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, Oil 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, oil 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, sun and oil resistant. The jacket is black PVC with a nylon ripcord for easy removal.

SPECIFICATIONS:

- UL 13 Standard for Power-Limited Circuit Cables
- UL 2250 Standard for 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

SAMPLE PRINT LEGEND:

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

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Number of Triads	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25° C
	AWG/ Kcmil	triad	mil	mil	inch	lb/1000ft	inch	Ω/1000ft
TBA	20	2	15	52	0.440	91	1.76	10.5
TBA	20	4	15	65	0.510	138	2.04	10.5
TBA	20	8	15	75	0.683	255	2.73	10.5
TBA	20	12	15	75	0.791	334	3.16	10.5
TBA	20	16	15	75	0.874	421	3.50	10.5
TBA	20	24	15	85	1.098	626	4.39	10.5
TBA	18	2	15	65	0.484	115	1.94	6.66
TBA	18	4	15	65	0.562	178	2.25	6.66
TBA	18	8	15	75	0.735	317	2.94	6.66
TBA	18	12	15	75	0.884	449	3.54	6.66
TBA	18	16	15	85	0.992	586	3.97	6.66
631324	18	24	15	85	1.218	836	6.09	6.66
566930	16	2	15	65	0.534	148	2.14	4.18
566953	16	4	15	75	0.645	249	2.58	4.18
566954	16	8	15	75	0.817	414	3.27	4.18
TBA	16	12	15	85	1.012	634	5.06	4.18
TBA	16	16	15	85	1.109	798	5.55	4.18
TBA	16	24	15	97	1.398	1196	6.99	4.18

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

Table 2 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Number of Triads	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25° C
	AWG/ Kcmil	triad	mm	mm	mm	lb/km	mm	Ω/km
TBA	20	2	0.38	1.32	11.18	135	44.70	34.45
TBA	20	4	0.38	1.65	12.95	205	51.82	34.45
TBA	20	8	0.38	1.91	17.35	379	69.34	34.45
TBA	20	12	0.38	1.91	20.09	497	80.26	34.45
TBA	20	16	0.38	1.91	22.20	627	88.90	34.45
TBA	20	24	0.38	2.16	27.89	932	111.51	34.45
TBA	18	2	0.38	1.65	12.29	171	49.28	21.85
TBA	18	4	0.38	1.65	14.27	265	57.15	21.85
TBA	18	8	0.38	1.91	18.67	472	74.68	21.85
TBA	18	12	0.38	1.91	22.45	668	89.92	21.85
TBA	18	16	0.38	2.16	25.20	872	100.84	21.85
631324	18	24	0.38	2.16	30.94	1244	154.69	21.85
566930	16	2	0.38	1.65	13.56	220	54.36	13.71
566953	16	4	0.38	1.91	16.38	371	65.53	13.71
566954	16	8	0.38	1.91	20.75	616	83.06	13.71
TBA	16	12	0.38	2.16	25.70	943	128.52	13.71
TBA	16	16	0.38	2.16	28.17	1188	140.97	13.71
TBA	16	24	0.38	2.46	35.51	1780	177.55	13.71

Typical Electrical Specifications for Each Triad

Size	Capacitance	Inductance
AWG	pF/ft	µH/ft
18	40.66	0.0957
16	48.51	0.0895