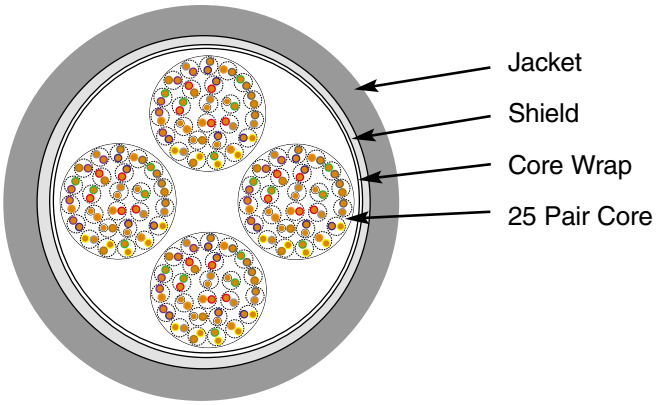
ARMM Riser Cable

MULTI-PAIR 24 AWG CATEGORY 3



DESCRIPTION

RISER CABLE IS A RUGGED MULTI-PAIR CABLE THAT EXCEEDS 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, CORE WRAP, CORRUGATED ALUMINUM SHIELD BONDED TO AN OVERALL PVC JACKET.

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.

SUPPORTED APPLICATIONS

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

CONSTRUCTION

PRIMARIES:
CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER
INSULATION: FOAM POLYOLEFIN/PVC SKIN

PAIR ASSEMBLY:
2 PRIMARIES TWISTED IN VARIED LAYS

SUB-ASSEMBLY:
25 PAIRS CABLED TOGETHER WITH A BINDER

CABLE ASSEMBLY:
GROUP PAIRS CABLED TOGETHER

COLOR CODE: SEE TABLE 2

CORE WRAP: OVERALL POLYESTER TAPE

SHEILD TAPE:
OVERALL .008" (.20 mm) CORRUGATED ALUMINUM TAPE, 100% COVERAGE, BONDED TO JACKET

JACKET: GRAY FLAME RETARDANT PVC
NOMINAL OD: SEE TABLE 1

LISTINGS: UL/cUL TYPE CMR

TABLE 1

Mohawk Part No.	Pair Count	Jacket Diameter inch	Jacket Diameter mm	Min Bend Radius inch	Min Bend Radius mm	Weight lbs/mft	Weight kg/km
M58452	25 PAIR	.470	11.9	4.7	119	115	171
M58460	50 PAIR	.660	16.8	6.9	188	230	342
M58461	75 PAIR	.760	19.3	7.8	190	345	519
M58453	100 PAIR	.850	21.6	8.5	215	412	613
M58462	150 PAIR	.990	25.1	9.9	261	616	918
M58454	200 PAIR	1.10	27.9	11	280	820	1222
M58455	250 PAIR	1.22	30.9	12.2	310	950	1415
M58456	300 PAIR	1.32	33.5	13.2	335	1100	1639
M58457	400 PAIR	1.50	38.1	15	380	1400	2086

PHYSICAL CHARACTERISTICS

CABLE WEIGHT: SEE TABLE 1

BENDING RADIUS: SEE TABLE 1 (10 X CABLE OD)

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*: -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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TABLE 2

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

NOTE: COLOR CODE REPEATED FOR EACH GROUP OF 25/PRS. BINDER COLORS ARE FOR EACH GROUP OF 25 PAIRS.

ELECTRICAL CHARACTERISTICS (See Table 3)

STANDARDS: TIA/EIA 568-B.2 CAT 3 BACKBONE CABLE, MEETING POWER SUM NEXT

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

DCR UNBALANCE: 5% MAX

MUTUAL CAPACITANCE: 56 pF/m (17 pF/ft) MAX AVG

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 $\log_{10}$ (f/10) dB MIN (>10 MHz)

ATTENUATION: $2.320\sqrt{f} + .238f$ 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: $534 + 36\sqrt{f}$ ns/100m MAX

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

NOMINAL VELOCITY OF PROPAGATION (NVP): 68%

WHERE f = FREQUENCY IN MHz from .772 to 16 MHz

TABLE 3
REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	ATTENUATION (dB/100m)		(dB/mft)	NEXT (dB/100m)		ACR* (dB/100m)	POWER SUM NEXT (dB/100m)		PS-ACR* (dB/100m)	SRL (dB)
	avg	max	max	avg	min	avg	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

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