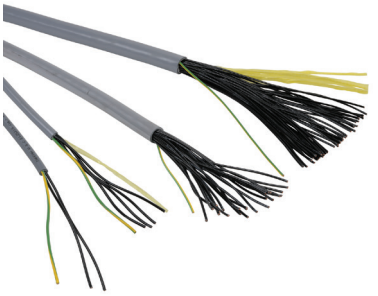
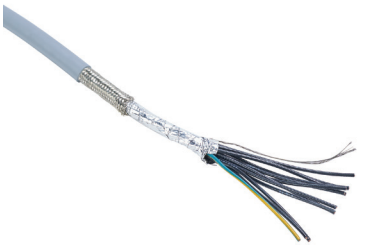
Multi-Conductor Flexible Control Cable



Unshielded Flexible Control Cable



Shielded Flexible Control Cable

Multi-conductor flexible control cable from AutomationDirect is available in sizes from 18 AWG to 10 AWG 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 line. 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, 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. These cables are made in the USA and are available in 50 foot (shielded only), 100 foot, 250 foot, 500 or 1000 foot reels.

Features

- 18 AWG to 10 AWG, 3 to 41 conductors including a ground
- Unshielded and shielded constructions
- Individual conductors have black PVC/Nylon insulation and are marked with identification numbers
- Rugged Thermoplastic Elastomer (TPE) outer jacket
- Green/yellow ground wire included
- Multiple ratings and approvals include Type TC-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
- 50 foot (shielded only), and 100, 250, 500 or 1000 foot reels
- Made in the USA
- Ideal for use with ZIPport multi-wire connectors (as shown below)

Cable Use Examples*:

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

18 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

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

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
V40166-100	3	18	16	20	45	0.28	1.12	100	4.7	
V40166-250								250	11.8	
V40166-1000								1000	47.0	
V40168-100	4					0.31	1.24	100	5.9	
V40168-250								250	14.8	
V40168-1000								1000	59.0	
V40170-100	5					0.33	1.32	100	6.8	
V40170-250								250	17.0	
V40170-1000								1000	68.0	
V40172-100	7					0.36	1.44	100	8.5	
V40172-250								250	21.3	
V40172-1000								1000	85.0	
V40174-100	9					0.41	1.64	100	10.7	
V40174-250								250	26.8	
V40174-1000								1000	107.0	
V40176-100	12					0.46	1.84	100	13.5	
V40176-250								250	33.8	
V40176-1000								1000	135.0	
V40178-100	18				45	0.55	2.20	100	20.7	
V40178-250								250	51.8	
V40178-1000								1000	207.0	
V40180-100	25				60	0.64	2.56	100	24.5	
V40180-250								250	61.3	
V40180-1000								1000	245.0	

**** Installed bend radius ≥ 4x diameter***
***** Per ASTM B174***

16 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

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

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
V50196-100	3	16	26	20	50	0.31	1.24	100	6.0	
V50196-250								250	15.0	
V50196-1000								1000	60.0	
V50198-100	4					0.34	1.36	100	7.6	
V50198-250								250	19.0	
V50198-1000								1000	76.0	
V50200-100	5					0.37	1.48	100	8.9	
V50200-250								250	22.3	
V50200-1000								1000	89.0	
V50202-100	7					0.40	1.60	100	11.3	
V50202-250								250	28.3	
V50202-1000								1000	113.0	
V50206-100	9					0.46	1.84	100	14.4	
V50206-250								250	36.0	
V50206-1000								1000	144.0	
V50208-100	12				50	0.51	2.04	100	19.9	
V50208-250								250	49.8	
V50208-1000								1000	199.0	
V50212-100	18				65	0.62	2.48	100	28.0	
V50212-250								250	70.0	
V50212-1000								1000	280.0	
V50214-100	25					0.72	2.88	100	34.8	
V50214-250								250	87.0	
V50214-500								500	348.0	
V50216-100	41				85	0.91	3.64	100	55.7	
V50216-250								250	139.3	
V50216-500								500	557.0	

**** Installed bend radius ≥ 4x diameter***
***** Per ASTM B174***

14 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

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

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
V60127-100	3	14	41	20	50	0.34	1.36	100	8.2	
V60127-250								250	20.5	
V60127-1000								1000	82.0	
V60129-100	4					0.37	1.48	100	10.6	
V60129-250								250	26.5	
V60129-1000								1000	106.0	
V60131-100	5					0.41	1.64	100	12.5	
V60131-250								250	31.3	
V60131-1000								1000	125.0	
V60133-100	7					0.45	1.80	100	16.0	
V60133-250								250	40.0	
V60133-1000								1000	160.0	
V60135-100	9					0.52	2.08	100	20.5	
V60135-250								250	51.3	
V60135-1000								1000	205.0	
V60137-100	12				65	0.60	2.40	100	28.2	
V60137-250								250	70.5	
V60137-1000								1000	282.0	
V60139-100	18					0.70	2.80	100	40.2	
V60139-250								250	100.5	
V60139-500								500	402.0	
V60141-100	25					0.81	3.24	100	56.5	
V60141-250								250	141.3	
V60141-500								500	565.0	

**** Installed bend radius ≥ 4x diameter***
***** Per ASTM B174***

12 and 10 Gauge Multi-Conductor Flexible Control Cable (Unshielded)

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

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
V70107-100	4	12	65	20	50	0.43	1.72	100	14.7	
V70107-250								250	36.8	
V70107-1000								1000	147.0	

**** Installed bend radius ≥ 4x diameter***
***** Per ASTM B174***

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

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)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
V80059-100	4	10	105	25	50	0.50	2.00	100	20.6	
V80059-250								250	51.5	
V80059-1000								1000	206.0	

**** Installed bend radius ≥ 4x diameter***
***** Per ASTM B174***

18 Gauge Multi-Conductor Flexible Control Cable (Shielded)

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

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)***	**Reel Length (ft)**	**Approx. Weight (lbs)**	**Price**
MCTC-18-3S-50	3	18	16	20	47	0.30	3.60	50	3.1	
MCTC-18-3S-100								100	6.2	
MCTC-18-3S-250								250	15.5	
MCTC-18-3S-500								500	31.0	
MCTC-18-3S-1000								1000	62.0	
MCTC-18-4S-50	4					0.33	3.96	50	3.7	
MCTC-18-4S-100								100	7.3	
MCTC-18-4S-250								250	18.3	
MCTC-18-4S-500								500	36.5	
MCTC-18-4S-1000								1000	73.0	
MCTC-18-5S-50	5					0.35	4.20	50	4.2	
MCTC-18-5S-100								100	8.4	
MCTC-18-5S-250								250	21.0	
MCTC-18-5S-500								500	42.0	
MCTC-18-5S-1000								1000	84.0	
MCTC-18-7S-50	7					0.38	4.56	50	5.1	
MCTC-18-7S-100								100	10.2	
MCTC-18-7S-250								250	25.5	
MCTC-18-7S-500								500	51.0	
MCTC-18-7S-1000								1000	102	
MCTC-18-9S-50	9					0.44	5.28	50	6.8	
MCTC-18-9S-100								100	13.5	
MCTC-18-9S-250								250	33.8	
MCTC-18-9S-500								500	67.5	
MCTC-18-9S-1000								1000	135.0	

Installed bend radius ≥ 12x diameter
****Per ASTM B174***

18 Gauge Multi-Conductor Flexible Control Cable (Shielded)

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)**	*Reel Length (ft)*	*Approx. Weight (lbs)*	*Price*
MCTC-18-12S-50	12	18	16	20	47	0.47	5.64	50	8.1	
MCTC-18-12S-100								100	16.2	
MCTC-18-12S-250								250	40.5	
MCTC-18-12S-500								500	81.0	
MCTC-18-12S-1000								1000	162.0	
MCTC-18-25S-50	25				62	0.66	7.92	50	15.3	
MCTC-18-25S-100								100	30.6	
MCTC-18-25S-250								250	76.5	
MCTC-18-25S-500								500	153.0	
MCTC-18-25S-1000								1000	306.0	

** Installed bend radius ≥ 12x diameter*
*** Per ASTM B174*

16 Gauge Multi-Conductor Flexible Control Cable (Shielded)

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

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
MCTC-16-3S-50	3	16	26	20	47	0.33	3.96	50	4.0	
MCTC-16-3S-100								100	8.0	
MCTC-16-3S-250								250	20.0	
MCTC-16-3S-500								500	40.0	
MCTC-16-3S-1000								1000	80.0	
MCTC-16-4S-50	4					0.36	4.32	50	4.8	
MCTC-16-4S-100								100	9.5	
MCTC-16-4S-250								250	23.8	
MCTC-16-4S-500								500	47.5	
MCTC-16-4S-1000								1000	95.0	
MCTC-16-5S-50	5					0.39	4.68	50	5.7	
MCTC-16-5S-100								100	11.3	
MCTC-16-5S-250								250	28.3	
MCTC-16-5S-500								500	56.5	
MCTC-16-5S-1000								1000	113.0	
MCTC-16-7S-50	7					0.42	5.04	50	5.9	
MCTC-16-7S-100								100	13.7	
MCTC-16-7S-250								250	34.3	
MCTC-16-7S-500								500	68.5	
MCTC-16-7S-1000								1000	137.0	
MCTC-16-9S-50	9					0.49	5.88	50	9.0	
MCTC-16-9S-100								100	17.9	
MCTC-16-9S-250								250	44.8	
MCTC-16-9S-500								500	89.5	
MCTC-16-9S-1000								1000	179.0	

**** Installed bend radius ≥ 12x diameter***

***** Per ASTM B174***

16 Gauge Multi-Conductor Flexible Control Cable (Shielded)

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
MCTC-16-12S-50	12	16	26	20	73	0.56	6.72	50	14.0	
MCTC-16-12S-100								100	28.0	
MCTC-16-12S-250								250	70.0	
MCTC-16-12S-500								500	140.0	
MCTC-16-12S-1000								1000	280.0	
MCTC-16-25S-50	25				76	0.75	9.00	50	20.4	
MCTC-16-25S-100								100	40.7	
MCTC-16-25S-250								250	101.8	
MCTC-16-25S-500								500	203.5	
MCTC-16-25S-1000								1000	407.0	

**** Installed bend radius ≥ 12x diameter***
***** Per ASTM B174***

14 Gauge Multi-Conductor Flexible Control Cable (Shielded)

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

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
MCTC-14-3S-50	3	14	41	20	47	0.36	4.32	50	5.2	
MCTC-14-3S-100								100	10.3	
MCTC-14-3S-250								250	25.8	
MCTC-14-3S-500								500	51.5	
MCTC-14-3S-1000								1000	103.0	
MCTC-14-4S-50	4					0.40	4.80	50	6.3	
MCTC-14-4S-100								100	12.6	
MCTC-14-4S-250								250	31.5	
MCTC-14-4S-500								500	63.0	
MCTC-14-4S-1000								1000	126.0	
MCTC-14-7S-50	7					0.47	5.64	50	10.0	
MCTC-14-7S-100								100	19.9	
MCTC-14-7S-250								250	49.8	
MCTC-14-7S-500								500	99.5	
MCTC-14-7S-1000								1000	199.0	

**** Installed bend radius ≥ 12x diameter***
***** Per ASTM B174***

12 Gauge Multi-Conductor Flexible Control Cable (Shielded)

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

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
MCTC-12-4S-50	4	12	65	25	47	0.44	5.28	50	8.8	
MCTC-12-4S-100								100	17.6	
MCTC-12-4S-250								250	44.0	
MCTC-12-4S-500								500	88.0	
MCTC-12-4S-1000								1000	176.0	

**** Installed bend radius ≥ 12x diameter***
***** Per ASTM B174***

10 Gauge Multi-Conductor Flexible Control Cable (Shielded)

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

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 ±10%)***	***Minimum Installed Bend Radius (inches)****	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
MCTC-10-4S-50	4	10	105	25	62	0.56	6.72	50	16.2	
MCTC-10-4S-100								100	32.3	
MCTC-10-4S-250								250	80.8	
MCTC-10-4S-500								500	161.5	
MCTC-10-4S-1000								1000	323.0	

**** Installed bend radius ≥ 12x diameter***
***** Per ASTM B174***