

Industrial Ethernet Cable - Cat5e

Industrial Ethernet Cable - Cat5e Cable Selection									
Part Number	Wiring Standard	Jacket Color	Shield	No. of Pairs	Pair Colors	Description	Approximate Weight (lb/ft)	Minimum Cut Length (ft) *	Price per foot
<u>Q5941-1</u>	Cat5e	Black	Unshielded	4	Pair 1 - Blue/White & Blue Pair 2 - Orange/White & Orange Pair 3 - Green/White & Green Pair 4 - Brown/White & Brown	unshielded, 4 twisted pairs, 22 AWG, solid, bare copper, polyethylene conductor insulation material, PVC jacket, black, cut to length.	0.04	20	\$0.79
<u>Q5942-1</u>		Teal				unshielded, 4 twisted pairs, 22 AWG, solid, bare copper, polyethylene conductor insulation material, PVC jacket, teal, cut to length.			\$0.79
<u>Q5730-1</u>		Black	Shielded			Ethernet cable, shielded, 4 twisted pairs, 26 AWG, 7-stranded, tinned copper, polyolefin conductor insulation material, polyurethane jacket, black, cut to length.	0.03		\$1.44

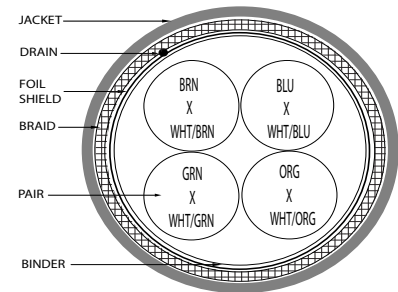
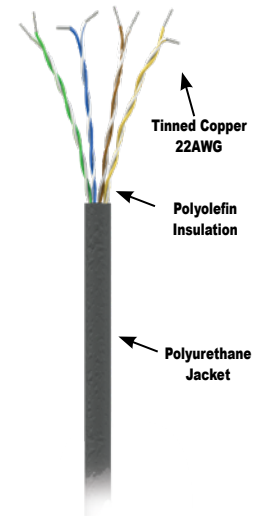
* See web store for maximum cut lengths



Please Note: Our prices on Continuous Flexing IE Cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

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Industrial Ethernet Cable - Cat5e Cable Specifications		
<i>Physical Properties</i>		
<i>Q5730-1</i>		
Conductor Gauge and Stranding	26 AWG stranded tinned copper; 4 twisted pairs	
Assembly	Individual conductors twisted into pairs	
Jacket	Black, Polyurethane	
Jacket Insulation Thickness	0.010 inch; Nominal	
Shield	Shielded	
Overall Cable Diameter	0.220 inch; Nominal	
Temp/Voltage	75°C (167°F)/ 300V	
Minimum Temperature Rating	-40°C (0°F)	
Plenum	No	
Sunlight Resistant	UV Resistant Jacket	
Conductor Insulation	Polyolefin	
Color Code	Pair 1	Blue/White & Blue
	Pair 2	Orange/White & Orange
	Pair 3	Green/White & Green
	Pair 4	Brown/White & Brown
Bare Conductor	0.016 inch; Nominal	
Conductor Insulation Thickness	0.010 inch; Nominal	
Insulated Conductor Diameter	0.039 inch; Nominal	
Pair Diameter	0.078 inch; Nominal	
Cabled Core Diameter	0.149 inch; Nominal	
Print Legend	QUABBIN DATAMAX EXTREME DURABLE INDUSTRIAL ETHERNET PATCH CORD CAT 5e SF/UTP P/N xxxx--CE RoHS --(LOT DESIGNATOR) (SEQUENTIAL FOOTAGE)	



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Electrical Characteristics (for 100 meters of cable)	
	Q5730-1
Impedance (1–100 MHz)	100 ±15 Ω 1 -100 MHz
Capacitance	13.5 pF/ft Nominal @ 1MHz
Resistance	42.6 Ω/1000'
Voltage Rating (max)	300V
Dielectric Withstand, Min.	1500V RMS
Return Loss	$1 \leq f < 10 \text{ MHz}$ 20 + 5 LOG(f) dB MIN $10 \leq f < 20 \text{ MHz}$ 25 dB MIN $20 \leq f \leq 100 \text{ MHz}$ 25 - 8.6 LOG(f/20) dB MIN
Near End Crosstalk (NEXT)	$1 \leq f \leq 100 \text{ MHz}$ 35.3 - 15 LOG(f/100) dB MIN
Power Sum Near End Crosstalk (PSNEXT)	$1 \leq f \leq 100 \text{ MHz}$ 32.3 - 15 LOG(f/100) dB MIN
Power Sum Attenuation to Crosstalk Ratio, Far End (PSACRF)	$1 \leq f \leq 100 \text{ MHz}$ 20.8 - 20 LOG(f/100) dB MIN
Attenuation Crosstalk Ratio, Far End (ACRF)	$1 \leq f \leq 100 \text{ MHz}$ 23.8 - 20 LOG(f/100) dB MIN
Insertion Loss	$1 \leq f \leq 100 \text{ MHz}$ $1.5[1.967\sqrt{f} + 0.023(f) + 0.050/\sqrt{f}]$ dB MAX
Delay	$1 \leq f \leq 100 \text{ MHz}$ 534 + 36/√f
Delay Skew	$1 \leq f < 100 \text{ MHz}$ < 25ns
Velocity Of Propagation	68%
Tested Length	100 meters off the reel
Agency Approval	MEETS EU DIRECTIVE 2011/65/EU (RoHS II)

NOTE: All testing conducted off the reel.



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Industrial Ethernet Cable

Quabbin DataMax® Extreme Industrial Ethernet Cable *



Features

- Available in Category 5e and 6/6a
- In compliance with TIA 568-C.2 and TIA 1005
- Designed for use in EtherNet/IP systems **
- 26 AWG & 24AWG stranded or 22 AWG solid
- 2 or 4 twisted pairs
- Unshielded or overall braid and foil shields
- Rugged jacket for excellent chemical, moisture, and flame resistance, and exceptional low temperature flexibility
- UL Type CMX OUTDOOR – CM and UL AWM Style 2463 (80°C, 600V)
- Cut to length in 1 foot increments
- Low 20 foot minimum length
- Made in the USA

* DataMax is a registered trademark of Quabbin Wire and Cable Corporation.

** EtherNet/IP is a trademark of ODVA, Inc.

Many industrial applications expose cables to hazards not present in commercial data cabling installations. Although a cable suited for commercial applications may initially work in a harsh industrial environment, it could quickly fail when used in an industrial applications. While commercial grade cables may have a low initial product cost, downtime due to premature failure can be avoided by using a cable that is specifically designed and tested for industrial applications.

Quabbin DataMax Extreme Industrial Ethernet cable jackets were developed to survive the many industrial hazards that commercial jackets will not.

Furthermore, commercial ethernet cables have a tube jacket surrounding the conductor pairs with room within for the pairs to move around and even untwist in flexing applications resulting in early mechanical or electrical failure of the cable.

DataMax Extreme continuous flexing cable jackets are pressure extruded over the cable core, effectively "locking" the conductor pairs in place. This type of jacket construction provides very stable electrical performance, even when the cable is impacted, bent, or repeatedly flexed. Pressure extrusion also provides a very smooth, round, and firm jacket profile that is crush resistant and ideal for obtaining a reliable termination and seal when installing connectors.

Quabbin has performed extensive testing on their pressure extruded jacketed DataMax Extreme Continuous Flexing Industrial Ethernet cables. Samples are subjected to 10 million cycles in a flex testing device that simulates an unsupported bend, simulating a situation the cable would be exposed to on a robotic arm. The unsupported bend test is much more abusive than a C-Track or Tick-tock test, both of which add protection to the cable by supporting the bend. Quabbin DataMax Extreme Industrial Ethernet cable provides superior design and construction that will withstand the rigors of continuous flexing applications and the harsh environments found in industrial installations. Quabbin DataMax Extreme Continuous Flexing Industrial Ethernet cable performs above industry standards, thereby reducing downtime and increasing productivity.

DataMax Extreme Industrial Ethernet cables fully comply with TIA 568-C.2 and TIA 1005 industrial communication specifications and are designed for use in EtherNet/IP systems.

Description

AutomationDirect offers Quabbin DataMax Extreme Industrial Ethernet cable in 2 and 4 pair, unshielded and shielded constructions. Conductors are color coded high density polyethylene insulation. Shielded constructions include both a tinned copper braid shield and aluminized polyester foil overall shield. All constructions feature a rugged jacket with excellent moisture, chemical, UV and weathering resistance, exceptional low-temperature flexibility, and good flame and fire resistance. Some are specifically designed and constructed for continuous flexing applications. The DataMax Extreme Continuous Flexing cables have been tested for a minimum of 1 million cycles (10x cable O.D. minimum radius), a minimum of 10 million cycles (20x cable O.D. minimum radius), and a minimum of 3 million cycles torsion test. Agency approvals include UL Type CMX OUTDOOR - CM, and UL AWM Style 2463 (80°C, 600V).

Click on the above thumbnail or go to
<https://www.automationdirect.com/VID-WD-0016>
 for a short introduction on our cut to length cable

