C-L-X® Okozel® Type MC (Z)

600V Control Cable—Aluminum Sheath
Multiple Copper Conductors/150°C Rating
For Cable Tray Use - Sunlight Resistant

A Bare, Stranded Copper Conductor
B Okozel Insulation
C Binder Tape
D Marker Tape
E Impervious, Continuous, Welded Corrugated, Aluminum C-L-X Sheath

Insulation

Okozel is Okonite's trade name for ETFE Fluoropolymer, a modified Ethylene Tetrafluoroethylene. Okozel is extremely rugged with excellent resistance to cut-through and abrasion. It is chemically inert and has low permeability. Okozel passes the IEEE 383 and UL vertical tray flame test. It is rated for 150°C (302°F conductor operating temperature for continuous use and retains all useful physical properties at temperatures down to -100°C (-148°F).

Specifications

Conductors: Bare copper per ASTM B-3, Class B stranded per ASTM B-8.

Insulation: Flame-retardant, moisture-resistant Okozel, a modified ETFE fluoropolymer.

Conductor Identification: Base colors and tracers as shown on reverse of Data Sheet.

Assembly: Conductors cabled together in accordance with ICEA S-73-532, NEMA WC57 Section 5.1; with non-hygroscopic fillers as required; and a binder tape overall.

Sheath: Close fitting, impervious, continuous, welded, corrugated aluminum C-L-X in accordance with UL 1569. The sheath exceeds the grounding conductor requirements of Table 250.122 of the NEC. All C-L-X cables are rated "nonburning" under ASTM D635.

Applications

C-L-X Okozel control cables are recommended for use in or fossil fueled generating stations where continuity of service in critical circuits is of primary importance. These cables, which are rated 150°C in dry and 75°C in wet locations, offer reduced cable diameters through higher ampacities and thinner insulation walls than comparable XLPE or rubber constructions. C-L-X Okozel control cables are also recommended for high ambient temperature areas up to 150°C (302°F) in industrial applications or for cold weather installations to -65°C (-85°F).

Product Features

- Factory assembled "cable in conduit".
- 150°C continuous operating temperature.
- Cold installation temperature in excess of -65°C.
- Flame retardant - passes the vertical tray flame test requirements of IEEE 383 and 1202, UL 1569 and ICEA T-29-520(210,000 BTU/hr).
- Lower smoke emission.
- Chemically inert insulation-unaffected by typical acids, bases, solvents and cleaning agents, fuels and hydraulic fluids.
- High dielectric strength.
- Low dielectric constant.
- Smaller diameter and lighter weight permits more cables per tray.
- C-L-X enclosure permits installation in cable tray containing other voltages within a barrier separator.
- In addition, the aluminum CLX sheath exceeds the equipment grounding requirements of NEC Section 250.118 and 250.122, and can be used as the equipment grounding conductor.
- Provides excellent grounding safety.
- Excellent compression and impact resistance.
- No limit to number of bends in run.
- Lower installed system cost than conduit or EMT systems.
- UL Listed for cable tray use, and sunlight resistant.
- May be installed in ducts, plenums and other environmental air-handling spaces per NEC Articles 300.22(B) and (C).
- Special designs available that are qualified for nuclear generating stations at 90°C in accordance with IEEE Standards 383-74 and 323-74.

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Catalog Number	Conductor Size AWG	Number of Conductors	Insulation Thickness (mils)	Core O.D. - Inches	Core O.D. - mm	C-L-X O.D. - Inches	C-L-X O.D. - mm	Cross-Sectional Area (sq. In.)	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	Ampacity 150°C Dry(1)*
548-76-1402	18(7X)	2	15	0.20	5.1	0.38	9.7	0.11	57	80	7
548-76-1403		3		0.20	5.1	0.38	9.7	0.11	63	85	7
548-76-1404		4		0.20	5.1	0.38	9.7	0.11	71	95	7
548-76-1405		5		0.22	5.6	0.38	9.7	0.15	78	105	7
548-76-1407		7		0.24	6.1	0.43	10.9	0.15	98	120	7
548-76-1409		9		0.29	7.4	0.49	12.4	0.18	120	145	7
548-76-1412		12		0.33	8.4	0.53	13.5	0.25	146	180	7
548-76-1419		19		0.40	10.2	0.62	15.7	0.29	206	235	7
548-76-1437		37		0.55	14.0	0.80	20.3	0.49	364	400	7
548-76-1482	16(7X)	2	15	0.20	5.1	0.38	9.7	0.11	64	85	10
548-76-1483		3		0.20	5.1	0.38	9.7	0.11	74	95	10
548-76-1484		4		0.22	5.6	0.38	9.7	0.15	86	115	10
548-76-1485		5		0.25	6.4	0.43	10.9	0.15	102	125	10
548-76-1487		7		0.28	7.1	0.49	12.4	0.18	129	150	10
548-76-1489		9		0.33	8.4	0.53	13.5	0.25	158	190	10
548-76-1492		12		0.38	9.7	0.58	14.7	0.29	195	230	10
548-76-1499		19		0.46	11.7	0.67	17.0	0.33	278	310	10
548-76-1517		37		0.64	16.3	0.89	22.6	0.61	504	545	10
548-76-1562	14(7X)	2	15	0.21	5.3	0.38	9.7	0.15	77	100	15
548-76-1563		3		0.23	5.8	0.43	10.9	0.15	97	120	15
548-76-1564		4		0.26	6.6	0.43	10.9	0.18	115	140	15
548-76-1565		5		0.29	7.4	0.49	12.4	0.18	137	160	15
548-76-1567		7		0.32	8.1	0.53	13.5	0.22	175	195	15
548-76-1569		9		0.38	9.7	0.58	14.7	0.29	217	245	15
548-76-1572		12		0.44	11.2	0.67	17.0	0.33	272	305	15
548-76-1579		19		0.53	13.5	0.75	19.1	0.43	393	425	15
548-76-1597		37		0.73	18.5	0.97	24.6	0.81	721	765	15
548-76-1642	12(7X)	2	15	0.25	6.4	0.43	10.9	0.15	102	120	20
548-76-1643		3		0.27	6.9	0.49	12.4	0.18	130	150	20
548-76-1644		4		0.30	7.6	0.49	12.4	0.22	157	180	20
548-76-1645		5		0.33	8.4	0.53	13.5	0.25	188	215	20
548-76-1647		7		0.37	9.5	0.58	14.7	0.25	242	265	20
548-76-1649		9		0.45	11.5	0.67	17.0	0.33	308	330	20
548-76-1652		12		0.51	13.0	0.75	19.1	0.43	387	420	20
548-76-1659		19		0.62	15.7	0.84	21.3	0.55	567	600	20
548-76-1677		37		0.86	21.8	1.11	28.2	1.04	1057	1100	20
548-76-1722	10(7X)	2	20	0.32	8.1	0.53	13.5	0.22	150	165	30
548-76-1723		3		0.35	8.9	0.58	14.7	0.25	192	210	30
548-76-1724		4		0.39	9.9	0.58	14.7	0.29	236	260	30
548-76-1725		5		0.43	10.9	0.67	17.0	0.33	287	305	30
548-76-1727		7		0.48	12.2	0.71	18.0	0.33	371	385	30
548-76-1729		9		0.58	14.7	0.80	20.3	0.55	470	495	30
548-76-1732		12		0.66	16.8	0.89	22.6	0.67	594	635	30
548-76-1802	9(7X)	2	25	0.37	9.5	0.58	14.7	0.25	183	195	67
548-76-1803		3		0.40	10.2	0.62	15.7	0.29	235	250	67
548-76-1804		4		0.44	11.2	0.67	17.0	0.33	296	310	53
548-76-1805		5		0.49	12.4	0.71	18.0	0.43	355	375	53
548-76-1807		7		0.55	14.0	0.80	20.3	0.49	466	480	46
548-76-1809		9		0.66	16.8	0.89	22.6	0.67	594	615	46
548-76-1812		12		0.76	19.3	1.02	25.9	0.81	752	790	46

(1) Ampacities are based on Table 310.18 of the NEC for type Z conductors rated at a continuous operating temperature of 150°C (302°F) adjusted for a

Okonite's web site, www.okonite.com contains the most up to date information.

*Per Section 240.4(D) of the NEC, sizes #18 and #16 AWG, current limited to 7 and 10 amps, intermittent and 5.6 and 8 amps, continuous, respectively. For sizes #14, #12 and #10 AWG, current limited to 15, 20 and 30 amps, respectively.

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Conductor Color Coding Sequence

Conductor Number	Base Color	Tracer Color
1	Black	
2	Red	
3	Blue	
4	Orange	
5	Yellow	
6	Brown	
7	Red	Black
8	Blue	Black
9	Orange	Black
10	Yellow	Black
11	Brown	Black
12	Black	Red
13	Blue	Red
14	Orange	Red
15	Yellow	Red
16	Brown	Red
17	Black	Blue
18	Red	Blue
19	Orange	Blue
20	Yellow	Blue
21	Brown	Blue
22	Black	Orange
23	Red	Orange
24	Blue	Orange
25	Yellow	Orange
26	Brown	Orange
27	Black	Yellow
28	Red	Yellow
29	Blue	Yellow
30	Orange	Yellow
31	Brown	Yellow
32	Black	Brown
33	Red	Brown
34	Blue	Brown
35	Orange	Brown
36	Yellow	Brown
37	Black	

Color Coding
Sizes 18 - 9 AWG:
per ICEA Method 1, E-2
color sequence

THE OKONITE COMPANY
Ramsey, New Jersey 07446