

Instrumentation Cable

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300V, PVC, 105°C

Unshielded Pairs or Triads with Overall Shield

Shielded Pairs or Triads with Overall Shield

Type PLTC - UL 13 - NEC ART 725

Type ITC - UL 2250 - NEC ART 727

Applications

The 300V Instrumentation Cables are dual listed as Type PLTC per UL 13 and Type ITC per UL 2250. These cables are suitable for installations as outlined in NEC ART 725 for Type PLTC cables and NEC ART 727 for Type ITC cables.

Construction:

Conductor: bare, annealed copper conforming to ASTM B3 and Class B stranded in accordance to ASTM B8.

Insulation: polyvinyl chloride in accordance with UL 13 and UL 2250, flame retardant, 105°C temperature rating.

Insulation Shield (on shielded pair/triad constructions): aluminum foil/polyester shield helically wrapped to provide 100% coverage with a tinned copper drain wire that is two gauge sizes smaller than the circuit conductors.

Assembly: pairs/triads are cabled in concentric layers. In the case of unshielded pairs/triads, they are cabled at staggered lengths to reduce crosstalk.

Communication Wire: Orange communication wire is provided for calibration on 4 pair / triad and larger.

Overall cable shield: aluminum foil/polyester shield helically wrapped to provide 100% coverage with a tinned copper drain wire that is the same size as the circuit conductors, with the exception of single pair/triad constructions where the drain wire is two gauge sizes smaller than the circuit conductors.

Jacket: UL listed sunlight and moisture resistant, sequentially length marked, black, flame retardant polyvinyl chloride material. A Nylon ripcord is included for ease of jacket removal.

Identification of Conductors:

Pairs: black/white and number coded

Triads: black/white/red and number coded

Bending Radius:

Fixed Position: 5 x cable overall diameter

During Installation: 8 x cable overall diameter

Specifications

- Conductor rated 105°C 300V
- Meets UL requirements for Type PLTC and ITC
- Designated Type PLTC per NEC ART 725
- Designated Type ITC per NEC ART 727

Product Features

- UL approved Type PLTC and ITC, 300V
- UL approved insulated conductors
- Cables pass UL 1685 and IEEE 383 vertical fire tests at 70,000 BTU/hr
- Temperature rating 105°C dry
- Sunlight and moisture resistant jacket
- For use within Class 1 Division 2 and Class 2 Division 2 Hazardous Locations, and Intrinsically Safe applications as permitted by NEC ART 392, 501, 502, 504 and 505.*
- As indicated in UL 13 and 2250: The overall jackets of these cables are a "gas/vaportight continuous sheath" as discussed in NEC Sections 501.5(D) and 501.5(E).*
- For use under raised floors in control rooms when arranged in such a fashion as to prevent damage to the cables.
- In Class 2 and Class 3 Circuits, as defined in NEC ART 725 for Type PLTC cables.

Options

The following constructions can be provided on special orders:

- Tinned copper conductors.
- When increased mechanical, chemical, or environmental protection is required, cables can be supplied with a continuously corrugated aluminum armor and an outer PVC jacket.
- Interlocked aluminum armor with or without an additional outer PVC jacket.
- Direct Burial listed cable (when ordered as ITC/DB)
- Conductors with alternate color / identification codes
- Alternate jacket colors

* Use in Hazardous locations:

Please note that no investigation of these cables has been performed regarding the transmission of gases or vapours through the core. When these cables are used in hazardous locations they should be sealed properly as required by the NEC.

Instrumentation Cable

300V, PVC, 105°C

Individual and Overall Shield

UL 13 - Type PLTC - NEC ART 725
UL 2250 - Type ITC - NEC ART 727

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Shielded Pairs with an Overall Shield (SPOS), 300V - 20 AWG (7w)
Insulation Thickness: 12 mils / .30 mm

Part Number	# of Pairs	Jacket Thickness		Nominal Diameter over Jacket		Approximate Net Cable Weight		Pulling Tension	
		inches	mm	inches	mm	lb/kft	kg/km	lbf	N
669705	2	.042	1.07	.349	8.86	66	98	52	231
669820	4	.052	1.32	.423	10.74	101	150	96	427
669697	8	.052	1.32	.543	13.79	170	253	184	818
-----	10	.062	1.57	.654	16.61	220	327	228	1014
671263	12	.062	1.57	.674	17.12	250	372	272	1210
671362	16	.062	1.57	.747	18.97	316	470	380	1601
-----	20	.062	1.57	.827	21.01	382	568	448	1993
671370	24	.072	1.83	.939	23.85	466	693	538	2384
671388	38	.072	1.83	1.071	27.20	655	975	800	3558
671396	50	.082	2.08	1.278	32.46	902	1342	1108	4928

Shielded Pairs with an Overall Shield (SPOS), 300V - 18 AWG (7w)
Insulation Thickness: 15 mils / .38 mm

Part Number	# of Pairs	Jacket Thickness		Nominal Diameter over Jacket		Approximate Net Cable Weight		Pulling Tension	
		inches	mm	inches	mm	lb/kft	kg/km	lbf	N
669671	2	.052	1.32	.362	9.70	84	125	81	380
669689	4	.052	1.32	.443	11.25	121	180	149	663
669721	8	.062	1.57	.577	14.66	211	314	285	1268
-----	10	.062	1.57	.720	18.29	285	424	353	1570
669713	12	.062	1.57	.743	18.87	327	487	421	1873
671404	16	.062	1.57	.824	20.93	415	618	558	2462
-----	20	.072	1.83	.935	23.75	521	775	694	3087
671412	24	.072	1.83	1.038	26.37	614	914	830	3692
671420	38	.072	1.83	1.187	30.15	870	1295	1239	5511
671081	50	.082	2.08	1.417	35.99	1201	1787	1716	7633

Shielded Pairs with an Overall Shield (SPOS), 300V - 16 AWG (7w)
Insulation Thickness: 15 mils / .38 mm

Part Number	# of Pairs	Jacket Thickness		Nominal Diameter over Jacket		Approximate Net Cable Weight		Pulling Tension	
		inches	mm	inches	mm	lb/kft	kg/km	lbf	N
671222	2	.052	1.32	.446	11.33	120	179	129	574
671230	4	.052	1.32	.516	13.11	174	259	237	1054
671248	8	.062	1.57	.690	17.53	317	472	454	2019
-----	10	.062	1.57	.808	20.52	388	577	537	2389
671255	12	.062	1.57	.834	21.18	449	668	671	2985

671438	16	.072	1.83	.948	24.08	592	881	888	3950
-----	20	.072	1.83	1.053	26.75	721	1073	1105	4915
671446	24	.072	1.83	1.171	29.74	852	1268	1322	5880
671453	36	.082	2.08	1.362	34.59	1245	1853	1972	8771
671487	50	.082	2.08	1.603	40.72	1684	2506	2731	12147

Note:

Specifications and weights shown are nominal and subject to standard industry tolerances.