Southwire® CU 600/1000V PVC-Nylon Insulation TPE Gray Jacket. TFFN. Silicone-Free

Type TC-ER Machine Tray Control 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. Silicone-Free

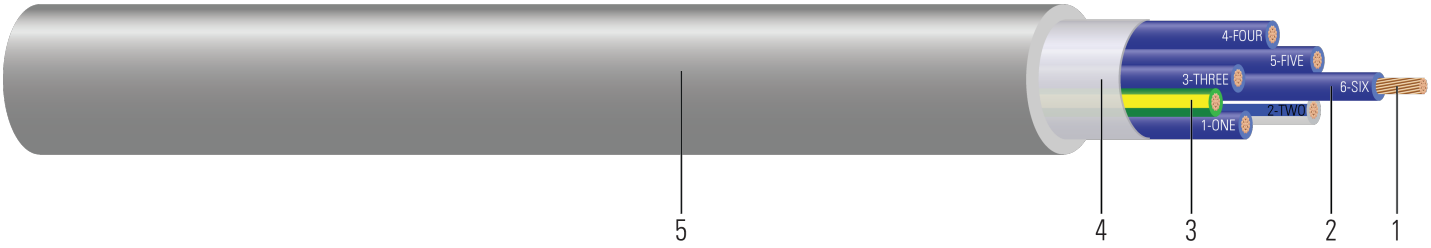

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class K flexible stranded bare annealed copper per ASTM B3 and B172 or B174
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon layer* Type TFFN
3. **Ground:** Flexible stranded bare annealed copper per ASTM B3 with green with yellow stripe Polyvinyl Chloride (PVC) with nylon layer
4. **Binder:** White tissue paper
5. **Jacket:** Sunlight resistant gray Thermoplastic Elastomer (TPE)

* Insulation Colors: All blue insulation with white number coding except phase 2 is white with a blue stripe with black text

APPLICATIONS AND FEATURES:

Southwire's® control tray 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. 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. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC® 336.10. Southwire's machine tray cable is ideal for use in 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 13 Power-Limited Circuit Cables
- UL 66 Fixture Wire Type TFFN (for sizes 18 and 16 AWG)
- UL 758 AWM Style 2587
- UL 1063 Machine Tool Wiring (MTW)
- UL 1277 TC-ER
- UL 1690 Data Processing Cable (DP-1)

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- UL 2250 Instrumentation Tray Cable
- UL 2277 Type WTTC
- CSA C22.2 No. 210 Appliance wiring material products I/II A/B
- CSA C22.2 No.230 Tray Cables - Rated TC
- 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
- Exceeds Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
- **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
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® XX AWG (X.XXmm2) XX/C PVC/NYLON TYPE TC-ER E75755 (UL) 600V 90ºC DRY 75ºC WET SUN RES OIL RES I/II DIR BUR -40ºC OR MTW FLEXING OR DP-1 OR WTTC 1000V OR PLTC OR ITC OR AWM 2587 -- LL90458 CSA CIC/TC FT4 OR AWM I/II A/B 105{D}C 1000V -40{D}C FT4 -- {NOM}-ANCE PLTC -- {CE} RoHS-2 MADE IN USA

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Table 1 – Physical and Electrical Data

Cond. Size	Cond. Number	Cond. Strands	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Rectance	Min Bending Radius	Allowable Ampacity 75°C	Allowable Ampacity 90°C	Jacket Color
AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	
18 AWG															
18	2	16	0.044	20	45	0.264	15	37	6.659	8.265	0.036	1.1	-	14	GY
18	3	16	0.044	20	45	0.277	20	45	6.659	8.265	0.036	1.1	-	14	GY
18	4	16	0.044	20	45	0.299	25	54	6.659	8.265	0.036	1.2	-	11	GY
18	5	16	0.044	20	45	0.323	30	63	6.659	8.265	0.036	1.3	-	11	GY
18	6	16	0.044	20	45	0.348	35	73	6.659	8.265	0.036	1.4	-	11	GY
18	7	16	0.044	20	45	0.348	40	80	6.659	8.265	0.036	1.4	-	10	GY
18	9	16	0.044	20	45	0.399	50	98	6.659	8.265	0.036	1.6	-	10	GY
18	12	16	0.044	20	45	0.445	65	124	6.659	8.265	0.036	1.8	-	7	GY
18	18	16	0.044	20	45	0.516	95	173	6.659	8.265	0.036	2.1	-	7	GY
18	19	16	0.044	20	45	0.516	100	180	6.659	8.265	0.036	2.1	-	7	GY
18	25	16	0.044	20	60	0.63	131	248	6.659	8.265	0.036	2.5	-	6	GY
16 AWG															
16	2	26	0.059	20	45	0.294	24	50	4.181	5.189	0.033	1.2	-	18	GY
16	3	26	0.059	20	45	0.31	32	61	4.181	5.189	0.033	1.2	-	18	GY
16	4	26	0.059	20	45	0.336	40	74	4.181	5.189	0.033	1.3	-	14	GY
16	5	26	0.059	20	45	0.363	48	87	4.181	5.189	0.033	1.5	-	14	GY
16	6	26	0.059	20	45	0.393	56	101	4.181	5.189	0.033	1.6	-	14	GY
16	7	26	0.059	20	45	0.393	64	112	4.181	5.189	0.033	1.6	-	13	GY
16	8	26	0.059	20	45	0.424	72	124	4.181	5.189	0.033	1.7	-	13	GY
16	9	26	0.059	20	45	0.453	80	137	4.181	5.189	0.033	1.8	-	13	GY
16	10	26	0.059	20	45	0.492	88	151	4.181	5.189	0.033	2	-	9	GY
16	12	26	0.059	20	45	0.508	104	175	4.181	5.189	0.033	2	-	9	GY
16	18	26	0.059	20	60	0.621	153	262	4.181	5.189	0.033	2.5	-	9	GY
16	19	26	0.059	20	60	0.621	161	273	4.181	5.189	0.033	2.5	-	9	GY
16	25	26	0.059	20	60	0.72	210	350	4.181	5.189	0.033	2.9	-	8	GY
16	41	26	0.059	20	80	0.919	339	573	4.181	5.189	0.033	3.7	-	6	GY

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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