

Power Machine Tray Cable



Overview

Power Machine Tray Cable from Southwire is available in sizes from 18AWG to 8AWG with 3 to 25 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 stripe. 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, Southwire Power Machine Tray 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. Cut to length in 1 foot increments with a 20 foot minimum length.

Features

- 18AWG to 8AWG, 3 to 25 conductors including a ground
- 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
- Exceeds Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
- Flexibility for easy installation
- Cut to length in 1 foot increments
- Low 20 foot minimum length
- Made in the USA



Click on the above thumbnail or go to <https://www.automationdirect.com/VID-WD-0016> for a short introduction on our cut to length cable



18 Gauge Multi-Conductor Power/Control Cable (Unshielded)

18 Gauge Multi-Conductor Flexible Power/Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	18AWG 16/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174 UL 1277 - Type TC-ER UL 2277 - Type WTTTC UL 1063 - Machine Tool Wiring (MTW) UL 1690 - Data Processing Cable (DP-1) UL 758 - AWM Style 20886 C22.2 NO. 230 - c(UL) Type TC CSA 22.2 No. 239 - c(UL) Type CIC CSA C22.2 No. 210 - CSA AWM I/II A/B Class 1 Division II per NEC 336, 501, 502 Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
Voltage Rating	600V (Type TC-ER) 1000V (Type WTTTC) 1000V (UL/CSAAWM)		
Capacitance	28.2 pF/ft Nom. Conductor to Conductor		
Resistance	6.53 Ω /kft*		
Impedance	55.0 Ω		
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		
Jacket Material	Flexible Black Thermoplastic Elastomer (TPE) - sunlight & oil resistant		
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

** 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

18 Gauge Multi-Conductor Flexible Power/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
										
PMTC-18U-3BK-1	3	18	16	20	45	0.28	1.12	20	0.05	\$0.70
PMTC-18U-4BK-1	4					0.31	1.24	20	0.06	\$0.77
PMTC-18U-5BK-1	5					0.33	1.32	20	0.07	\$1.06
PMTC-18U-7BK-1	7					0.36	1.44	20	0.09	\$1.31
PMTC-18U-9BK-1	9					0.41	1.64	20	0.11	\$1.59
PMTC-18U-12BK-1	12					0.46	1.84	20	0.14	\$1.91
PMTC-18U-25BK-1	25				60	0.64	2.56	20	0.25	\$3.90

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

** See web store for maximum cut lengths



Please Note: Our prices on flexible power/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.

16 Gauge Multi-Conductor Power/Control Cable (Unshielded)

16 Gauge Multi-Conductor Flexible Power/Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	16AWG 26/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174 UL 1277 - Type TC-ER UL 2277 - Type WTTC UL 1063 - Machine Tool Wiring (MTW) UL 1690 - Data Processing Cable (DP-1) UL 758 - AWM Style 20886 C22.2 NO. 230 - c(UL) Type TC CSA 22.2 No. 239 - c(UL) Type CIC CSA C22.2 No. 210 - CSA AWM I/II A/B Class 1 Division II per NEC 336, 501, 502 Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
Voltage Rating	600V (Type TC-ER) 1000V (Type WTTC) 1000V (UL/CSAAWM)		
Capacitance	32.78 pF/ft Nom. Conductor to Conductor		
Resistance	4.10 Ω /kft*		
Impedance	46.3 Ω		
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		
Jacket Material	Flexible Black Thermoplastic Elastomer (TPE) - sunlight & oil resistant		
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 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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16 Gauge Multi-Conductor Flexible Power/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
										
PMTC-16U-3BK-1	3	16	26	20	50	0.31	1.24	20	0.06	\$0.85
PMTC-16U-4BK-1	4					0.34	1.36	20	0.08	\$1.01
PMTC-16U-5BK-1	5					0.37	1.48	20	0.09	\$1.23
PMTC-16U-9BK-1	9					0.46	1.84	20	0.14	\$2.05
PMTC-16U-12BK-1	12				50	0.51	2.04	20	0.20	\$2.80

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths



Please Note: Our prices on flexible power/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 Power/Control Cable (Unshielded)

14 Gauge Multi-Conductor Flexible Power/Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	14AWG 41/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174 UL 1277 - Type TC-ER UL 2277 - Type WTTC UL 1063 - Machine Tool Wiring (MTW) UL 1690 - Data Processing Cable (DP-1) UL 758 - AWM Style 20886 C22.2 NO. 230 - c(UL) Type TC CSA 22.2 No. 239 - c(UL) Type CIC CSA C22.2 No. 210 - CSA AWM I/II A/B Class 1 Division II per NEC 336, 501, 502 Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
Voltage Rating	600V (Type TC-ER) 1000V (Type WTTC) 1000V (UL/CSA AWM)		
Capacitance	37.09 pF/ft Nom. Conductor to Conductor		
Resistance	2.57 Ω /kft*		
Impedance	40.0 Ω		
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		
Jacket Material	Flexible Black Thermoplastic Elastomer (TPE) - sunlight & oil resistant		
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	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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14 Gauge Multi-Conductor Flexible Power/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
										
PMTC-14U-3BK-1	3	14	41	20	50	0.34	1.36	20	0.82	\$1.19
PMTC-14U-4BK-1	4					0.37	1.48	20	0.11	\$1.49
PMTC-14U-9BK-1	9					0.52	2.08	20	0.21	\$3.09
PMTC-14U-12BK-1	12				65	0.60	2.40	20	0.28	\$4.19
PMTC-14U-18BK-1	18					0.70	2.80	20	0.40	\$5.75

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

** See web store for maximum cut lengths



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12 Gauge Multi-Conductor Power/Control Cable (Unshielded)

12 Gauge Multi-Conductor Flexible Power/Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	12AWG 65/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174 UL 1277 - Type TC-ER UL 2277 - Type WTTC UL 1063 - Machine Tool Wiring (MTW) UL 1690 - Data Processing Cable (DP-1) UL 758 - AWM Style 20886 C22.2 NO. 230 - c(UL) Type TC CSA 22.2 No. 239 - c(UL) Type CIC CSA C22.2 No. 210 - CSA AWM I/II A/B Class 1 Division II per NEC 336, 501, 502 Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
Voltage Rating	600V (Type TC-ER) 1000V (Type WTTC) 1000V (UL/CSA AWM)		
Capacitance	40.4 pF/ft Nom. Conductor to Conductor		
Resistance	1.62 Ω /kft*		
Impedance	36.1 Ω		
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		
Jacket Material	Flexible Black Thermoplastic Elastomer (TPE) - sunlight & oil resistant		
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 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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12 Gauge Multi-Conductor Flexible Power/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
PMTC-12U-3BK-1	3	12	65	20	50	0.39	1.56	20	0.11	\$1.92
PMTC-12U-4BK-1	4					0.42	1.68	20	0.15	\$2.27
PMTC-12U-5BK-1	5					0.46	1.85	20	0.18	\$2.72
PMTC-12U-7BK-1	7					0.50	2.01	20	0.23	\$3.78

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths



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10 Gauge Multi-Conductor Power/Control Cable (Unshielded)

10 Gauge Multi-Conductor Flexible Power/Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	10 AWG 105/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174 UL 1277 - Type TC-ER UL 2277 - Type WTTC UL 1063 - Machine Tool Wiring (MTW) UL 1690 - Data Processing Cable (DP-1) UL 758 - AWM Style 20886 C22.2 NO. 230 - c(UL) Type TC CSA 22.2 No. 239 - c(UL) Type CIC CSA C22.2 No. 210 - CSA AWM I/II A/B Class 1 Division II per NEC 336, 501, 502 Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
Voltage Rating	600V (Type TC-ER) 1000V (Type WTTC) 1000V (UL/CSA AWM)		
Capacitance	40.7 pF/ft Nom. Conductor to Conductor		
Resistance	1.02 Ω /kft*		
Impedance	35.8 Ω		
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		
Jacket Material	Flexible Black Thermoplastic Elastomer (TPE) - sunlight & oil resistant		
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	Approvals**	UL (E75755), CSA (90458)
Temperature Rating	75°C (167°F) Wet, 90°C (194°F) Dry		
Cold Impact	-40°C (-40°F) per UL 1277	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
Min. Bend Radius	4x diameter		
Flame Rating	FT4, IEEE 1202/383, ICEA T-29-520 UL 1685, UL MTW NFPA 79 2007		
Oil Resistance	Oil Res I & II		

* Per ASTM B174

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10 Gauge Multi-Conductor Flexible Power/Control Cable										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches)*	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
PMTC-10U-4BK-1	4	10	105	25	50	0.50	2.00	20	0.21	\$3.36
PMTC-10U-5BK-1	5					0.53	2.12	20	0.26	\$4.11

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

** See web store for maximum cut lengths



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8 Gauge Multi-Conductor Power/Control Cable (Unshielded)

8 Gauge Multi-Conductor Flexible Power/Control Cable Specifications (Unshielded)			
Conductor Gauge & Stranding	8 AWG 168/30 bare copper, Class K	Applicable Standards	ASTM B3, B172, B174 UL 1277 - Type TC-ER UL 2277 - Type WTTTC UL 1063 - Machine Tool Wiring (MTW) UL 1690 - Data Processing Cable (DP-1) UL 758 - AWM Style 20886 C22.2 NO. 230 - c(UL) Type TC CSA 22.2 No. 239 - c(UL) Type CIC CSA C22.2 No. 210 - CSA AWM I/II A/B Class 1 Division II per NEC 336, 501, 502 Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
Voltage Rating	600V (Type TC-ER) 1000V (Type WTTTC) 1000V (UL/CSA AWM)		
Capacitance	40.7 pF/ft Nom. Conductor to Conductor		
Resistance	1.02 Ω /kft*		
Impedance	35.8 Ω		
Operating Temperature	-40°C to 90°C (-40°F to 194°F)		
Jacket Material	Flexible Black Thermoplastic Elastomer (TPE) - sunlight & oil resistant		
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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8 Gauge Multi-Conductor Flexible Power/Control Cable										
Part Number	Number of Conductors (includes ground)	AWG	Strand	Overall Conductor Insulation Thickness (Mils)	Overall Jacket Thickness (Mils)	Nominal O.D. (Inches $\pm 10\%$)	Minimum Installed Bend Radius (inches) *	Minimum Cut Length (ft)**	Approximate Weight (lb/ft)	Price per foot
										
PMTC-8U-4BK-1	4	8	168	37	70	0.68	2.72	20	0.37	\$4.97

* Installed bend radius $\geq 4x$ diameter

** See web store for maximum cut lengths



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