

Taming Harsh Environments with Industrial Ethernet.



MOHAWK

Cabling Excellence for Open Architecture

Omniguard

Rugged Cable Solutions for Extreme Environments

Market Commitment

At Mohawk, we strive to produce cables and solutions for each specific installation. Today's high-performance networking applications are moving from clean office environments out to greasy factory floors and have created a unique market. Mohawk has responded with a line of Industrial Ethernet cable solutions. These cables are remarkably durable to withstand EMI, fluctuating temperature ranges, abrasion, crushing, vibration, chemical and oil and other fluids, flame and prolonged UV exposure.

Evolving industry standards, based on commercial environments, are being adapted to Industrial Ethernet-based networks in harsh conditions to provide guidelines to assure cables and connectivity products meet these environmental challenges. Mohawk's telecommunications cabling systems are being designed to support these standards to assure product reliability and to eliminate interconnection complexity between the office to the factory floor or even in extreme outdoors, such as military applications.

Stable Cable Constructions

The criteria that separates Mohawk from other cable manufacturers is their ability to design and produce cost-effective cables that can meet the proposed environmental requirements, while meeting or exceeding the electrical and mechanical standards. Mohawk offers a wide range of cable constructions including fiber, copper, composite or hybrid cables of all backbone and horizontal applications. All cables offer a wide temperature range as specified by the proposed TIA/EIA TR-42.9 standards.

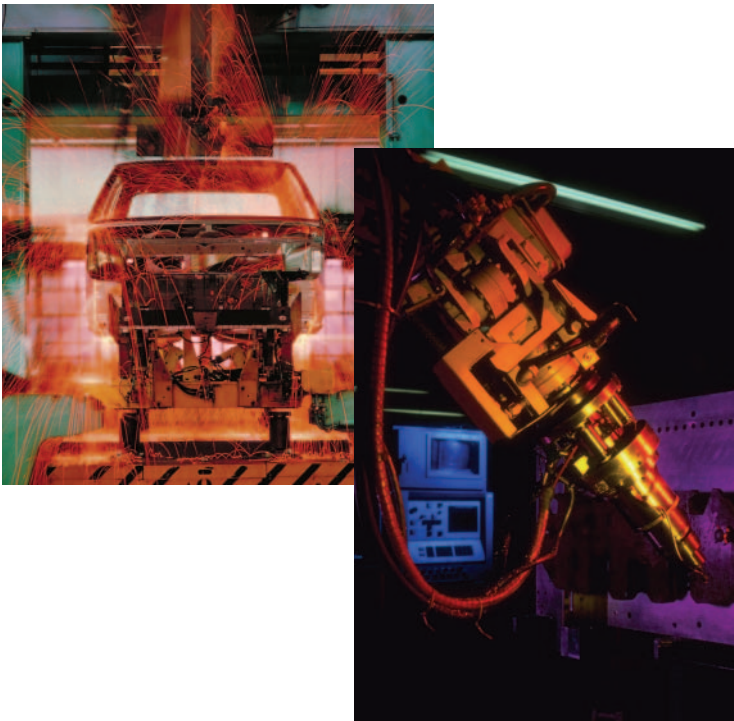
Mohawk's Industrial Grade AdvanceNet™ and LAN copper cable families include both unshielded and shielded twisted pair, Category 5e and

Category 6, constructions. These cables are designed to meet or exceed the performance standards of TIA/EIA-568-B and ISO/IEC11801 requirements, while providing added jacket compounds for durability. These cables are riser, non-plenum for use as a vertical runs in a shaft and for general-purpose communications. Industrial Ethernet copper cables have a black oil and UV-resistant jacket for excellent abrasion/cut through resistance with a temperature range of -20°C to +60°C.

For longer distances and higher bandwidth requirements while withstanding noise and EMI, Mohawk's offering of fiber optic cables feature a chemical resistant and flame retardant outer jacket for outdoor aerial, ducts and burial applications. Meeting UL1581 flame test, these cables are OFN listed and perform in the wide operating range of -40°C to +80°C.

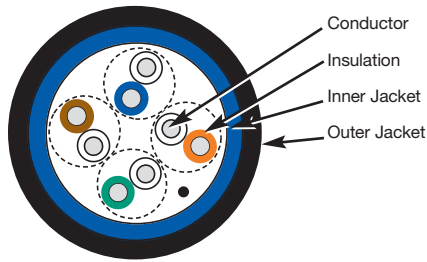
Long-Term Commitment

Mohawk's history spans fifty years of innovations and dedication to progressive cable technologies. From comprehensive research through unique manufacturing capabilities, Mohawk is committed to excellence in producing a wide variety of copper and fiber cable solutions for the telecommunications industry. Mohawk's manufacturing facility is ISO 9001 registered and all products utilize industry leading independent testing laboratories to assure compliance for safety and performance. As part of the worldwide Belden CDT group, Mohawk has access into the vast engineering and financial resources from their manufacturing facilities across North America and Europe, as well as distribution centers in the United States, Canada, Singapore, Australia and the Netherlands.



MOHAWK

Category 5 UTP Industrial Grade



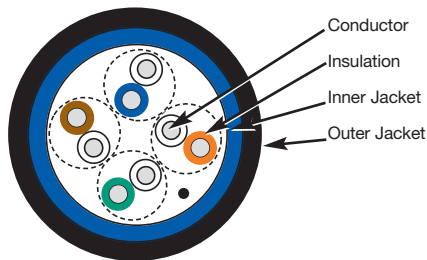
REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	ATTENUATION (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)	SRL	RL (dB)
	avg	max	max	avg	min	min	avg	min	min	min	min	min	min
.772	1.6	1.8	5.5	7.9	68.0	66.2	7.0	64.0	62.2	-	-	-	-
1.0	1.8	2.0	6.3	7.7	66.3	64.3	6.8	62.3	60.3	61.8	58.8	23.0	17.0
4.0	3.8	4.1	1.3	6.8	57.3	53.2	5.7	53.3	49.2	49.7	46.7	23.0	18.8
8.0	5.4	5.8	1.8	6.4	52.8	47.0	5.4	48.8	43.0	43.7	40.7	23.0	19.7
10.0	6.0	6.5	2.0	6.2	51.3	44.8	5.2	47.3	40.8	41.8	38.8	23.0	20.0
16.0	7.6	8.2	2.5	6.0	48.3	40.1	5.0	44.3	36.1	37.7	34.7	23.0	20.0
20.0	8.6	9.3	2.8	5.8	46.8	37.5	4.8	42.8	33.5	35.7	32.7	23.0	20.0
25.0	9.7	10.4	3.2	5.7	45.3	34.9	4.7	41.3	30.9	33.8	30.8	22.0	19.3
31.25	10.9	11.7	3.6	5.6	43.9	32.2	4.6	39.9	28.2	31.9	28.9	21.1	18.6
62.5	15.8	17.0	5.2	5.2	39.4	22.4	4.2	35.4	18.4	25.8	22.8	18.1	16.5

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type	Diameter	Weight
				inch mm	lbs/ M' kg/ k m
M58630	4 PAIR 24 AWG UTP	Polyolefin	Black Thermoplastic	.233 5.92	32 48

US Patent No. 5,424,491.

Category 5e UTP Industrial Grade 5e LAN



REFERENCE ELECTRICAL CHARACTERISTICS

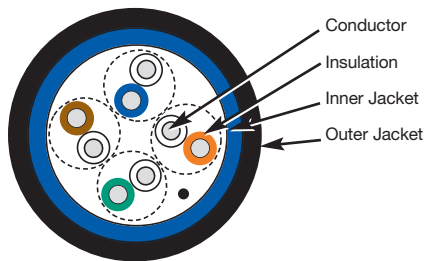
FREQ (MHz)	INSERTION LOSS (dB/100m) (dB/mft)			NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL
	avg	max	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	5.5	7.9	68.0	66.2	7.0	64.0	62.2	-	-	-
1.0	1.8	2.0	6.3	7.7	66.3	64.3	6.8	62.3	60.3	63.8	60.8	20.0
4.0	3.8	4.1	1.3	6.8	57.3	53.2	5.7	53.3	49.2	51.8	48.8	23.0
8.0	5.4	5.8	1.8	6.4	52.8	47.0	5.4	48.8	43.0	45.7	42.7	24.5
10.0	6.0	6.5	2.0	6.2	51.3	44.8	5.2	47.3	40.8	43.8	40.8	25.0
16.0	7.6	8.2	2.5	6.0	48.2	40.0	5.0	44.2	36.0	39.7	36.7	25.0
20.0	8.6	9.3	2.8	5.8	46.8	37.5	4.8	42.8	33.5	37.8	34.8	25.0
25.0	9.7	10.4	3.2	5.7	45.3	34.9	4.7	41.3	30.9	35.8	32.8	24.3
31.25	10.9	11.7	3.6	5.6	43.9	32.2	4.6	39.9	28.2	33.9	30.9	23.6
62.5	15.8	17.0	5.2	5.2	39.4	22.4	4.2	35.4	18.4	27.9	24.9	21.5
100.0	20.5	22.0	6.7	4.8	36.3	14.3	3.8	32.3	10.3	23.8	20.8	20.1

Values Above 100 MHz are for Engineering Information Only

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type	Diameter	Weight
				inch mm	lbs/ M' kg/ k m
M58620	4 PAIR 24 AWG UTP	Polyolefin	Black Thermoplastic	.233 5.92	32 48

US Patent No. 5,424,491.

Category 5E+ UTP Industrial Grade 5E+ MegaLAN



REFERENCE ELECTRICAL CHARACTERISTICS

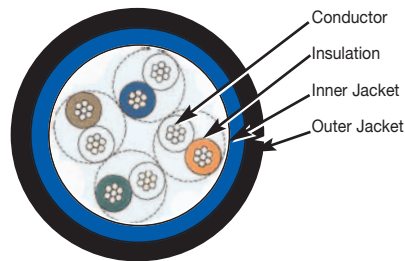
FREQ (MHz)	INSERTION LOSS (dB/100m) (dB/mft)			NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL
	avg	max	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	5.5	8.2	72.0	72.2	7.5	70.0	68.2	-	-	-
1.0	1.8	2.0	6.2	8.0	70.3	70.3	7.3	68.3	66.3	67.8	64.8	20.0
4.0	3.6	4.0	12.2	7.0	61.3	59.3	6.3	59.3	55.3	55.8	52.8	23.0
8.0	5.2	5.7	17.4	6.6	56.8	53.1	5.9	54.8	49.1	49.7	46.7	24.5
10.0	5.8	6.4	19.4	6.4	55.3	50.9	5.8	53.3	46.9	47.8	44.8	25.0
16.0	7.3	8.1	24.7	6.2	52.2	46.1	5.6	50.2	42.1	43.7	40.7	25.0
20.0	8.3	9.1	27.7	6.0	50.8	43.7	5.4	48.8	39.7	41.8	38.8	25.0
25.0	9.3	10.2	31.0	5.9	49.3	41.1	5.2	47.3	37.1	39.8	36.8	24.3
31.25	10.4	11.4	34.8	5.8	47.9	38.5	5.1	45.9	34.5	37.9	34.9	23.6
62.5	15.1	16.4	5.0	5.4	43.4	29.0	4.7	41.4	25.0	31.9	28.9	21.5
100.0	19.6	21.0	6.4	5.0	40.3	21.3	4.3	38.3	17.3	27.8	24.8	20.1
155.0	25.0	26.6	8.1	4.8	37.4	12.9	4.1	35.4	8.9	24.0	21.0	18.8
200.0	28.8	30.5	9.3	4.6	35.8	7.3	4.0	33.8	3.3	21.8	18.8	18.0
250.0	32.8	34.4	10.5	4.5	34.3	1.9	3.8	32.3	-	19.8	16.8	17.3
300.0	36.5	38.0	11.6	4.4	33.1	-	3.7	31.1	-	-	-	16.8
350.0	40.0	41.4	12.6	4.3	32.1	-	3.6	30.1	-	-	-	16.3

Values Above 250 MHz are for Engineering Information Only

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type	Diameter	Weight
				inch mm	lbs/ M' kg/ k m
M58629	4 PAIR 24 AWG UTP	Polyolefin	Black Thermoplastic	.233 5.92	32 48

US Patent No. 5,424,491.

Category 5e Stranded UTP Industrial Grade



REFERENCE ELECTRICAL CHARACTERISTICS

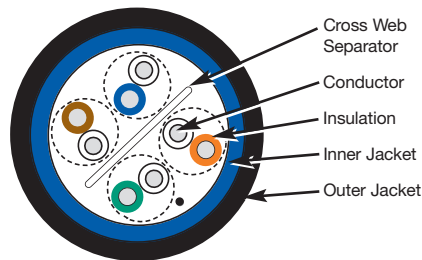
FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB/100m)	
	avg	max	max	avg	min	min	avg	min	min	min	min	
.772	2.0	2.2	6.7	7.9	68.0	65.8	7.0	64.0	61.8	-	-	-
1.0	2.2	2.5	7.5	7.7	66.3	63.9	6.8	62.3	59.9	63.8	60.8	20.0
4.0	4.7	4.9	15	6.8	57.3	52.4	5.7	53.3	48.4	51.8	48.8	23.0
8.0	6.6	6.9	21	6.4	52.8	45.9	5.4	48.8	41.9	45.7	42.7	24.5
10.0	7.4	7.8	24	6.2	51.3	43.5	5.2	47.3	39.5	43.8	40.8	25.0
16.0	9.4	9.9	30	6.0	48.2	38.3	5.0	44.2	34.3	39.7	36.7	25.0
20.0	10.5	11.1	34	5.8	46.8	35.7	4.8	42.8	31.7	37.8	34.8	25.0
25.0	11.9	12.5	3.8	5.7	45.3	32.8	4.7	41.3	28.8	35.8	32.8	24.2
31.25	13.4	14.1	4.3	5.6	43.9	29.8	4.6	39.9	25.8	33.9	30.9	23.3
62.5	19.4	20.4	6.2	5.2	39.4	19.0	4.2	35.4	15.0	27.9	24.9	20.7
100.0	25.1	26.4	8.0	4.8	36.3	9.9	3.8	32.3	5.9	23.8	20.8	19.0
155.0	32.0	33.7	10.3	4.4	33.4	-	3.5	29.4	-	20.0	17.0	17.4

Values Above 100 MHz are for Engineering Information Only

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter inch mm	Weight lbs/ M' kg/ k m
M58509	4 PAIR 24 AWG UTP STRANDED	Polyolefin	Black Thermoplastic .260 6.60	37 55

US Patent No. 5,424,491.

Category 6e UTP Industrial Grade AdvanceNet



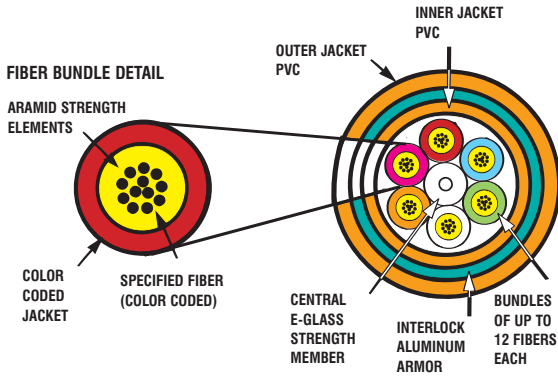
REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB/100m)	
	avg	max	avg	min	min	avg	min	min	min	min	min	
.772	1.6	1.8	9.0	80.0	78.2	-	-	76.2	-	-	-	-
1.0	1.8	2.0	8.8	78.3	76.3	70.0	68.0	74.3	70.0	68.0	20.0	-
4.0	3.5	3.8	7.9	69.3	65.5	58.0	56.0	63.5	58.0	56.0	24.2	-
8.0	4.9	5.3	7.5	64.8	59.5	51.9	49.9	57.5	51.9	49.9	26.3	-
10.0	5.6	5.9	7.3	63.3	57.4	50.0	48.0	55.4	50.0	48.0	27.0	-
16.0	7.1	7.5	7.0	60.2	52.7	45.9	43.9	50.7	45.9	43.9	27.0	-
20.0	7.9	8.4	6.9	58.8	50.4	44.0	42.0	48.4	44.0	42.0	27.0	-
25.0	8.8	9.4	6.7	57.3	47.9	42.0	40.0	45.9	42.0	40.0	26.5	-
31.25	10.0	10.6	6.6	55.9	45.3	40.1	38.1	43.3	40.1	38.1	25.9	-
62.5	14.3	15.3	6.1	51.4	36.1	34.1	32.1	34.1	34.1	32.1	24.2	-
100.0	18.4	19.7	5.8	48.3	28.6	30.0	28.0	26.6	30.0	28.0	23.1	-
155.0	23.4	25.0	5.5	45.4	20.4	26.2	24.2	18.4	26.2	24.2	22.0	-
200.0	27.0	28.8	5.4	43.8	15.0	24.0	22.0	13.0	24.0	22.0	21.4	-
250.0	30.5	32.6	5.2	42.3	9.7	22.0	20.0	7.7	22.0	20.0	20.9	-
300.0	33.9	36.2	5.1	41.1	4.9	20.5	18.5	2.9	20.5	18.5	20.4	-
350.0	37.0	39.5	5.0	40.1	0.6	19.1	17.1	-	19.1	17.1	20.1	-
400.0	40.0	42.7	4.9	39.3	-	18.0	16.0	-	-	-	19.7	-
500.0	45.5	48.6	4.8	37.8	-	16.0	14.0	-	-	-	19.2	-
550.0	48.2	51.5	4.7	37.2	-	-	-	-	-	-	19.0	-
600.0	50.7	54.2	4.7	36.6	-	-	-	-	-	-	18.8	-

Values Above 350 MHz are for Engineering Information Only

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter inch mm	Weight lbs/ M' kg/ k m
M58622	4 PAIR 24 AWG UTP	Polyolefin	Black Thermoplastic .266 6.76	39 58

US Patent Nos. 6,570,095 and 5,424,491.



Recommended Applications

- Industrial environments
- Rugged installations
- Mining Shafts
- Telecommunications and data trunk
- Replacement for innerduct

Product Features

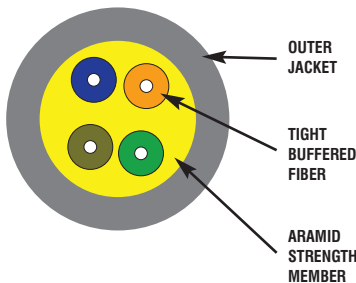
- Excellent mechanical protection
- Heavy duty construction
- Eliminates need for innerduct
- Versions available for outside plant
- Colored armor available

Plenum

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M9X240	6	12.0	.471	129	87	23.9	9.4	18.0	7.1	1201	270
M9X241	12	12.9	.506	153	103	25.7	10.1	19.3	7.6	1334	300
M9X242	24	16.0	.631	225	151	32.0	12.6	24.1	9.5	1735	390

Tactical Cables

AdvanceLite™ Fiber Optic



Recommended Applications

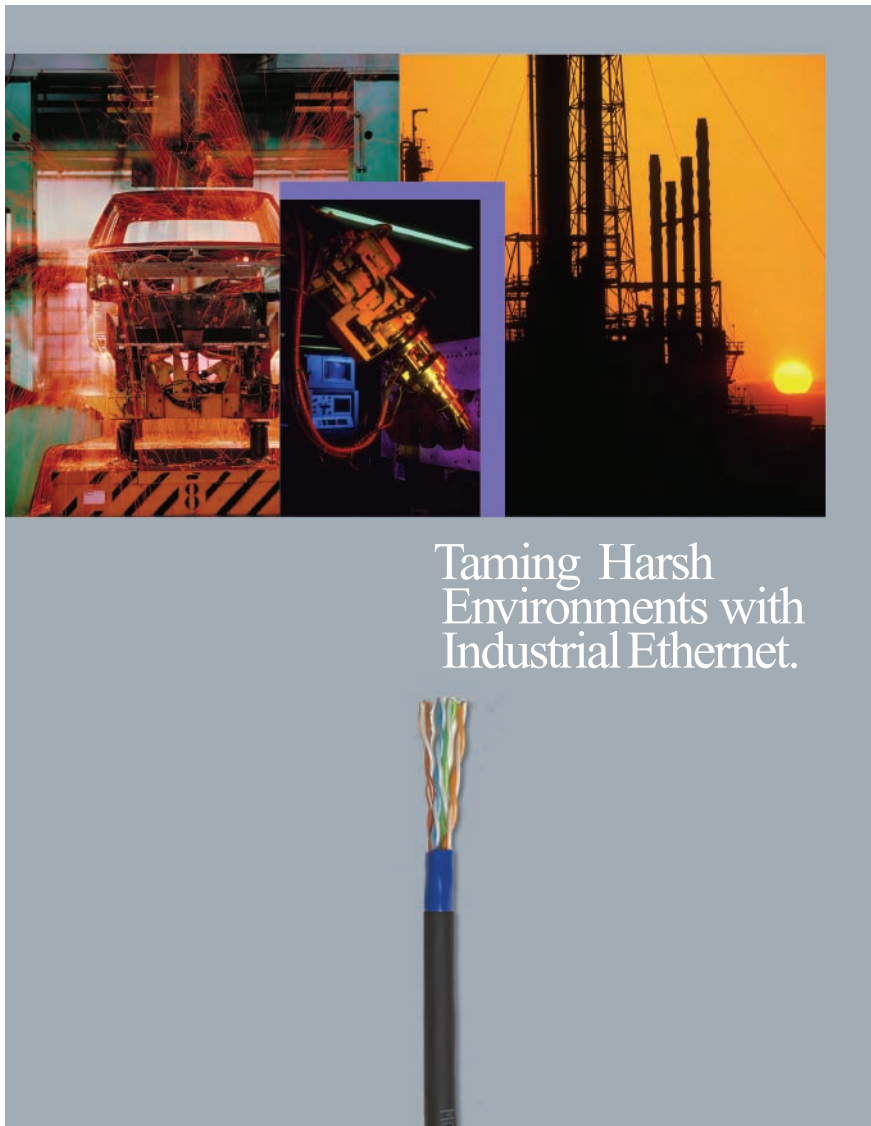
- ENG vehicles
- Outdoor events
- Re-deployable communications
- Digital camera transmission

Product Features

- Rugged jacket
- Durable design for repeated handling
- Designed to military standards
- Superior level of crush resistance

Multimode (62.5/125)

Part Number	Fiber Count	Nominal OD		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M96571	2	5.5	.217	28	19	8.3	3.2	5.5	2.2	1468	330
M96551	4	5.7	.225	31	21	8.6	3.4	5.8	2.3	1468	330
M96572	6	6.0	.236	34	23	9.0	3.5	6.0	2.4	1468	330
M96573	8	6.3	.250	39	26	9.7	3.8	6.4	2.5	1468	330
M96574	10	6.7	.265	42	28	10.2	4.0	6.9	2.7	1468	330
M96575	12	7.1	.280	46	31	10.5	4.1	7.0	2.8	1468	330



Taming Harsh
Environments with
Industrial Ethernet.

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Mohawk reserves the right to revise any specifications
in the interest of product enhancement.

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SystemMATE, HomeLAN, UltraLink, MegaLink, GigaLink, AdvanceLink,
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