORY 6A,
ISO/IEC 11801 ed 2.2 (2011) CLASS EA &
IEC 61156-5 ed 2.0 HORIZONTAL CABLE

CONDUCTOR DCR: 7.9 Ω/100m (24.0 Ω/Mft) MAX

DCR UNBALANCE: 3% MAX (CONDUCTOR-CONDUCTOR)
5% MAX (PAIR-PAIR)

MUTUAL CAPACITANCE: 56 pF/m MAX

CAPACITANCE UNBALANCE PAIR/GROUND: 45 pF/100m MAX

CHARACTERISTIC IMPEDANCE: 115 Ω ± 13% (1 MHz)
100 Ω ± 7% (>1-500 MHz)

INPUT IMPEDANCE: 100 Ω ± 5% (1-4 MHz)
100 Ω ± 22% (>4-200 MHz)
100 Ω ± 32% (>200 MHz)

RETURN LOSS (RL): 20 + 5 log₁₀(f) dB MIN (1-10 MHz)
25 dB MIN (>10-20 MHz)
25 - 7 log₁₀(f/20) dB MIN (>20-100 MHz)

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

POWER SUM NEAR END CROSSTALK (PS-NEXT): 43.3 - 15 log₁₀(f/100) dB/100m MIN

POWER SUM ATTENUATION TO CROSSTALK RATIO (PS ACR): 23.2 - 20 log₁₀(f/100) dB/100m MIN

POWER SUM ATTENUATION TO CROSSTALK RATIO FAR END (PS ACRF): 28.2 - 20 log₁₀(f/100) dB/100m MIN

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

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

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

DELTA DELAY (SKEW): 45 ns/100m MAX

NOMINAL VELOCITY OF PROPAGATION (NVP): 65%

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)	PS NEXT (dB/100m)	PS ACR (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	max	min	min
4.0	2.1	72.3	70.2	64.8	20.0	570.0	67.0	67.0
8.0	3.8	63.3	59.5	52.8	23.0	552.0	67.0	66.2
10.0	5.3	58.8	53.4	46.7	24.5	546.7	67.0	60.1
16.0	5.9	57.3	51.4	44.8	25.0	545.4	67.0	58.2
20.0	7.5	54.2	46.8	40.7	25.0	543.0	67.0	54.1
25.0	8.4	52.8	44.5	38.8	25.0	542.0	67.0	52.2
31.25	9.4	51.3	42.0	36.8	24.3	541.2	67.0	50.2
62.5	10.5	49.9	39.4	34.9	23.6	540.4	67.0	48.3
100.0	15.0	45.4	30.4	28.9	21.5	538.6	65.6	42.3
200.0	19.1	42.3	23.2	24.8	20.1	537.6	62.5	38.2
250.0	27.6	37.8	10.2	18.8	18.0	536.9	58.0	32.2
300.0	31.1	36.3	5.3	16.8	17.3	536.5	56.5	30.2
350.0	34.3	35.1	0.9	15.3	16.8	536.3	55.3	28.7
400.0	37.2	34.1	--	13.9	16.3	536.1	54.3	27.3
450.0	40.0	33.3	--	12.8	15.9	535.9	53.5	26.2
500.0	42.7	32.5	--	11.7	15.5	535.8	52.7	25.1
	45.3	31.8	--	10.8	15.2	535.6	52.0	24.2



SWEEP TESTED TO 500 MHz.



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