

# LAN-Trak OSP Category 5e

## 4 Pair #24 AWG UTP Category 5e Outdoor Cable

**PART # M58790**

### DESCRIPTION

ENHANCED UNSHIELDED TWISTED PAIR (UTP) CATEGORY 5e CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER TIA 568-B. THE CABLE MEETS TIA 568-B.2 CATEGORY 5e AND ISO/IEC 11801 CATEGORY 5 ELECTRICAL CHARACTERISTICS AND IS TESTED TO 200 MHz. THE CABLE CONSISTS OF #24 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, FLOODED TO PREVENT MOISTURE INGRESS, UNDER AN OVERALL JACKET. THIS PRODUCT AND/OR ITS MANUFACTURE IS COVERED BY US PATENT NO. 5424491.

THE CABLE IS SUITABLE FOR OUTDOOR USE IN DUCT AND FOR 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.

THIS CABLE COMPLIES WITH THE EU-RoHS DIRECTIVE 2002/95/EC (RESTRICTIONS ON HAZARDOUS SUBSTANCES) REGULATIONS.

### SUPPORTED APPLICATIONS

IEEE 802.3 10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, ATM UP TO 155 Mbps, 550 MHz BROADBAND VIDEO AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 622 Mbps.

### CONSTRUCTION

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**COLOR CODE:** SEE TABLE 1 (WHITE CONDS HAVE INTEGRAL STRIPE TO MATCH THEIR MATE)

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER

**JACKET:** MATERIAL: POLYETHYLENE  
NOMINAL WALL: .040" (1.02 mm)  
NOMINAL DIAMETER: .246" (6.25 mm)  
COLOR: BLACK

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

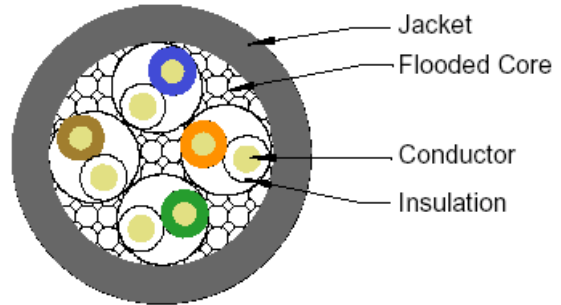


TABLE 1

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

### PHYSICAL CHARACTERISTICS

**CABLE WEIGHT:** 30 lbs/1000ft (45 kg/km)

**BEND RADIUS:** 2.5" (61 mm) MIN (10 x CABLE OD)

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP\*:** -20°C to +60°C (-4°F to +140°F)

\*THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

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### ELECTRICAL CHARACTERISTICS (REF TABLE 2)

<b>STANDARDS:</b>	TIA 568-B.2 CAT 5e HORIZONTAL CABLE	<b>NEAR END CROSSTALK (NEXT):</b>	35.3 - 15 log <sub>10</sub> (f/100) dB/100m MIN
<b>VOLTAGE RATING:</b>	300 VOLTS	<b>POWER SUM NEAR END CROSSTALK (PS-NEXT):</b>	32.3 - 15 log <sub>10</sub> (f/100) dB/100m MIN
<b>CONDUCTOR DCR:</b>	9.38 Ω/100m (28.6 Ω/Mft) MAX	<b>EQUAL LEVEL FAR END CROSSTALK (ELFEXT):</b>	23.8 - 20 log <sub>10</sub> (f/100) dB/100m MIN
<b>DCR UNBALANCE:</b>	5% MAX	<b>POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):</b>	20.8 - 20 log <sub>10</sub> (f/100) dB/100m MIN
<b>MUTUAL CAPACITANCE:</b>	46 pF/m (14 pF/ft) NOM	<b>PROPAGATION DELAY:</b>	534 + 36 / f ns/100m MAX
<b>CAPACITANCE UNBALANCE PAIR/GROUND:</b>	132 pF/100m (400 pF/Mft) MAX	<b>DELTA DELAY (SKEW):</b>	25 ns/100m MAX
<b>CHARACTERISTIC IMPEDANCE:</b>	100 Ω ± 15% (1-100 MHz)	<b>NOMINAL VELOCITY OF PROPAGATION (NVP):</b>	65%
<b>RETURN LOSS (RL):</b>	20 + 5 log <sub>10</sub> (f) dB MIN (1-10 MHz) 25 dB MIN (>10-20 MHz) 25 - 7 log <sub>10</sub> (f/20) dB MIN (>20 MHz)	WHERE f = FREQUENCY IN MHz from .772 to 100 MHz.	
<b>INSERTION LOSS:</b>	1.967 f + .023 f + $\frac{.050}{f}$ dB/100m MAX		

TABLE 2

### REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS			NEXT		ACR	PS-NEXT		PS-ACR	ELFEXT	PS-ELFEXT	RL
	(dB/100m)	(dB/mft)	(dB/mft)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB)
.772	avg	max	max	avg	min	min	avg	min	min	min	min	min
1.0	1.6	1.8	5.5	79	67.0	65.2	70	64.0	62.2	-	-	-
1.0	1.8	2.0	6.3	77	65.3	63.3	68	62.3	60.3	63.8	60.8	20.0
4.0	3.8	4.1	13	68	56.3	52.2	57	53.3	49.2	51.8	48.8	23.0
8.0	5.4	5.8	18	64	51.8	46.0	54	48.8	43.0	45.7	42.7	24.5
10.0	6.0	6.5	20	62	50.3	43.8	52	47.3	40.8	43.8	40.8	25.0
16.0	7.6	8.2	25	60	47.2	39.0	50	44.2	36.0	39.7	36.7	25.0
20.0	8.6	9.3	28	58	45.8	36.5	48	42.8	33.5	37.8	34.8	25.0
25.0	9.7	10.4	32	57	44.3	33.9	47	41.3	30.9	35.8	32.8	24.3
31.25	10.9	11.7	36	56	42.9	31.2	46	39.9	28.2	33.9	30.9	23.6
62.5	15.8	17.0	52	52	38.4	21.4	42	35.4	18.4	27.9	24.9	21.5
100.0	20.5	22.0	67	48	35.3	13.3	38	32.3	10.3	23.8	20.8	20.1
155.0	26.2	28.1	86	45	32.4	4.3	35	29.4	1.3	20.0	17.0	18.8
200.0	30.2	32.4	99	43	30.8	-	33	27.8	-	17.8	14.8	18.0

VALUES ABOVE 100 MHz ARE FOR ENGINEERING INFORMATION ONLY.

Mohawk reserves the right to change specification in the interest of product enhancement.



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