

## 300 VOLT INSTRUMENTATION TFFN/PVC TRIADS, TOS, TYPE PLTC/ITC

Type PLTC/ITC Instrumentation Cable 300 Volt Copper Conductors PVC/Nylon Insulated Singles Overall Shield TOS. 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:

- Conductors:** Class B stranded bare copper per ASTM B-3 and B-8
- Insulation:** Premium Grade Polyvinyl Chloride (PVC) Black/White/Red alpha-numeric print alternate and inverted. 1-ONE, 2-TWO. 22 AWG PVC (Orange) communication conductor included
- Twisted Triad:** Black, White and Red insulated conductors
- Binder:** Mylar binder
- Overall Drain Wire:** Tinned Copper
- Overall Shielded:** 100% coverage aluminum/polyester foil shield with a drain wire as shown in step 6
- Rip Cord:** Rip cord under jacket for ease of removal
- 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 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) 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 Standard 13 Type PLTC
- UL Standard 2250 Type ITC
- Passes IEEE 383 Flame Test (70,000 btu)
- Passes FT4/IEEE 1202 Flame Test
- NEC Article 336
- EPA 40 CFR, Part 26, Subpart C, heavy metals per Table 1, TCLP method
- RoHS-2 (European Directive 2011/65/EU)

### SAMPLE PRINT LEGEND:

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



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**Table 1 – Measurements and Electrical**

Stock Code	Cond. Size AWG	No. of Triads.	Insulation Thickness		Jacket Thickness		Nominal OD (8)		Nominal Weight		DC Resistance		Min Bend Radius	
			(mils)	(mm)	(mils)	(mm)	(Inches)	(mm)	(Lbs/Mft)	kg/km	Ω/MFT	Ω/km	Inches	mm
TBA	20	2	15	0.38	52	1.32	0.44	11.18	91	135	10.5	34.45	1.76	44.70
TBA	20	4	15	0.38	65	1.65	0.51	12.95	138	205	10.5	34.45	2.04	51.82
TBA	20	8	15	0.38	75	1.91	0.683	17.35	255	379	10.5	34.45	2.73	69.39
TBA	20	12	15	0.38	75	1.91	0.791	20.09	334	497	10.5	34.45	3.16	80.37
TBA	20	16	15	0.38	75	1.91	0.874	22.20	421	627	10.5	34.45	3.50	88.80
TBA	20	24	15	0.38	85	2.16	1.098	27.89	626	932	10.5	34.45	4.39	111.56
566938	18	1	15	0.38	52	1.32	0.27	6.86	46	68	6.66	21.84	1.08	27.43
TBA	18	2	15	0.38	65	1.65	0.484	12.29	115	171	6.66	21.84	1.94	49.17
TBA	18	4	15	0.38	65	1.65	0.562	14.27	178	265	6.66	21.84	2.25	57.10
TBA	18	8	15	0.38	75	1.91	0.735	18.67	317	472	6.66	21.84	2.94	74.68
TBA	18	12	15	0.38	75	1.91	0.884	22.45	449	668	6.66	21.84	3.54	89.81
TBA	18	16	15	0.38	85	2.16	0.992	25.20	586	872	6.66	21.84	3.97	100.79
TBA	18	24	15	0.38	85	2.16	1.218	30.94	836	1244	6.66	21.84	6.09	123.75
566931	16	1	15	0.38	52	1.65	0.30	7.77	64	95	4.18	13.71	1.2	30.42
TBA	16	2	15	0.38	65	1.65	0.534	13.56	148	220	4.18	13.71	2.14	54.25
TBA	16	4	15	0.38	75	1.91	0.645	16.38	249	371	4.18	13.71	2.58	65.53
TBA	16	8	15	0.38	75	1.91	0.817	20.75	414	616	4.18	13.71	3.27	83.01
TBA	16	12	15	0.38	85	2.16	1.012	25.70	634	943	4.18	13.71	5.06	128.52
TBA	16	16	15	0.38	85	2.16	1.109	28.17	798	1188	4.18	13.71	5.55	140.84
TBA	16	24	15	0.38	97	2.46	1.398	35.51	1196	1780	4.18	13.71	6.99	177.55

All dimensions are nominal and subject to normal manufacturing tolerances

Typical Electrical Specifications for Each Triad		
Size	Capacitance	Inductance
18 AWG	40.66 pF/ft.	0.0957 μ Henry/ft.
16 AWG	48.51 pF/ft.	0.0895 μ Henry/ft.

