

Control and Signal Cable

Q3130-1 Unshielded 2-Conductor 16AWG Cable Specifications

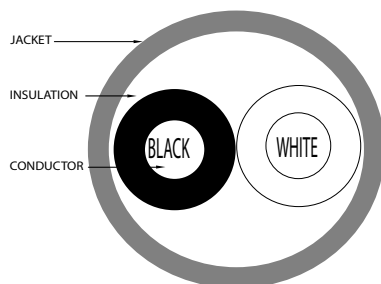
Conductors Gauge & Stranding	16AWG 7/28 Stranded Tinned Copper	Insulated Conductor Diameter	0.130 inch; nominal
Voltage Rating	300V	Twisted Conductor Diameter	0.166 inch; nominal
Temperature Rating, Max.	80°C, 90°C & 105°C (176°F, 194°F & 221°F)	Overall Diameter	0.242 inch; nominal
Temperature Rating, Min.	-20°C (-4°F)	Jacket Color	Chrome
Capacitance, Mutual, Nom.	25 pF/ft	Jacket Thickness	0.038 inch; nominal
Capacitance, Grounded, Nom.	N/A	Jacket Material	Polyvinyl chloride (PVC)
Dielectric Withstanding, Min.	1500V RMS	Sunlight Resistant	Yes
D.C. Resistance, Max.	6.7 Ω / 1000ft.	Oil Resistance	No
Conductor Twist / Lay	Left hand / 2-1/2 Inch	Flame Retardant	FT-4
Shield	None	Approvals*	NEC (UL) TYPE PLTC 105C 300V NEC (UL) TYPE ITC 105C 300V UL AWM STYLE 2464 80C 300V CSA FAS 105 FT4 CSA AWM FT4 90C 300V
Drain	None		
Conductor Insulation Material	Polyvinyl chloride (PVC)		
Conductor Identification	Black, white	Sample Print Legend	QUABBIN 0200 (UL) TYPE CM 18 AWG 105C SUN RES OR AWM 2464 -- CSA LL66965 FAS 105 18AWG 3 CONDUCTOR FT4 OR AWM I/II A/B 90C 300V FT4 -- RoHS -- (LOT DESIGNATOR)
Conductor Insulation Wall Thickness	0.016 inch; nominal		
Bare Conductor Diameter	0.057 inch; nominal		

* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.AutomationDirect.com

Q3130-1 Unshielded 2-Conductor 16AWG Cable Specifications

Part Number	Number of Conductors	AWG	Strand	Maximum O.D. (Inches ±10%)	Minimum Installed Bend Radius (inches) ¹	Minimum Cut Length (ft) ^{**}	Approximate Weight (lb/ft)	Price per foot
								
Q3130-1	2	16	19	0.242 [6.23 mm]	2.42	30	0.0377	\$0.65

1. Installed bend radius ≥ 10x diameter



** See web store www.AutomationDirect.com for maximum cut lengths



Please Note: Our prices on Control and Sensor 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.

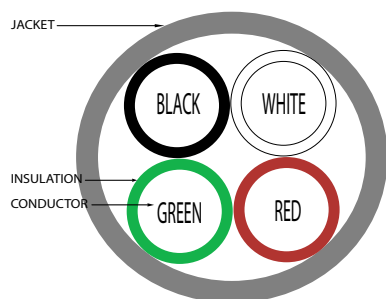
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Q3100-1 Unshielded 4-Conductor 16AWG Cable Specifications			
Conductors Gauge & Stranding	16AWG 19/.0117 Stranded Tinned Copper	Insulated Conductor Diameter	0.089 inch; nominal
Voltage Rating	300V	Twisted Conductor Diameter	0.215 inch; nominal
Temperature Rating, Max.	80°C & 90°C (176°F & 194°F)	Overall Diameter	0.279 inch; nominal
Temperature Rating, Min.	-20°C (-4°F)	Jacket Color	Chrome Gray
Capacitance, Mutual, Nom.	26 pF/ft	Jacket Thickness	0.032 inch; nominal
Capacitance, Grounded, Nom.	N/A	Jacket Material	Polyvinyl chloride (PVC)
Dielectric Withstanding, Min.	1000V RMS	Sunlight Resistant	No
D.C. Resistance, Max.	4.82 Ω / 1000ft.	Oil Resistance	No
Conductor Twist / Lay	Left hand / 2-1/2 Inch	Flame Retardant	FT-4
Shield	None	Approvals*	NEC (UL) TYPE CL2 UL STYLE 2464 CSA AWM FT4
Drain	None		
Conductor Insulation Material	Polyvinyl chloride (PVC)		
Conductor Identification	Black, White, Red, Green	Sample Print Legend	QUABBIN 3100 (UL) TYPE CL2 16 AWG 90C OR AWM 2464 -- CSA LL51726 AWM I/II A/B 90C 300V FT4 -- RoHS -- (LOT DESIGNATOR)
Conductor Insulation Wall Thickness	0.016 inch; nominal		
Bare Conductor Diameter	0.057 inch; nominal		

* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.AutomationDirect.com

Q3100-1 Unshielded 4-Conductor 16AWG Cable Specifications								
Part Number	Number of Conductors	AWG	Strand	Maximum O.D. (Inches ±10%)	Minimum Installed Bend Radius (inches) ¹	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
								
Q3100-1	4	16	19	0.279 [7.09 mm]	2.79	30	0.0562	\$0.84

1. Installed bend radius ≥ 10x diameter



** See web store www.AutomationDirect.com for maximum cut lengths



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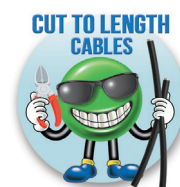
Control and signal cable from Quabbin is available in sizes from 24 AWG to 16 AWG with up to 25 conductors. These are available either in unshielded or shielded constructions. Individual conductors are stranded tinned copper with color coded insulation for easy identification, with an industry standard PVC chrome gray jacket. Shielded versions include an overall aluminum mylar foil tape with a tinned copper drain wire for maximum effectiveness against external electrical noise interference.

With a 300 and 600 volt rating, these cables are ideal for low voltage control signals and audio applications.

The 4-conductor unshielded versions are designed to work directly with our SureStep® STP-DRV drives for applications where a longer cable is required. The cables carry both UL and CSA approvals and are proudly made in the USA. Combining all that with our cut to length ordering, eliminates unnecessary expense and waste by ordering only the length needed, in 1 foot increments with a low 30 foot minimum, makes these cables a great value.

Quabbin Control and Signal Cable Application Examples

Part Number	Common Application
Q8508-1	Low capacitance, RS-232 computer interconnect, extended distance cable, RoHS compliant materials
Q8215-1	
Q8205-1	RS-232 computer interconnect, instrumentation, audio, broadcast, Class 2 circuits, RoHS compliant materials
Q8200-1	
Q8195-1	
Q8190-1	Computer interconnect, instrumentation, audio, broadcast, RoHS compliant materials
Q8185-1	
Q8180-1	
Q8175-1	RS-232 computer interconnect, instrumentation, audio, broadcast, Class 2 circuits, RoHS compliant materials
Q8170-1	
Q8165-1	
Q8138-1	Instrumentation, audio, control cable
Q8138-1	RS-232 computer interconnect, audio, and instrumentation cable, RoHS compliant materials
Q8110-1	RoHS compliant materials
Q7565-1	Communication, data and control cable, RoHS compliant materials
Q7560-1	
Q7555-1	
Q7545-1	
Q7535-1	
Q7525-1	
Q7465-1	
Q7395-1	
Q7325-1	
Q7320-1	
Q7315-1	Instrumentation, audio, control cable
Q7175-1	Instrumentation, audio, and broadcast cable, RoHS compliant materials
Q7170-1	
Q7165-1	
Q7160-1	
Q7155-1	
Q7150-1	RS-232 computer interconnect, control and audio cable, RoHS compliant materials
Q7145-1	
Q7140-1	
Q7135-1	Instrumentation, audio, control cable
Q7131-1	
Q7125-1	



Control and Signal Cable

Quabbin Control and Signal Cable Application Examples (continued)

Part Number	Common Application
<u>Q7121-1</u>	Instrumentation, audio, control cable
<u>Q7120-1</u>	RS-232 computer interconnect, control and audio cable, RoHS compliant materials
<u>Q7115-1</u>	Instrumentation, audio, control cable
<u>Q6151-1</u>	Data and computer interconnect cable, RoHS compliant materials
<u>Q6145-1</u>	Instrumentation, audio, broadcast cable, RoHS compliant materials
<u>Q6140-1</u>	Instrumentation, audio, broadcast cable
<u>Q6130-1</u>	Instrumentation, audio and control cable, RoHS compliant materials
<u>Q6100-1</u>	Instrumentation, audio, control cable, stepper motor control
<u>Q4560-1</u>	Instrumentation, audio, broadcast cable
<u>Q4177-1</u>	Instrumentation, audio, broadcast cable, RoHS compliant materials
<u>Q4175-1</u>	
<u>Q4170-1</u>	Instrumentation, audio, broadcast cable
<u>Q4165-1</u>	Instrumentation, audio, broadcast cable
<u>Q4140-1</u>	Instrumentation, audio and control cable, RoHS compliant materials
<u>Q4135-1</u>	
<u>Q4130-1</u>	
<u>Q4125-1</u>	
<u>Q4120-1</u>	
<u>Q4110-1</u>	
<u>Q4105-1</u>	
<u>Q4100-1</u>	Instrumentation, audio, control cable, stepper motor control
<u>Q3130-1</u>	Instrumentation, audio and control cable, RoHS compliant materials
<u>Q3100-1</u>	Instrumentation, audio, control cable, stepper motor control
<u>Q0225-1</u>	Process system interconnect, power limited tray cable, instrumentation tray cable, class 3 circuits, RoHS compliant materials
<u>Q0220-1</u>	Process system interconnect, power limited tray cable, instrumentation tray cable, class 3 circuits
<u>Q0200-1</u>	Process system interconnect, power limited tray cable, instrumentation tray cable, class 3 circuits, RoHS compliant materials
<u>Q0195-1</u>	
<u>Q0190-1</u>	
<u>Q0170-1</u>	
<u>Q0165-1</u>	Process system interconnect, power limited tray cable, instrumentation tray cable, class 3 circuits
<u>Q0160-1</u>	Process system interconnect, power limited tray cable, instrumentation tray cable, class 3 circuits, RoHS compliant materials
<u>Q0140-1</u>	Process system interconnect, power limited tray cable, instrumentation tray cable, class 3 circuits

Control and Signal Cable

Control & Signal Cable Cross-Reference							
ADC	Belden	Quabbin	Carol	Alpha	Lake	Description	Colors
<u>Q8508-1</u>	---	8508	---	---	---	24AWG, 4 twisted pairs, shielded, PVC, chrome gray,	bk-wh/wh-bk/gn-wh/rd-wh
<u>Q8215-1</u>	9543	8215	---	6309	C2425CST-45BLD	24AWG, 25-conductor, shielded, PVC, chrome gray	bk/wh/rd/gn/or/bu/wh-bk/rd-bk/gn-bk/or-bk/ bu-bk/bk-wh/rd-wh/gn-wh/bu-wh/bk-rd/wh-rd/ or-wh/bu-rd/rd-gn/bk-wh-rd/wh-bk-rd/ rd-bk-wh/gn-bk-wh
<u>Q8205-1</u>	9541	8205	---	6307	C2415CST-45	24AWG, 15-conductor, shielded, PVC, chrome gray	bk/wh/rd/gn/or/bu/wh-bk/rd-bk/gn-bk/or-bk/ bu-bk/bk-wh/rd-wh/gn-wh/bu-wh
<u>Q8200-1</u>	9540	8200	---	---	C2410CST-45	24AWG, 10-conductor, shielded, PVC, chrome gray	bk/wh/rd/gn/br/bu/or/yl/vi/gr
<u>Q8195-1</u>	9539	8195	---	---	C2410CST-45	24AWG, 9-conductor, shielded, PVC, chrome gray	bk/wh/rd/gn/br/bu/or/yl/vi
<u>Q8190-1</u>	9538	8190	---	---	C2410CST-45	24AWG, 8-conductor, shielded, PVC, chrome gray	bk/wh/rd/gn/br/bu/or/yl
<u>Q8185-1</u>	9537	8185	---	---	C247CST-45	24AWG, 7-conductor, shielded, PVC, chrome gray	bk/wh/rd/gn/br/bu/or
<u>Q8165-1</u>	9533	8165	C0741A	6300/3	C243CST-45	24AWG, 3-conductor, shielded, PVC, chrome gray	bk/rd/wh
<u>Q8170-1</u>	9534	8170	C0742A	6300/4	C244CST-BLD	24AWG, 4-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn
<u>Q8175-1</u>	9535	8175	C0753A	6305	C245CST-45	24AWG, 5-conductor, shielded, PVC, chrome gray,	bk/rd/wh/gn/bn
<u>Q8180-1</u>	9536	8180	C0743A	6306	B246CST	24AWG, 6-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn/bn/bu
<u>Q8138-1</u>	9508	8138	---	5478/C	B248PRCST-45	24AWG, 8 twisted pairs, shielded, PVC, chrome gray	bk.rd/bk.wh/bk.gn/bk.bu/bk.yl/bk.br/bk.or/rd.wh
<u>Q8110-1</u>	9502	8110	---	5472/C	B242PRCS	24AWG, 2 twisted pairs, shielded, PVC, chrome gray	bk.rd/bk.wh
<u>Q7115-1</u>	8442	7115	C6348A	1172C	B222CT	22AWG, 2-conductor, unshielded, PVC, chrome gray	bk/rd
<u>Q7120-1</u>	---	7120	---	1173C	---	22AWG, 3-conductor, unshielded, PVC, chrome gray	bk/rd/wh
<u>Q7121-1</u>	9443	7121	C4062A	1173C	C223CT	22AWG, 3-conductor, unshielded, PVC, chrome gray	bk/rd/gn
<u>Q7125-1</u>	8444	7125	C4063A	1174C	B224CT	22AWG, 4-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn
<u>Q7131-1</u>	8445	7131	C4064	1175C	225CT	22AWG, 5-conductor, unshielded, PVC, chrome gray	bk/wh/rd/gn/br
<u>Q7135-1</u>	---	7135	---	1176C	---	22AWG, 6-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/bu/or
<u>Q7140-1</u>	9430	7140	C4088	1177C	---	22AWG, 7-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br
<u>Q7145-1</u>	9421	7145	C4065	1178C	B228CT-45	22AWG, 8-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/bn/bu/or/yl
<u>Q7150-1</u>	9423	7150	C4070	1179C	---	22AWG, 9-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl/vi
<u>Q7155-1</u>	8456	7155	C4071	1180C	---	22AWG, 10-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl/vi/gr
<u>Q7160-1</u>	8457	7160	C4607	1181C	C2212CT-2464	22AWG, 12-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/bn/bu/or/yl/vi/gr/pk/tn
<u>Q7165-1</u>	---	7165R	---	1181/15C	---	22AWG, 15-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl/vi/gr/pk/tn/ rd-gn/rd-yl/rd-bk
<u>Q7170-1</u>	---	7170	---	1181/20C	---	22AWG, 20-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl/vi/gr/pk/tn/rd-gn/ rd-yl/rd-bk/wh-bk/wh-rd/wh-gn/wh-yl/wh-bl
<u>Q7175-1</u>	---	7175	---	1181/25C	---	22AWG, 25-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl/vi/gr/pk/tn/rd-gn/ rd-yl/rd-bk/wh-bk/wh-rd/wh-gn/wh-yl/wh-bl/ wh-br/wh-or/wh-gr/wh-vi/wh-bk-rd

Control and Signal Cable

Control & Signal Cable Cross-Reference

ADC	Belden	Quabbin	Carol	Alpha	Lake	Description	Colors
Q7315-1	8451	7315	C2516A	2461C	222CSTPP	22AWG, 2-conductor, shielded, PVC, chrome gray	bk/rd
Q7320-1	8761	7320	C2514	2401/C	C222CSTP-45	22AWG, 2-conductor, shielded, PVC, chrome gray	cl/bk
Q7325-1	8771	7325	C2526	1294C	223CSP	22AWG, 3-conductor, shielded, PVC, chrome gray	bk/rd/cl
Q7395-1	8723	7395	C1352	2466C	B222PRT	22AWG, 2 twisted pairs, shielded, PVC, chrome gray	bk/rd/wh/gn
Q7465-1	8724	7465	C1340	2464/C	B222PROT	22AWG, 2 twisted pair, shielded, PVC, chrome gray	bk-rd-wh-gn
Q7565-1	---	7565	---	1299/15C	---	22AWG, 15-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl/vi/gr/pk/tn/ rd-gn/rd-yl/rd-bk
Q7560-1	---	7560	---	1299/12C	---	22AWG, 12-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl/vi/gr/pk/tn
Q7555-1	---	7555	---	1299/10C	---	22AWG, 10-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl/vi/gr
Q7545-1	---	7545	---	1298C	---	22AWG, 8-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn/or/bu/br/yl
Q7535-1	---	7535	C0763	1296C	---	22AWG, 6-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn/bu/or
Q7525-1	---	7525	C0762	1294C	---	22AWG, 4-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn
Q6100-1	9444	6100	C6353A	1317C	C204Ct	20AWG, 4-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn
Q6130-1	8205	6130	C6351	1895C	B202CT	20AWG, 1 twisted pair, unshielded, PVC, chrome gray	bk/rd
Q6140-1	8762	6140	C2524A	2411C	202CSP	20AWG, 2-conductor, shielded, PVC, chrome gray	bk/cl
Q6145-1	8772	6145	C2528	2413C	203CSP	20AWG, 3-conductor, shielded, PVC, chrome gray	bk/rd/cl
Q6151-1	---	6151	---	---	---	20AWG, 2 twisted pair, shielded, PVC, chrome gray	bk/rd x gn/wh
Q4560-1	9740	4560	C8116	1897C	B182CT16	18AWG, 2-conductor, unshielded, PVC, chrome gray	bk/rd
Q4100-1	8489	4100	C2404A	1858/4C	C184T(16)-2598	18AWG, 4-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn
Q4105-1	8465	4105	C2420	1898/5C	B185CT(19)-45	18AWG, 5-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn/bn
Q4110-1	8489	4110	C2404	1898/4C	B184CT(19)-45	18AWG, 7-conductor, unshielded, PVC, chrome gray	bk/wh/rd/gn/bn/bu/or
Q4120-1	8466	4120	C2412	1898/12C	B1812CT(19)-45	18AWG, 12-conductor, unshielded, PVC, chrome gray	bk/wh/rd/gn/bu/wh-bk/ rd-bk/gn-bk/or-bk/bu-bk/bk-wh
Q4125-1	8468	4125	C2423	1898/15C	B1815CT(19)	18AWG, 15-conductor, unshielded, PVC, chrome gray	bk/wh/rd/gn/or/bu/wh-bk/rd-bk/ gn-bk/or-bk/bu-bk/bk-wh/gn-wh/bu-wh
Q4130-1	8619	4130	C2424	1898/19C	B1819CT19-45	18AWG, 19-conductor, unshielded, PVC, chrome gray	bk/wh/rd/gn/or/bn/bu/wh-bk/rd-bk/gn-pk/ or-bk/bu-bk/bk-wh/rd-wh/gn-wh/bu-wh/bk- rd/wh-rd/or-rd/bu-rd
Q4135-1	9626	4135	C2433	1898/25C	C1825CT-45BLD	18AWG, 25-conductor, unshielded, PVC, chrome gray	bk/wh/rd/gn/or/bu/wh-bk/rd-bk/gn-pk/ or-bk/bu-bk/bk-wh/rd-wh/gn-wh/bu-wh/bk- rd/wh-rd/or-rd/bu-rd/rd-gn/or-gn/ bk-wh-rd/wh-bk-rd/rd-bk-wh/gn-bk-wh
Q4140-1	8461	4140	C2830	---	---	18AWG, 2-conductor, unshielded, PVC, chrome gray	bk/wh
Q4165-1	8760	4165	C2534A	2421C	C182CSTP(16)-4S	18AWG, 2-conductor, shielded, PVC, chrome gray	bk/cl
Q4170-1	8770	4170	C2535A	2423C	183CSP	18AWG, 3-conductor, shielded, PVC, chrome gray	bk/rd/cl
Q4175-1	9418	4175	C2543	M13244	C184CST(19)-45BL	18AWG, 4-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn
Q4177-1	---	4177	---	---	---	18AWG, 6-conductor, shielded, PVC, chrome gray	bk/rd/wh/gn/bn/bu
Q3100-1	8620	3100	C2425A	---	B164T-20811	16AWG, 4-conductor, unshielded, PVC, chrome gray	bk/rd/wh/gn
Q3130-1	8471	3130	C2405	1899C	162CPT19	16AWG, 2-conductor, unshielded, PVC, chrome gray	bk/wh

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<i>ADC</i>	<i>Belden</i>	<i>Quabbin</i>	<i>Carol</i>	<i>Alpha</i>	<i>Lake</i>	<i>Description</i>	<i>Colors</i>
<u>Q0225-1</u>	9365	0225	C0455	5640B1801	T183ST(19)-BLD	18AWG, 3-conductor, shielded, PVC, chrome gray	bk/rd/wh
<u>Q0220-1</u>	9364	0220	C0453A	M39116	----	20AWG, 3-conductor, shielded, PVC, chrome gray	bk/rd/wh
<u>Q0200-1</u>	9493	0200	C0436	5630B1801	T183T(19)-45	18AWG, 3-conductor, unshielded, PVC, chrome gray	bk/rd/wh
<u>Q0195-1</u>	9492	0195	C0434	5630B2001	----	20AWG, 3-conductor, unshielded, PVC, chrome gray	bk/rd/wh
<u>Q0190-1</u>	---	0190	---	---	---	22AWG, 3-conductor, unshielded, PVC, chrome gray	bk/rd/wh
<u>Q0170-1</u>	9318	170	C0454	---	---	18AWG, 2-conductor, shielded, PVC, chrome gray	bk/rd
<u>Q0165-1</u>	9320	0165	---	M39115	---	20AWG, 2-conductor, shielded, PVC, chrome gray	bk/rd
<u>Q0160-1</u>	9322	0160	C0450	5610B2201	B222CST-45	22AWG, 2-conductor, shielded, PVC, chrome gray	bk/rd
<u>Q0140-1</u>	9409	140	C0435	M39075	---	18AWG, 2-conductor, unshielded, PVC, chrome gray	bk/rd