Ref 1294

# COPPER INSTRUMENTATION CABLE

## Overall Shield Served Wire Armor

## UL Listed 300 Volt PVC Insulated 221°F (105°C)

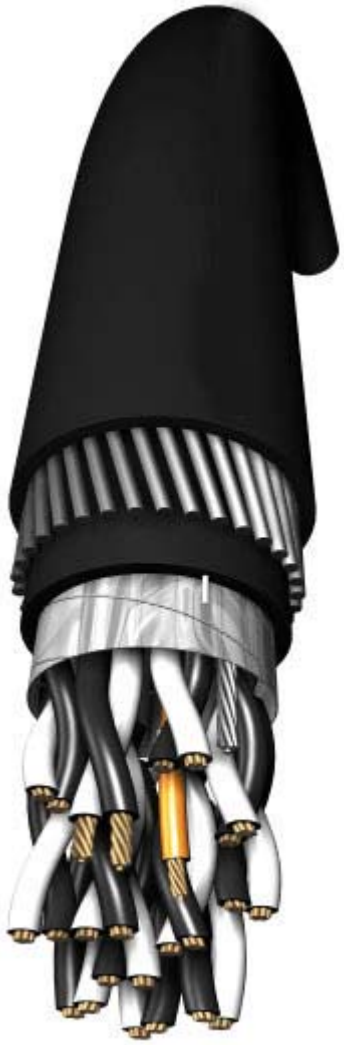
**CSA Certified Constructions Also Available**

### Applications

- Petrochemical Plants
- Utilities and Industrial Plants
- Instrumentation Circuits
- Suitable for Direct Burial and Suspension Applications
- For use in NEC Article 725 Class 1 Division 2 Hazardous Locations
- Complies with NEC 725 for use in Class 2 and Class 3 Circuits

### Product Features

- UL Listed Subject 13 PLTC
- Rated 105C 300 Volt
- Flame Retardant
- Passes IEEE 383 Flame Test
- Passes VW-1 Flame Test
- Available as Type ITC
- Resists Rodent and Mechanical Abuse
- Excellent Longitudinal Strength
- Sunlight Resistant



### Product Specifications

Conductors: Solid or stranded, bare or tinned copper 12 to 22 AWG (2.44 to .63MM)

Insulation: Nominal .016" (.40MM) flame retardant PVC

Color Code: Pairs-black & white, numbered. Triads-black, white & red, numbered (other colors available)

Construction: Twisted pairs or triads

Communication Wire: 22 AWG (.61MM) 7-strand copper insulated with nominal .015" (.38MM) orange PVC (4 pair/triad and larger)

Cable Shield: .002" (.05MM) aluminum/polyester tape, 25% overlap

Cable Drain Wire: 20 AWG (.91MM) 7-strand tinned copper

Inner Jacket: Flame retardant PVC with ripcord under jacket

Armor: Galvanized steel served wire, 80% nominal coverage

Outer Jacket: Flame retardant PVC with ripcord under jacket

### Ordering Code

UP/ALPWPTWK - [ ] - [ ] [ ] - [ ]

- [ ] # of Pairs or Triads
- [ ] Wire Size AWG or Metric
- [ ] Add (F) for Stranded Wire
- [ ] (TRIAD) or (BX) for Pairs
- [ ] Add (TIN) for Tinned Copper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| Wire Size | Numbers of Pairs/Triads | Inner/Outer Jacket Thickness inches | (MM) | Outer Diameter inches | (MM) | Bend Radius inches | (MM) | Pull Tension LB | KG | Net Weight LB/MF | KG/KM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **16 AWG** | 1 | .037 (0.94) | .053 (1.35) | .422 | (10.7) | 5.1 | (129) | 97 | (44) | 128 | (191) |
| **(1.47MM)** | 2 | .053 (1.35) | .053 (1.35) | .599 | (15.2) | 7.2 | (183) | 175 | (79) | 243 | (362) |
| **7-Strand** | 4 | .053 (1.35) | .064 (1.63) | .696 | (17.7) | 8.4 | (212) | 288 | (131) | 345 | (514) |
| | 8 | .064 (1.63) | .064 (1.63) | .870 | (22.1) | 10.4 | (265) | 545 | (248) | 581 | (865) |
| | 12 | .064 (1.63) | .074 (1.88) | 1.028 | (26.1) | 12.3 | (313) | 822 | (374) | 842 | (1253) |
| | 16 | .064 (1.63) | .074 (1.88) | 1.118 | (28.4) | 13.4 | (341) | 1017 | (462) | 989 | (1472) |
| | 24 | .074 (1.88) | .085 (2.16) | 1.349 | (34.3) | 16.2 | (411) | 1528 | (694) | 1470 | (2187) |
| | 36 | .074 (1.88) | .085 (2.16) | 1.484 | (37.7) | 17.8 | (452) | 2089 | (949) | 2417 | (3596) |
| | 1 | .042 (1.07) | .053 (1.35) | .446 | (11.3) | 5.4 | (136) | 123 | (56) | 151 | (224) |
| | 4 | .053 (1.35) | .064 (1.63) | .813 | (20.7) | 9.8 | (249) | 439 | (199) | 490 | (729) |
| | 8 | .064 (1.63) | .074 (1.88) | 1.058 | (26.9) | 12.7 | (322) | 832 | (378) | 870 | (1294) |
| | 12 | .074 (1.88) | .074 (1.88) | 1.241 | (31.5) | 14.9 | (378) | 1151 | (523) | 1149 | (1709) |
| | 24 | .074 (1.88) | .085 (2.16) | 1.658 | (42.1) | 19.9 | (505) | 2175 | (989) | 2035 | (3028) |
| **18 AWG** | 1 | .037 (0.94) | .042 (1.07) | .376 | (9.6) | 4.5 | (115) | 76 | (35) | 104 | (155) |
| **(1.2MM)** | 2 | .042 (1.07) | .053 (1.35) | .535 | (13.6) | 6.4 | (163) | 132 | (60) | 194 | (288) |
| **7-Strand** | 4 | .053 (1.35) | .064 (1.63) | .646 | (16.4) | 7.8 | (197) | 215 | (98) | 289 | (430) |
| | 8 | .053 (1.35) | .064 (1.63) | .781 | (19.8) | 9.4 | (238) | 395 | (179) | 458 | (682) |
| | 12 | .064 (1.63) | .074 (1.88) | .917 | (23.3) | 11.0 | (280) | 541 | (246) | 615 | (915) |
| | 16 | .064 (1.63) | .074 (1.88) | .994 | (25.2) | 11.9 | (303) | 662 | (301) | 715 | (1064) |
| | 24 | .074 (1.88) | .074 (1.88) | 1.177 | (29.9) | 13.4 | (340) | 1006 | (457) | 1039 | (1545) |
| | 36 | .074 (1.88) | .085 (2.16) | 1.352 | (34.3) | 16.2 | (412) | 1480 | (673) | 1481 | (2204) |
| | 1 | .037 (0.94) | .053 (1.35) | .410 | (10.4) | 4.9 | (125) | 88 | (40) | 122 | (182) |
| | 4 | .053 (1.35) | .064 (1.63) | .725 | (18.4) | 8.7 | (221) | 286 | (130) | 357 | (531) |
| | 8 | .064 (1.63) | .074 (1.88) | .942 | (23.9) | 11.3 | (287) | 541 | (246) | 628 | (935) |
| | 12 | .064 (1.63) | .074 (1.88) | 1.113 | (28.3) | 13.4 | (339) | 829 | (377) | 893 | (1328) |
| | 24 | .074 (1.88) | .085 (2.16) | 1.502 | (38.2) | 18.0 | (458) | 1566 | (712) | 1611 | (2400) |
| **20 AWG** | 1 | .037 (0.94) | .042 (1.07) | .356 | (9.0) | 4.3 | (109) | 55 | (26) | 91 | (136) |
| **(0.91MM)** | 2 | .042 (1.07) | .053 (1.35) | .490 | (12.4) | 5.9 | (150) | 94 | (43) | 157 | (235) |
| **7-Strand** | 4 | .053 (1.35) | .053 (1.35) | .570 | (14.5) | 6.8 | (174) | 150 | (68) | 221 | (329) |
| | 8 | .053 (1.35) | .064 (1.63) | .699 | (17.8) | 8.4 | (213) | 251 | (114) | 342 | (510) |
| | 12 | .053 (1.35) | .064 (1.63) | .806 | (20.5) | 9.7 | (246) | 385 | (175) | 476 | (708) |
| | 16 | .064 (1.63) | .074 (1.88) | .916 | (23.3) | 11.0 | (279) | 479 | (218) | 603 | (897) |
| | 24 | .064 (1.63) | .074 (1.88) | 1.062 | (27.0) | 12.7 | (324) | 724 | (329) | 833 | (1240) |
| | 36 | .074 (1.88) | .074 (1.88) | 1.184 | (30.1) | 14.2 | (361) | 958 | (435) | 1058 | (1574) |
| | 1 | .037 (0.94) | .042 (1.07) | .366 | (9.3) | 4.4 | (112) | 68 | (31) | 101 | (150) |
| | 4 | .053 (1.35) | .064 (1.63) | .672 | (17.1) | 8.1 | (205) | 216 | (98) | 308 | (459) |
| | 8 | .064 (1.63) | .064 (1.63) | .849 | (21.6) | 10.2 | (259) | 403 | (183) | 612 | (910) |
| | 12 | .064 (1.63) | .074 (1.88) | .992 | (25.2) | 11.9 | (302) | 534 | (243) | 663 | (986) |
| | 24 | .074 (1.88) | .085 (2.16) | 1.370 | (34.8) | 16.4 | (418) | 1137 | (517) | 1326 | (1972) |

**The products referenced above represent the most popular constructions. Other constructions can be manufactured to meet individual specification and application requirements. Contact factory for additional information.**

**Electrical Characteristics**

Insulation passes 3000 V ac spark test per UL Subject 13.
Completed cable passes a dielectric test of 2500 V dc for
10 seconds, conductor to conductor and conductor to shield, per UL Subject 13


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