Industrial Ethernet Cable

Quabbin DataMax® Extreme Industrial Ethernet Cable *

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.

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.

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:///VID-WD-0016 for a short introduction on our cut to length cable

Industrial Ethernet Cable - Cat5e

Industrial Ethernet Cable - Cat5e Cable Selection								
Part Number	***Wiring Standard***	***Minimum Cut Length (ft)****	***Shield***	***No. of Pairs***	***Pair Colors***	***Description***	***Approximate Weight (lb/ft)***	***Price per foot***
Q5941-1	Cat5e	20ft (6m)	Unshielded	4	Pair 1 - Blue/White & Blue Pair 2 - Orange/White & Orange Pair 3 - Green/White & Green Pair 4 - Brown/White & Brown	4 twisted pairs, 22 AWG, unshielded, PVC jacket, black, cut to length.	0.04	
Q5942-1		20ft (6m)				4 twisted pairs, 22 AWG, unshielded, PVC jacket, teal, cut to length.	0.04	

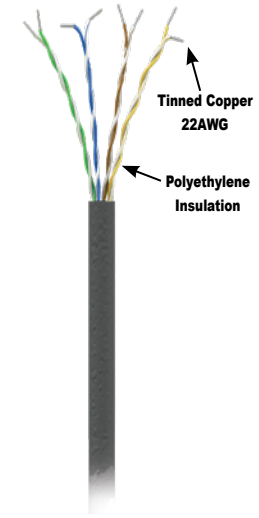
** See web store for maximum cut lengths*

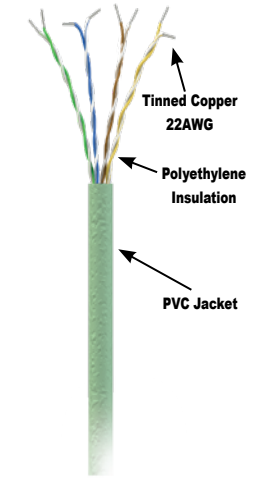
Please Note: Our prices on Continuous Flexing IE Cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

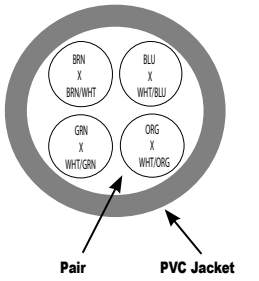
Industrial Ethernet Cable - Cat5e

Industrial Ethernet Cable - Cat5e Cable Specifications			
		Physical Properties	
		Q5941-1	***Q5942-1***
Conductor Gauge and Stranding		22 AWG solid bare copper; 4 twisted pairs	
Assembly		Individual conductors twisted into pairs	
Jacket		Black, Flame Retardant Polyvinylchloride (PVC), pressure extruded	Teal, Flame Retardant Polyvinylchloride (PVC), pressure extruded
Jacket Insulation Thickness		0.037 inch; Nominal	
Shield		Unshielded	
Overall Cable Diameter		0.267 inch; Nominal	
Temp/Voltage		75°C & 80°C (167°F & 176°F)/600V (AWM 2463)	
Minimum Temperature Rating		-20°C (-4°F)	
Plenum		No	
Sunlight Resistant		Yes per AWM 2463	
Minimum Bend Radius		2.67 inch	
Conductor Insulation		High Density Polyethelene (HDPE)	
Color Code	***Pair 1***	Blue/White & Blue	
	Pair 2	Orange/White & Orange	
	Pair 3	Green/White & Green	
	Pair 4	Brown/White & Brown	
Bare Conductor		0.025 inch; Nominal	
Conductor Insulation Thickness		0.010 inch; Nominal	
Insulated Conductor Diameter		0.045 inch; Nominal	
Pair Diameter		0.090 inch; Nominal	
Cabled Core Diameter		0.193 inch; Nominal	
Print Legend		QUABBIN DATAMAX EXTREME CAT 5E 350 MHZ U/UTP HORIZONTAL CABLE P/N (P/N PER CHART 1) (UL) PLTC 22 AWG 75C OIL RES I FT4 OR C(UL)US CMX OUTDOOR-CMR 75C SUN RES OR AWM 2463 80C 600V -- CAT 5e TIA-568.2-D -- CE RoHS -- (LOT DESIGNATOR) (SEQUENTIAL FOOTAGE)	
		Performance	
Cutting Machine Oil Resistance *		Tensile strength retention 80%; Nominal Elongation retention 100%; Nominal	

**** Per Quabbin test report #TR 08-0001***







Four Pair Unshielded

Industrial Ethernet Cable - Cat5e

Industrial Ethernet Cable - Cat5e Cable Specifications		
Electrical Characteristics (for 100 meters of cable)		
	Q5941-1	*Q5942-1*
Impedance (1–100 MHz)	100Ω ±15Ω, 1 - 350MHz	
Capacitance	13.5 pF/ft Nominal @ 1MHz	
Resistance	17.2 Ω DC, per 1000ft	
Voltage Rating (max)	600V	
Dielectric Withstand, Min.	1500V RMS	
Return Loss	Per Chart 2	
Near End Crosstalk (NEXT)	$1 \le f \le 350$ MHz 35.3 - 15 LOG(f/100) dB MIN	
Power Sum Near End Crosstalk (PSNEXT)	$1 \le f \le 350$ MHz 32.3 - 15 LOG(f/100) dB MIN	
Power Sum Attenuation to Crosstalk Ratio, Far End (PSACRF)	$1 \le f \le 350$ MHz 20.8 - 20 LOG(f/100) dB MIN	
Attenuation Crosstalk Ratio, Far End (ACRF)	$1 \le f \le 350$ MHz 23.8 - 20 LOG(f/100) dB MIN	
Insertion Loss	Per Chart 2	
Delay	$1 \le f \le 350$ MHz $534 + 36/\sqrt{f}$	
Delay Skew	$1 \le f < 350$ MHz < 25ns	
Velocity Of Propagation	68%	
Tested Length	100 meters off the reel	
UL Classification	Type CMX Outdoor - CM or AWM Style 2463	
Agency Approval	UL E118830 for CMX, CM; UL E69976 for AWM, UL E70148 for PLTC, RoHS Compliant	

NOTE: All testing conducted off the reel.

Chart 2		
Frequency (MHz)	*Insertion Loss, MAX. (dB/100m)*	*Return Loss, MIN. (dB)*
1	2.0	20.0
4	4.0	23.0
8	5.7	24.5
10	6.4	25.0
16	8.1	25.0
20	9.2	25.0
25	10.3	24.3
31.25	11.6	23.6
62.5	16.8	21.5
100	21.7	20.1
155	27.7	19.0
200	32.0	19.0
250	36.4	18.0
300	40.5	18.0
310	41.3	18.0
350	44.3	17.0

Continuous Flexing IE Cable

Continous Flexing Industrial Ethernet Cable Selection								
Part Number	***Wiring Standard***	***Minimum Cut Length (ft)****	***Shield***	***No. of Pairs***	***Pair Colors***	***Description***	***Approximate Weight (lb/ft)***	***Price per foot***
Q5772-1	Cat5e	20ft (6m)	Unshielded	2	Pair 1 - White/Orange & Orange Pair 2 - White/Green & Green	Ethernet cable, 2 twisted pairs, 24 AWG, high density polyethylene conductor insulation material, unshielded, flame retardant thermoplastic elastomer (FR-TPE) jacket, UL cable type CMX Outdoor - CM and AWM style 2463	0.02	
Q5752-1		20ft (6m)		4	Pair 1 - White/Blue & Blue Pair 2 - White/Orange & Orange Pair 3 - White/Green & Green Pair 4 - White/Brown & Brown	Ethernet cable, 4 twisted pairs, 24 AWG, high density polyethylene conductor insulation material, unshielded, flame retardant thermoplastic elastomer (FR-TPE) jacket, UL cable type CMX Outdoor - CM and AWM style 2463	0.03	
Q5025-1		20ft (6m)	Foil and Braid	2	Pair 1 - Orange & White/ Orange Pair 2 - Green & White/ Green	Ethernet cable, 2 twisted pairs, 24 AWG, high density polyethylene conductor insulation material, overall foil and braid shielded, flame retardant thermoplastic elastomer (FR-TPE) jacket, UL cable type CMX Outdoor - CM and AWM style 2463	0.04	
Q5090-1		20ft (6m)		4	Pair 1 - Blue & White/Blue Pair 2 - Orange & White/ Orange Pair 3 - Green & White/ Green Pair 4 - Brown & White/ Brown	Ethernet cable, 4 twisted pairs, 24 AWG, high density polyethylene conductor insulation material, overall foil and braid shielded, flame retardant thermoplastic elastomer (FR-TPE) jacket, UL cable type CMX Outdoor - CM and AWM style 2463	0.05	
Q5026-1	6/6a	20ft (6m)	Foil and Braid			industrial Ethernet cable, 4 twisted pairs, 26 AWG, shielded, TPE jacket, teal, cut to length.	0.04	
Q5922-1		20ft (6m)				industrial Ethernet cable, 4 twisted pairs, 24 AWG, shielded, TPE jacket, teal, cut to length.	0.05	

** See web store for maximum cut lengths*

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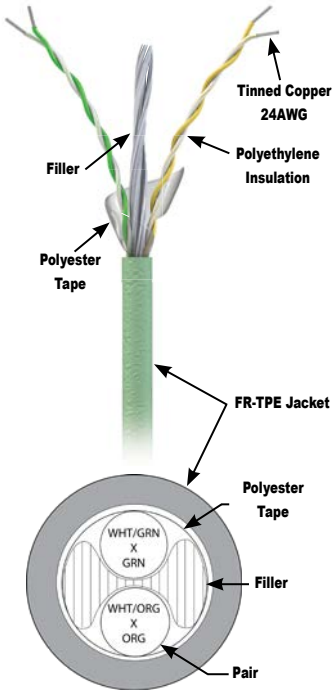
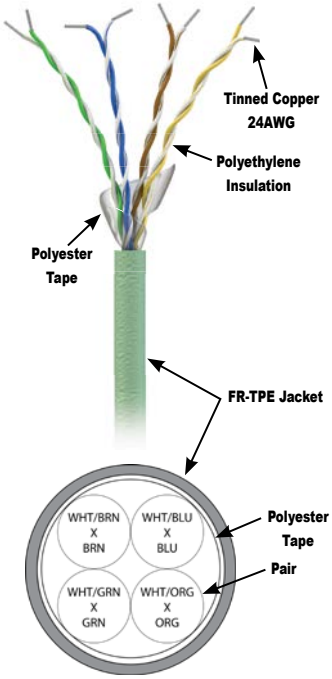
Continuous Flexing IE Cable Cat5e - Unshielded

Continuous Flexing Unshielded - Cat5e Industrial Ethernet Cable Specifications			
		Physical Properties	
		Q5772 Series	***Q5752 Series***
Conductor Gauge and Stranding		24 AWG 7/32 stranded tinned copper; 2 twisted pairs	24 AWG 7/32 stranded tinned copper; 4 twisted pairs
Assembly		Individual conductors twisted into pairs, cabled with filler; overall clear polyester tape with pressure extruded jacket	Individual conductors twisted into pairs, cabled; overall polyester clear tape with pressure extruded jacket
Jacket		Teal, Flame Retardant Thermal Plastic Elastomer (FR-TPE), pressure extruded	
Jacket Insulation Thickness		0.032 inch; Nominal	
Shield		Unshielded	
Overall Cable Diameter		0.240 inch; Nominal	0.248 inch; Nominal
Temp/Voltage		80°C (176°F)/600V (AWM 2463)	
Minimum Temperature Rating		-40°C (-40°F)	
Plenum		No	
Sunlight Resistant		Yes per UL 2556	
Minimum Bend Radius		2.4 inch	2.48 inch
Conductor Insulation		High Density Polyethelene (HDPE)	
Color Code	***Pair 1***	White/Orange & Orange	White/Blue & Blue
	Pair 2	White/Green & Green	White/Orange & Orange
	Pair 3	N/A	White/Green & Green
	Pair 4	N/A	White/Brown & Brown
Bare Conductor		0.024 inch; Nominal	
Conductor Insulation Thickness		0.008 inch; Nominal	
Insulated Conductor Diameter		0.039 inch; Nominal	
Pair Diameter		0.078 inch; Nominal	0.080 inch; Nominal
Cabled Core Diameter		0.176 inch; Nominal	0.184 inch; Nominal
Print Legend		QUABBIN DATAMAX EXTREME HIGH FLEX INDUSTRIAL ETHERNET/IP PATCH CORD CAT5e U/UTP P/N xxxx -- C(UL)US TYPE CMX OUTDOOR - CM 4PR 24 AWG 75C SUN RES OR AWM 2463 80C 600V -- RoHS -- (LOT DESIGNATOR) (SEQUENTIAL FOOTAGE)	
Performance			
Flex Life *		1 million cycles minimum (10x cable O.D. minimum radius) 10 million cycles minimum (20x cable O.D. minimum radius)	
Torsion Test **		3 million cycles minimum	
Cutting Machine Oil Resistance ***		Tensile strength retention 80%; Nominal Elongation retention 100%; Nominal	

** 126 Cycles per minute, @ 20C*
*** 1lb load, 360 degrees, 71 cycles per minute, @20°C*
**** Per Quabbin test report #TR 08-0001*



Two Pair Unshielded Part# Q5772



Four Pair Unshielded Part# Q5752

Continuous Flexing IE Cable - Cat5e - Unshielded

Continuous Flexing Unshielded - Cat5e Industrial Ethernet Cable Specifications		
Electrical Characteristics (for 100 meters of cable)		
	Q5772 Series	*Q5752 Series*
Impedance (1–100 MHz)	100Ω ±15Ω	
Capacitance	13.5 pF/ft Nominal @ 1MHz	
Resistance	26.0 Ω DC, per 1000ft	14.0 Ω DC, per 1000ft
Voltage Rating (max)	600V	
Dielectric Withstand, Min.	2000V RMS	1500V RMS
Return Loss	$1 \le f < 10$ MHz 20 + 6 LOG (f) dB MIN* $10 \le f < 20$ MHz 26dB MIN* $20 \le f \le 100$ MHz 26 - 5 LOG(f/20) dB MIN*	
Near End Crosstalk (NEXT)	$1 \le f \le 100$ MHz 35.3 - 15 LOG(f/100) dB MIN	
Power Sum Near End Crosstalk (PSNEXT)	N/A	$1 \le f \le 100$ MHz 32.3 - 15 LOG(f/100) dB MIN
Power Sum Attenuation to Crosstalk Ratio, Far End (PSACRF)	N/A	$1 \le f \le 100$ MHz 20.8 - 20 LOG(f/100) dB MIN
Attenuation Crosstalk Ratio, Far End (ACRF)	$1 \le f \le 100$ MHz 23.8 - 20 LOG(f/100) dB MIN	
Insertion Loss	$1 \le f < 100$ MHz 1.2*(1.967 SQRT(f) + 0.023(f) + 0.05/SQRT(f)) dB Max	
Delay	$1 \le f \le 100$ MHz 534 + 36/$\sqrt{f}$	
Delay Skew	$1 \le f < 100$ MHz < 25ns	
Transverse Conversion Loss (TCL)	$1 \le f < 100$ MHz 30 - 10*LOG(f/100) dB; 40dB Max	$1 \le f \le 30$ MHz 73 - 15 Log(f) dB MIN, (40dB MAX)* $30 \le f \le 100$ MHz 80.4 - 20 LOG(f) dB MIN
Equal Level Transverse Conversion Transfer Loss (ELTCTL)	$1 \le f < 30$ MHz >35 - 20*LOG(f/100) dB	$1 \le f \le 30$ MHz 50 - 20 LOG(f) dB MIN, (40dB Max)*
Velocity Of Propagation	68%	
Tested Length	P. O. E. Compliant (802.3af) up to 279 feet [85 meters] Meets CAT5e channel requirements up to 279 feet [85 meters]	
UL Classification	Type CMX Outdoor - CM or AWM Style 2463	
Agency Approval	UL E118830 for CMX, CM; UL E69976 for AWM, RoHS Compliant	

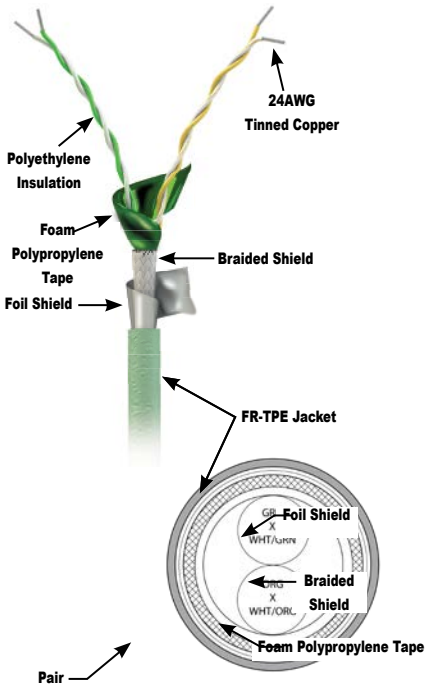
** Per ODVA Volume 2 EtherNet/IP*

NOTE: All testing conducted off the reel.

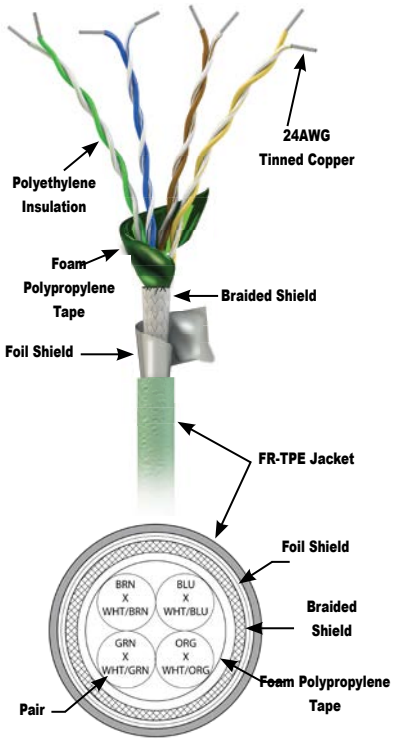
Continuous Flexing IE Cable - Cat5e - Shielded

Continuous Flexing Shielded - Cat5e Industrial Ethernet Cable Specifications			
		Physical Properties	
		Q5025 Series	*Q5090 Series*
Conductor Gauge and Stranding		24 AWG 7/32 stranded tinned copper; 2 twisted pairs	24 AWG 7/32 stranded tinned copper; 4 twisted pairs
Assembly		Individual conductors twisted into pairs, cabled; overall foil and tinned copper braid shield, overall green foam polypropylene tape with pressure extruded jacket	Individual conductors twisted into pairs, cabled; overall foil and tinned copper braid shield, overall green foam polypropylene tape with pressure extruded jacket
Jacket		Teal, Fire Retardant Thermal Plastic Elastomer (FR-TPE), pressure extruded	
Jacket Insulation Thickness		0.037 inch; Nominal	
Shield		Overall aluminized polyester foil shield 100% coverage & 38 AWG tinned copper braid 75% coverage	
Cable Overall Diameter		0.265 inch; Nominal	0.290 inch; Nominal
Temp/Voltage		80°C (176°F) (AWM 2463)	
Minimum Temperature Rating		-40°C (-40°F)	
Plenum		No	
Sunlight Resistant		Yes, per UL2556	
Minimum Bend Radius		2.65 inch	2.90 inch
Conductor Insulation		High Density Polyethylene (HDPE)	
Color Code	*Pair 1*	Orange & White/Orange	Blue & White/Blue
	Pair 2	Green & White/Green	Orange & White/Orange
	Pair 3	N/A	Green & White/Green
	Pair 4	N/A	Brown & White/Brown
Bare Conductor Diameter		0.024 inch; Nominal	
Conductor Insulation Thickness		0.011 inch; Nominal	
Insulated Conductor Diameter		0.047 inch; Nominal	
Pair Diameter		0.092 inch; Nominal	
Cabled Core Diameter		0.160 inch; Nominal	0.197 inch; Nominal
Shield + Cabled Core Diameter		0.191 inch; Nominal	0.216 inch; Nominal
Print Legend		QUABBIN DATAMAX EXTREME HIGH FLEX INDUSTRIAL ETHERNET/IP PATCH CORD CAT5e SF/UTP P/N P/N xxxx -- C(UL)US TYPE CMX OUTDOOR - CM 4PR 24 AWG 75C SUN RES OR AWM 2463 80C 600V -- RoHS -- (LOT DESIGNATOR) (SEQUENTIAL FOOTAGE)	
		Performance	
*Flex Life **		1 million cycles minimum (10x cable O.D. minimum radius)	
		12.25 million cycles minimum (20x cable O.D. minimum radius)	10 million cycles minimum (20x cable O.D. minimum radius)
*Torsion Test***		3 million cycles minimum	
*Cutting/ Machine Oil Resistance ****		Tensile strength retention 80%; Nominal Elongation retention 100%; Nominal	

** 126 Cycles per minute, @ 20°C*
*** 1lb load, 360 degrees, 71 cycles per minute, @20C*
**** Per Quabbin test report #TR 08-0001*



Two Pair Shielded Part# Q5025



Four Pair Shielded Part# Q5090

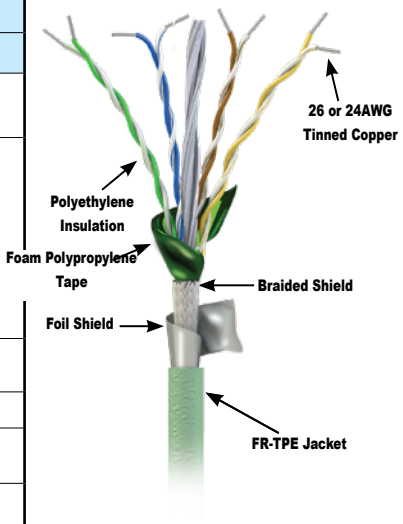
Continuous Flexing IE Cable - Cat5e - Shielded

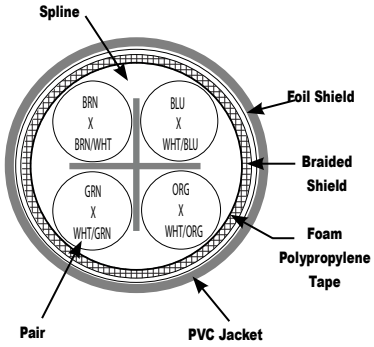
Continuous Flexing Shielded - Cat5e Industrial Ethernet Cable Specifications		
Electrical Characteristics (for 100 meters of cable)		
	Q5025 Series	***Q5090 Series***
Impedance (1-100 MHz)	100Ω ±15Ω	
Impedance, Smoothed	100 ±10 Ω TYPICAL 5 ≤ f ≤ 100 MHz	100 ± 20 Ω TYPICAL 5–100 MHz
Capacitance	12.8 pF/ft @ 1MHz; Nominal	13.5 pF/ft @ 1MHz; Nominal
Resistance (max)	26.5 Ω DC per 1000ft @ 20°C (68°F)	14.0 Ω DC per 1000ft
Voltage Rating (max)	600V	
Dielectric Withstand, Min.	2000V RMS	
Return Loss	1 ≤ f < 10 MHz 20 + 6 LOG (f) dB MIN* 10 ≤ f < 20 MHz 26 dB MIN* 20 ≤ f ≤ 100 MHz 26 - 5 LOG(f/20) dB MIN*	
Near End Crosstalk (NEXT)	1 ≤ f ≤ 100 MHz 35.3 - 15 LOG(f/100) dB MIN	
Power Sum Near End Crosstalk (PSNEXT)	N/A	1 ≤ f ≤ 100 MHz 32.3 - 15 LOG(f/100) dB MIN
Power Sum Attenuation to Crosstalk Ratio, Far End (PSACRF)	N/A	1 ≤ f ≤ 100 MHz 20.8 - 20 LOG(f/100) dB MIN
Attenuation Crosstalk Ratio, Far End (ACRF)	1 ≤ f ≤ 100 MHz 23.8 - 20 LOG(f/100) dB MIN	
Insertion Loss	1 ≤ f ≤ 100 MHz 1.2*[1.967 $\sqrt{f}$ + 0.023(f) + 0.050/$\sqrt{f}$] dB MAX	
Delay	1 ≤ f ≤ 100 MHz 534 + 36/$\sqrt{f}$ ns Max	
Delay Skew	1 ≤ f ≤ 100 MHz <25ns	
Coupling Attenuation Per IEC 62153-4-9	30 ≤ f ≤ 100 MHz 50dB MIN	30 ≤ f ≤ 100 MHz ≥ 60dB E3* Segregation class d acc. EN 50174-2
Velocity Of Propagation	68%	
UL Classification	Type CMX Outdoor - CM or AWM Style 2463	
Tested Length	P. O. E. Compliant (802.3af) up to 279 feet [85 meters] Meets CAT5e channel requirements up to 279 feet [85 meters]	
Agency Approvals	UL E118830 for CMX, CM; UL E69976 for AWM, RoHS Compliant	

** Per ODVA Volume 2 EtherNet/IP*
NOTE: All testing conducted off the reel.

Continuous Flexing IE Cable - Cat6/6a - Shielded

Continuous Flexing Shielded Cat6/6a Industrial Ethernet Cable Specifications			
		Physical Properties	
		Q5026-1	***Q5922-1***
Conductor Gauge and Stranding		26 AWG 7/32 stranded tinned copper; 4 twisted pairs	24 AWG 7/32 stranded tinned copper; 4 twisted pairs
Assembly		Individual conductors twisted into pairs, cabled; overall foil and tinned copper braid shield, overall green foam polypropylene tape with pressure extruded jacket	Individual conductors twisted into pairs, cabled; overall foil and tinned copper braid shield, overall green foam polypropylene tape with pressure extruded jacket
Jacket		Teal, Fire Retardant Thermal Plastic Elastomer (FR-TPE), pressure extruded	
Jacket Insulation Thickness		0.040 inch; Nominal	
Shield		Overall aluminized polyester foil shield 100% coverage & 38 AWG tinned copper braid 75% coverage	
Cable Overall Diameter		0.275 inch; Nominal	0.325 inch; Nominal
Temp/Voltage		75°C (167°F)/300V	75°C & 80°C (167°F & 176°F)/600V (AWM 2463)
Minimum Temperature Rating		-40°C (-40°F)	-20°C (-4°F) (Per UL 444 cold bend) -40°C (-40°F) (Manufacturer's recommended)
Plenum		No	
Sunlight Resistant		Yes, per UL2556	
Minimum Bend Radius		2.75 inch	3.25 inch
Conductor Insulation		High Density Polyethylene (HDPE)	
Color Code	***Pair 1***	Blue/White & Blue	
	Pair 2	Orange/White & Orange	
	Pair 3	Green/White & Green	
	Pair 4	Brown/White & Brown	
Bare Conductor Diameter		0.019 inch; Nominal	0.024 inch; Nominal
Conductor Insulation Thickness		0.009 inch; Nominal	0.011 inch; Nominal
Insulated Conductor Diameter		0.036 inch; Nominal	0.046 inch; Nominal
Pair Diameter		0.072 inch; Nominal	0.092 inch; Nominal
Cabled Core Diameter		0.176 inch; Nominal	0.228 inch; Nominal
Shield + Cabled Core Diameter		0.195 inch; Nominal	0.247 inch; Nominal
Print Legend		QUABBIN DATAMAX EXTREME HIGH FLEX INDUSTRIAL ETHERNET/IP PATCH CORD CAT 6/6a SF/UTP P/N 5026 -- C(UL)US TYPE CMX OUTDOOR - CM 4PR 26 AWG 75C SUN RES -- CE RoHS -- (LOT DESIGNATOR) (SEQUENTIAL FOOTAGE)	QUABBIN DATAMAX EXTREME HIGH FLEX INDUSTRIAL ETHERNET/IP CAT 6/6a SF/UTP PATCH CORD P/N (QWC P/N PER CHART 1) -- U.S. PATENT NO. US 8,487,184 B2 -- C(UL)US TYPE CMX OUTDOOR - CM 24 AWG 75C SUN RES OR AWM 2463 80C 600V -- CAT 6a TIA-568.2-D -- CE RoHS -- (LOT DESIGNATOR) (SEQUENTIAL FOOTAGE)
		Performance	
Flex Life *		1 million cycles minimum (10x cable O.D. minimum radius)	
		1 million cycles minimum (10x cable O.D. minimum radius) 10 million cycles minimum (20x cable O.D. minimum radius)	1 million cycles minimum (10x cable O.D. minimum radius) 10 million cycles minimum (20x cable O.D. minimum radius)
Torsion Test**		3 million cycles minimum	
Cutting/ Machine Oil Resistance ***		Tensile strength retention 80%; Nominal Elongation retention 100%; Nominal	





Four Pair Shielded

** 126 Cycles per minute, @ 20°C*
*** 1lb load, 360 degrees, 71 cycles per minute, @20C*
**** Per Quabbin test report #TR 08-0001*

Continuous Flexing IE Cable - Cat6/6a - Shielded

Continuous Flexing Shielded Cat6/6a Industrial Ethernet Cable Specifications		
Electrical Characteristics (for 100 meters of cable)		
	Q5026-1	***Q5922-1***
Impedance (1-100 MHz)	100Ω ±15Ω (1-100 MHz),	
Capacitance	13.5 pF/ft @ 1MHz; Nominal	
Resistance (max)	42.6 Ω DC per 1000ft	26.2 Ω DC per 1000ft
Voltage Rating (max)	300V	600V
Dielectric Withstand, Min.	1500V RMS	2000V RMS
Return Loss	$1 \le f < 10$ MHz 20 + 6 LOG (f) dB MIN* $10 \le f < 20$ MHz 26 dB MIN* $20 \le f \le 100$ MHz 26 - 5 LOG(f/20) dB MIN* $100 \le f \le 250$ MHz 25 - 8.6 LOG(f/20) dB MIN	
Near End Crosstalk (NEXT)	$1 \le f \le 500$ MHz 42.3 - 15 LOG(f/100) dB MIN	
Power Sum Near End Crosstalk (PSNEXT)	$1 \le f \le 500$ MHz 32.3 - 15 LOG(f/100) dB MIN	
Power Sum Attenuation to Crosstalk Ratio, Far End (PSACRF)	$1 \le f \le 500$ MHz 24.8 - 20 LOG(f/100) dB MIN	
Attenuation Crosstalk Ratio, Far End (ACRF)	$1 \le f \le 500$ MHz 27.8 - 20 LOG(f/100) dB MIN	
Insertion Loss	$1 \le f \le 500$ MHz $1.5[1.82 \sqrt{f} + 0.0091(f) + 0.25/\sqrt{f}]$ dB MAX	$1 \le f \le 500$ MHz $1.2[1.82 \sqrt{f} + 0.0091(f) + 0.25/\sqrt{f}]$ dB MAX
Delay	$4 \le f \le 500$ MHz 534 + 36/$\sqrt{f}$ ns Max	
Delay Skew	$1 \le f \le 500$ MHz <45ns	
PS ANEXT LOSS (6 AROUND 1)	$1 \le f \le 500$ MHz 62.5 - 15 LOG(f/100) dB 50-500 MHz, 67 dB 1-50MHz	
PS AFEXT (6 AROUND 1)	$1 \le f \le 500$ MHz 38.2 - 20 LOG(f/100) dB	
Coupling Attenuation Per IEC 62153-4-9	$30 \le f \le 250$ MHz 100 - 20 LOG(f) MAX 60dB) E3* Segregation class d acc. EN 50174-2	
Velocity Of Propagation	68%	
UL Classification	Type CMX Outdoor - CM or AWM Style 2463	
Tested Length	100 meters off the reel	
Agency Approvals	UL E118830 for CMX, CM, RoHS Compliant	UL E118830 for CMX, CM; UL E69976 for AWM, RoHS Compliant

** Per ODVA Volume 2 EtherNet/IP*
NOTE: All testing conducted off the reel.