



300V CU PVC TRIADS PVC TOS Instrumentation

Type PLTC/ITC Instrumentation Cable 300 Volt Copper Conductors PVC Insulated Singles Overall Shield TOS. 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 triad with Premium Grade Polyvinyl Chloride (PVC) Black/White/Red alpha-numeric print alternate and inverted. 1-ONE, 2-TWO.
3. **Overall Drain Wire:** Tinned Copper
4. **Overall Shielded:** 100% coverage aluminum/polyester foil shield with a drain wire as shown in step 3
5. **Rip Cord:** Rip cord under jacket for ease of removal
6. **Jacket:** Black sunlight, and moisture resistant Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Tanner'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 nylon covered 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). 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

SAMPLE PRINT LEGEND:

TANNER XX AWG XX TRIADS PVC/PVC TYPE PLTC/ITC
SEQUENTIAL MARKING

9 V3 & V4 (UL) 105°C SUN RES FT4/IEEE 1202





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
24IT3-2002	20	2	0.036	20	50	0.401	66	2.4	10.50
24IT3-2004	20	4	0.036	20	50	0.463	102	2.7	10.50
24IT3-2008	20	8	0.036	20	50	0.594	176	3.5	10.50
24IT3-2012	20	12	0.036	20	60	0.740	263	4.4	10.50
24IT3-2016	20	16	0.036	20	60	0.822	332	4.9	10.50
24IT3-2024	20	24	0.036	20	70	1.033	495	6.1	10.50
24IT3-1801	18	1	0.045	15	50	0.276	46	1.6	6.669
24IT3-1802	18	2	0.045	20	50	0.439	84	2.6	6.669
24IT3-1804	18	4	0.045	20	50	0.509	135	3.0	6.669
24IT3-1808	18	8	0.045	20	60	0.677	249	4.0	6.669
24IT3-1812	18	12	0.045	20	60	0.819	353	4.9	6.669
24IT3-1816	18	16	0.045	20	70	0.931	468	5.5	6.669
24IT3-1824	18	24	0.045	20	70	1.147	671	6.8	6.669
24IT3-1601	16	1	0.056	15	35	0.270	53	1.6	4.181
24IT3-1602	16	2	0.056	20	50	0.483	110	2.8	4.181
24IT3-1604	16	4	0.056	20	50	0.562	182	3.3	4.181
24IT3-1608	16	8	0.056	20	60	0.750	339	4.5	4.181
24IT3-1612	16	12	0.056	20	70	0.931	504	5.5	4.181
24IT3-1616	16	16	0.056	20	70	1.035	644	6.2	4.181
24IT3-1624	16	24	0.056	20	80	1.299	957	7.7	4.181

All dimensions are nominal and subject to normal manufacturing tolerances





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
24IT3-2002	20	2	0.036	0.51	1.27	10.19	98	60.96	34.45
24IT3-2004	20	4	0.036	0.51	1.27	11.76	152	68.58	34.45
24IT3-2008	20	8	0.036	0.51	1.27	15.09	262	88.90	34.45
24IT3-2012	20	12	0.036	0.51	1.52	18.80	391	111.76	34.45
24IT3-2016	20	16	0.036	0.51	1.52	20.88	494	124.46	34.45
24IT3-2024	20	24	0.036	0.51	1.78	26.24	737	154.94	34.45
24IT3-1801	18	1	0.045	0.38	1.27	7.01	68	40.64	21.88
24IT3-1802	18	2	0.045	0.51	1.27	11.15	125	66.04	21.88
24IT3-1804	18	4	0.045	0.51	1.27	12.93	201	76.20	21.88
24IT3-1808	18	8	0.045	0.51	1.52	17.20	371	101.60	21.88
24IT3-1812	18	12	0.045	0.51	1.52	20.80	525	124.46	21.88
24IT3-1816	18	16	0.045	0.51	1.78	23.65	696	139.70	21.88
24IT3-1824	18	24	0.045	0.51	1.78	29.13	999	172.72	21.88
24IT3-1601	16	1	0.056	0.38	0.89	6.86	79	40.64	13.72
24IT3-1602	16	2	0.056	0.51	1.27	12.27	164	71.12	13.72
24IT3-1604	16	4	0.056	0.51	1.27	14.27	271	83.82	13.72
24IT3-1608	16	8	0.056	0.51	1.52	19.05	504	114.30	13.72
24IT3-1612	16	12	0.056	0.51	1.78	23.65	750	139.70	13.72
24IT3-1616	16	16	0.056	0.51	1.78	26.29	958	157.48	13.72
24IT3-1624	16	24	0.056	0.51	2.03	32.99	1424	195.58	13.72

Typical Electrical Specifications for Each Triad

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

