

MachineFLEX™ Tray Power Cable Cu 600/1000V PVC THHN TPE Jacket

Type TC-ER Machine Tray Power Cable 600/1000 Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation Thermoplastic Elastomer Jacket, 90°C Dry 75°C Wet -40°C Cold Impact Identification Method 4



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class K, Flexible stranded bare annealed copper per ASTM B3, B172, and B174
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer THHN
- Ground:** One Green Ground with Yellow Stripe THHN
- Jacket:** Black Thermoplastic Elastomer TPE: Other jacket colors available upon request

APPLICATIONS AND FEATURES:

Southwire's MachineFLEX™ tray power cables 600/1000 Volt conform to NFPA 79 and are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial and where superior electrical properties are desired. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC® 336.10. These cables are capable of operating continuously at the conductor temperature not in excess of 75°C in wet locations and 90°C in dry locations, 130°C for emergency overload, and 150°C for short circuit conditions. For uses in Class I, II, Division 2 hazardous locations per NEC® Article 501 and 502. Southwire's machine tray cable is ideal to power CNC machines, grinding, cutting, metal forming, buffing, bottling equipment, conveyors, processing & packaging equipment, assembly lines, control panels, food and beverage, oil sands, plant expansion, wind energy and data centers. Multiple approvals for multiple applications. Cable is rated for -40°C cold impact. Two conductor cables contain no green/yellow ground.

SPECIFICATIONS:

- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1690 Data Processing Cable (DP-1)
- UL 2277 Type WTTTC
- CSA C22.2 No. 210 Appliance wiring material products I/II A/B (Sizes 16 - 8AWG)
- CSA C22.2 No.230 Tray Cables - Rated TC-ER
- CSA C22.2 No. 239 Control and instrumentation cables
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive
- NFPA 79 Electrical Standard for Industrial Machinery



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SAMPLE PRINT LEGEND:

Southwire XXAWG (XXmm²) XX/C PVC/Nylon Type TC-ER EXXXXX (UL) 600V 90°C Dry 75C 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 -- LLXXXXX CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE RoHS -2 Made in USA

Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Allowable Ampacity At 60° C *	Allowable Ampacity 75°C *	Allowable Ampacity 90°C *
	AWG	No.	strands	mil	mil	inch	lb /1000ft	inch	Amp	Amp	Amp
18 AWG											
6773150	18	3	16	20	45	0.281	43	1.12	7	7	7
6775300	18	4	16	20	45	0.306	59	1.22	7	7	7
6773160	18	5	16	20	45	0.322	63	1.33	7	7	7
6775310	18	7	16	20	45	0.358	85	1.43	7	7	7
6775320	18	9	16	20	45	0.411	107	1.64	7	7	7
6775330	18	12	16	20	45	0.456	135	1.82	7	7	7
6773170	18	25	16	20	65	0.635	254	1.33	6	6	6
16 AWG											
6775350	16	3	26	20	50	0.311	60	1.24	10	10	10
6775360	16	4	26	20	50	0.339	76	1.36	10	10	10
6773180	16	5	26	20	45	0.370	86	1.48	10	10	10
6773200	16	9	26	20	50	0.462	138	1.85	10	10	10
6773210	16	12	26	20	50	0.509	175	2.04	9	9	9
14 AWG											
6772580	14	3	41	20	50	0.342	82	1.37	15	15	15
6772590	14	4	41	20	50	0.375	106	1.50	15	15	15
6530050	14	8	41	20	50	0.481	161	1.92	14	14	14
6772610	14	9	41	20	50	0.516	205	2.06	14	14	14
6773220	14	12	41	20	65	0.616	261	2.46	14	14	14
6772620	14	18	41	20	65	0.697	402	2.79	10	10	10
6772630	14	25	41	20	65	0.806	565	3.22	9	9	9
12 AWG											
6772560	12	3	65	20	50	0.389	108	1.56	20	20	20
6775370	12	4	65	20	50	0.420	147	1.68	20	20	20
677538	12	5	65	20	50	0.462	176	1.85	20	20	20
677257	12	7	65	20	50	0.502	227	2.01	17	17	17
10 AWG											
653009	10	3	105	25	50	0.462	161	2.01	30	30	30
6775390	10	4	105	25	50	0.502	206	2.01	28	28	28
677254	10	5	105	25	50	0.530	255	2.01	28	28	28
677255	10	7	105	25	60	0.608	364	2.43	24	24	24
653672	8	3	168	37	70	0.680	360	2.72	40	50	55
6773230	8	4	168	37	70	0.680	374	2.72	32	40	44
653007	8	5	168	37	70	0.766	441	3.01	32	40	44
6773240	6	4	259	37	70	0.760	556	3.04	55	65	75



Stock Number	Cond. Size	Cond. Number	Cond. Strands	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Allowable Ampacity At 60°C*	Allowable Ampacity 75°C*	Allowable Ampacity 90°C*
	AWG	No.	strands	mil	mil	inch	lb /1000ft	inch	Amp	Amp	Amp
677325◇	4	4	420	37	80	0.969	830	3.88	70	76	76
652968	2	3	651	37	100	1.064	988	4.1	95	104	104
677326◇	2	4	651	37	100	1.196	1264	5.98	95	104	104

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

