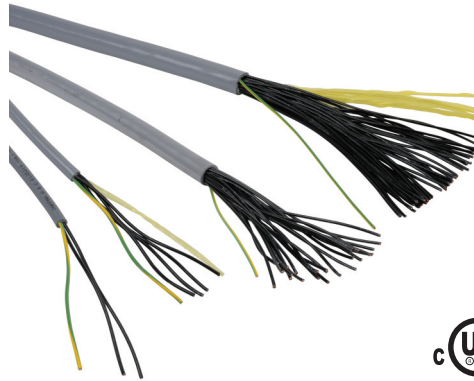


Multi-Conductor Flexible Control Cable



Multi-conductor flexible control cable from AutomationDirect is available in sizes from 18 AWG to 10 AWG with 3 to 41 unshielded 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. The cable's outer jacket is a flexible, premium grade PVC 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.

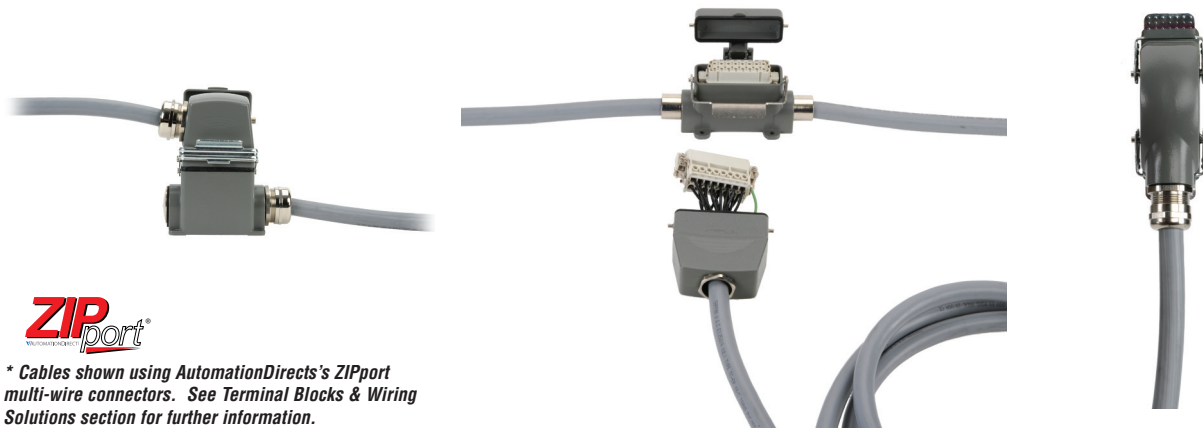
With multiple ratings and approvals, AutomationDirect flexible multi-conductor control cable has the versatility to meet a wide range of industrial applications. Tray Cable Exposed Run, UL Type TC-ER, enables our cable to be installed between a cable tray and the utilization equipment or device without 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, Submersible Pump, 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 100 foot, 250 foot, 500 or 1000 foot reels.

Features

- 18 AWG to 10 AWG, 3 to 41 conductors including a ground
- Individual conductors have black PVC/Nylon insulation and are marked with identification numbers
- Rugged PVC 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, Submersible Pump, Direct Burial, Wet and Dry Location, Oil Resistant, Sunlight Resistant
- Flexibility for easy installation
- 100 foot, 250 foot, 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 AutomationDirect's ZIPport multi-wire connectors. See Terminal Blocks & Wiring Solutions section for further information.*

18 Gauge Multi-Conductor Flexible Control Cable

18 Gauge Multi-Conductor Flexible Control Cable Specifications			
Conductor Gauge & Stranding	18 AWG 16/30 bare copper	Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520
Voltage Rating	600V (Type TC)		UL1685, UL MTW NFPA 79 2007
	1000V (Type WTTC)	Oil Resistance	Oil Res I & II
Capacitance	26 pF/ft Nom.	Applicable Standards	UL Type WTTC UL2277
Resistance	6.92 Ω D.C. per 1000 FT @ 68°F (20°C)		UL Type TC UL1277
Impedance	86 Ω		c(UL) 600V CIC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		c(UL) 1000V AWM I/II A/B 600V 90°C (194°F)
Jacket Material	Flexible Gray PVC - sunlight & oil resistant		UL Type TC-ER (Exposed Run) per UL1277 or DP1 (Data Process)
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 392, 501
Conductor Markings	"#1-ONE", "2-TWO", "3-THREE", etc...		UL 83 NEC Type PVC/Nylon conductors
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		Direct Burial
Cold Bend	-40°C (-40°F) per UL 1277		Submersible Pump
Cold Impact	-40°C (-40°F) per UL 1277		MTW Flexing (meets NFPA 79)
Min. Bend Radius	6x diameter		ICEA S-73-532
			ICEA S-95-658 (NEMA WC-70)

18 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%)	Installed Bend Radius (inches)*	Reel Length (ft)	Approx. Weight (lbs)	Price
V40166-100	3	18	16/30	20	50	0.28	1.70	100	7.8	<--->
V40166-250								250	19.5	<--->
V40166-1000								1000	78.0	<--->
V40168-100	4					0.31	1.84	100	8.8	<--->
V40168-250								250	22.0	<--->
V40168-1000								1000	88.0	<--->
V40170-100	5					0.32	1.91	100	9.7	<--->
V40170-250								250	24.2	<--->
V40170-1000								1000	97.0	<--->
V40172-100	7					0.36	2.13	100	11.6	<--->
V40172-250								250	29.0	<--->
V40172-1000								1000	116.0	<--->
V40174-100	9					0.39	2.36	100	13.5	<--->
V40174-250								250	33.8	<--->
V40174-1000								1000	135.0	<--->
V40176-100	12					0.44	2.63	100	16.3	<--->
V40176-250								250	40.7	<--->
V40176-1000								1000	163.0	<--->
V40178-100	18				65	0.55	3.27	100	25.1	<--->
V40178-250								250	62.9	<--->
V40178-1000								1000	251.0	<--->
V40180-100	25					0.62	3.71	100	31.5	<--->
V40180-250								250	78.7	<--->
V40180-1000								1000	315.0	<--->

* Installed bend radius = 6x diameter

16 Gauge Multi-Conductor Flexible Control Cable

16 Gauge Multi-Conductor Flexible Control Cable Specifications			
Conductor Gauge & Stranding	16 AWG 26/30 bare copper	Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520
Voltage Rating	600V (Type TC)		UL1685, UL MTW NFPA 79 2007
	1000V (Type WTTTC)	Oil Resistance	Oil Res I & II
Capacitance	29.3 pF/ft Nom.	Applicable Standards	UL Type WTTTC UL2277
Resistance	4.35 Ω D.C. per 1000 FT @ 68°F (20°C)		UL Type TC UL1277
Impedance	76 Ω		c(UL) 600V CIC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		c(UL) 1000V AWM I/II A/B 600V 90°C (194°F)
Jacket Material	Flexible Gray PVC - sunlight & oil resistant		UL Type TC-ER (Exposed Run) per UL1277 or DP1 (Data Process)
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 392, 501
Conductor Markings	"#1-ONE", "2-TWO", "3-THREE", etc...		UL 83 NEC Type PVC/Nylon conductors
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		Direct Burial
Cold Bend	-40°C (-40°F) per UL 1277		Submersible Pump
Cold Impact	-40°C (-40°F) per UL 1277		MTW Flexing (meets NFPA 79)
Min. Bend Radius	6x diameter		ICEA S-73-532
			ICEA S-95-658 (NEMA WC-70)

16 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%)	Installed Bend Radius*	Reel Length (ft)	Approx. Weight (lbs)	Price
V50196-100	3	16	26/30	20	50	0.31	1.84	100	9.1	<---
V50196-250								250	22.7	<---
V50196-1000								1000	91.0	<---
V50198-100	4					0.33	1.98	100	10.5	<---
V50198-250								250	26.1	<---
V50198-1000								1000	105.0	<---
V50200-100	5					0.34	2.06	100	11.7	<---
V50200-250								250	29.3	<---
V50200-1000								1000	117.0	<---
V50202-100	7					0.39	2.31	100	14.4	<---
V50202-250								250	36.0	<---
V50202-1000								1000	144.0	<---
V50206-100	9					0.43	2.57	100	17.1	<---
V50206-250								250	42.7	<---
V50206-1000								1000	171.0	<---
V50208-100	12				65	0.51	3.05	100	24.3	<---
V50208-250								250	60.9	<---
V50208-1000								1000	243.0	<---
V50212-100	18					0.59	3.56	100	32.2	<---
V50212-250								250	80.6	<---
V50212-1000								1000	322.0	<---
V50214-100	25					0.68	4.06	100	41.2	<---
V50214-250								250	103.0	<---
V50214-500								500	206.0	<---
V50216-100	41				85	0.87	5.21	100	71.2	<---
V50216-250								250	178.0	<---
V50216-500								500	356.0	<---

* Installed bend radius = 6x diameter

14 Gauge Multi-Conductor Flexible Control Cable

14 Gauge Multi-Conductor Flexible Control Cable Specifications

Conductor Gauge & Stranding	14 AWG 41/30 bare copper	Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520
Voltage Rating	600V (Type TC) 1000V (Type WTTTC)	Oil Resistance	UL1685, UL MTW NFPA 79 2007
Capacitance	33.6 pF/ft Nom.	Applicable Standards	UL Type WTTTC UL2277
Resistance	2.73 Ω D.C. per 1000 FT @ 68°F (20°C)		UL Type TC UL1277
Impedance	66 Ω		c(UL) 600V CIC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		c(UL) 1000V AWM I/II A/B 600V 90°C (194°F)
Jacket Material	Flexible Gray PVC - sunlight & oil resistant		UL Type TC-ER (Exposed Run) per UL1277 or DP1 (Data Process)
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 392, 501
Conductor Markings	"#1-ONE", "2-TWO", "3-THREE", etc...		UL 83 NEC Type PVC/Nylon conductors
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		Direct Burial
Cold Bend	-40°C (-40°F) per UL 1277		Submersible Pump
Cold Impact	-40°C (-40°F) per UL 1277		MTW Flexing (meets NFPA 79)
Min. Bend Radius	6x diameter		ICEA S-73-532
			ICEA S-95-658 (NEMA WC-70)

14 Gauge Multi-Conductor Flexible Control Cable

14 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%)	Installed Bend Radius*	Reel Length (ft)	Approx. Weight (lbs)	Price
V60127-100	3	14	41/30	20	50	0.34	2.05	100	11.3	<--->
V60127-250								250	28.1	<--->
V60127-1000								1000	113.0	<--->
V60129-100	4					0.37	2.21	100	13.3	<--->
V60129-250								250	33.2	<--->
V60129-1000								1000	133.0	<--->
V60131-100	5					0.39	2.31	100	15.1	<--->
V60131-250								250	37.9	<--->
V60131-1000								1000	151.0	<--->
V60133-100	7					0.43	2.60	100	19.1	<--->
V60133-250								250	47.7	<--->
V60133-1000								1000	191.0	<--->
V60135-100	9					0.48	2.90	100	23.0	<--->
V60135-250								250	57.6	<--->
V60135-1000								1000	230.0	<--->
V60137-100	12				65	0.57	3.43	100	32.4	<--->
V60137-250								250	81.0	<--->
V60137-1000								1000	324.0	<--->
V60139-100	18	0.67	4.03	100		44.0	<--->			
V60139-250				250		110.0	<--->			
V60139-500				500		220.0	<--->			
V60141-100	25	85	0.81	4.85	100	67.2	<--->			
V60141-250					250	168.0	<--->			
V60141-500					500	336.0	<--->			

* Installed bend radius = 6x diameter

12 and 10 Gauge Multi-Conductor Flexible Control Cable

12 Gauge Multi-Conductor Flexible Control Cable Specifications			
Conductor Gauge & Stranding	12 AWG 65/30 bare copper	Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520
Voltage Rating	600V (Type TC)		UL1685, UL MTW NFPA 79 2007
	1000V (Type WTTTC)	Oil Resistance	Oil Res I & II
Capacitance	39.1 pF/ft Nom.	Applicable Standards	UL Type WTTTC UL2277
Resistance	1.71 Ω D.C. per 1000 FT @ 68°F (20°C)		UL Type TC UL1277
Impedance	57 Ω		c(UL) 600V CIC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		c(UL) 1000V AWM I/II A/B 600V 90°C (194°F)
Jacket Material	Flexible Gray PVC - sunlight & oil resistant		UL Type TC-ER (Exposed Run) per UL1277 or DP1 (Data Process)
Conductor Insulation	0.015 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 392, 501
Conductor Markings	"#1-ONE", "2-TWO", "3-THREE", etc...		UL 83 NEC Type PVC/Nylon conductors
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		Direct Burial
Cold Bend	-40°C (-40°F) per UL 1277		Submersible Pump
Cold Impact	-40°C (-40°F) per UL 1277		MTW Flexing (meets NFPA 79)
Min. Bend Radius	6x diameter		ICEA S-73-532
			ICEA S-95-658 (NEMA WC-70)

12 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 $\pm 10\%$)	Installed Bend Radius*	Reel Length (ft)	Approx. Weight (lbs)	Price
V70107-100	4	12	65/30	20	50	0.43	2.57	100	17.4	<--->
V70107-250								250	43.5	<--->
V70107-1000								1000	174	<--->

* Installed bend radius = 6x diameter

10 Gauge Multi-Conductor Flexible Control Cable Specifications			
Conductor Gauge & Stranding	10 AWG 105/30 bare copper	Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520
Voltage Rating	600V (Type TC)		UL1685, UL MTW NFPA 79 2007
	1000V (Type WTTTC)	Oil Resistance	Oil Res I & II
Capacitance	38.8 pF/ft Nom.	Applicable Standards	UL Type WTTTC UL2277
Resistance	1.08 Ω D.C. per 1000 FT @ 68°F (20°C)		UL Type TC UL1277
Impedance	57 Ω		c(UL) 600V CIC
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		c(UL) 1000V AWM I/II A/B 600V 90°C (194°F)
Jacket Material	Flexible Gray PVC - sunlight & oil resistant		UL Type TC-ER (Exposed Run) per UL1277 or DP1 (Data Process)
Conductor Insulation	0.020 Inch, PVC + 0.005 Inch, NYLON		Class 1 Division II per NEC 336, 392, 501
Conductor Markings	"#1-ONE", "2-TWO", "3-THREE", etc...		UL 83 NEC Type PVC/Nylon conductors
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		Direct Burial
Cold Bend	-40°C (-40°F) per UL 1277		Submersible Pump
Cold Impact	-40°C (-40°F) per UL 1277		MTW Flexing (meets NFPA 79)
Min. Bend Radius	6x diameter		ICEA S-73-532
			ICEA S-95-658 (NEMA WC-70)

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 $\pm 10\%$)	Installed Bend Radius*	Reel Length (ft)	Approx. Weight (lbs)	Price
V80059-100	4	10	105/30	25	50	0.50	3.02	100	27.8	<--->
V80059-250								250	69.5	<--->
V80059-1000								1000	278.0	<--->

* Installed bend radius = 6x diameter