



CAT 3 Power Sum

HIGH PAIR COUNT #24 AWG UTP CAT 3 Cable

DESCRIPTION

UNSHIELDED TWISTED PAIR (UTP) CATEGORY 3 CABLE FOR USE IN BACKBONE CABLING SYSTEMS AS DESCRIBED IN TIA/EIA 568-B. THE CABLE CONSISTS OF #24 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO TWISTED PAIRS, WITH A RIPCORD, UNDER AN OVERALL JACKET.

THE PLENUM RATED CABLE IS RATED FOR USE IN AIR HANDLING DUCTS AND SPACES IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE PLENUM CABLE IS ETL (USA) & cETL (CANADA) LISTED FOR THIS APPLICATION BY PASSING NFPA 262/UL 910 (STEINER TUNNEL) TEST. THE NON-PLENUM IS UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING UL 1666 RISER CABLE FLAMMABILITY TEST.

SUPPORTED APPLICATIONS

ANALOG & DIGITAL VOICE, ISDN, IBM 3270 & 3x, IEEE 802.5 4 Mbps, TOKEN RING®, IEEE 802.3, 1BASE-5 & 10 BASE-T, 10 Mbps ETHERNET®, 100 BASE VG-ANYLAN.

CONSTRUCTION

PRIMARIES:

CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER
INSULATION: PLENUM RATED THERMOPLASTIC
NON-PLENUM FIRE RETARDANT THERMOPLASTIC

PAIR ASSEMBLY:

2 PRIMARIES TWISTED IN VARIED LAYS

COLOR CODE: SEE TABLE 1

CABLE ASSEMBLY:

25 PAIRS CABLED TOGETHER
GROUPS OF 25 PAIRS, ALONG WITH SPARE PAIRS, ARE CABLED TOGETHER

BARRIER:

OVERAL POLYESTER TAPE, 25% OVERLAP (>100PR)

JACKET:

PLENUM: GRAY ThermoPlen®*
NON-PLENUM: DEC 068 GRAY PVC

LISTINGS:

PLENUM: UL/cUL CMP, MPP
NON-PLENUM: UL/cUL CMR, MPR

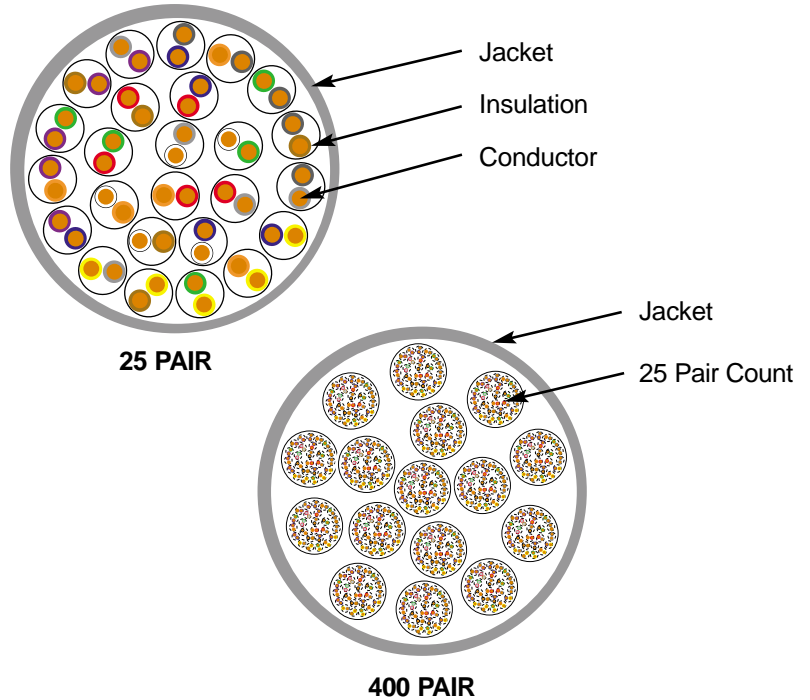
PHYSICAL CHARACTERISTICS

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 BELOW 0°C (32°F).



Mohawk Part No.	Pair Count	Jacket Diameter		Weight		Min Bend Radius	
		inch	mm	lbs/ M'	kg/ km	inch	mm

Non-Plenum

M55700	25 PAIR	.364	9.25	100	149	3.6	91
M55216	50 PAIR	.591	15.01	197	293	5.9	150
M55211	100 PAIR	.707	17.96	381	567	7.1	180
M55212	200 PAIR	1.054	26.77	814	1211	10.5	267
M57098	300 PAIR	1.222	31.04	1186	1765	12.25	311

Plenum

M56801	25 PAIR	.364	9.25	108	161	3.6	91
M56126	50 PAIR	.535	13.59	213	317	5.4	137
M56128	100 PAIR	.732	18.59	424	631	7.3	185
M56129	200 PAIR	1.044	26.52	884	1315	10.4	264
M57211	300 PAIR	1.276	32.41	1301	1936	12.75	324
M58349	400 PAIR	1.59	40.38	1750	2604	16	406

*Plenum rated Thermoplastic

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TABLE 1

PAIR NUMBER	PAIR COLOR CODE	
	1	WHITE-BLUE
2	WHITE-ORANGE	ORANGE-WHITE
3	WHITE-GREEN	GREEN-WHITE
4	WHITE-BROWN	BROWN-WHITE
5	WHITE-GRAY	GRAY-WHITE
6	RED-BLUE	BLUE-RED
7	RED-ORANGE	ORANGE-RED
8	RED-GREEN	GREEN-RED
9	RED-BROWN	BROWN-RED
10	RED-GRAY	GRAY-RED
11	BLACK-BLUE	BLUE-BLACK
12	BLACK-ORANGE	ORANGE-BLACK
13	BLACK-GREEN	GREEN-BLACK
14	BLACK-BROWN	BROWN-BLACK
15	BLACK-GRAY	GRAY-BLACK
16	YELLOW-BLUE	BLUE-YELLOW
17	YELLOW-ORANGE	ORANGE-YELLOW
18	YELLOW-GREEN	GREEN-YELLOW
19	YELLOW-BROWN	BROWN-YELLOW
20	YELLOW-GRAY	GRAY-YELLOW
21	PURPLE-BLUE	BLUE-PURPLE
22	PURPLE-ORANGE	ORANGE-PURPLE
23	PURPLE-GREEN	GREEN-PURPLE
24	PURPLE-BROWN	BROWN-PURPLE
25	PURPLE-GRAY	GRAY-PURPLE

ELECTRICAL CHARACTERISTICS

STANDARDS:	TIA/EIA 568-B.2 CAT 3 BACKBONE CABLE
CONDUCTOR DCR:	9.38 Ω/100m (28.6 ΩMft) MAX
DCR EMBALANCE:	5% MAX
MUTUAL CAPACITANCE:	66 pF/m (20 pF/ft) NOM
CAPACITANCE UNBALANCE PAIR/GROUND:	330 pF/100m (1000 pF/Mft) MAX
CHARACTERISTIC IMPEDANCE:	100 Ω ± 15% (1-16 MHz)
STRUCTURAL RETURN LOSS (SRL):	12 dB MIN (1-10 MHz) 12 - 10 MHz)log ₁₀ (f/10) dB MIN (>10 MHz)
ATTENUATION:	2.320√f + .238f dB/100m MAX
NEAR END CROSSTALK (NEXT):	47 - 15 log ₁₀ (f / 0.772) dB/100m MIN
POWER SUM NEAR END CROSSTALK (PS-NEXT):	43 - 15 log ₁₀ (f / 0.772) dB/100m MIN
PROPAGATION DELAY:	534 + 36√f ns/100m MAX
DELTA DELAY (SKEW):	45 ns/100m MAX
NOMINAL VELOCITY OF PROPAGATION (NVP):	64%
WHERE f = FREQUENCY IN MHz from .772 to 16 MHz	
SEE TABLE 2 FOR ADDITIONAL ELECTRICAL CHARACTERISTICS.	

TABLE 2

REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	ATTENUATION (dB/100m)			NEXT (dB/100m)		ACR* (dB/100m)	POWER SUM NEXT (dB/100m)		PS-ACR* (dB/100m)	SRL (dB)
	avg	max	max	avg	min		avg	min		
.772	1.9	2.2	6.8	52	47	50.1	48	43	46.1	-
1.0	2.2	2.6	7.8	50	45	47.8	46	41	43.8	12
4.0	5.0	5.6	17	41	36	36.0	37	32	32.0	12
8.0	7.7	8.5	26	36	31	28.3	32	27	24.3	12
10.0	8.8	9.7	30	35	30	26.2	31	26	22.2	12
16.0	11.9	13.1	40	32	27	20.1	28	23	16.1	10

*ACR - ATTENUATION TO CROSSTALK RATIO