300V CU PVC TRIADS PVC STOS Instrumentation

Type PLTC/ITC Instrumentation Cable 300 Volt Copper Conductors PVC Insulated Singles Shielded Triads with Overall Shield STOS. PVC Jacket Heat, Moisture, and Sunlight Resistant RoHS rated for -30°C To 105°C



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B stranded bare copper per ASTM B3 and B8
2. **Insulation:** Premium Grade Polyvinyl Chloride (PVC) Black/White/Red alpha-numeric print alternate and inverted. 1-ONE, 2-TWO.
3. **Drain Wire:** Tinned copper
4. **Twisted Shielded Triads:** 100% coverage aluminum/polyester foil shield with an individual drain wire shown in step 3
5. **Binder:** Mylar binder
6. **Overall Drain Wire:** Tinned Copper
7. **Overall Shielded:** 100% coverage aluminum/polyester foil shield with a drain wire as shown in step 6
8. **Rip Cord:** Rip cord under jacket for ease of removal
9. **Jacket:** Black sunlight, and moisture resistant Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's Instrumentation Cables Type PLTC per UL 13 and Type ITC per UL 2250 are suitable for installations as outlined in NEC Article 336 for process control and instrumentation, control circuits for operation and interconnection of protective and signaling devices and for general use in manufacturing, industrial and commercial distribution systems. Cables are constructed with 7-strand copper conductors insulated with PVC. The triad conductors are colored black, white, red and alpha-numeric printed. Each triad has an aluminum polyester foil with 100% coverage and a tinned drain wire. The overall assembly is covered with an aluminum polyester foil with 100% coverage and a tinned drain wire. The cable is suited for use in cable trays, raceways, conduit, aerial (when supported with a messenger) and direct burial. The cable is rated for -30°C to 105°C and rated for Class I Div II hazardous locations, and sun resistant. The jacket is black PVC with a nylon ripcord for easy removal.

SPECIFICATIONS:

- UL 13 Power-Limited Circuit Cables
- UL 2250 Instrumentation Tray Cable
- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- EPA 40 CFR, Part 26, Subpart C heavy metals per Table 1, TCLP method
- RoHS-2 (European Directive 2011/65/EU)
- NEC Article 336 Power and Control Tray Cable

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SAMPLE PRINT LEGEND:

SOUTHWIRE® XX AWG XX SHIELDED TRIADS PVC/PVC TYPE PLTC/ITC E176494 (UL) 105°C SUN AND RES FT4/IEEE 1202 SEQUENTIAL MARKING

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Number of Triads	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25°C
	AWG/ Kcmil	triad	inch	mil	mil	inch	lb/1000ft	inch	Ω/1000ft
TBA	20	2	0.036	20	50	0.423	72	2.5	10.503
TBA	20	4	0.036	20	50	0.4897	113	2.9	10.503
TBA	20	8	0.036	20	60	0.651	208	3.9	10.503
TBA	20	12	0.036	20	60	0.803	294	4.8	10.503
TBA	20	16	0.036	20	70	0.912	390	5.4	10.503
TBA	20	24	0.036	20	70	1.123	556	6.7	10.503
TBA	18	2	0.045	20	50	0.465	93	2.7	6.669
TBA	18	4	0.045	20	50	0.540	150	3.2	6.669
TBA	18	8	0.045	20	60	0.720	279	4.3	6.669
TBA	18	12	0.045	20	70	0.910	417	5.4	6.669
TBA	18	16	0.045	20	70	1.011	530	6.0	6.669
631324	18	24	0.045	15	85	1.15	831	6.9	6.669
566930	16	2	0.056	15	65	0.534	145	3.2	4.181
566953	16	4	0.056	15	75	0.645	238	3.8	4.181
566954	16	8	0.056	15	75	0.817	411	4.9	4.181
TBA	16	12	0.056	20	70	1.010	575	6.0	4.181
TBA	16	16	0.056	20	70	1.124	737	6.7	4.181
TBA	16	24	0.056	20	80	1.413	1096	8.4	4.181

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

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Table 2 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Number of Triads	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25°C
	AWG/ Kcmil	triad	inch	mm	mm	mm	lb/km	mm	Ω/km
TBA	20	2	0.036	0.51	1.27	10.74	107	63.50	34.46
TBA	20	4	0.036	0.51	1.27	12.44	168	73.66	34.46
TBA	20	8	0.036	0.51	1.52	16.54	310	99.06	34.46
TBA	20	12	0.036	0.51	1.52	20.40	438	121.92	34.46
TBA	20	16	0.036	0.51	1.78	23.16	580	137.16	34.46
TBA	20	24	0.036	0.51	1.78	28.52	827	170.18	34.46
TBA	18	2	0.045	0.51	1.27	11.81	138	68.58	21.88
TBA	18	4	0.045	0.51	1.27	13.72	223	81.28	21.88
TBA	18	8	0.045	0.51	1.52	18.29	415	109.22	21.88
TBA	18	12	0.045	0.51	1.78	23.11	621	137.16	21.88
TBA	18	16	0.045	0.51	1.78	25.68	789	152.40	21.88
631324	18	24	0.045	0.38	2.16	29.21	1237	175.26	21.88
566930	16	2	0.056	0.38	1.65	13.56	216	81.28	13.72
566953	16	4	0.056	0.38	1.91	16.38	354	96.52	13.72
566954	16	8	0.056	0.38	1.91	20.75	612	124.46	13.72
TBA	16	12	0.056	0.51	1.78	25.65	856	152.40	13.72
TBA	16	16	0.056	0.51	1.78	28.55	1097	170.18	13.72
TBA	16	24	0.056	0.51	2.03	35.89	1631	213.36	13.72

Typical Electrical Specifications for Each Triad

Size	Capacitance	Inductance
18	40.66	0.0957
16	48.51	0.0895