

Multi-Conductor Flexible Control Cable



Unshielded Flexible Control Cable



Shielded Flexible Control Cable



Multi-conductor flexible control cable from AutomationDirect is available in sizes from 20AWG to 10AWG with 3 to 41 unshielded and shielded conductors. Individual conductors are bare copper and stranded for flexibility, with black PVC/Nylon insulation and marked with numbers for easy identification. A convenient ground conductor is included in the conductor count of each cable and has insulation that is green with a yellow stripe. Shielded versions include both an overall aluminum mylar foil tape with drain wire and tinned copper braid for maximum effectiveness against external electrical noise interference. The cable's outer jacket is a flexible, premium grade Thermoplastic Elastomer (TPE) that is resistant to sunlight, oil, and moisture penetration, making these cables suitable for wet and dry locations as well as outdoors. Although not suitable for continuous flexing applications, these cables are ideal for both stationary and flexible applications with limited mechanical stress and free movement without any tensile stress, loads or forced movements.

With multiple ratings and approvals, AutomationDirect flexible multi-conductor control cable has the versatility to meet a wide range of industrial applications. Given its Tray Cable Exposed Run rating, UL Type TC-ER or Power Limited Tray Cable Tray Cable, UL Type PLTC-ER, our cable can be installed between a cable tray and the utilization equipment or device without the need for metal conduit and/or armor resulting in installation and maintenance savings. With the Machine Tool Wire rating, UL Type MTW, these cables meet NFPA 79, Electrical Standard for Industrial Machinery. Other ratings and approvals include Wind Turbine Tray Cable UL Type WTTC, Class 1 Division 2 Hazardous Locations and Direct Burial.

When combined with AutomationDirect ZIPport multi-wire connectors, our flexible multi-conductor cables provide an economical way to organize and simplify control wiring in facilities and during assembly of machinery. Cut to length in 1 foot increments with a 20 foot minimum length.

Features

- 20AWG to 10AWG, 3 to 41 conductors including a equal size ground
- Unshielded and shielded constructions
- Individual conductors have black PVC/Nylon insulation and are marked with identification numbers
- Rugged Thermoplastic Elastomer (TPE) outer jacket
- Equal size green/yellow ground wire included
- Multiple ratings and approvals include Type TC-ER or PLTC-ER (eliminates need for conduit/armor), Type MTW (meets NFPA 79), WTTC, Class 1 Division 2, Direct Burial, Wet and Dry Location, Oil Resistant, Sunlight Resistant
- Flexibility for easy installation
- Cut to length in 1 foot increments
- Low 20 foot minimum length
- Made in the USA
- Ideal for use with ZIPport multi-wire connectors (as shown below)

Cable Use Examples*:




* Cables shown using AutomationDirect's ZIPport multi-wire connectors. See Terminal Blocks & Wiring Solutions section for further information.

20 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

20 Gauge Multi-Conductor Flexible Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	20AWG 10/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	300V Power Limited Tray Cable - Exposed Run (PLTC-ER)		UL 13 Standard for Power-Limited Circuit Cables
	300V Instrumentation Tray Cable - Exposed Run (ITC-ER)		UL 2250 Standard for Instrumentation Tray Cable
	600V MTW Flexing / AWM 2587		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	26 pF/ft Nom. Conductor to Conductor		UL 758 - AWM Style 20886
Resistance	10.15 Ω /kft*	Approvals**	CSA C22.2 No. 210 - CSA AWM I/II A/B
Impedance	61.0 Ω		Class 1 Division II per NEC 336, 501, 502
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		UL (E57497), CSA (90458)
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant	Sample Print Legend	Southwire EXXXXX (UL) Type PLTC-ER XXAWG (XXmm²) XX/C PVC/Nylon 90C Sun Res Oil Res I/II -40C or ITC-ER or MTW Flexing 600V or AWM 2587 or -- LLXXXXXX CSA AWM I/II A/B 105C 600V -40C FT4 -- CE RoHS -2 Made in USA Sequential Footage
Conductor Insulation	0.011 Inch, PVC + 0.005 Inch, NYLON		
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	4x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520		
	UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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

20 Gauge Multi-Conductor Flexible Control Cable (Unshielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches ± 10%)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
V30156-1	3	20	10	16	47	0.26	1.12	20	0.04	
V30158-1	4					0.28	1.24	20	0.04	
V30160-1	5					0.30	1.32	20	0.05	
V30162-1	7				62	0.33	1.44	20	0.06	
V30164-1	9					0.41	1.64	20	0.09	
V30186-1	12					0.45	1.84	20	0.11	
V30188-1	18					0.52	2.20	20	0.15	
V30190-1	25					0.60	2.56	20	0.20	

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths




Please Note: Our prices on flexible control 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.

18 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

18 Gauge Multi-Conductor Flexible Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	18AWG 16/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTTC)		UL 2277 - Type WTTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
			UL 1690 - Data Processing Cable (DP-1)
Capacitance	28.2 pF/ft Nom. Conductor to Conductor		UL 758 - AWM Style 20886
Resistance	6.53 Ω /kft*		C22.2 NO. 230 - c(UL) Type TC
Impedance	55.0 Ω		CSA 22.2 No. 239 - c(UL) Type CIC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		CSA C22.2 No. 210 - CSA AWM I/II A/B
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant		Class 1 Division II per NEC 336, 501, 502
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON	Approvals**	UL (E75755), CSA (90458)
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry	Sample Print Legend	Southwire XXAWG (XXmm2) XX/C PVC/Nylon Type TC-ER E75755 (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 - LL90458 CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	4x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520		
	UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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18 Gauge Multi-Conductor Flexible Control Cable (Unshielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
V40166-1	3	18	16	20	45	0.28	1.12	20	0.05	
V40168-1	4					0.31	1.24	20	0.06	
V40170-1	5					0.33	1.32	20	0.07	
V40172-1	7					0.36	1.44	20	0.09	
V40174-1	9					0.41	1.64	20	0.11	
V40176-1	12					0.46	1.84	20	0.14	
V40178-1	18				45	0.55	2.20	20	0.21	
V40180-1	25				60	0.64	2.56	20	0.25	

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths




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16 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

16 Gauge Multi-Conductor Flexible Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	16AWG 26/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTC)		UL 2277 - Type WTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
	32.78 pF/ft Nom. Conductor to Conductor		UL 1690 - Data Processing Cable (DP-1)
Resistance	4.10 Ω /kft*		UL 758 - AWM Style 20886
Impedance	46.3 Ω		C22.2 NO. 230 - c(UL) Type TC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		CSA 22.2 No. 239 - c(UL) Type CIC
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant	Approvals**	CSA C22.2 No. 210 - CSA AWM I/II A/B
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 501, 502
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		UL (E75755), CSA (90458)
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		Sample Print Legend
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	4x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520		
	UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		Southwire XXAWG (XXmm2) XX/C PVC/Nylon Type TC-ER E75755 (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 - LL90458 CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE

* Per ASTM B174

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16 Gauge Multi-Conductor Flexible Control Cable (Unshielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
V50196-1	3	16	26	20	50	0.31	1.24	20	0.06	
V50198-1	4					0.34	1.36	20	0.08	
V50200-1	5					0.37	1.48	20	0.09	
V50202-1	7					0.40	1.60	20	0.11	
V50206-1	9					0.46	1.84	20	0.14	
V50208-1	12				50	0.51	2.04	20	0.20	
V50212-1	18				65	0.62	2.48	20	0.28	
V50214-1	25					0.72	2.88	20	0.35	
V50216-1	41				85	0.91	3.64	20	0.56	

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths




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14 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

14 Gauge Multi-Conductor Flexible Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	14AWG 41/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTC)		UL 2277 - Type WTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	37.09 pF/ft Nom. Conductor to Conductor		UL 1690 - Data Processing Cable (DP-1)
Resistance	2.57 Ω /kft*		UL 758 - AWM Style 20886
Impedance	40.0 Ω		C22.2 NO. 230 - c(UL) Type TC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		CSA 22.2 No. 239 - c(UL) Type CIC
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant	Approvals**	CSA C22.2 No. 210 - CSA AWM I/II A/B
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 501, 502
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		UL (E75755), CSA (90458)
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		Sample Print Legend Southwire XXAWG (XXmm ²) XX/C PVC/Nylon Type TC-ER E75755 (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 - LL90458 CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	4x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520		
	UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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14 Gauge Multi-Conductor Flexible Control Cable (Unshielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
V60127-1	3	14	41	20	50	0.34	1.36	20	0.82	
V60129-1	4					0.37	1.48	20	0.11	
V60131-1	5					0.41	1.64	20	0.13	
V60133-1	7					0.45	1.80	20	0.16	
V60135-1	9				65	0.52	2.08	20	0.21	
V60137-1	12					0.60	2.40	20	0.28	
V60139-1	18					0.70	2.80	20	0.40	
V60141-1	25					0.81	3.24	20	0.57	

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths




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12 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

12 Gauge Multi-Conductor Flexible Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	12AWG 65/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTTC)		UL 2277 - Type WTTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	40.4 pF/ft Nom. Conductor to Conductor		UL 1690 - Data Processing Cable (DP-1)
Resistance	1.62 Ω /kft*		UL 758 - AWM Style 20886
Impedance	36.1 Ω		C22.2 NO. 230 - c(UL) Type TC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		CSA 22.2 No. 239 - c(UL) Type CIC
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant "		CSA C22.2 No. 210 - CSA AWM I/II A/B
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 501, 502
Conductor Markings	"#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4	Approvals**	UL (E75755), CSA (90458)
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry	Sample Print Legend	Southwire XXAWG (XXmm2) XX/C PVC/Nylon Type TC-ER E75755 (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 - LL90458 CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	4x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520 UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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12 Gauge Multi-Conductor Flexible Control Cable (Unshielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
V70107-1	4	12	65	20	50	0.43	1.72	20	0.15	

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths




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10 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

10 Gauge Multi-Conductor Flexible Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	10 AWG 105/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTC)		UL 2277 - Type WTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	40.7 pF/ft Nom. Conductor to Conductor		UL 1690 - Data Processing Cable (DP-1)
Resistance	1.02 Ω/kft*		UL 758 - AWM Style 20886
Impedance	35.8 Ω		C22.2 NO. 230 - c(UL) Type TC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		CSA 22.2 No. 239 - c(UL) Type CIC
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant		CSA C22.2 No. 210 - CSA AWM I/II A/B
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 501, 502
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4	Approvals**	UL (E75755), CSA (90458)
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry	Sample Print Legend	Southwire XXAWG (XXmm ²) XX/C PVC/Nylon Type TC-ER E75755 (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 - LL90458 CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	4x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520 UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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10 Gauge Multi-Conductor Flexible Control Cable										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches ± 10%)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
V80059-1	4	10	105	25	50	0.50	2.00	20	0.21	

* Installed bend radius ≥ 4x diameter

** See web store for maximum cut lengths




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18 Gauge Multi-Conductor Flexible Control Cable (Shielded)

18 Gauge Multi-Conductor Flexible Control Cable Specifications (Shielded)			
Conductor Gauge & Stranding	18AWG 16/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTC)		UL 2277 - Type WTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	72.02 pF/ft Nom. Conductor to Shield 40.01 pF/ft Nom. Conductor to Conductor		UL 1690 - Data Processing Cable (DP-1)
Resistance	6.53 Ω /kft*		UL 758 - AWM Style 20886
Impedance	53.8 Ω		C22.2 NO. 230 - c(UL) Type TC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		CSA 22.2 No. 239 - c(UL) Type CIC
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant	Approvals**	CSA C22.2 No. 210 - CSA AWM I/II A/B
Shield	Overall aluminized polyester foil shield 100% coverage & tinned copper braid 85% coverage with 20 AWG drain		Class 1 Division II per NEC 336, 501, 502
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON	Sample Print Legend	Southwire XXAWG (XXmm2) XX/C PVC/Nylon Type TC-ER E75755 (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 - LL90458 CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	12x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520 UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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18 Gauge Multi-Conductor Flexible Control Cable (Shielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches ± 10%)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
MCTC-18-3S-1	3	18	16	20	47	0.30	3.60	20	0.06	
MCTC-18-4S-1	4					0.33	3.96	20	0.07	
MCTC-18-5S-1	5					0.35	4.20	20	0.08	
MCTC-18-7S-1	7					0.38	4.56	20	0.10	
MCTC-18-9S-1	9					0.44	5.28	20	0.14	
MCTC-18-12S-1	12					0.47	5.64	20	0.16	
MCTC-18-25S-1	25				62	0.66	7.92	20	0.31	

* Installed bend radius $\geq 4x$ diameter

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16 Gauge Multi-Conductor Flexible Control Cable (Shielded)

16 Gauge Multi-Conductor Flexible Control Cable Specifications (Shielded)			
Conductor Gauge & Stranding	16AWG 26/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTC)		UL 2277 - Type WTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	85.59 pF/ft Nom. Conductor to Shield 47.55 pF/ft Nom. Conductor to Conductor		UL 1690 - Data Processing Cable (DP-1)
Resistance	4.10 Ω /kft*		UL 758 - AWM Style 20886
Impedance	45.3 Ω		C22.2 NO. 230 - c(UL) Type TC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		CSA 22.2 No. 239 - c(UL) Type CIC
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant	Approvals**	CSA C22.2 No. 210 - CSA AWM I/II A/B
Shield	Overall aluminized polyester foil shield 100% coverage & tinned copper braid 85% coverage with 18 AWG drain		Class 1 Division II per NEC 336, 501, 502
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON	Sample Print Legend	UL (E75755), CSA (90458)
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	12x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520 UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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

16 Gauge Multi-Conductor Flexible Control Cable (Shielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
MCTC-16-3S-1	3	16	26	20	47	0.33	3.96	20	0.08	
MCTC-16-4S-1	4					0.36	4.32	20	0.10	
MCTC-16-5S-1	5					0.39	4.68	20	0.11	
MCTC-16-7S-1	7					0.42	5.04	20	0.14	
MCTC-16-9S-1	9					0.49	5.88	20	0.18	
MCTC-16-12S-1	12				73	0.56	6.72	20	0.28	
MCTC-16-25S-1	25				76	0.75	9.00	20	0.41	

* Installed bend radius $\geq 4 \times$ diameter

** See web store for maximum cut lengths




Please Note: Our prices on flexible control 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.

14 Gauge Multi-Conductor Flexible Control Cable (Shielded)

14 Gauge Multi-Conductor Flexible Control Cable Specifications (Shielded)			
Conductor Gauge & Stranding	14AWG 41/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type W TTC)		UL 2277 - Type W TTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	99.09 pF/ft Nom. Conductor to Shield 55.05 pF/ft Nom. Conductor to Conductor		UL 1690 - Data Processing Cable (DP-1)
Resistance	2.57 Ω /kft*		UL 758 - AWM Style 20886
Impedance	39.1 Ω		C22.2 NO. 230 - c(UL) Type TC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		CSA 22.2 No. 239 - c(UL) Type CIC
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant	Approvals**	CSA C22.2 No. 210 - CSA AWM I/II A/B
Shield	Overall aluminized polyester foil shield 100% coverage & tinned copper braid 85% coverage with 16 AWG drain		Class 1 Division II per NEC 336, 501, 502
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON	Sample Print Legend	UL (E75755), CSA (90458)
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	12x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520 UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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

14 Gauge Multi-Conductor Flexible Control Cable (Shielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
MCTC-14-3S-1	3	14	41	20	47	0.36	4.32	20	0.10	
MCTC-14-4S-1	4					0.40	4.80	20	0.13	
MCTC-14-7S-1	7					0.47	5.64	20	0.20	

* Installed bend radius $\geq 4 \times$ diameter

** See web store for maximum cut lengths



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12 Gauge Multi-Conductor Flexible Control Cable (Shielded)

12 Gauge Multi-Conductor Flexible Control Cable Specifications (Shielded)			
Conductor Gauge & Stranding	12AWG 65/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTTC)		UL 2277 - Type WTTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	109.85 pF/ft Nom. Conductor to Shield		UL 1690 - Data Processing Cable (DP-1)
	61.03 pF/ft Nom. Conductor to Conductor		UL 758 - AWM Style 20886
Resistance	1.62 Ω /kft*		C22.2 NO. 230 - c(UL) Type TC
Impedance	35.5 Ω		CSA 22.2 No. 239 - c(UL) Type CIC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)	Approvals**	CSA C22.2 No. 210 - CSA AWM I/II A/B
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant		Class 1 Division II per NEC 336, 501, 502
Shield	Overall aluminized polyester foil shield 100% coverage & tinned copper braid 85% coverage with 14 AWG drain	Sample Print Legend	Southwire XXAWG (XXmm2) XX/C PVC/Nylon Type TC-ER E75755 (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 - LL90458 CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		
Conductor Markings	#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	12x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520 UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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

12 Gauge Multi-Conductor Flexible Control Cable (Shielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
MCTC-12-4S-1	4	12	65	25	47	0.44	5.28	20	0.18	

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths




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10 Gauge Multi-Conductor Flexible Control Cable (Shielded)

10 Gauge Multi-Conductor Flexible Control Cable Specifications (Shielded)			
Conductor Gauge & Stranding	10AWG 105/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174
Voltage Rating	600V (Type TC-ER)		UL 1277 - Type TC-ER
	1000V (Type WTTC)		UL 2277 - Type WTTC
	1000V (UL/CSA AWM)		UL 1063 - Machine Tool Wiring (MTW)
Capacitance	110.83 pF/ft Nom. Conductor to Shield		UL 1690 - Data Processing Cable (DP-1)
	61.57 pF/ft Nom. Conductor to Conductor		UL 758 - AWM Style 20886
Resistance	1.02 Ω /kft*		C22.2 NO. 230 - c(UL) Type TC
Impedance	35.0 Ω		CSA 22.2 No. 239 - c(UL) Type CIC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)	Approvals**	CSA C22.2 No. 210 - CSA AWM I/II A/B
Jacket Material	Flexible Gray Thermoplastic Elastomer (TPE) - sunlight & oil resistant		Class 1 Division II per NEC 336, 501, 502
Shield	Overall aluminized polyester foil shield 100% coverage & tinned copper braid 85% coverage with 12 AWG drain	Sample Print Legend	UL (E75755), CSA (90458)
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Southwire XXAWG (XXmm2) XX/C PVC/Nylon Type TC-ER E75755 (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 - LL90458 CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE
Conductor Markings	"#1-ONE", "2-TWO", "3-THREE", etc... @ 4.5 inch intervals, ICEA Method 4		
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		
Cold Impact	-40°C (-40°F) per UL 1277		
Min. Bend Radius	12x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520 UL1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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

10 Gauge Multi-Conductor Flexible Control Cable (Shielded)										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
MCTC-10-4S-1	4	10	105	25	62	0.56	6.72	20	0.32	

* Installed bend radius $\geq 4 \times$ diameter

** See web store for maximum cut lengths



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