

5e LAN®

4 Pair #24 AWG ScTP Category 5e Cable

DESCRIPTION

SHIELDED TWISTED PAIR (ScTP) CATEGORY 5e CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER TIA 568-B. THE CABLE MEETS CATEGORY 5 AND 5e 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 WITH AN OVERALL FOIL SHIELD, DRAIN AND RIPCORD, UNDER AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0.

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 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.

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: PL: ALL FEP NP: THERMOPLASTIC
PAIR ASSEMBLY:	2 PRIMARIES TWISTED IN VARIED LAYS
COLOR CODE:	SEE TABLE 1
CABLE ASSEMBLY:	4 PAIRS CABLED TOGETHER
BARRIER:	OVERALL POLYESTER TAPE, 25% OVERLAP
DRAIN:	#24 AWG SOLID TINNED COPPER
SCREEN (SHIELD):	OVERALL ALUMINUM/POLYESTER TAPE, ALUM SIDE FACING IN, 25% OVERLAP, 100% COVERAGE
JACKET:	PL: NO LEAD PLENUM RATED THERMOPLASTIC
	NP: NO LEAD FLAME RETARDANT THERMOPLASTIC
	JACKET COLOR: SEE TABLE 2
	NOMINAL CABLE OD: PL: .218" (5.54 mm) NP: .232" (5.89 mm)

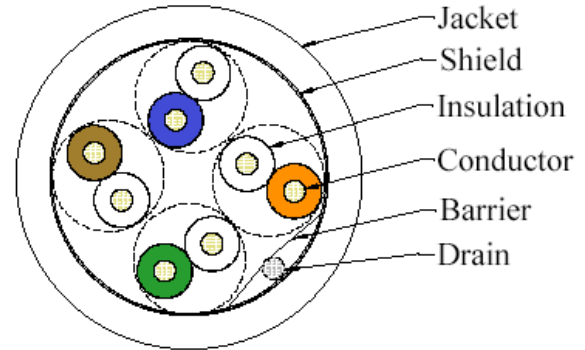


TABLE 1

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

TABLE 2

PLENUM		NON-PLENUM	
PART NUMBER	JACKET COLOR	PART NUMBER	JACKET COLOR
M58185	WHITE	M58195	WHITE
M58186	BLUE	M58196	BLUE
M58187	PINK	M58197	PINK
M58188	YELLOW	M58198	YELLOW
M58144	GRAY	M58145	GRAY
M58189	GREEN	M58199	GREEN
M58190	RED	M58200	RED
M58191	ORANGE	M58201	ORANGE
M58192	BLACK	M58202	BLACK
M58193	VIOLET	M58203	VIOLET

PHYSICAL CHARACTERISTICS

CABLE WEIGHT:	PL: 31 lbs/1000ft (46 kg/km)
	NP: 30 lbs/1000ft (45 kg/km)
BENDING RADIUS:	1" (25.4 mm) MIN (4 x CABLE OD)
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. 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:	9.38 Ω /100m (28.6 Ω /Mft) MAX
DCR UNBALANCE:	5% MAX
MUTUAL CAPACITANCE:	46 pF/m (14 pF/ft) NOM
CAPACITANCE UNBALANCE PAIR/GROUND:	132 pF/100m (400 pF/Mft) MAX
CHARACTERISTIC IMPEDANCE:	100 $\Omega \pm 15\%$ (1-100 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:	$1.967 f + .023 f + \frac{.050}{f}$ dB/100m MAX

NEAR END CROSSTALK (NEXT):	36.3 - 15 $\log_{10}(f/100)$ dB/100m MIN
POWER SUM NEAR END CROSSTALK (PS-NEXT):	32.3 - 15 $\log_{10}(f/100)$ dB/100m MIN
EQUAL LEVEL FAR END CROSSTALK (ELFEXT):	23.8 - 20 $\log_{10}(f/100)$ dB/100m MIN
POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):	20.8 - 20 $\log_{10}(f/100)$ dB/100m MIN
PROPAGATION DELAY:	534 + 36 / f ns/100m MAX
DELTA DELAY (SKEW):	30 ns/100m MAX
NOMINAL VELOCITY OF PROPAGATION (NVP):	72% PLENUM 68% NON-PLENUM

WHERE f = FREQUENCY IN MHz from .772 to 100 MHz.

TABLE 3

REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m) (dB/mft)			NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	5.5	79	68.0	66.2	70	64.0	62.2	-	-	-
1.0	1.8	2.0	6.3	77	66.3	64.3	68	62.3	60.3	63.8	60.8	20.0
4.0	3.8	4.1	13	68	57.3	53.2	57	53.3	49.2	51.8	48.8	23.0
8.0	5.4	5.8	18	64	52.8	47.0	54	48.8	43.0	45.7	42.7	24.5
10.0	6.0	6.5	20	62	51.3	44.8	52	47.3	40.8	43.8	40.8	25.0
16.0	7.6	8.2	25	60	48.2	40.0	50	44.2	36.0	39.7	36.7	25.0
20.0	8.6	9.3	28	58	46.8	37.5	48	42.8	33.5	37.8	34.8	25.0
25.0	9.7	10.4	32	57	45.3	34.9	47	41.3	30.9	35.8	32.8	24.3
31.25	10.9	11.7	36	56	43.9	32.2	46	39.9	28.2	33.9	30.9	23.6
62.5	15.8	17.0	52	52	39.4	22.4	42	35.4	18.4	27.9	24.9	21.5
100.0	20.5	22.0	67	48	36.3	14.3	38	32.3	10.3	23.8	20.8	20.1
155.0	26.2	28.1	86	45	33.4	5.3	35	29.4	1.3	20.0	17.0	18.8
200.0	30.2	32.4	99	43	31.8	-	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.