

## Instrumentation Cable

XLPE insulation / 18 & 16 AWG / CPE jacket / 600 volt



### Applications

These single pair or triad instrumentation cables are constructed with heat and moisture resistant cross-linked polyethylene (XLPE) with an abrasion, oil, chemical and flame-resistant polyvinyl chloride (PVC), chlorinated polyethylene (CPE) or low smoke, zero halogen (LSZH/XLPO) jacket for use in utility substation or power generation facilities.

They are recommended for indoor or outdoor applications in conduit, duct, cable tray or aerial installations and NEC-compliant for continuous operation at 90°C in wet and dry locations.

### Specifications and Ratings

- UL Sunlight Resistant
- Oil resistant

### Optional Constructions:

- Tinned copper conductors
- Flexible stranded conductors
- PVC/Nylon or EPR insulation
- PVC, CPE, LSZH and XLPO jacket compounds  
300 volt rating

### Design Parameters

**CONDUCTORS:** Class B, soft drawn, bare copper per ASTM B3 and ASTM B8.

**INSULATION:** Heat and moisture resistant, cross-linked polyethylene (XLP) meeting the requirements of NEMA WC57/ICEA S-73-532 and UL 66 & 1277. The insulation is suitable for use in wet or dry locations at a conductor temperature not exceeding 90°C for normal operation.

### Design Parameters continued..

**CIRCUIT IDENTIFICATION:** One black and one white insulated single conductor in each pair with printed pair numbers (black/white/red for triads).

**PAIR ASSEMBLY:** Two insulated conductors twisted with a stranded tinned copper drain wire per ASTM B33 and wrapped with an aluminum foil/mylar shield and an isolation tape.

**CABLING:** Required number of pairs are cabled with non-hygroscopic fillers where necessary to form a round compact core.

**OVERALL SHIELD/DRAIN:** Helically applied aluminum foil/mylar tape. The drain is a stranded soft-drawn tinned copper per ASTM B33. Optional constructions include:

- Corrugated longitudinally-applied .005 or .010 copper shielding
- Flat helically-applied .005 or .010 copper
- Longitudinally-applied copper or aluminium copolymer-bonded shield
- Copper braid (specify percentage of coverage for optimum EMI protection)

**JACKET:** Abrasion, oil and chemical resistant and highly flame retardant polyvinyl chloride (PVC), chlorinated polyethylene (CPE) or low smoke, zero halogen (LSZH/XLPO) jacket to meet UL Standard 1277.



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Conductor AWG	Pair/Triad Count	Conductor Strand Class /Stranding	Nominal Insulation Thickness in (mm)	Nominal Jacket Thickness in (mm)	Nominal Cable Outside Diameter in (mm)	Approximate Cable Weight Lbs/Mft (Kg/Km)
18 AWG	1 pair	B / 7	0.030 (0.8)	0.045 (1.1)	0.320 (8.2)	49 (73)
18 AWG	2 pair	B / 7	0.030 (0.8)	0.045 (1.1)	0.490 (12.5)	128 (190)
18 AWG	4 pair	B / 7	0.030 (0.8)	0.060 (1.5)	0.680 (17.3)	190 (283)
18 AWG	8 pair	B / 7	0.030 (0.8)	0.060 (1.5)	0.810 (20.7)	332 (494)
18 AWG	12 pair	B / 7	0.030 (0.8)	0.080 (2.0)	0.960 (24.5)	486 (723)
18 AWG	16 pair	B / 7	0.030 (0.8)	0.080 (2.0)	1.090 (27.8)	605 (900)
18 AWG	24 pair	B / 7	0.030 (0.8)	0.080 (2.0)	1.430 (36.5)	960 (1428)
18 AWG	1 triad	B / 7	0.030 (0.8)	0.045 (1.1)	0.330 (8.4)	60 (89)
18 AWG	2 triad	B / 7	0.030 (0.8)	0.045 (1.1)	0.550 (14.0)	152 (226)
18 AWG	4 triad	B / 7	0.030 (0.8)	0.060 (1.5)	0.720 (18.4)	261 (388)
18 AWG	8 triad	B / 7	0.030 (0.8)	0.080 (2.0)	0.920 (23.5)	454 (676)
18 AWG	12 triad	B / 7	0.030 (0.8)	0.080 (2.0)	1.110 (28.3)	627 (933)
18 AWG	16 triad	B / 7	0.030 (0.8)	0.080 (2.0)	1.150 (29.3)	771 (1147)
18 AWG	24 triad	B / 7	0.030 (0.8)	0.080 (2.0)	1.530 (39.0)	1218 (1812)
16 AWG	1 pair	B / 7	0.030 (0.8)	0.045 (1.1)	0.340 (8.7)	62 (92)
16 AWG	2 pair	B / 7	0.030 (0.8)	0.045 (1.1)	0.540 (13.8)	153 (228)
16 AWG	4 pair	B / 7	0.030 (0.8)	0.060 (1.5)	0.670 (17.1)	255 (379)
16 AWG	8 pair	B / 7	0.030 (0.8)	0.060 (1.5)	0.850 (21.7)	408 (607)
16 AWG	12 pair	B / 7	0.030 (0.8)	0.080 (2.0)	1.060 (27.0)	610 (908)
16 AWG	16 pair	B / 7	0.030 (0.8)	0.080 (2.0)	1.230 (31.4)	770 (1146)
16 AWG	24 pair	B / 7	0.030 (0.8)	0.080 (2.0)	1.380 (35.2)	1175 (1748)
16 AWG	1 triad	B / 7	0.030 (0.8)	0.045 (1.1)	0.370 (9.4)	78 (116)
16 AWG	2 triad	B / 7	0.030 (0.8)	0.060 (1.5)	0.630 (16.1)	209 (311)
16 AWG	4 triad	B / 7	0.030 (0.8)	0.060 (1.5)	0.740 (18.9)	349 (519)
16 AWG	8 triad	B / 7	0.030 (0.8)	0.080 (2.0)	1.030 (26.3)	575 (856)
16 AWG	12 triad	B / 7	0.030 (0.8)	0.080 (2.0)	1.220 (31.1)	803 (1195)
16 AWG	16 triad	B / 7	0.030 (0.8)	0.080 (2.0)	1.360 (34.7)	1010 (1503)
16 AWG	24 triad	B / 7	0.030 (0.8)	0.080 (2.0)	1.590 (40.6)	1549 (2305)

The data herein is approximate and subject to normal manufacturing tolerances. These specifications are subject to change without notice. Consult factory for a variety of alternate constructions for specific applications.notice.

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