

Multi-Conductor CU 600V PVC Type TC SDN Flexible Control Cable

Type TC-SDN® Control Cable 600 Volt Flexible Strand Bare Copper Conductors, Polyvinyl Chloride (PVC) insulation with nylon sheath THHN/THWN, Black Neoprene Jacket, Oil and Sunlight Resistant 90°C Dry 75°C Wet



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class K, Flexible stranded bare annealed copper per ASTM B3, B172, and B174
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon sheath THHN/THWN. Color code Method 1 Table 2 with no white or green.
3. **Fillers:** Polypropylene or paper to form round core
4. **Binder:** Two mil mylar tape helically applied over core
5. **Jacket:** Black heavy duty sunlight and oil resistant Neoprene

APPLICATIONS AND FEATURES:

Southwire SDN (Small Diameter Neoprene) flexible control tray cables 600 Volt are suited for use in industrial power or control circuits where small diameter, flame retardant cables are desired. These cables are suitable for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial and where superior electrical properties are desired. Southwire SDN cables listed as THHN/THWN are capable of operating continuously at the conductor temperature not in excess of 75°C in wet locations and 90°C in dry locations, 105°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 SDN flexible control cable is CSA listed Type TC and as Control and Instrumentation Cable Type (CIC)

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- UL 66 Fixture Wire
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- CSA C22.2 No.230 Tray Cables - Rated TC-ER (1/0 AWG and Larger)
- CSA C22.2 No. 239 Control and instrumentation cables
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2

SAMPLE PRINT LEGEND:

SOUTHWIRE{R} SDN XXX AWG (0.82mm²) XX/C TC 90{D}C DRY 75{D}C WET SUN RES 600V DIR BUR E75755 MASTER-DESIGN (UL) --- 156205 (CSA) CIC 90{D}C DRY 75{D}C WET PVC/N (-40{D}C) 600V SR OIL RES FT4



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Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Number	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	DC Resistance @ 25°C	Min Bending Radius	Allowable Ampacity At 60°C *	Allowable Ampacity 75°C *	Allowable Ampacity 90°C *
	AWG	No.	inch	mil	mil	inch	lb /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
18 AWG												
569925	18	3	0.044	20	45	0.29	52	6.66	1.16	7	7	7
569926	18	5	0.044	20	45	0.334	71	6.66	1.336	7	7	7
584100	18	5	0.044	20	45	0.334	70	6.66	1.336	7	7	7
569927	18	6	0.044	20	45	0.36	84	6.66	1.44	7	7	7
569928	18	8	0.044	20	45	0.365	94	6.66	1.46	7	7	7
571341	18	10	0.044	20	50	0.417	116	6.66	1.668	7	7	7
569929	18	12	0.044	20	50	0.442	131	6.66	1.768	7	7	7
569943	18	14	0.044	20	50	0.462	149	6.66	1.848	7	7	7
571342	18	16	0.044	20	50	0.515	170	6.66	2.06	7	7	7
569944	18	19	0.044	20	60	0.552	208	6.66	2.208	7	7	7
571389	18	24	0.044	20	70	0.651	266	6.66	2.604	6	6	6
569930	18	37	0.044	20	70	0.74	372	6.66	2.96	6	6	6
16 AWG												
569912	16	2	0.058	20	45	0.302	54	4.18	1.208	10	10	10
571340	16	3	0.058	20	45	0.313	62	4.18	1.252	10	10	10
569914	16	4	0.058	20	45	0.341	75	4.18	1.364	10	10	10
569915	16	5	0.058	20	45	0.372	92	4.18	1.488	10	10	10
569916	16	6	0.058	20	45	0.402	105	4.18	1.608	10	10	10
569917	16	7	0.058	20	45	0.402	113	4.18	1.608	9	10	10
569918	16	8	0.058	20	55	0.457	136	4.18	1.828	9	10	10
569910	16	10	0.058	20	45	0.464	165	4.18	1.856	6	7	9
570089	16	9	0.058	20	55	0.487	150	4.18	1.948	9	10	10
569919	16	12	0.058	20	60	0.524	192	4.18	2.096	6	7	9
570090	16	14	0.058	20	60	0.568	218	4.18	2.272	6	7	9
569920	16	16	0.058	20	60	0.579	242	4.18	2.316	6	7	9
569922	16	19	0.058	20	60	0.628	279	4.18	2.512	6	7	9
569911	16	24	0.058	20	65	0.67	346	4.18	2.68	6	7	8
569923	16	30	0.058	20	70	0.765	431	4.18	3.06	6	7	8
569924	16	37	0.058	20	90	0.86	545	4.18	3.44	6	7	8
14 AWG												
569931	14	3	0.074	20	45	0.344	80	2.63	1.376	15	15	15
569932	14	4	0.074	20	45	0.377	99	2.63	1.508	15	15	15
569933	14	5	0.074	20	45	0.413	121	2.63	1.652	14	15	15
569934	14	6	0.074	20	45	0.447	139	2.63	1.788	14	15	15
570091	14	8	0.074	20	65	0.519	201	2.63	2.076	12	15	15
569935	14	10	0.074	20	65	0.595	233	2.63	2.38	9	11	12
570092	14	12	0.074	20	65	0.602	265	2.63	2.408	9	11	12
569936	14	16	0.074	20	65	0.678	341	2.63	2.712	9	11	12
570094	14	24	0.074	20	70	0.784	489	2.63	3.136	8	9	11



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	AWG	No.	inch	mil	mil	inch	lb /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
570095	14	37	0.074	20	90	0.979	754	2.63	3.916	7	8	9
12 AWG												
569937	12	3	0.092	20	45	0.383	115	1.65	1.532	20	20	20
569938	12	4	0.092	20	45	0.422	140	1.65	1.688	16	20	20
569940	12	5	0.092	20	45	0.464	176	1.65	1.856	16	20	20
569941	12	6	0.092	20	45	0.504	208	1.65	2.016	16	20	20
569942	12	8	0.092	20	80	0.62	297	1.65	2.48	14	17	20
571313	12	12	0.092	20	65	0.688	401	1.65	2.752	10	12	15

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 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F). Ampacities have been adjusted for more than three current-carrying conductors based on Table 310.15(C) 1.

