300V CU PVC PAIRS PVC SPOS Instrumentation

Type PLTC/ITC Instrumentation Cable 300 Volt Copper Conductors PVC Insulated Singles Shielded Pairs with Overall Shield SPOS. 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:** Twisted pair with Premium Grade Polyvinyl Chloride (PVC) Color code: Black/White alpha-numeric print alternate and inverted. 1-ONE, 2-TWO
3. **Drain Wire:** Tinned copper
4. **Twisted Shielded Pair:** 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 paired conductors are colored black, white, and alpha-numeric printed. Each pair 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 PAIRS PVC/PVC TYPE PLTC/ITC E220129 (UL) 105°C SUN AND RES FT4/IEEE 1202 SEQUENTIAL MARKING

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Number of Pairs	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25°C
	AWG/ Kcmil	pair	inch	mil	mil	inch	lb/1000ft	inch	Ω/1000ft
TBA	18	1	0.045	20	35	0.221	33	2.7	6.669
TBA	18	2	0.045	20	40	0.377	64	4.5	6.669
558414	18	4	0.045	15	65	0.493	133	5.9	6.669
591453	18	8	0.045	15	60	0.602	220	7.2	6.669
TBA	18	12	0.045	20	60	0.736	294	8.8	6.669
TBA	18	24	0.045	20	70	1.027	558	12.3	6.669
TBA	18	36	0.045	20	70	1.188	792	14.3	6.669
596818	16	2	0.056	15	50	0.445	102	5.3	4.181
596819	16	4	0.056	20	50	0.501	154	6.0	4.181
596820	16	8	0.056	20	60	0.667	286	8.0	4.181
566925	16	12	0.056	15	75	0.799	445	9.6	4.181
TBA	16	24	0.056	15	85	1.154	845	13.8	4.181
TBA	16	36	0.056	20	80	1.341	1147	16.0	4.181

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 Pairs	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25°C
	AWG/ Kcmil	pair	inch	mm	mm	mm	lb/km	mm	Ω/km
TBA	18	1	0.045	0.51	0.89	5.61	49	68.58	21.88
TBA	18	2	0.045	0.51	1.02	9.58	95	114.30	21.88
558414	18	4	0.045	0.38	1.65	12.52	198	149.86	21.88
591453	18	8	0.045	0.38	1.52	15.29	327	182.88	21.88
TBA	18	12	0.045	0.51	1.52	18.69	438	223.52	21.88
TBA	18	24	0.045	0.51	1.78	26.09	830	312.42	21.88
TBA	18	36	0.045	0.51	1.78	30.18	1179	363.22	21.88
596818	16	2	0.056	0.38	1.27	11.30	152	134.62	13.72
596819	16	4	0.056	0.51	1.27	12.73	229	152.40	13.72
596820	16	8	0.056	0.51	1.52	16.94	426	203.20	13.72
566925	16	12	0.056	0.38	1.91	20.29	662	243.84	13.72
TBA	16	24	0.056	0.38	2.16	29.31	1257	350.52	13.72
TBA	16	36	0.056	0.51	2.03	34.06	1707	406.40	13.72

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Typical Electrical Specifications for Each Pair

Size	Capacitance	Inductance
18	40.66	0.0957
16	48.51	0.0895