

Reduced Diameter Instrumentation Cable (PSOS)

dual shielded multipair XLPE insulated conductors / 18 & 16 AWG
LSZH TPO or XLPO jacket / 600 volt



Applications

These are multiple pair instrumentation tray cables constructed with a reduced diameter. Crosslinked polyethylene (XLPE) insulation and either a thermoplastic polyolefin (TPO) or a crosslinked polyolefin (XLPO) jacket are used to meet UL 1685 for limited smoke. Aluminum/mylar tape shields and drain wires for each pair as well as an overall aluminum/mylar shield and drain help reduce electromagnetic interference. It is suitable for both tray and aerial installations. These cables meet UL 1685 for a UL "LS" (limited smoke) designation.

Ratings

- UL Standard 44, 1277 and 1685
- ICEA S-73-532 (NEMA WC 57)
- IEEE 383

Construction

CONDUCTOR: Class B (7 strand), soft drawn, bare or tinned copper per ASTM B3, ASTM B8 and ASTM B33.

INSULATION: Reduced thickness crosslinked polyethylene (XLPE) that meets ICEA S-73-532 (NEMA WC 57) and UL 44 acceptable for 90°C wet and dry locations. Completely non-halogen constructions that can withstand 75°C wet/90°C dry environments are available upon request.

CIRCUIT IDENTIFICATION: One black and one red insulated single conductor in each pair with printed pair numbers.

PAIR ASSEMBLY: Two insulated conductors twisted with a Class K stranded tinned copper drain wire per ASTM B33 & B174 and wrapped with a helically-applied 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 Wire
Helically applied aluminum foil/mylar tape. The drain is a Class K stranded soft-drawn tinned copper per ASTM B 33 and ASTM B174.

BINDER TAPE: Overall polyester tape.

JACKET: Reduced wall thickness, sunlight-resistant, flame-retardant, low smoke and zero-halogen black TPO or XLPO that meets UL 1277.

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Part Number	Conductor Number	Conductor Size/Stranding	Drain Size/Stranding	Average Insulation Thickness in (cm)	Average Jacket Thickness in (mm)	Minimum Bend Radius in (mm)	Cable O.D. in (mm)	Approximate Cable Weight Lbs/Mft (Kg/Km)
418-02	2	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.030 (.76)	5.0 (127.0)	0.415 (10.5)	80 (119)
418-03	3	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.030 (.76)	5.3 (134.6)	0.440 (11.1)	105 (156)
418-04	4	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.030 (.76)	5.8 (147.3)	0.485 (12.3)	132 (197)
418-05	5	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.045 (1.1)	6.8 (172.7)	0.565 (14.3)	178 (265)
418-07	7	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.045 (1.1)	7.4 (188.0)	0.615 (15.6)	230 (343)
418-09	9	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.045 (1.1)	8.0 (203.2)	0.670 (17.0)	259 (386)
418-12	12	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.045 (1.1)	8.6 (218.4)	0.720 (18.3)	289 (430)
418-15	15	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.045 (1.1)	9.8 (248.9)	0.815 (20.7)	372 (554)
418-19	19	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.065 (1.7)	11.4 (289.6)	0.950 (24.1)	496 (739)
418-27	27	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.065 (1.7)	13.0 (330.2)	1.000 (25.4)	598 (891)
418-37	37	18 AWG / 7x0.0152	20 AWG / 10x0.010	.020 (.51)	.065 (1.7)	16.1 (408.9)	1.345 (34.1)	1074 (1600)
416-02	2	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.030 (.76)	5.5 (139.7)	0.455 (11.5)	103 (153)
416-03	3	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.030 (.76)	5.8 (147.3)	0.485 (12.3)	137 (204)
416-04	4	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.045 (1.1)	6.8 (172.7)	0.565 (14.3)	193 (288)
416-05	5	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.045 (1.1)	7.4 (188.0)	0.620 (15.7)	231 (344)
416-07	7	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.045 (1.1)	8.1 (205.7)	0.675 (17.1)	302 (450)
416-09	9	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.045 (1.1)	8.8 (223.5)	0.735 (18.6)	341 (508)
416-12	12	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.045 (1.1)	9.5 (241.3)	0.795 (20.2)	380 (566)
416-15	15	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.065 (1.7)	11.3 (287.0)	0.940 (23.8)	535 (797)
416-19	19	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.065 (1.7)	12.5 (317.5)	1.045 (26.5)	649 (967)
416-27	27	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.065 (1.7)	13.2 (335.3)	1.100 (27.9)	788 (1174)
416-37	37	16 AWG / 7x0.0192	18 AWG / 16x0.010	.020 (.51)	.065 (1.7)	17.8 (452.1)	1.485 (37.7)	1434 (2136)

The data herein is approximate and subject to normal manufacturing tolerances.

Information is subject to change without notice. Consult factory for a variety of alternate constructions for specific applications.

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