OKONITE CABLES

IN STOCK

FOR IMMEDIATE DELIVERY

THE OKONITE COMPANY
102 Hilltop Road, Ramsey, New Jersey 07446 • Phone 201.825.0300 • www.okonite.com

MADE IN THE USA
QUALITY CABLES SINCE 1878

NEED CABLE IN A HURRY?

Okonite maintains an in-stock inventory of the products shown in these pages, identified by catalog number. The products used in this bulletin are stocked in our service centers which are linked via an on-line computer network with our district sales offices and manufacturing plants to provide up-to-the-minute in-stock and stock replenishment information.

Your local Okonite office and service center, listed below, are ready to assist you with information and to expedite your cable selection. In addition, they will be able to discuss your needs regarding other sizes and types of instrumentation cables as well as a full range of power and control cables.

OKONITE DISTRICT SALES OFFICES AND SERVICE CENTERS

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Suite 120
Woodstock, GA 30189
(770) 928-9778
E-Mail: atlanta@okonite.com

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100 Alpha Drive, Building B
Destrehan, LA 70047
(504) 467-1920
E-Mail: batonrouge@okonite.com

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(205) 655-0390
E-Mail: birmingham@okonite.com

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(603) 625-1900
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E-Mail: boston@okonite.com

Buffalo District Office
169 South River Road
Bedford, NH 03110
(603) 625-1900
buffalo@okonite.com

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11111 Carmel Commons Blvd.
Suite 140
Charlotte, NC 28226
(704) 542-1572
E-Mail: charlotte@okonite.com

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2280 White Oak Circle, Suite 106
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Lewisville, TX 75067
(940) 383-1967
E-Mail: dallas@okonite.com

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636 Coffman Street
Suite 201
Longmont, CO 80501
(303) 772-3517
E-Mail: denver@okonite.com

Houston District Office and Service Center
802 Century Plaza
Houston, TX 77073
(281) 821-5500
E-Mail: houston@okonite.com

Kansas City District Office and Service Center
2631 South 96th Street
Edwardsville, KS 66111
(913) 422-6958
E-Mail: kansascity@okonite.com

Los Angeles District Office
340 Golden Shore, Suite 230
Long Beach, CA 90802
(562) 590-3070
E-Mail: losangeles@okonite.com

Minneapolis District Office
16200 Hwy 7
Lower Level
Minnetonka, MN 55345
(763) 432-3818
E-Mail: minneapolis@okonite.com

New Orleans District Office and Service Center
100 Alpha Drive, Building B
Destrehan, LA 70047
(504) 467-1920
E-Mail: neworleans@okonite.com

New York District Office
Three Garret Mountain Plaza, St. 304
Woodland Park, NJ 07424
NJ (973) 742-8040 • NY (212) 239-0660
E-Mail: newyork@okonite.com

Philadelphia District Office
111 Continental Dr., Suite 308
Newark, DE 19713
(302) 318-2054
E-Mail: philadelphia@okonite.com

Phoenix District Office
1744 S. Val Vista Dr., Suite 206
Mesa, AZ 85204
(480) 838-8596
E-Mail: phoenix@okonite.com

Pittsburgh Service Center
120 Solar Drive
Imperial, PA 15126
(724) 899-4300
E-Mail: pittsburgh@okonite.com

Portland District Office and Service Center
14944 S.W. Century Drive
Sherwood, OR 97140
(503) 598-0598
E-Mail: portland@okonite.com

Richmond District Office
111 Continental Dr., Suite 308
Newark, DE 19713
(302) 318-2054
E-Mail: richmond-district@okonite

Salt Lake District Office
1401 N. 1075 W.
Suite 210
Farmington, UT 84025
(801) 262-1993
E-Mail: saltlake@okonite.com

San Francisco District Office
2440 Camino Ramon, Suite 315
San Ramon, CA 94583
(925) 830-0801
E-Mail: sanfrancisco@okonite.com

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11705 Dorsett Road
Suite 210
Maryland Heights, MO 63043
(314) 770-9070
E-Mail: stlouis@okonite.com

Tampa District Office
10002 Princess Palm Avenue
Suite 104
Tampa, FL 33619
(813) 627-9400
E-Mail: tampa@okonite.com

International Sales
802 Century Plaza
Houston, TX 77073
(281) 821-5500
E-Mail: houston@okonite.com


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GLOSSARY

INDUSTRY ASSOCIATIONS

ABS American Bureau of Shipping.
AEIC Association of Edison Illuminating Companies.
ANSI American National Standards Institute.
AREMA American Railway Engineering and Maintenance of Way Association
ASTM American Society for Testing and Materials.
ICEA Insulated Cable Engineers Association (formerly IPCEA).
IEC International Electrotechnical Commission
IEEE Institute of Electrical and Electronics Engineers.
NEC National Electrical Code.
NEMA National Electrical Manufacturers Association.
NFPA National Fire Protection Association.

GOVERNMENT AGENCIES

OSHA Occupational Safety and Health Act administered by U.S. Dept. of Labor which establishes employee safety standards in all industrial and commercial establishments.
RUS Rural Utility Systems of the U.S. Department of Agriculture, formerly REA.
FAA Federal Aviation Administration
EPA Environmental Protection Agency
DOE Department of Energy
FERC Federal Energy Regulatory Commission

OKONITE REGISTERED TRADE NAMES

C-L-X® Continuous-Lightweight-Exterior. Welded and corrugated, impervious metallic sheathed cables.
LOXARMOR® An interlocked S shaped armor cable covering, normally galvanized steel or aluminum.
OKOBON® A moisture resistant cable finish consisting of an aluminum/ copolymer tape fused to itself and to an overall jacket.
OKOBUS® Fieldbus instrumentation cable.
OKOCLEAR TP® (TPPO) Thermoplastic Polyolefin low smoke/zero halogen jacket compound.
OKOCLEAR TS® Thermosetting Polyolefin low smoke/zero halogen jacket compound.
OKOGUARD® Okonite's exclusive ethylene-propylene rubber (EPR) based, thermosetting insulation, with an optimum balance of electrical and physical properties unequaled in other solid dielectrics, used on power cables rated 600 V and above. (50th Anniversary - 2017)
OKOLENE® Thermoplastic polyethylene or polypropylene based insulation or jacket compound.
OKONITE® Okonite's exclusive ethylene propylene rubber (EPR) based, thermo-setting insulation used up to 2000V.
OKONITE-FMR® Okonites exclusive flame and moisture resistant ethylene propylene rubber (EPR) insulation used up to 2000V.
OKOGUARD-OKOLON® Composite insulation system consisting of a layer of EPR and covered with a chlorinated thermoset compound.
OKOPACT® Okonites unique compact round conductor shape and design.
OKOSEAL® A PVC insulation or jacketing compound with excellent resistance to flame and most chemicals.
OKOSEAL-N® PVC insulated and nylon jacketed low voltage conductors, Type THHN, THWN-2 and TFN.
OKOLON TP-CPE® Thermoplastic moisture resistant CPE compound serving as an outer jacket.
OKOLON TS-CPE® Thermoset moisture resistant flame retardant CPE outer jacket.
OKOTEMP® - Thermoplastic rubber jacketing compound with excellent abrasion resistance combined with flexibility.
OKOTHERM® Heat resistant silicone rubber based insulation for use in high temperature locations.
OKOZEL® Okonite's name for its ETFE based flame and radiation resistant insulating and jacketing compound.
P-30® Okolene-Okoseal insulated 600V multiple and single conductor control cable.
P-45® Okolene-Okoseal Insulated 1000V Multiple Conductor Control Cable.
URO-J Underground Residential distribution-Okoguard (EPR) insulation-Okolene Jacket employing a concentric neutral.
USE Underground Service Entrance Cable. (NEC Article 338)
X-OLENE® Okonite's name for its XLPE insulation and jacket.

STANDARD TERMS

AWG American Wire Gauge, based on the circular mil system where 1 mil equals 0.001 inch.
CIC Cable in Conduit for buried distribution systems.
CIC Circuit Integrity flame retardant cables
C-L-X-M C-L-X Marine Shipboard Cable
CPE Chlorinated Polyethylene jacketing material.
CSA Canadian Standards Association. An independent organization which implements and monitors the commercial and consumer electrical product standards. The CSA assures compliance to the various Canadian Electrical Code requirements.
CT Designation given to cables meeting UL requirements for cable tray use.
CTC Designation for Centralized Traffic Control Code Line cable.
CWCMC ULs designation for 600 volt C-L-X marine shipboard cable - continuously welded corrugated MC cable.
DEL Diesel Electric Locomotive and car wiring with Okonite insulation and Okolon jacket.
EPR Ethylene Propylene Rubber insulating compound ingredient.
ER Exposed Run, UL term designating cables approved for open wire applications.
ETFE Modified Ethylene Tetrofluoroethylene compound (Okozel) used for insulation and jackets.
FIELDBUS CABLE - High Speed digital signal transmission instrumentation cable having specific electrical characteristics.
FPL Power limited Fire Protective Signal Cable (NEC Art. 760). 300V rated
FMR Flame and Moisture Retardant.
HL Designation given to MC and ITC cables meeting NEC and UL requirements for use in Division 1 hazardous locations.
INSULATION LEVEL-100% Cable for use on grounded systems or where the system is provided with relay protection such that grounds faults will be cleared as rapidly as possible but in any case within one minute.
INSULATION LEVEL-133% Cable for use on ungrounded or grounded systems or where the faulted section will be de-energized in a time not exceeding one hour.
ITC Instrumentation Tray Cable for

GLOSSARY (continued)

instrumentation & control circuits operating ≤150V and ≤5 amps., per NEC Article 727.

kcmil A unit of conductor area in thousands of circular mils. (Formerly MCM).

LOCA Loss of Coolant Accident, IEEE 383 defines test requirements.

LCS Longitudinal Corrugated Shield.

MC Metal-Clad cable. NEC type designation for power and control cables enclosed in a welded and corrugated metallic sheath (C-L-X), or an interlocking tape armor (Loxarmor). (Article 330)

MC-HL Metal-Clad cable listed for hazardous locations

mil 0.001 inch.

MV Medium Voltage cable. NEC designation for single & multiple conductor insulated cable rated 2001 to 35,000 volts. (NEC Article 328)

NPLF Non-Power Limited Fire Protective Signal Cable (NEC Art. 760). 600V rated

OKO-MARINE UL designation for non-armored Marine Shipboard Cable.

PLTC Type designation for Power-Limited Tray Cable for use in Class 2 or 3 power-limited circuits; instrumentation, supervisory control, and thermocouple extension.

P-NS Single pair or triad, Non Shielded, instrumentation or thermocouple extension cable.

P-OS Single or multi Pairs or Triads with Overall Shield, instrumentation or thermocouple extension cable.

POWER-LIMITED CIRCUIT Circuit either inherently limited requiring no overcurrent protection or limited by a combination of a power source and overcurrent protection.

PVC Polyvinyl Chloride insulating and jacketing material which is usually flame retardant and resistant to many chemicals.

P-104 Okonites identification number issued by the Pennsylvania Department of Environmental Resources.

RHH NEC conductor type designation for conductors with Heat resistant rubber or XLPE insulation, for use in dry locations.

RHW-2 NEC conductor type designation for conductors with Heat and Moisture resistant rubber or XLPE insulation, for use in 90°C wet or dry locations.

RTA Thermoplastic insulated, aluminum shielded, polyethylene jacketed communication cable.

SCREEN A semiconducting nonmetallic layer used under and over the insulation of power cables rated over 2kV to reduce electrical stresses and corona

SEMICONDUCTING An extruded layer or tape of such resistance that when applied between two elements of a cable the adjacent surfaces of the two elements will maintain substantially the same potential.

SHIELD A nonmagnetic, metallic material applied over an insulated conductor(s) to confine the electric field to the insulation.

SP-OS Multiple Shielded Pairs or Triads with Overall Shield, instrumentation or thermocouple extension cable.

SR Sunlight Resistant

TC NEC type designation for power and control tray cable. (Article 336)

TFN NEC conductor type designation for PVC insulated nylon jacketed conductors in sizes #18 and 16 AWG for use in dry locations.

THERMOCOUPLE CABLE - A cable consisting of two dissimilar metals or alloys that, when electrically joined at one end can be used to measure temperature. These cables have no voltage rating.

THHN NEC conductor type designation for PVC insulated nylon jacketed conductors for use in dry locations.

THWN-2 NEC conductor type designation for PVC insulated nylon jacketed conductors for use in 90°C wet or dry locations.

TPPO Thermoplastic Polyolefin, a thermoplastic jacket material with low smoke characteristics and is free of halogens.

UL Underwriters Laboratories. An independent organization which examines, tests, lists and periodically inspects equipment to appropriate standards.

URD Underground Residential Distribution Cables.

VERTICAL TRAY FLAME TEST
Conducted per UL, IEEE or ICEA procedures to demonstrate that a single conductor (1/0 AWG and larger) or multi-conductor cable will not propagate a fire in the defined test.

VOLTAGE LEVELS
Power-Limited - 0-300 Volts
Low Voltage - 600-2000 Volts
Medium Voltage - 2400-46000 Volts
High Voltage - >46 to 345kV

VOLTAGE RATING V or kV, industry convention to identify voltage levels, phase to phase voltage.

VW-1 Basic flammability test for single conductors; employs a tirrill burner applied intermittently to a Vertical Wire.

XHHW-2 NEC conductor type designation for conductors with Heat and Moisture resistant thermoset insulation for use in 90°C wet or dry locations.

XLPE Cross-Linked Polyethylene insulating compound.

XLPO Cross Linked Polyolefin, a thermoset jacket material with low smoke characteristics and is free of halogens.

Z NEC conductor type designation for conductors with ETFE insulation for use in dry locations.

ZW NEC conductor type designation for conductors with ETFE insulation for use in wet or dry locations.

CONDUCTOR IDENTIFICATION INFORMATION

E-1 Color sequences for utility conductor identification, see Appendix E, Table E-1, ICEA Standard S-73-532, includes green and white.

E-2 Color sequence for industrial conductor identification, see Appendix E, Table E-2, ICEA Standard S-73-532, excludes green and white.

METHOD-1 Conductor identification, colored compounds with tracers in accordance with the ICEA standard.

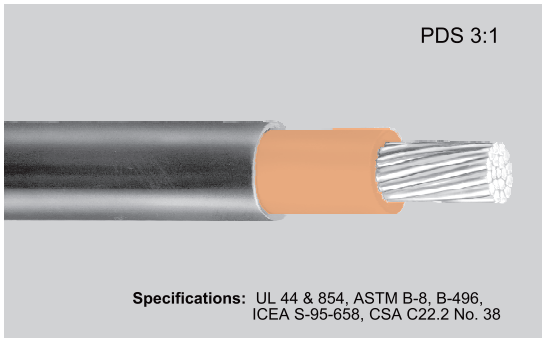
METHOD-2 Conductor identification, neutral compounds with tracers in accordance with the ICEA Standard.

METHOD-3 Conductor identification, neutral or single colored compounds with surface printing of numbers and color designations in accordance with the ICEA Standard.

METHOD-4 Conductor identification, neutral or single colored compounds with surface printing of numbers in accordance with the ICEA Standard.

METHOD-5 Conductor identification, individual color coding with braids in accordance with the ICEA Standard.

LOW VOLTAGE SINGLE CONDUCTOR CABLES



Specifications: UL 44 & 854, ASTM B-8, B-496, ICEA S-95-658, CSA C22.2 No. 38

*Sizes 12 AWG and larger, with exception to 6 AWG

OKOGUARD-OKOLON TS-CPE 600/1000V
UL Type RHH or RHW-2 or USE-2*, VW-1, SUN RES
CSA Type RW90, FT4 (≥1/0 AWG), FT1 (<1/0), -40°C, SR

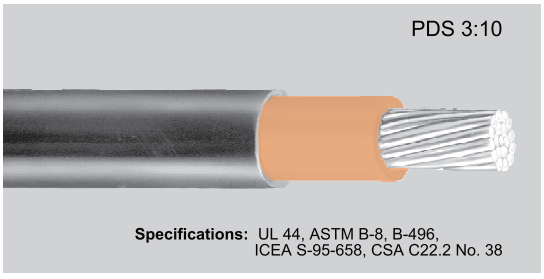
Construction: One bare stranded round copper conductor, composite Okoguard EPR-Okolon TS-CPE insulation. Sizes smaller that #8 AWG are compressed round. #8 AWG and larger are compact round.

Conductor Temperature: 90°C wet or dry

Sizes: #14 AWG - 1000 kcmil

Application: Services, feeders, branch and control circuits for industrial, commercial and electrical utility installations, wet or dry locations, direct burial (#14 AWG and larger) in raceways, underground ducts, or lashed to a messenger for aerial installation or cable tray (1/0 AWG and larger). Listed by UL as Type RHH/RHW-2, USE-2, -40°C, and VW-1. Sizes 1/0 AWG and larger pass UL 1581 and IEEE 1202 Vertical Tray Flame Test requirements and are marked "For CT Use". Listed by CSA as RW-90, -40°C, FT1, FT4 (1/0 AWG and larger), and SR (Sunlight Resistant).

Catalog Number	Conductor Size AWG or kcmil	Number of Strands	Composite Insulation Thickness-mils	Approx. O.D.-Inches	Approx. Net Weight (lbs/M')
112-24-2071	14	7	45	0.17	25
112-24-2101	12	7	45	0.19	34
112-24-2131	10	7	45	0.21	49
112-24-2191	8	7	60	0.27	75
112-24-2221*	6	7	75	0.33	119
112-24-2251	4	7	75	0.38	173
112-24-2311	2	7	75	0.43	257
112-24-2351	1/0	19	100	0.56	414
112-24-2371	2/0	19	100	0.60	507
112-24-2411	4/0	19	100	0.70	766
112-24-2431	250	37	130	0.80	938
112-24-2471	350	37	130	0.89	1265
112-24-2531	500	37	130	1.01	1750
112-24-2591	750	61	145	1.21	2590
112-24-2651	1000	61	145	1.36	3391



Specifications: UL 44, ASTM B-8, B-496, ICEA S-95-658, CSA C22.2 No. 38

OKOGUARD-OKOLON TS-CPE 2000V
UL Type RHH or RHW-2, VW-1, SUN RES
CSA Type RW90, FT4 (≥1/0 AWG), FT1 (<1/0), -40°C, SR

Construction: One bare stranded round copper conductor, composite Okoguard EPR-Okolon TS-CPE insulation. Sizes smaller than #8 AWG are compressed round. #8 AWG and larger are compact round.

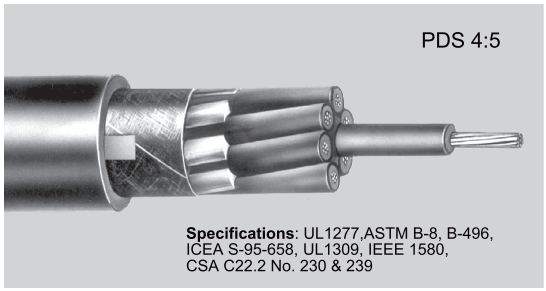
Conductor Temperature: 90°C wet or dry

Sizes: #14 AWG - 750 kcmil

Application: Services, feeders, branch and control circuits for industrial, commercial and electric utility installations, wet or dry locations, in raceways, underground ducts, or lashed to a messenger for aerial installation or cable tray (1/0 AWG and larger). Listed by UL as Type RHH/RHW-2, -40°C, and VW-1. Sizes 1/0 AWG and larger pass UL 1581 and IEEE 1202 Vertical Tray Flame Test requirements and are marked "For CT Use". Listed by CSA as RW-90, -40°C, FT1, FT4 (1/0 AWG and larger), and SR (Sunlight Resistant).

Catalog Number	Conductor Size AWG or kcmil	Number of Strands	Composite Insulation Thickness-mils	Approx. O.D.-Inches	Approx. Net Weight (lbs/M')
113-24-2071	14	7	60	0.20	30
113-24-2101	12	7	60	0.22	40
113-24-2131	10	7	60	0.24	55
113-24-2191	8	7	85	0.32	90
113-24-2221	6	7	85	0.35	126
113-24-2251	4	7	85	0.40	180
113-24-2311	2	7	85	0.45	265
113-24-2351	1/0	19	110	0.57	424
113-24-2371	2/0	19	110	0.61	517
113-24-2411	4/0	19	110	0.71	777
113-24-2431	250	37	140	0.83	957
113-24-2471	350	37	140	0.92	1286
113-24-2531	500	37	140	1.04	1773
113-24-2591	750	61	155	1.24	2618

LOW VOLTAGE MULTI CONDUCTOR CABLES



Specifications: UL1277,ASTM B-8, B-496, ICEA S-95-658, UL1309, IEEE 1580, CSA C22.2 No. 230 & 239

OKONITE-FMR OKOSEAL Cable (XHHW-2) 600/1000V
UL Type TC-ER, SUN RES
cUL Type CIC-TC-ER (≤4/0 AWG)

UL & ABS Listed as Marine Shipboard Cable (Okomarine) 600/1000V

Construction: Multiple stranded copper conductors, sizes smaller than #8 AWG are compressed, sizes #8 AWG and larger are compact stranded,Okonite-FMR insulation, color coded control conductors, flame and moisture resistant fillers with cable tape, Okoseal jacket.

Conductor Temperature: 90°C wet or dry

Sizes: #14 AWG - 500 kcmil

Application: Feeders and branch circuits in industrial, commercial and electric utility applications; for power, lighting, control, signal, and communication circuits; indoors or outdoors, in cable trays, between cable trays and utilization equipment, in raceways, direct burial, supported by a messenger in outdoor locations, and in cable tray in ClassI,Division 2 and in ClassII, Division 2 hazardous locations in industrial establishments only. Flame retardant - passes the vertical tray flame test requirements of IEEE 383 and 1202. UL listed as Type TC-ER, -40°C, "Sunlight Resistant" and for "Direct Burial". cUL listed CIC-TC-ER (≤4/0 AWG).

CONTROL CABLES

Catalog Number	Conductor Size AWG (Strands)*	Number of Conductors	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Weight (lbs/M')
202-10-3203	14(7X)	3	30	45	0.40	104
202-10-3204	14(7X)	4	30	45	0.44	126
202-10-3205	14(7X)	5	30	45	0.48	151
202-10-3207	14(7X)	7	30	45	0.52	195
202-10-3212	14(7X)	12	30	60	0.71	332
202-10-3219	14(7X)	19	30	60	0.82	480
202-10-3237	14(7X)	37	30	80	1.14	925
202-10-3403	12(7X)	3	30	45	0.44	134
202-10-3404	12(7X)	4	30	45	0.48	167
202-10-3405	12(7X)	5	30	45	0.52	202
202-10-3407	12(7X)	7	30	60	0.60	281
202-10-3409	12(7X)	9	30	60	0.70	363
202-10-3412	12(7X)	12	30	60	0.78	446
202-10-3419	12(7X)	19	30	80	0.95	697
202-10-3503	10(7X)	3	30	45	0.49	183
202-10-3504	10(7X)	4	30	60	0.57	243

Conductor Identification: Color coding per ICEA Method 1, E-2
* #8 and larger is compact round conductor

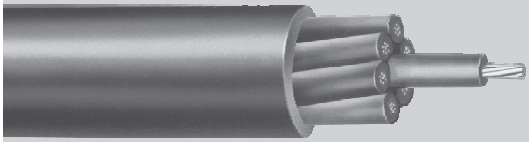
POWER CABLES

Catalog Number	Conductor Size AWG or kcmil (Strands)*	Number of Phase Conductors	Grounding Conductor (1) Size AWG	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Weight (lbs/M')
202-10-3443	12(7X)	3	12 (2)	30	45	0.48	162
202-10-3543	10(7X)	3	10 (2)	30	45	0.53	223
112-10-3844	8(7X)	3	10 (2)	45	60	0.70	349
112-10-3854	6(7X)	3	8 (2)	45	60	0.76	437
112-10-3864	4(7X)	3	8 (2)	45	60	0.84	696
112-10-3874	2(7X)	3	6 (3)	45	80	0.99	941
112-10-3894	1/0(19X)	3	6 (3)	55	80	1.18	1410
112-10-3904	2/0(19X)	3	6 (3)	55	80	1.27	1711
112-10-3924	4/0(19X)	3	4 (3)	55	80	1.48	2576
112-10-3933	350(37X)	3	3 (3)	65	110	1.89	4164
112-10-3937	500(37X)	3	2 (3)	65	110	2.14	5743

* #8 and larger is bare compact round conductor
Conductor Identification: Sizes #10 AWG & smaller ICEA Method 1, E-2
Sizes #8 AWG & larger ICEA Method 4 Printing of Numbers
(1) Min. Size - UL permits partitioning of Grounding Conductor
(2) Green Insulated Ground
(3) Bare Uninsulated Ground

LOW VOLTAGE MULTI CONDUCTOR CABLES

PDS 4:8



Specifications: ICEA S-73-532, & S-95-658, ASTM B-8, B-496 & UL 1277, C22.2 No. 230 & 239

X-OLENE OKOSEAL Cable (XHHW-2) 600/1000V
UL Type TC OR TC-ER, SUN RES
cUL Type CIC-TC-ER*
*Sizes 1/0-4/0 AWG

Construction: Multiple stranded bare copper conductors, sizes smaller than #8 AWG are compressed, sizes #8 AWG and larger are compact stranded, X-Olene color coded conductors and Okoseal jacket.

Conductor Temperature: 90°C wet or dry

Sizes: #14 AWG - 750 kcmil

Application: Feeders and branch circuits in industrial, commercial and electric utility applications; for power, lighting, control, signal, and communication circuits; indoors or outdoors, in cable trays, between cable trays and utilization equipment, in raceways, direct burial, supported by a messenger in outdoor locations, and in cable tray in Class I, Division 2 and Class II, Division 2 hazardous locations in industrial establishments only. UL listed as Type TC or TC-ER, "Sunlight Resistant" and for "Direct Burial".

CONTROL CABLES

Catalog Number	Conductor Size AWG (Strands)*	UL Type	Number of Conductors	Green Insulated Cu Grounding Conductor Size AWG	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D. - Inches	Approx. Net Weight (lbs/M')
202-31-3502	14(7X)	TC	2	—	30	45	0.37	78
202-31-3503	14(7X)	TC-ER	3	—	30	45	0.39	100
202-31-3504	14(7X)	TC-ER	4	—	30	45	0.43	122
202-31-3505	14(7X)	TC-ER	5	—	30	45	0.46	144
202-31-3507	14(7X)	TC-ER	7	—	30	45	0.50	182
202-31-3509	14(7X)	TC-ER	9	—	30	60	0.62	254
202-31-3512	14(7X)	TC-ER	12	—	30	60	0.69	306
202-31-3602	12(7X)	TC	2	—	30	45	0.41	98
202-31-3603	12(7X)	TC-ER	3	—	30	45	0.43	133
202-31-3823	12(7X)	TC-ER	3	1#12	30	45	0.48	140
202-31-3604	12(7X)	TC-ER	4	—	30	45	0.47	164
202-31-3605	12(7X)	TC-ER	5	—	30	45	0.51	196
202-31-3607	12(7X)	TC-ER	7	—	30	60	0.59	269
202-31-3609	12(7X)	TC-ER	9	—	30	60	0.68	344
202-31-3612	12(7X)	TC-ER	12	—	30	60	0.77	425
202-31-3702	10(7X)	TC	2	—	30	45	0.46	132
202-31-3703	10(7X)	TC-ER	3	—	30	45	0.48	183
202-31-3833	10(7X)	TC-ER	3	1#10	30	45	0.53	238
202-31-3704	10(7X)	TC-ER	4	—	30	60	0.56	246
202-31-3705	10(7X)	TC-ER	5	—	30	60	0.61	291
202-31-3707	10(7X)	TC-ER	7	—	30	60	0.66	378

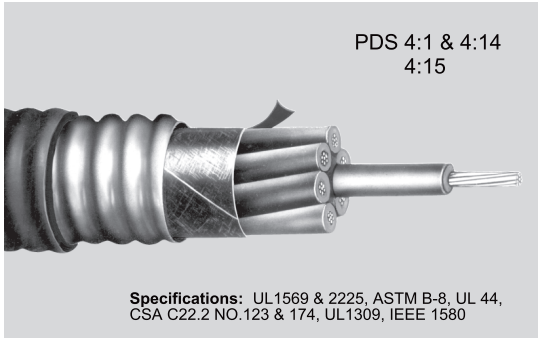
POWER CABLES

Catalog Number	Conductor Size AWG or kcmil (Strands)*	UL Type	Number of Conductors	Grounding Conductor Size AWG	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D. - Inches	Approx. Net Weight (lbs/M')
202-31-3653	12(7X)	TC	3	12	30	45	0.47	141
202-31-3753	10(7X)	TC	3	10	30	60	0.56	214
112-31-3735	8(7X)	TC-ER	3	10	45	60	0.66	313
112-31-3747	6(7X)	TC-ER	3	8	45	60	0.74	440
112-31-3759	4(7X)	TC-ER	3	8	45	60	0.81	578
112-31-3765	2(7X)	TC-ER	3	6	45	80	0.97	896
112-31-3777	1/0(19X)	TC-ER	3	6	55	80	1.17	1350
112-31-3781	2/0(19X)	TC-ER	3	6	55	80	1.26	1639
112-31-3785	4/0(19X)	TC-ER	3	4	55	80	1.47	2488
112-31-3793	350(37X)	TC-ER	3	3	65	110	1.88	4044
112-31-3797	500(37X)	TC-ER	3	2	65	110	2.13	5581
112-31-3801	750(61X)	TC-ER	3	1	80	110	2.56	8206

* #8 and larger is bare compact round conductor

Conductor Identification: Sizes #10 AWG & smaller ICEA Method 1, E-2
Sizes #8 AWG & larger ICEA Method 3 Printing of Numbers

LOW VOLTAGE CONTROL MULTI CONDUCTOR CABLES



Specifications: UL1569 & 2225, ASTM B-8, UL 44, CSA C22.2 NO.123 & 174, UL1309, IEEE 1580

C-L-X (XHHW-2) Control Cable 600/1000V UL Type MC, FOR CT USE, SUN RES CSA Type RA90, FT4, HL

UL & ABS listed as Marine Shipboard Cable Type, (CLXM-CWCMC) 600/1000V, VFD Applications

Construction: Two or more stranded copper conductors, sizes #8 AWG and larger are compact stranded, X-Olene insulated, color coded conductors, ground wire (MC-HL only), fillers (as necessary), binder tape over core, corrugated aluminum C-L-X sheath, with Okoseal jacket overall.
Conductor Temperature: 90°C dry or wet * **Sizes:** #14 AWG - #10 AWG

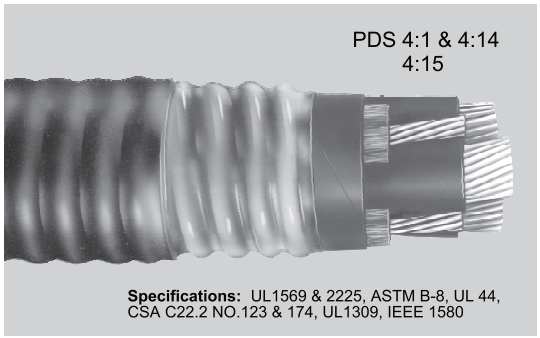
Application MC & MC-HL: Economical and versatile alternate to a conduit system; for services, feeders, and branch circuits in industrial and commercial applications; power, lighting, control and signal circuits; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, and as aerial cable on a messenger. Recommended for VFD/PWM drives (3/C with 3 grounds). Type MC-HL are listed for use in Class I, Division 1 hazardous locations. CSA Type HL cables may be used in Zone 1 and 2 locations, Zone 20, 21, and 22 locations, and Classes I, II, and III, Divisions 1 and 2 locations per the CEC Section 18 and Appendix J.

TYPE MC CONTROL CABLE (Does not include grounding conductor)

Catalog Number	Cdr Size AWG (Strands)	Number of Conductors	Insulation Thickness-mils	C-L-X O.D.-Inches	Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
546-31-3002	14(7X)	2	30	0.49	50	0.60	141
546-31-3003	14(7X)	3	30	0.49	50	0.60	153
546-31-3004	14(7X)	4	30	0.53	50	0.64	181
546-31-3005	14(7X)	5	30	0.58	50	0.69	210
546-31-3007	14(7X)	7	30	0.62	50	0.73	254
546-31-3009	14(7X)	9	30	0.71	50	0.82	308
546-31-3012	14(7X)	12	30	0.80	50	0.91	381
546-31-3019	14(7X)	19	30	0.93	50	1.04	537
546-31-3037	14(7X)	37	30	1.24	50	1.35	946
546-31-3082	12(7X)	2	30	0.53	50	0.64	168
546-31-3083	12(7X)	3	30	0.53	50	0.64	189
546-31-3084	12(7X)	4	30	0.58	50	0.69	226
546-31-3085	12(7X)	5	30	0.62	50	0.73	262
546-31-3087	12(7X)	7	30	0.67	50	0.78	324
546-31-3089	12(7X)	9	30	0.80	50	0.91	405
546-31-3092	12(7X)	12	30	0.89	50	1.00	503
546-31-3099	12(7X)	19	30	1.02	50	1.13	721
546-31-3117	12(7X)	37	30	1.37	50	1.48	1301
546-31-3162	10(7X)	2	30	0.58	50	0.69	207
546-31-3163	10(7X)	3	30	0.58	50	0.69	238
546-31-3164	10(7X)	4	30	0.67	50	0.78	297
546-31-3167	10(7X)	7	30	0.75	50	0.86	436

Color coding per ICEA method 1, Table E-2

LOW VOLTAGE CONTROL MULTI CONDUCTOR CABLES



Specifications: UL1569 & 2225, ASTM B-8, UL 44, CSA C22.2 NO.123 & 174, UL1309, IEEE 1580

C-L-X (XHHW-2) Control Cable 600/1000V UL Type MC-HL, FOR CT USE, SUN RES CSA Type RA90, FT4, HL

UL & ABS listed as Marine Shipboard Cable Type, (CLXM-CWCMC) 600/1000V, VFD Applications

Construction: Two or more stranded copper conductors, sizes #8 AWG and larger are compact stranded, X-Olene insulated, color coded conductors, ground wire (MC-HL only), fillers (as necessary), binder tape over core, corrugated aluminum C-L-X sheath, with Okoseal jacket overall.
Conductor Temperature: 90°C dry or wet * **Sizes:** #14 AWG - #10 AWG

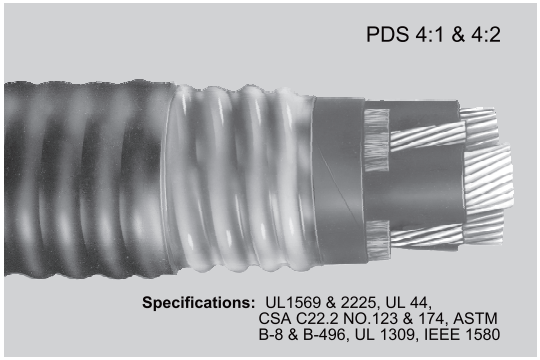
Application MC & MC-HL: Economical and versatile alternate to a conduit system; for services, feeders, and branch circuits in industrial and commercial applications; power, lighting, control and signal circuits; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, and as aerial cable on a messenger. Recommended for VFD/PWM drives (3/C with 3 grounds). Type MC-HL are listed for use in Class I, Division 1 hazardous locations. CSA Type HL cables may be used in Zone 1 and 2 locations, Zone 20, 21, and 22 locations, and Classes I, II, and III, Divisions 1 and 2 locations per the CEC Section 18 and Appendix J.

TYPE MC-HL CONTROL CABLE (Includes grounding conductor(s))

Catalog Number	Cdr Size AWG (Strands)	Number of Ungrounded Conductors	Grounding Conductor size AWG	Insulation Thickness-mils	C-L-X O.D.-Inches	Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
546-31-3402	14(7X)	2	#14 Green Insuated	30	0.49	50	0.60	163
546-31-3403	14(7X)	3	3 x 18 Bare	30	0.53	50	0.64	189
546-31-3404	14(7X)	4	3 x 18 Bare	30	0.58	50	0.69	222
546-31-3406	14(7X)	6	#14 Green Insulated	30	0.62	50	0.73	267
546-31-3408	14(7X)	8	#14 Green Insulated	30	0.71	50	0.82	321
546-31-3411	14(7X)	11	#14 Green Insulated	30	0.80	50	0.91	395
546-31-3418	14(7X)	18	#14 Green Insulated	30	0.93	50	1.04	554
546-31-3436	14(7X)	36	#14 Green Insulated	30	1.24	50	1.35	948
546-31-3452	12(7X)	2	#12 Green Insulated	30	0.53	50	0.64	200
546-31-3453	12(7X)	3	3 x 16 Bare	30	0.58	50	0.69	239
546-31-3454	12(7X)	4	3 x 16 Bare	30	0.67	50	0.77	286
546-31-3456	12(7X)	6	#12 Green Insulated	30	0.67	50	0.78	338
546-31-3458	12(7X)	8	#12 Green Insulated	30	0.80	50	0.91	426
546-31-3461	12(7X)	11	#12 Green Insulated	30	0.89	50	1.00	519
546-31-3468	12(7X)	18	#12 Green Insulated	30	1.02	50	1.13	739
546-31-3486	12(7X)	36	#12 Green Insulated	30	1.37	50	1.48	1302
546-31-3503	10(7X)	3	3 x 14 Bare	30	0.62	50	0.73	300
546-31-3504	10(7X)	4	3 x 14 Bare	30	0.67	50	0.78	348
546-31-3506	10(7X)	6	#10 Green Insulated	30	0.75	50	0.86	451
546-31-3508	10(7X)	8	#10 Green Insulated	30	0.89	50	1.00	568
546-31-3511	10(7X)	11	#10 Green Insulated	30	0.97	50	1.08	704

Color Coding per ICEA Method 1, Table E-2 (for non-grounding conductors)

LOW VOLTAGE POWER MULTI CONDUCTOR CABLES



Specifications: UL1569 & 2225, UL 44, CSA C22.2 NO.123 & 174, ASTM B-8 & B-496, UL 1309, IEEE 1580

C-L-X (XHHW-2) 600/1000V
UL Type MC-HL FOR CT USE, SUN RES
CSA Type RA90, FT4, HL

UL and ABS listed as Marine Shipboard Cable Type, CLXM-CWCMC 600/1000V, VFD Applications

Construction: Two or more stranded copper conductors, sizes #8 AWG and larger are compact stranded, X-Olene insulated, color coded conductors, ground wire, fillers, binder tape over core, corrugated aluminum C-L-X sheath, with Okoseal jacket overall.

Conductor Temperature: 90°C dry or wet
Sizes: #14 AWG - 750 kcmil

Application: Economical and versatile alternate to a conduit system; for services, feeders, and branch circuits in industrial and commercial applications; power, lighting, control and signal circuits; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, and as aerial cable on a messenger. Recommended for VFD/PWM drives (3/C with 3 grounds). CSA Type HL cables may be used in Zone 1 and 2 locations, Zone 20, 21, and 22 locations, and Classes I, II, and III, Divisions 1 and 2 locations per the CEC Section 18 and Appendix J.

POWER CABLES

Catalog Number	Conductor Size AWG or kcmil (Strands)*	Number of Conductors	Grounding Conductor* Size AWG	Insulation Thickness-mils	C-L-X O.D. - Inches	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
546-31-3403	14(7X)	3	3 x 18	30	0.53	50	0.64	160
546-31-3404	14(7X)	4	3 x 18	30	0.58	50	0.69	222
546-31-3453	12(7X)	3	3 x 16	30	0.58	50	0.69	239
546-31-3454	12(7X)	4	3 x 16	30	0.67	50	0.77	286
546-31-3503	10(7X)	3	3 x 14	30	0.62	50	0.73	300
546-31-3504	10(7X)	4	3 x 14	30	0.67	50	0.78	348
571-31-3190	8(7X)	3	3 x 14	45	0.71	50	0.82	385
571-31-3263	8(7X)	4	10	45	0.80	50	0.91	465
571-31-3191	6(7X)	3	3 x 12	45	0.80	50	0.95	525
571-31-3270	6(7X)	4	8	45	0.89	50	0.99	630
571-31-3200	4(7X)	3	3 x 12	45	0.89	50	0.99	704
571-31-3272	4(7X)	4	8	45	0.97	50	1.08	845
571-31-3204	2(7X)	3	3 x 10	45	1.02	50	1.13	995
571-31-3276	2(7X)	4	6	45	1.15	50	1.26	1245
571-31-3213	1/0(19X)	3	3 x 10	55	1.24	50	1.35	1470
571-31-3216	2/0(19X)	3	3 x 10	55	1.34	50	1.45	1770
571-31-3289	2/0(19X)	4	6	55	1.51	60	1.65	2310
571-31-3218	3/0(19X)	3	3 x 8	55	1.47	50	1.58	2180
571-31-3224	4/0(19X)	3	3 x 8	55	1.60	60	1.73	2675
571-31-3296	4/0(19X)	4	4	55	1.78	60	1.91	3430
571-31-3228	250(37X)	3	3 x 8	65	1.74	60	1.87	3140
571-31-3236	350(37X)	3	3 x 7	65	1.96	60	2.09	4210
571-31-3308	350(37X)	4	3	65	2.19	60	2.32	5440
571-31-3244	500(37X)	3	3 x 6	65	2.28	75	2.44	5930
571-31-3316	500(37X)	4	2	65	2.49	75	2.65	7570
571-31-3248	750(61X)	3	3 x 5	80	2.75	75	2.92	8700

COMPOSITE POWER & CONTROL CABLES

Catalog Number	Power Conductors* No. X Size	Insulation Thickness-mils	Control Conductors No. X Size	Insulation Thickness-mils	C-L-X O.D.-Inches	Grounding Conductor* No. X Size	Jacket Thickness-mils	Cable O.D.-Inches	Approx. Net Wt. (lbs/M')
546-31-3984	3 X 10	30	4 X 12	30	0.75	1 X 10	50	0.86	425
571-31-3657	3 X 8	45	4 X 12	30	0.89	1 X 10	50	1.00	530
571-31-3667	3 X 6	45	4 X 12	30	0.93	1 X 8	50	1.04	655
571-31-3677	3 X 4	45	4 X 12	30	0.97	1 X 8	50	1.08	810

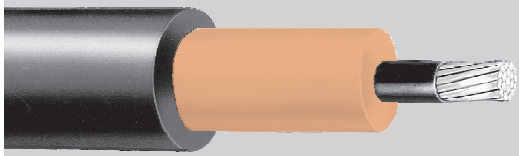
* #8 and larger is compact round conductor

Conductor Identification: Surface Printing of Numbers and Colors per ICEA Method 3 - Sizes #8 AWG and larger
Sizes #10 and smaller Method 1, E-2

*Minimum Size UL Permits Partitioning of Grounding Conductor, grounds are bare.

MEDIUM VOLTAGE
SINGLE CONDUCTOR POWER CABLES

PDS 2:2 & 6:6



Specifications: UL 1072, ASTM B-496, ICEA S-96-659, FAA L-824 Type B, CSA C22.2 No. 38

OKOGUARD NON-SHIELDED OKOLON TS-CPE 2.4kV
UL Type MV-90, CT USE, SUN RES
CSA Type RW90, FT4 (≥1/0 AWG), FT1 (<1/0), -25°C, 5kV NS

FAA L-824 TYPE B AIRPORT LIGHTING CABLE

Construction: One Okopact® (compact stranded) copper conductor, extruded semiconducting EPR strand screen, Okoguard EPR insulation, Okolon TS-CPE jacket.

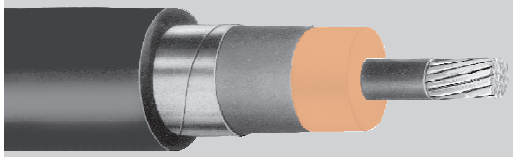
Conductor Temperature: 90°C

Sizes: #8 AWG - 750 kcmil

Application: Feeders and branch circuits in electric utility, industrial and commercial applications; may be used in wet or dry locations, in raceways, messenger supported wiring, underground ducts and in cable tray. (1/0 AWG and larger are UL labeled FOR CT USE.) Sizes #1 and smaller meet CSA FT1; sizes 1/0 and larger meet CSA FT4. Sizes #6 and #8 AWG are identified as FAA L-824 Type B and are rated 5kV. CSA listed as RW90, 5kV non-shielded, FT4 (1/0 & larger), FT1 (#1 and smaller) and -25°C.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.- In.	Approx. Net Wt. (lbs/M')
114-24-2213	8	125	80	0.60	215
114-24-2217	6	125	80	0.63	260
114-24-2219	4	125	80	0.67	328
114-24-2221	2	125	80	0.73	427
114-24-2225	1/0	125	80	0.80	580
114-24-2227	2/0	125	80	0.88	682
114-24-2231	4/0	125	95	0.97	991
114-24-2237	350	140	110	1.18	1555
114-24-2243	500	140	110	1.29	2075
114-24-2249	750	155	125	1.54	3034

PDS 2:4



Specifications: UL 1072, AEIC CS8, ASTM B-496, ICEA S-93-639, CSA C68.10

OKOGUARD SHIELDED OKOSEAL 5/8kV
UL Type MV-105, SUN RES
CSA C68.10, FT1, LTDD (-25°C), SR

5kV-133% or 8kV-100% INSULATION LEVEL

Construction: One Okopact® (compact stranded) copper conductor, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, bare copper shielding tape with 12.5% nominal overlap, Okoseal jacket.

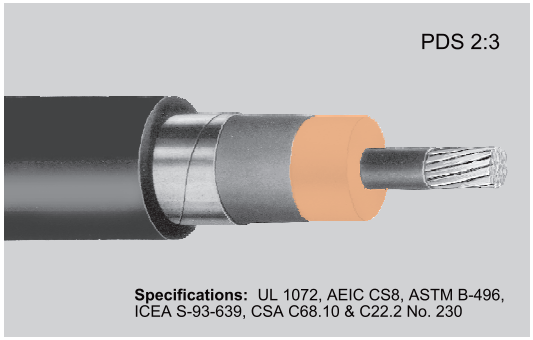
Conductor Temperature: 105°C

Sizes: #6 AWG - #2 AWG

Application: Feeders and branch circuits in electric utility, industrial and commercial applications; may be used in wet or dry locations, in raceways, messenger supported wiring, and in underground ducts, direct buried (if installed in a system with a grounding conductor in close proximity) or messenger supported in industrial and electric utilities. CSA C68.10 listed as FT1, LTDD (-25°C) and SR (Sunlight Resistant).

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Approx O.D. (in.) over: Insulation	Screen	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
114-23-3817	6	115	0.44	0.50	60	0.64	285
114-23-3819	4	115	0.48	0.54	60	0.69	355
114-23-3821	2	115	0.54	0.60	60	0.74	455

MEDIUM VOLTAGE
SINGLE CONDUCTOR POWER CABLES



Specifications: UL 1072, AEIC CS8, ASTM B-496, ICEA S-93-639, CSA C68.10 & C22.2 No. 230

OKOGUARD SHIELDED OKOSEAL 5/8kV UL Type MV-105, FOR CT USE, SUN RES CSA C68.10, FT4, LTGG (-40°C), SR, TC (1/0-350 kcmil), TC-ER (500-750 kcmil)

5kV-133% or 8kV-100% INSULATION LEVEL

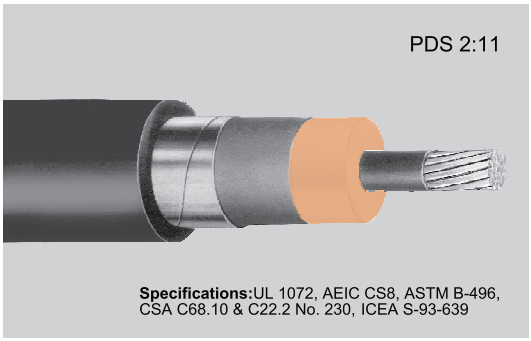
Construction: One Okopact® (compact stranded) copper conductor, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, bare copper shielding tape with 25% minimum overlap, Okoseal jacket.

Conductor Temperature: 105°C

Sizes: 1/0 AWG - 750 kcmil

Application: Feeders and branch circuits in electric utility, industrial and commercial applications; may be used in wet or dry locations, in raceways, messenger supported wiring, and in underground ducts, direct buried (if installed in a system with a grounding conductor in close proximity) or messenger supported in industrial and electric utilities. Meets UL 1072, IEEE 383, and IEEE 1202. CSA C68.10 listed as FT4, LTGG (-40°C), SR (Sunlight Resistant), and C22.2 No. 230 TC or TC-ER rating.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Approx O.D. (in.) over: Insulation	Screen	Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net WT. (lbs/M')
114-23-3824	1/0	115	0.61	0.67	60	0.81	615
114-23-3826	2/0	115	0.65	0.71	60	0.85	720
114-23-3832	4/0	115	0.75	0.81	80	0.99	1030
114-23-3834	250	115	0.80	0.86	80	1.05	1185
114-23-3838	350	115	0.89	0.95	80	1.14	1540
114-23-3846	500	115	1.01	1.07	80	1.26	2055
114-23-3873	750	115	1.19	1.25	80	1.43	2940



Specifications:UL 1072, AEIC CS8, ASTM B-496, CSA C68.10 & C22.2 No. 230, ICEA S-93-639

OKOGUARD SHIELDED OKOLON TS-CPE 15kV UL Type MV-105, FOR CT USE, SUN RES CSA C68.10, FT4, LTDD (-25°C), SR, TC

133% INSULATION LEVEL

Construction: One Okopact® (compact stranded) stranded copper conductor, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, bare copper shielding tape with 25% minimum overlap, Okolon TS-CPE jacket.

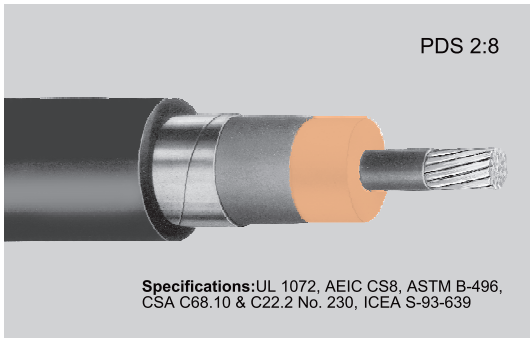
Conductor Temperature: 105°C

Sizes: 500-750 kcmil

Application: Feeders and branch circuits in electric utility, industrial and commercial applications; may be used in wet or dry locations, in raceways, and in underground ducts,direct buried (if installed in a system with a grounding conductor in close proximity) or messenger supported in industrial and electric utilities. Meets UL 1072, IEEE 383 and IEEE 1202. CSA C68.10 listed as FT4, LTDD (-25°C), SR (Sunlight Resistant), and C22.2 No. 230 TC rating.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Approx O.D. (in.) over: Insulation	Screen	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
115-23-2131	500	220	1.22	1.28	80	1.49	2385
115-23-2135	750	220	1.40	1.46	80	1.66	3285

MEDIUM VOLTAGE
SINGLE CONDUCTOR POWER CABLES



Specifications:UL 1072, AEIC CS8, ASTM B-496, CSA C68.10 & C22.2 No. 230, ICEA S-93-639

***Not marked For CT Use, FT4, -40C, or CSA.**

OKOGUARD-SHIELDED OKOSEAL 15kV UL Type MV-105, FOR CT USE, SUN RES CSA C68.10, FT4, LTGG (-40°C), SR, TC (1/0-350 kcmil), TC-ER (500-1000 kcmil)

133% INSULATION LEVEL

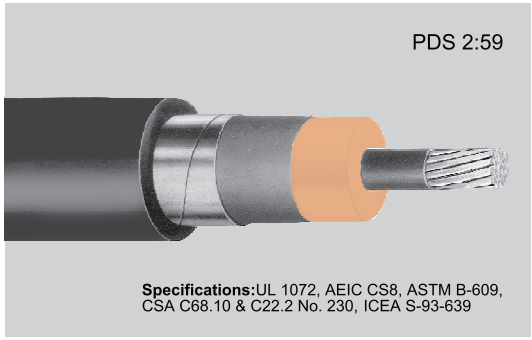
Construction: One Okopact® (compact stranded) copper conductor, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, copper shielding tape with 25% minimum overlap, Okoseal jacket.

Conductor Temperature: 105°C

Sizes: #2 AWG - 1000 kcmil

Application: Feeders and branch circuits in electric utility, industrial and commercial applications; may be used in wet or dry locations, in raceways, messenger supported wiring, and in underground ducts, direct buried (if installed in a system with a grounding conductor in close proximity) or messenger supported in industrial and electric utilities. Meets UL 1072, IEEE 383, IEEE 1202 and CSA C68.10 listed as FT4, LTGG (-40°C), SR (Sunlight Resistant), and C22.2 No. 230 TC or TC-ER rating.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Approx O.D. (in.) over: Insulation	Screen	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
115-23-3479*	2	220	0.76	0.81	80	0.99	682
115-23-3230	1/0	220	0.82	0.88	80	1.07	850
115-23-3232	2/0	220	0.86	0.92	80	1.11	970
115-23-3236	4/0	220	0.96	1.02	80	1.21	1280
115-23-3238	250	220	1.01	1.07	80	1.26	1435
115-23-3240	350	220	1.10	1.16	80	1.35	1810
115-23-3242	500	220	1.22	1.28	80	1.47	2350
115-23-3243	750	220	1.40	1.46	80	1.65	3240
115-23-3244	1000	220	1.54	1.60	110	1.86	4220



Specifications:UL 1072, AEIC CS8, ASTM B-609, CSA C68.10 & C22.2 No. 230, ICEA S-93-639

OKOGUARD-SHIELDED OKOSEAL 15kV UL Type MV-105, FOR CT USE, SUN RES CSA C68.10, FT4, LTGG (-40°C), SR, TC (4/0-350 kcmil), TC-ER (500-750 kcmil)

133% INSULATION LEVEL

Construction: One aluminum conductor, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, copper shielding tape with 25% minimum overlap, Okoseal jacket.

Conductor Temperature: 105°C

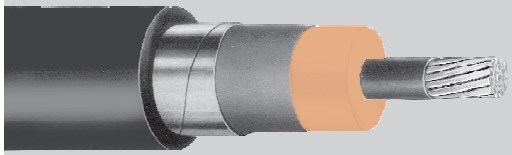
Sizes: #4/0 AWG - 750 kcmil

Application: Feeders and branch circuits in electric utility, industrial and commercial applications; may be used in wet or dry locations, in raceways, messenger supported wiring, and in underground ducts,direct buried (if installed in a system with a grounding conductor in close proximity) or messenger supported in industrial and electric utilities. Meets UL 1072, IEEE 383, IEEE 1202 and CSA C68.10 listed as FT4, LTGG (-40°C), SR (Sunlight Resistant), and C22.2 No. 230 TC or TC-ER rating.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Approx O.D. (in.) over: Insulation	Screen	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
135-23-3107	4/0	220	0.99	1.05	80	1.24	869
135-23-3174	350	220	1.16	1.22	80	1.41	1132
135-23-3175	500	220	1.29	1.35	80	1.54	1368
135-23-3176	750	220	1.49	1.55	80	1.73	1758

MEDIUM VOLTAGE
SINGLE CONDUCTOR POWER CABLES

PDS 2:57



Specifications: UL 1072 AEIC CS8, ASTM B-496, ICEA S-93-639, CSA C68.10 & C22.2 No. 230

OKOGUARD-SHIELDED OKOSEAL 35kV UL TYPE MV-105, FOR CT USE, SUN RES CSA C68.10, FT4, LTGG (-40°C), SR, TC (1/0-350 kcmil), TC-ER (500-750 kcmil)

133% INSULATION LEVEL

Construction: One Okopact® (compact stranded) copper conductor, extruded semiconducting EPR strand screen, Okoguard insulation, extruded semiconducting EPR insulation screen, copper shielding tape with 25% minimum overlap, Okoseal jacket.

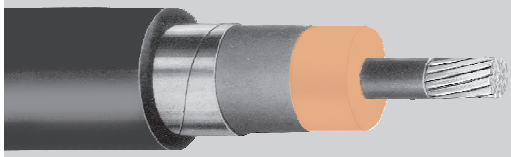
Conductor Temperature: 105°C

Sizes: #1/0 AWG - 750 kcmil

Application: Feeders and branch circuits in electric utility, industrial and commercial applications; may be used in wet or dry locations, in raceways, messenger supported wiring, and in underground ducts, direct buried (if installed in a system with a grounding conductor in close proximity) or messenger supported in industrial and electric utilities. CSA C68.10 listed as FT1, LTDD (-25°C), SR (Sunlight Resistant), and C22.2 No. 230 TC or TC-ER rating.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Approx O.D. (in.) over: Insulation	Screen	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
115-23-3402	1/0	345	1.09	1.15	80	1.34	1168
115-23-3409	4/0	345	1.23	1.29	80	1.48	1628
115-23-3440	500	345	1.48	1.54	80	1.73	2732
115-23-3422	1/0	420	1.25	1.31	80	1.50	1380
115-23-3426	2/0	420	1.29	1.35	80	1.54	1509
115-23-3439	4/0	420	1.39	1.45	80	1.64	1859
115-23-3446	350	420	1.53	1.59	110	1.84	2540
115-23-3750	500	420	1.63	1.69	110	1.94	3100
115-23-3751	750	420	1.82	1.90	110	2.13	4099

PDS 2:18



Specifications: AEIC CS9, ASTM B-496, ICEA S-108-720

OKOGUARD-SHIELDED OKOSEAL 69kV, SUN RES

100% INSULATION LEVEL

Construction: One Okopact® (compact stranded) copper conductor, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, copper shielding tape with 22.5% minimum overlap, Okoseal jacket

Conductor Temperature: 105°C

Sizes: 500-1000 kcmil

Application: Primary circuits in utility generating plants, and in distribution applications.

CSA standards do not address cables rated above 46kV.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Approx O.D. (in.) over: Insulation	Screen	Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
115-22-3771	500	650	2.12	2.22	110	2.47	4179
115-22-3777	1000	650	2.44	2.54	140	2.85	6389

MEDIUM VOLTAGE
SINGLE CONDUCTOR POWER CABLES

Specifications: AEIC CS8, ICEA S-94-649, RUS 7CFR 1728.204, CSA C68.5, ASTM B-231, B-609

OKOGUARD - 105°C
URO-J 15kV, 25kV AND 35kV
CSA C68.5, LTGG (-40°C), SR

100% and 133% INSULATION LEVEL - FILLED STRAND

Construction: One filled strand aluminum, unfilled strand aluminum or copper, or solid aluminum conductor, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, and copper concentric neutral wires spaced uniformly around the insulation screen, Okolene jacket with red stripes and lightning bolt.

Conductor Temperature: 105°C Continuous, 140°C Emergency.

Sizes: #2 AWG - 1100 kcmil

Application: Provides circuit reliability in primary underground distribution systems. Cable can be directly buried or installed in underground duct or conduit.

Catalog Number	Aluminum* Conductor Size	Nominal Diameter Over Insulation (in.)	Nominal Diameter Over Insulation Shield (in.)	Copper (1) Neutral Size	Nominal O.D. (in.)	Net Weight (lbs/M')	Ship Weight (lbs/M')
15kV-175 Mil Wall - 100% Insulation Level							
163-23-2060	2 Strd	0.68	0.75	Full (10X#14)	0.99	517	626
163-23-2072	1/0 Strd	0.76	0.83	Full (16X#14)	1.07	667	778
15kV-220 Mil Wall - 133% Insulation Level							
(2) 141-23-9460	2 Strd Copper**	0.75	0.81	Full (16X#14)	1.05	774	855
163-23-3060	2 Strd	0.77	0.84	Full (10X#14)	1.08	591	669
161-23-3057	2 Sol**	0.74	0.82	Full (10X#14)	1.06	572	635
161-23-9525	1/0 Sol**	0.81	0.89	Two-Third (10X#14)	1.12	651	736
161-23-3069	1/0 Sol**	0.80	0.89	Full (16X#14)	1.12	721	792
163-23-3072	1/0 Strd	0.84	0.92	Full (16X#14)	1.15	748	820
162-23-3081	4/0 Strd	0.98	1.06	One-Third (11X#14)	1.30	887	1005
162-23-3090	350 Strd	1.16	1.26	One-Third (18X#14)	1.50	1246	1425
162-23-3093	500 Strd	1.29	1.39	One-Third (16X#12)	1.72	1653	1853
162-23-3096	750 Strd	1.47	1.58	One-Third (16X.0966)	1.95	2209	2468
162-23-3099	1000 Strd	1.64	1.77	One-Third (18X.1052)	2.16	2807	3093
160-23-9590	1100 Strd**	1.61	1.74	One-Sixth (18X#12)	2.01	2470	2833
25kV-260 Mil Wall - 100% Insulation Level							
161-23-4069	1/0 Sol	0.89	0.97	Full (16X#14)	1.20	798	870
163-23-4072	1/0 Strd	0.92	1.00	Full (16X#14)	1.23	827	899
162-23-4081	4/0 Strd	1.07	1.17	One-Third (11X#14)	1.41	1006	1129
162-23-4093	500 Strd	1.37	1.47	One-Third (16X#12)	1.80	1771	1988
162-23-4096	750 Strd	1.57	1.67	One-Third (16X.0966)	2.03	2365	3215
162-23-4099	1000 Strd	1.70	1.85	One-Third (18X.1052)	2.23	2951	3535
35kV-345 Mil Wall - 100% Insulation Level							
163-23-6072	1/0 Strd	1.10	1.20	Full (16X#14)	1.44	1057	1181

(1) Individual wire size and count may vary. The resulting combination meets the 1/3rd, 2/3rds or full neutral, size requirement.

(2) Catalog Number 141-23-9460 is listed and shipped with UL's MV-90 rating printed on the jacket. All other cables shown are available with same listing on a special order basis.

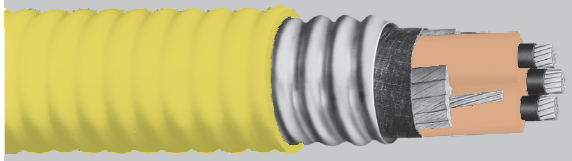
*Except as noted.

**Non-filled strand

NOTE: All cables above are available with a UL label rated MV-105 when an X-Olene (XLPE) jacket is used, on special order basis.

MEDIUM VOLTAGE MULTI CONDUCTOR POWER CABLES

PDS 2:21



Specifications: MC-HL UL 1569 & 1072, ASTM B-496, ICEA S-96-659, AEIC CS8, CSA C22.2 No. 123 & 174

OKOGUARD NON-SHIELDED C-L-X 2.4kV UL Type MV-90 or MC-HL, FOR CT USE, SUN RES CSA RA90 5000V, FT4, SR, HL, LTGG (-40°C)

UL and ABS listed as Marine Shipboard Cable Type CLXM-CWCMC

100% and 133% INSULATION LEVEL, VFD Applications

Construction: Three compact stranded copper conductors, extruded EPR semiconducting strand screen over individual conductors, Okoguard EPR insulation, print phase ID, with 3 grounding conductors, fillers and binder tape over the core, corrugated aluminum C-L-X sheath with yellow Okoseal jacket.

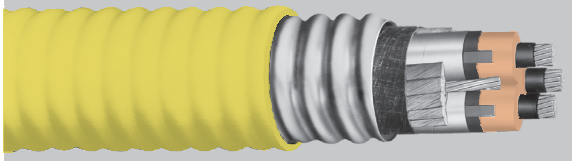
Conductor Temperature: 90°C **Sizes:** #4 AWG - 500 kcmil

Application: Economical and versatile alternate to a conduit system; for services, feeders, and branch circuits in electric utility, industrial, and commercial applications; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, and as aerial cable on a messenger. Recommended for VFD/PWM drives (3/C with 3 grounds). CSA Type HL cables may be used in Zone 1 and 2 locations, Zone 20, 21, and 22 locations, and Classes I, II, and III, Divisions 1 and 2 locations per the CEC Section 18 and Appendix J.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness -mils	Insulation O.D. Inches	Grounding Conductor* Size AWG	C-L-X O.D. (In.)	Jacket Thickness- mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
571-21-3200	4	90	0.44	3 x 10	1.19	50	1.30	960
571-21-3204	2	90	0.49	3 x 10	1.34	50	1.45	1270
571-21-3217	2/0	90	0.60	3 x 8	1.60	60	1.73	2160
571-21-3224	4/0	90	0.70	3 x 7	1.83	60	1.96	3075
571-21-3236	350	90	0.85	3 x 6	2.19	60	2.32	4705
571-21-3244	500	90	0.96	3 x 5	2.45	75	2.61	6405

*Minimum Size UL Permits Partitioning of Grounding Conductor

PDS 2:22



Specifications: MC-HL UL 1569 & 1072, CSA C68.10 & C22.2 No. 174, ASTM B-496, ICEA S-93-639, AEIC CS8

OKOGUARD SHIELDED C-L-X 5/8kV UL Type MV-105 or MC-HL FOR CT USE, SUN RES CSA C68.10, FT4, SR, HL, LTGG (-40°C)

UL and ABS listed as Marine Shipboard Cable Type CLXM-CWCMC

5kV-133% INSULATION LEVEL, 8kV-100% Insulation Level, VFD Applications

Construction: Three compact stranded copper conductors, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, phase identification strips, and copper shield tape with 12.5% nominal overlap over individual conductors, with 3 stranded copper grounding conductors, fillers and binder tape over the core, corrugated aluminum C-L-X sheath with yellow Okoseal jacket.

Conductor Temperature: 105°C

Sizes: #4 AWG - 500 kcmil

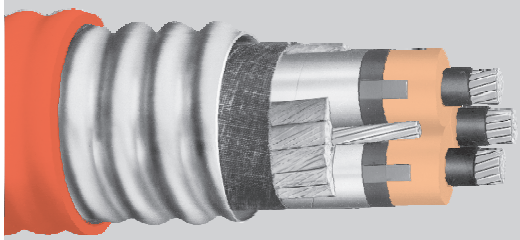
Application: Economical and versatile alternate to a conduit system; for services, feeders, and branch circuits in electric utility, industrial, and commercial applications; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, and as aerial cable on a messenger. Recommended for VFD/PWM drives (3/C with 3 grounds). CSA Type HL cables may be used in Zone 1 and 2 locations, Zone 20, 21, and 22 locations, and Classes I, II, and III, Divisions 1 and 2 locations per the CEC Section 18 and Appendix J.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness -mils	Insulation O.D. Inches	Grounding Conductor* Size AWG	C-L-X O.D. (In.)	Jacket Thickness- mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
571-22-3698	4	115	0.48	3 x 10	1.51	60	1.65	1398
571-22-3706	2	115	0.54	3 x 10	1.64	60	1.78	1732
571-22-3717	2/0	115	0.65	3 x 8	1.92	60	2.00	2616
571-22-3725	4/0	115	0.75	3 x 7	2.15	60	2.24	3613
571-22-3838	350	115	0.89	3 x 6	2.45	75	2.61	5328
571-22-3846	500	115	1.01	3 x 5	2.75	75	2.91	7095

*Minimum Size UL Permits Partitioning of Grounding Conductor

MEDIUM VOLTAGE MULTI CONDUCTOR POWER CABLES

PDS 2:24



Specifications: MC-HL UL 1569 & 1072 CSA C68.10 & C22.2 No. 174, ASTM B-496, ICEA S-93-639, AEIC CS8

OKOGUARD SHIELDED C-L-X 15kV
UL Type MV-105 or MC-HL, FOR CT USE, SUN RES
CSA C68.10, FT4, HL, SR, LTGG (-40°C)

UL and ABS listed as Marine Shipboard Cable Type CLXM-CWCMC

133% INSULATION LEVEL

Construction: Three compact stranded copper conductors, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting EPR insulation screen, phase identification strips, and copper shield tape with 12.5 % nominal overlap, over individual conductors, with one stranded copper grounding conductor, fillers, and binder tape over the core, corrugated aluminum C-L-X sheath with or without red Okoseal jacket.

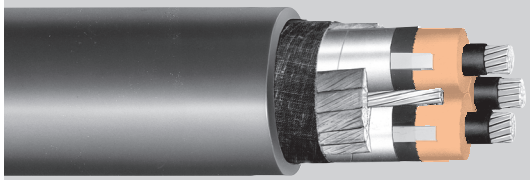
Conductor Temperature: 105°C

Sizes: #2 AWG - 750 kcmil

Application: Economical and versatile alternate to a conduit system; for services, feeders, and branch circuits in electric utility, industrial, and commercial application; power lighting, control and signal circuits; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, and as aerial cable on a messenger. CSA Type HL cables may be used in Zone 1 and 2 locations, Zone 20, 21, and 22 locations, and Classes I, II, and III, Divisions 1 and 2 locations per the CEC Section 18 and Appendix J.

Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Insulation O.D. Inches	Grounding Conductor Size AWG	C-L-X O.D. (In.)	Jacket Thickness-mils	Approx. O.D. Inches	Approx. Net Wt. (lbs/M')
571-23-3504	2	220	0.76	6	2.15	60	2.28	2420
571-23-3516	2/0	220	0.87	4	2.40	75	2.56	3434
571-23-3524	4/0	220	0.97	3	2.62	75	2.79	4460
571-23-3536	350	220	1.12	2	2.98	75	3.14	6264
571-23-3544	500	220	1.24	1	3.28	85	3.51	8269
571-23-3548	750	220	1.41	1/0	3.76	85	3.94	11317

PDS 2:19 & 2:20



Specifications: UL 1072, ASTM B-496 ICEA S-93-639, AEIC CS8, CSA C68.10 & C22.2 No. 230

OKOGUARD-SHIELDED OKOSEAL 5/8kV & 15kV
UL Type MV-105, SUN RES, FOR CT USE
CSA C68.10, FT4, SR, TC-ER, LTDD (-25°C)
(6-2/0 AWG), LTGG (-40°C) (4/0-500 kcmil)

5kV 133% & 8kV, 100%, and 15kV 133% INSULATION LEVEL

Construction: Three compact stranded copper conductors, extruded semiconducting EPR strand screen, Okoguard EPR insulation, extruded semiconducting insulation screen, phase identification strips (red, black, blue) and copper shield tape over individual conductors, with 12.5% nominal overlap, with one bare stranded copper grounding conductor, fillers, and binder tape over the core and covered with a black flame retardant PVC jacket (sizes 4/0 and larger, the jacket is our arctic grade PVC).

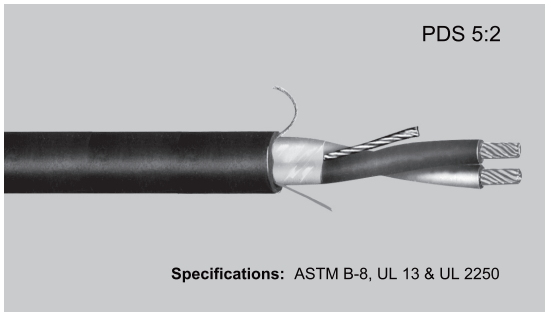
Conductor Temperature: 105°C

Sizes: #6 AWG - 500 kcmil

Application: For services, feeders, and branch circuits in electric utility, industrial, and commercial application; power lighting, control and signal circuits; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable and as aerial cable on a messenger.

5/8kV	Catalog Number	Conductor Size AWG or kcmil	Insulation Thickness-mils	Insulation O.D. Inches	Grounding Conductor Size AWG	Jacket Thickness-mils	Approx. O.D. Inches	Approx.. Net Wt. (lbs/M')
	114-23-3630	6	115	0.44	6	80	1.29	1015
	114-23-3640	2	115	0.54	6	80	1.51	1560
	114-23-3648	2/0	115	0.65	4	110	1.80	2513
	114-23-3736	4/0	115	0.75	3	110	2.02	3455
	114-23-3772	350	115	0.89	2	110	2.33	5116
	114-23-3782	500	115	1.01	1	110	2.59	6799
15kV								
	115-23-3802	2	220	0.76	6	110	2.02	2280
	115-23-3806	2/0	220	0.87	4	110	2.26	3260
	115-23-3808	4/0	220	0.97	3	110	2.48	4285
	115-23-3812	350	220	1.12	2	140	2.85	6168
	115-23-3814	500	220	1.24	1	140	3.10	7895

INSTRUMENTATION CABLES



Specifications: ASTM B-8, UL 13 & UL 2250

OKOSEAL TYPE P-OS INSTRUMENTATION CABLES UL Type ITC/PLTC/FPL Cable/300V Rated 105°C, Sun Res

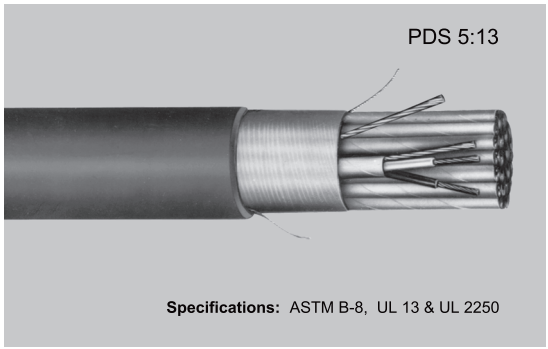
Construction: Stranded copper conductors, Okoseal insulation, color coded, black/white twisted into one pair or black/white/red triad or groups of pairs or triads, numeric print group identification, multiple groups assembled with communication wire, aluminum/polyester shield and coated copper drain wire, rip cord, Okoseal jacket.

Sizes: #18 & #16 AWG

Application: For use on Class 2 or 3 Power-Limited circuits where shielding against external interference is required, but interference between groups is not required; indoors or outdoors, in cable trays, in raceways, supported by a messenger wire; in Class I, Division 2 or Class II, Division 2 or Class III, Division 2 hazardous locations. Also for use as power limited fire protective signaling cable (FPL) per NEC Code 760. For use on ITC non Class 2 or 3 circuits up to 150 volts and 5 amps (750VA). Meets UL 1581 and IEEE 383-74 vertical tray flame tests.

Single Pair/Triad P-OS Cables

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
264-10-3301	18(7X)	1		15	35	0.23	35
264-10-4401	16(7X)	1		15	35	0.25	47
264-15-3301	18(7X)		1	15	35	0.24	43
264-15-4401	16(7X)		1	15	35	0.26	58



Specifications: ASTM B-8, UL 13 & UL 2250

OKOSEAL TYPE SP-OS INSTRUMENTATION CABLES UL Type ITC/PLTC/FPL Cable/300V Rated 105°C, Sun Res

Construction: Stranded copper conductors, Okoseal insulation, color coded black/white, twisted into groups of pairs or black/white/red triads, numeric print group identification, aluminum/polyester shield and coated copper drain wire over each group with 100% isolation between group shields, multiple groups assembled with communication wire, aluminum/polyester shield and coated copper drain wire overall, rip cord, Okoseal jacket.

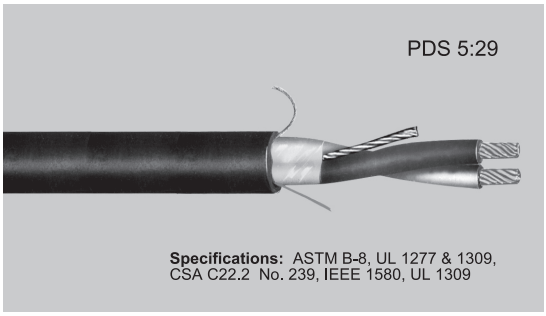
Sizes: #18 & #16 AWG

Application: For use on Class 2 or 3 Power-Limited circuits where low level signals require shielding both from adjacent groups as well as external sources; indoors or outdoors, in cable trays, in raceways, supported by a messenger wire; in Class I, Division 2 or Class II, Division 2 or Class III, Division 2 hazardous locations. Also for use as power limited fire protective signaling cable (FPL) per NEC Code 760. For use on ITC non Class 2 and 3 circuits up to 150 volts and 5 amps (750VA). Meets UL 1581 and IEEE 383-74 vertical tray flame tests.

Multi-Pair/Triad SP-OS Cables

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
261-10-3304	18(7X)	4		15	50	0.47	133
261-10-3308	18(7X)	8		15	50	0.56	223
261-10-3312	18(7X)	12		15	60	0.69	330
261-10-3324	18(7X)	24		15	70	0.98	614
261-10-3336	18(7X)	36		15	70	1.14	861
261-10-4402	16(7X)	2		15	50	0.43	116
261-10-4404	16(7X)	4		15	50	0.51	179
261-10-4408	16(7X)	8		15	60	0.68	323
261-10-4412	16(7X)	12		15	60	0.81	456
261-10-4424	16(7X)	24		15	70	1.10	860
261-15-4408	16(7X)		8	15	60	0.74	418
261-15-4412	16(7X)		12	15	70	0.93	615

INSTRUMENTATION CABLES



Specifications: ASTM B-8, UL 1277 & 1309, CSA C22.2 No. 239, IEEE 1580, UL 1309

OKOSEAL-N TYPE P-OS
UL Type TC Cable/600V Rated 90°C wet or dry, Sun Res, cUL Type CIC

UL and ABS listed as Marine Shipboard Cable (Okomarine) 600/1000V

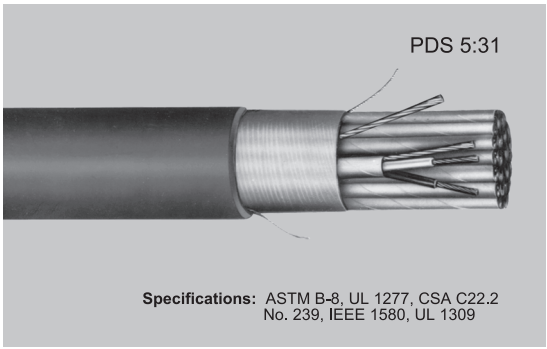
Construction: Stranded copper conductors, Okoseal insulation, nylon jacket, color coded black/white, twisted into one pair or black/white/red triad, aluminum/polyester shield and coated stranded copper drain wire, rip cord, Okoseal jacket.

Sizes: #18, #16 & #14 AWG

Application: For use on Class 1 Remote-Control and Signaling circuits or where a 600V cable is desired, as instrumentation, process control and computer cable, transmitting signals at levels above 100 millivolts, except in areas subject to abnormally high current or voltage interference such as proximity to large motors, generators and substations. Suitable for installation in wet or dry locations, may be installed in cable tray, rigid metal conduit, intermediate metal conduit, electrical metallic tubing, or other approved raceways. Authorized in Class I, Division 2 or Class II, Division 2 or Class III, Division 2 hazardous locations. Also for use as non power limited fire protective signaling cable (NPLF) per NEC Code 760. Meets UL 1277, IEEE 383-74, and IEEE 1202 vertical tray flame tests. cUL listed CIC.

Single Pair/Triad P-OS Cables

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
264-60-3301	18(7X)	1		15/4	45	0.27	48
264-60-4401	16(7X)	1		15/4	45	0.29	56
264-60-5501	14(7X)	1		15/4	45	0.32	75
264-65-4401	16(7X)		1	15/4	45	0.31	69



Specifications: ASTM B-8, UL 1277, CSA C22.2 No. 239, IEEE 1580, UL 1309

OKOSEAL-N TYPE SP-OS
UL Type TC Cable/600V Rated 90°C wet or dry, Sun Res, cUL Type CIC

UL and ABS listed as Marine Shipboard Cable (Okomarine) 600/1000V

Construction: Stranded copper conductors, Okoseal insulation with nylon covering on primaries, color coded black/white, twisted into groups of pairs or black/white/red triads, numeric print group identification, aluminum/polyester shield and coated stranded copper drain wire over each group with 100% isolation between group shields, multiple groups assembled, aluminum-polyester shield and coated stranded copper drain wire overall, rip cord, Okoseal jacket.

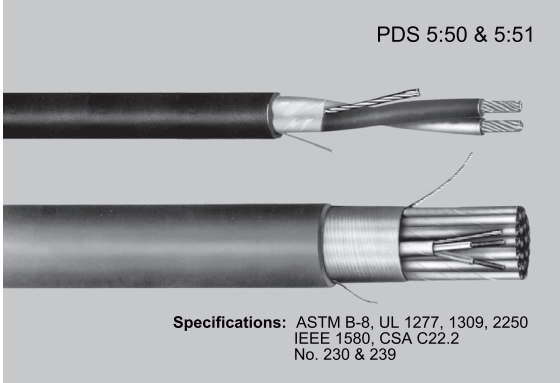
Sizes: #16 AWG

Application: For use on Class 1 Remote-Control and Signaling circuits or where a 600V rated cable is desired; for control, signal, and communication circuits; indoors or outdoors, in cable trays, in raceways, direct burial (8/PR and larger), supported by a messenger in outdoor locations, and in cable tray in Class I, Division 2 or Class II, Division 2 or Class III, Division 2 hazardous locations. Also for use as non power limited fire protective signaling cable (NPLF) per NEC Code 760. Meets UL 1277, IEEE 383-74, and IEEE 1202 vertical tray flame tests. cUL listed CIC.

Multi-Pair/Triad SP-OS Cables

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-Inches	Approx. Net Wt. (lbs/M')
261-60-4402	16(7X)	2		15/4	45	0.44	114
261-60-4404	16(7X)	4		15/4	60	0.58	198
261-60-4408	16(7X)	8		15/4	60	0.72	337
261-60-4412	16(7X)	12		15/4	80	0.91	515
261-60-4416	16(7X)	16		15/4	80	1.04	639
261-60-4424	16(7X)	24		15/4	80	1.18	925
261-65-4408	16(7X)		8	15/4	80	0.79	478
261-65-4412	16(7X)		12	15/4	80	1.00	674

INSTRUMENTATION CABLES



Specifications: ASTM B-8, UL 1277, 1309, 2250 IEEE 1580, CSA C22.2 No. 230 & 239

X-OLENE TYPE P-OS/SP-OS CABLE 600V
UL Type TC-ER/ITC-ER
cUL Type CIC-TC

UL listed as Marine Shipboard Cable 600/1000V

Construction: Stranded copper conductors, X-Olene insulation, color coded, twisted into pair or triad, or groups of pairs or triads, numeric print group identification, aluminum/polyester shield and coated stranded copper drain wire over each group with 100% isolation between group shields, multiple groups assembled, aluminum/polyester shield and coated stranded copper drain wire overall, rip cord, with Okoseal jacket. Pairs are black/white and numbered color code. Triads are black/white/red and numbered color code.

Conductor Temperature: 90°C wet or dry

Sizes: #16 AWG

Application: For use on Class I Remote-Control Signaling circuits; where a 600V rated cable is desired; for control, signal, and communication circuits; indoors or outdoors, in cable trays, in raceways, direct burial, supported by a messenger in outdoor locations. Suitable for Class I Division 2, Class II Division 2, or Class III Division 2 hazardous locations. Meets UL 1277, IEEE 383-74, and IEEE 1202 vertical tray flame tests. UL listed TC-ER, ITC-ER, and Marine Shipboard. cUL listed CIC-TC.

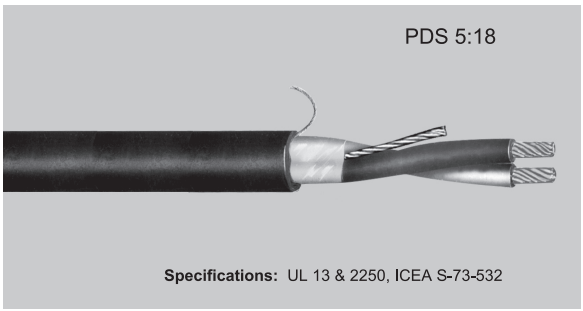
Single Pair/Triad P-OS Cables

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
267-40-3401	16(7X)	1		30	45	0.35	74
267-41-3401	16(7X)		1	30	45	0.37	86

Multi-Pair/Triad SP-OS Cables

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
268-40-3402	16(7X)	2		30	60	0.60	201
268-40-3404	16(7X)	4		30	60	0.69	264
268-40-3408	16(7X)	8		30	80	0.91	457
268-40-3412	16(7X)	12		30	80	1.08	618
268-40-3424	16(7X)	24		30	80	1.46	1070
268-41-3402	16(7X)		2	30	60	0.67	245
268-41-3404	16(7X)		4	30	60	0.79	335
268-41-3408	16(7X)		8	30	80	1.04	588
268-41-3412	16(7X)		12	30	80	1.23	806
268-41-3424	16(7X)		24	30	80	1.67	1439

INSTRUMENTATION CABLES



OKOSEAL TYPE P-OS THERMOCOUPLE
UL Type ITC/PLTC Cable/300V Rated 105°C, Sun Res

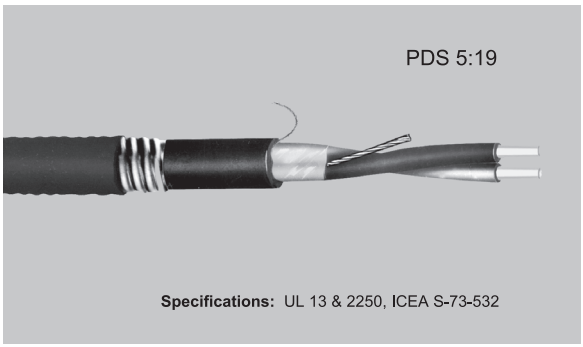
Construction: Solid thermocouple alloys, Okoseal insulation, ASTM color coded, twisted into one pair, aluminum/polyester shield and coated stranded copper drain wire, rip cord, color coded flame retardant Okoseal jacket.

Sizes: #16 AWG

Application: PLTC for use on Class 2 or 3 Power-Limited critical circuits and ITC for use on non-classified critical circuits where complete isolation is required from external interference. Suitable for installation in wet or dry locations and conductor temperatures to 105°C, may be installed in cable tray, rigid metal conduit, electrical metallic tubing, or other approved raceways. Type PLTC and ITC is authorized for use in Class I, Division 2 or Class II, Division 2 or Class III, Division 2 hazardous locations. Meets UL 1581 and IEEE 383-74 vertical tray flame tests.

Single Pair P-OS Cable

ASA/ISA TYPE	Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Insulation Thickness-mils	Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
EX	284-20-1401	16(1X)	1	15	35	0.24	44
JX	284-20-2401	16(1X)	1	15	35	0.24	44
KX	284-20-3401	16(1X)	1	15	35	0.24	44



C-L-X OKOSEAL TYPE P-OS THERMOCOUPLE
UL Type ITC/PLTC Cable/300V Rated 105°C, For CT Use, Sun Res

Construction: Solid thermocouple alloys, Okoseal insulation, ASTM color coded, twisted into one pair aluminum/polyester shield and coated stranded copper drain wire, rip cord, inner flame retardant Okoseal jacket, corrugated aluminum C-L-X sheath, overall Okoseal jacket.

Sizes: #16 AWG

Application: Okonite Type C-L-X P-O-S (Pair-Overall Shield) Thermocouple Extension cables are designed for use as instrumentation and process control cables in ITC non-classified or labeled circuits up to 150 volts and 5 amps (750VA) and in Class 2 or 3 Power-Limited circuits where shielding against external interference is required; indoors or outdoors; in wet or dry location with conductor operating temperatures up to 105°C; in cable trays; in raceways; supported by a messenger wire; under raised floors. Suitable Class I, Division 2, Class II, Division 2, or Class III, Division 2 and Class I, Zone 2 hazardous locations. The C-L-X sheath provides physical protection against mechanical damage. It may be installed in both exposed and concealed work, secured to supports not greater than 6 feet apart. Meets UL 1581, IEEE 383-74 and IEEE 1202 vertical tray flame test. Also, passes 210,000 BTU vertical flame tray test per ICEA T-29-520.

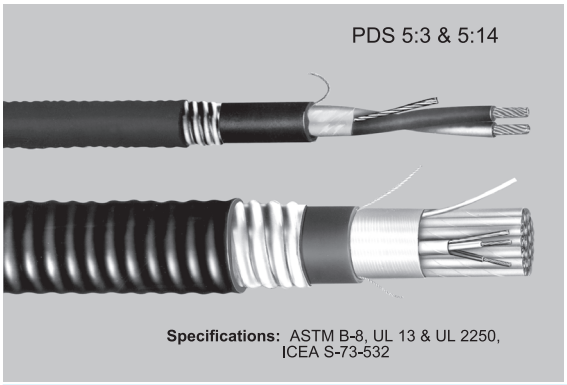
300V C-L-X

ASA/ISA TYPE	Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Insulation Thickness-mils	Inner Jacket Thickness-mils	C-L-X O.D. (in.)	Outer Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
KX	584-20-3401	16(1X)	1	15	35	0.43	50	0.54	128

ANSI/ISA COLOR CODE

ANSI/ISA TYPE	EX		JX		KX		TX	
	Alloy	Color	Alloy	Color	Alloy	Color	Alloy	Color
Positive Wire	Chromel	Purple	Iron	White	Chrome	Yellow	Copper	Blue
Negative Wire	Constantan	Red	Constantan	Red	Alumel	Red	Constantan	Red
Outer Jacket Color	Purple		Black		Yellow		Blue	

INSTRUMENTATION CABLES



Specifications: ASTM B-8, UL 13 & UL 2250, ICEA S-73-532

C-L-X OKOSEAL TYPE P-OS/SP-OS UL Type ITC/PLTC Cable/300V Rated 105°C For CT Use, Sun Res

Construction: Instrumentation Type P-OS and SP-OS cable, with continuously welded and corrugated aluminum C-L-X sheath, with Okoseal jacket. Black/white and numbered color code.

Sizes: #16 & #18 AWG

Application: For use on PLTC or ITC circuits where protection against physical damage or lightning is required; indoors or outdoors,as open runs of cable, in cable tray, in raceways, direct burial (8/PR and larger), supported by a messenger wire, suitable for Class I, Division 2 or Class II, Division 2 or Class III, Divisioin 2 hazardous locations. Also for use on power limited fire protective signaling cable (FPL) per NEC Code 760. Meets UL 13, IEEE 383-74 and IEEE 1202 vertical tray flame tests. Also, passes 210,000 BTU vertical try flame test per ICEA T-29-520.

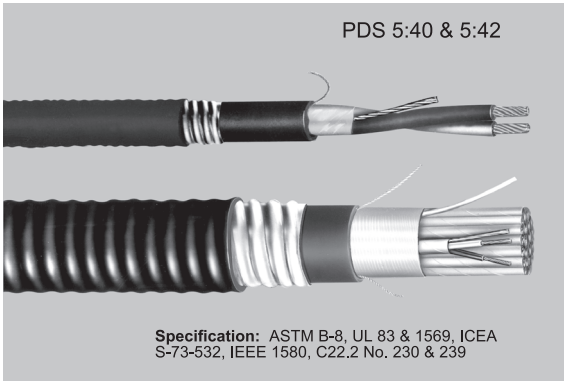
Single Pair and Triad Cables P-OS

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Inner Jacket Thickness-mils	C-L-X O.D. (In.)	Outer Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
564-10-3401	16(7X)	1		15	35	0.43	50	0.54	134
564-15-3401	16(7X)		1	15	35	0.43	50	0.54	155

Multi-Pair and Triad Cables SP-OS

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Inner Jacket Thickness-mils	C-L-X O.D. (In.)	Outer Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
561-10-3302	18(7X)	2		15	40	0.58	50	0.69	212
561-10-3304	18(7X)	4		15	50	0.71	50	0.82	273
561-10-3308	18(7X)	8		15	50	0.80	50	0.92	389
561-10-3312	18(7X)	12		15	60	0.93	50	1.04	529
561-10-3324	18(7X)	24		15	70	1.24	50	1.35	889
561-10-3402	16(7X)	2		15	50	0.67	50	0.78	255
561-10-3404	16(7X)	4		15	50	0.71	50	0.82	327
561-10-3408	16(7X)	8		15	60	0.93	50	1.04	505
561-10-3412	16(7X)	12		15	60	1.06	50	1.17	671
561-10-3424	16(7X)	24		15	70	1.37	50	1.48	1245
561-15-3404	16(7X)		4	15	50	0.80	50	0.91	384
561-15-3408	16(7X)		8	15	60	1.02	50	1.13	609
561-15-3412	16(7X)		12	15	70	1.19	50	1.30	862

INSTRUMENTATION CABLES



Specification: ASTM B-8, UL 83 & 1569, ICEA S-73-532, IEEE 1580, C22.2 No. 230 & 239

C-L-X OKOSEAL-N TYPE P-OS/SP-OS Cable 600V UL Type MC-HL, FOR CT USE, SUN RES cUL Type ACIC-TC

UL and ABS listed as Marine Shipboard Cable (CLXM-CWCMC) 600/1000V

Construction: Stranded copper conductors, Okoseal insulation with nylon covering on primaries, color coded, twisted into pair or triad, or groups of pairs or triads, numeric print group identification, aluminum/polyester shield and coated stranded copper drain wire over each group with 100% isolation between group shields, multiple groups assembled, aluminum/polyester shield and coated stranded copper drain wire overall, rip cord, Okoseal inner jacket with continuously welded and corrugated C-L-X sheath, with Okoseal jacket.
Pairs: Black/white and numbered color code. Triads: Black/white/red and numbered color code.

Conductor Temperature: 90°C wet or dry

Sizes: #16 AWG

Application: For use on Class 1 Remote-Control and Signaling circuits; where a 600V rated cable is desired; for control, signal, and communication circuits; indoors or outdoors, in cable trays, in raceways, direct burial, supported by a messenger in outdoor locations. Suitable for Class I, Division 2 or Class II, Division 2 as well as Class I, Class II, and Class III, Division 1 and division 2 hazardous locations. Listed by the American Bureau of Shipping (ABS) as CWCMC-MC-HL. Meets IEEE 383-74 and IEEE 1202 vertical tray flame tests. Also, passes 210,000 BTU vertical tray flame test per ICEA T-29-520. cUL listed ACIC-TC.

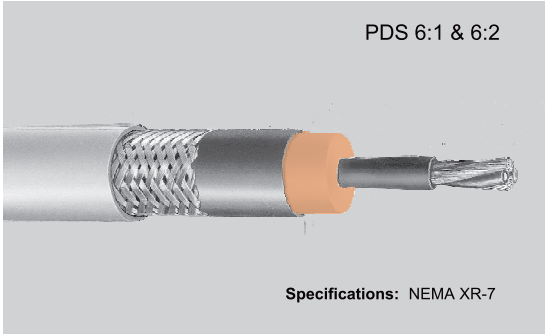
Single Pair and Triad Cables P-OS

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Inner Jacket Thickness-mils	C-L-X O.D. (In.)	Outer Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
564-60-3401	16(7X)	1		15/8	66	0.53	50	0.64	182
564-65-3401	16(7X)		1	15/8	58	0.53	50	0.64	190

Multi-Pair and Triad Cables SP-OS

Catalog Number	Conductor Size AWG (Strands)	Number of Pairs	Number of Triads	Insulation Thickness-mils	Inner Jacket Thickness-mils	C-L-X O.D. (In.)	Outer Jacket Thickness-mils	Approx. O.D.-In.	Approx. Net Wt. (lbs/M')
561-60-3402	16(7X)	2		15/4	40	0.67	50	0.76	234
561-60-3404	16(7X)	4		15/4	50	0.80	50	0.91	335
561-60-3408	16(7X)	8		15/4	50	0.93	50	1.04	492
561-60-3412	16(7X)	12		15/4	50	1.11	50	1.22	674
561-60-3424	16(7X)	24		15/4	50	1.42	50	1.53	1118
561-60-3436	16(7X)	36		15/4	50	1.69	60	1.82	1586
561-65-3404	16(7X)		4	15/4	50	0.84	50	0.95	395
561-65-3408	16(7X)		8	15/4	50	1.06	50	1.17	637
561-65-3412	16(7X)		12	15/4	50	1.29	50	1.40	863

SPECIAL PURPOSE CABLES

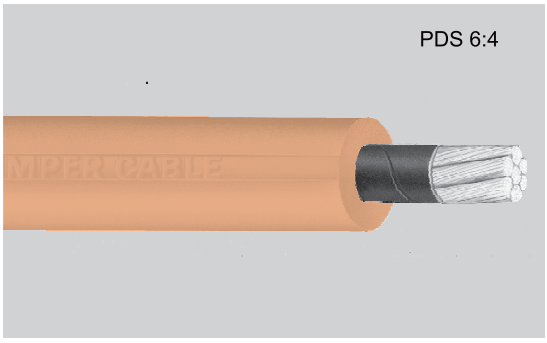


*X-RAY CABLE 65-250 kV DC

Construction: Two constructions are standard - one having three conductors and the other four conductors. The conductors are coated stranded copper, over which is an extruded semiconducting layer followed by Okonite insulation, extruded insulation shield, coated copper braid and an Okoseal jacket.

Sizes: 3 conductors and 4 conductors

Application: To supply the anode and cathode voltages to the X-Ray tube. Also used in other high voltage, low current applications.



OKOGUARD AERIAL JUMPER CABLE 15kV

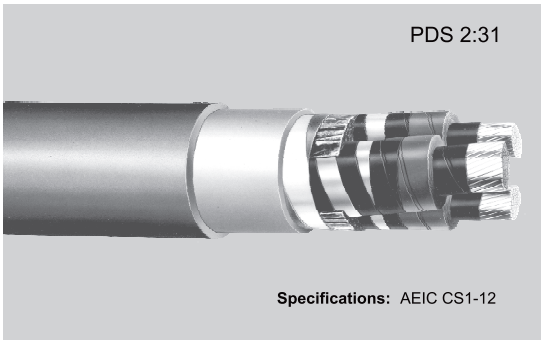
Conductor Temperature: 90°C

Sizes: #2 AWG - #4/0 AWG

Insulation Thickness: 210 mils

Application: For use as temporary power leads or by-pass jumpers for open aerial lines or aerial disconnects and switches in electric utility applications. For outdoor use only.

Catalog Number	Conductor Size AWG	Number of Strands	Approx. O.D.-In.
303-21-1934	2	259	0.78
303-21-1938	1/0	259	0.86
303-21-1940	2/0	259	0.91
303-21-1944	4/0	437	1.06



SOLID TYPE PILC
15kV Paper Insulated Lead Covered Power Cable

Construction: 3 compact sector copper conductors, polybutene impregnated paper insulation, copper bearing lead sheath, and Okolene (PE) jacket

Conductor Temperature:90°C

Sizes: 350 - 500 kcmil

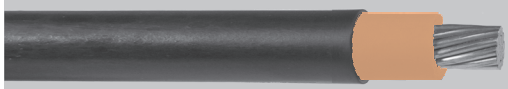
Application: For use in underground ducts, direct buried, and aerially when lashed to a messenger. Okonite PILC cable are manufactured in accordance with and meet the requirements of AEIC CS1-90 11th Edition. Cables made in accordance with AEIC CS1-12, 12th Edition are available on special order basis.

Catalog Number	Conductor Size-kcmil	Insulation Thickness-mils	Lead Thickness-mils	Jacket Thickness-mils	Approx. O.D. - Inches	Weight lbs./ft.
101-63-4544	350	165	100	90	2.37	8.19
101-63-4665	500	165	105	110	2.64	10.37

*Call your Okonite Representative for ordering information from stock.

RAILROAD AND TRANSIT SYSTEM CABLES

PDS 7:1



Specifications: AREMA, ICEA

*OKONITE ARMORED UNDERGROUND RAILROAD SIGNAL CABLE

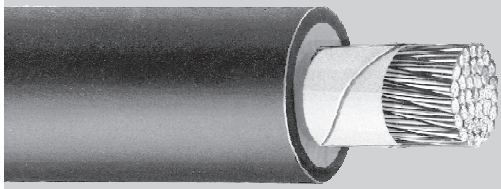
Construction: Multiple solid bare copper conductors, Okonite AAR Class A insulation, taped cushion layer, copper alloy armor and Okolene jacket overall with rip cord feature.

Conductor Temperature: 90°C

Sizes: 2 to 37 conductors#14 AWG, #2 AWG

Application: For direct burial or underground duct signal circuits where rodent and termite protection is required. Can also be used for squirrel resistant aerial applications.

PDS 7:17



Specifications: AREMA, ICEA

*TYPE DEL-DIESEL ELECTRIC LOCOMOTIVE AND CAR WIRE 300V, 600V and 2000V

Construction: Coated flexible stranded copper conductor, separator tape, Okonite insulation, Okolon TS-CPE jacket.

Conductor Temperature: 90°C Continuous - 110°C Hot Spot

Sizes: #16 AWG, #10 AWG

Application: For heavy duty use in locomotives and car equipment, wet or dry locations.

PDS 7:6

Specifications: AREMA, ICEA

*OKONITE-OKOLENE DUPLEX TRACK WIRE 600V

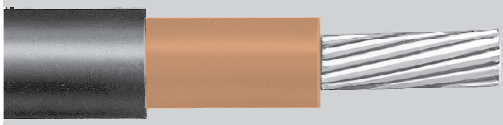
Construction: Solid Duplex bare copper conductor, Okonite insulation, Okolene jacket.

Conductor Temperature: 90°C

Sizes: Solid conductor: #6 AWG

Application: For use in track circuits, signal operations, car retarder and switch machine applications. Can be installed in wet or dry locations, in conduit, trays or troughs, or direct burial.

PDS 7:11



Specifications: AREMA, ICEA

*OKONITE-OKOLON TS-CPE CASE WIRE 600V

Construction: Bare stranded copper conductor, Okonite EPR insulation, Okolon TS-CPE jacket.

Conductor Temperature: 90°C

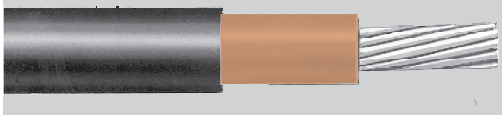
Sizes: #14 AWG, #6 AWG

Application: For use as relay and associated signal apparatus wiring and for connector wire.

*Call your Okonite Representative for ordering information from stock.

RAILROAD AND TRANSIT SYSTEM CABLES

PDS 7:10



Specifications: ICEA, AREMA

*OKONITE TOWER & CASE WIRE 600V

Construction: Bare stranded copper conductor, Okonite insulation, Okoseal jacket in any color.

Conductor Temperature: 90°C

Sizes: #14 AWG, #10 AWG, #6 AWG

Application: For use as relay and associated signal apparatus wiring and for connector wire.

PDS 7:12

Specifications: ICEA

*OKONITE-NYLON BRAID CASE WIRE 600V

Construction: Bare stranded copper conductor, Okonite insulation, nylon braid with lacquer finish overall.

Conductor Temperature: 90°C

Sizes: #16 AWG, #12 AWG, #10 AWG

Application: For use as relay and associated signal apparatus wiring and for connector wire.

SPLICING AND TERMINATING PRODUCTS

C-L-X TERMINATING TOOL KIT

Application: The C-L-X Terminating Tool Kit contains all the tools required to remove the overall jacket and aluminum sheath from the C-L-X power, control, and instrumentation cables. The Cable Slitting Saw may also be used on interlocked armor and lead sheathed cables. It is available in either an electric or a pneumatic model. The electric model is available with a 120V ac, 2500rpm double insulated motor. The lightweight pneumatic motor is powered by a 2200rpm motor which requires 90 psi of air pressure for maximum efficiency. The Small Cable Guide keeps the saw centered on the cable when slitting cables of 1" diameter or less.

Contents: 1-Cable Slitting Saw, 1-Small Cable Guide, 12-2" dia. High Speed Steel Saw Blades, 1-Tubing Cutter, 1-Channel Lock Pliers, 1-10' Retractable Tape, 1-5/16" x 11" Screwdriver, 1-Cable Knife, 4" blade, 1-Cutter Blade Holder, 3-10" Hacksaw Blades, 1-Tool Case, 1-Padlock with 2 keys.

Catalog Number	Description	Net Weight (lbs.)	Shipping Weight (lbs.)
C-L-X Terminating Tool Kit			
▲606-01-1026	Electric - 120 Volt ac	20	21
▲606-01-1526	Pneumatic - 90 psi	20	21
Cable Slitting Saw, Small Cable Guide and 12 High Speed Steel Saw Blades			
▲606-01-0026	Electric - 120 Volt ac	19	20
▲606-01-0526	Pneumatic - 90 psi	19	20
12 High Speed Steel Saw Blades			
▲606-01-5754	2" diameter, 7 teeth per inch, packaged in a round tin container	1	1

▲Authorized Stock Item

SPLICING AND TERMINATING PRODUCTS

Removing the C-L-X Armor

This procedure applies to all types of C-L-X armor - aluminum, copper, bronze and stainless steel. Safe working practices are to be observed, e.g., safety glasses and work gloves. Practice sessions are recommended to familiarize all concerned with the procedures and equipment.

1. Remove the jacket to expose the desired length of un-armored cable within the enclosure.

2. Refer to the C-L-X fitting instructions for the length of C-L-X armor to be exposed beyond the end of the jacket and mark the C-L-X armor at the top of the crown nearest to that point.

For C-L-X Diameters 1 5/8 and Smaller, Go To Steps 10 through 12.

For C-L-X Diameters greater than 1 5/8 Follow Steps 3 through 9 and 12.

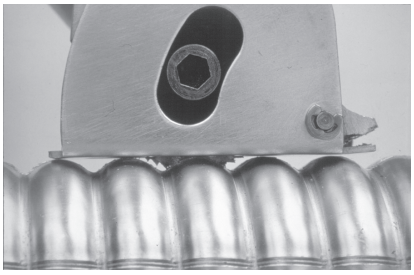
3. First the C-L-X armor will be circumferentially cut using a hacksaw blade, (note the C-L-X saw tool kit is supplied with a hacksaw blade and blade holder) cut through the crown (high point) of the C-L-X at an angle so as to connect (or bridge) the valleys (low points) on both sides of the crown.

4. Again using a hacksaw blade, make a circumferential score in the valleys adjacent to the cut crown connecting both sides of the crown cut to the valleys. Do not cut through armor in valleys.

5. Holding the score area rigid, flex the cable by moving the free end so as to break the score around the circumference of the cable.

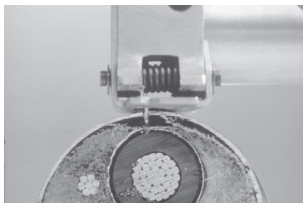
6. Next the C-L-X will be longitudinally cut by performing the following:

Note on the C-L-X Saw- The longitudinal cut is made with the C-L-X saw, which has an adjustable positive depth stop that can be set so the saw blade cuts through the crowns and partially cuts through the valleys. A proper saw depth is achieved when 80 to 95 % of the metal in the valley is removed. Use an extra piece of the cable being terminated to adjust the blade depth and practice.

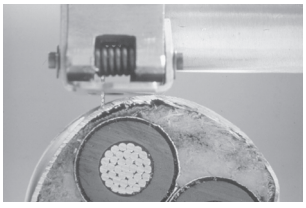


Set blade to remove 80 to 95% of the metal thickness in the valley.

7. With cable secured, start at the free end of the cable and advance the Kett saw, making sure to use slight downward pressure to maintain the depth of cut along the cable, to the ring cut. When advancing the saw, be sure to maintain a straight line by cutting along the high point of the cable; this affects the cut depth also. See following:



Correct



Incorrect

If it is necessary to stop cutting or if a portion of the cut is to be repeated, use caution when reinserting the blade as kickback may occur.

8. At the completion of the longitudinal cut, starting at the free end, insert a wide blade screwdriver into the cut and twist. Repeat until the ring cut is reached. This will cause the remaining metal in the valleys to break open and the armor to loosen on the cable. Do not drive the screwdriver into the cut with excessive force as this may damage the underlying conductors.

9. Slide the armor off the cable. In the event that the armor is tight around the cable, pliers may be used to grab the armor at the split and pull it away from the cable. For large diameter cables, where long lengths of armor are to be removed, two cuts spaced 180° apart are recommended so that the armor may be removed in two pieces. (Go to step 12)

For C-L-X Diameters 1 5/8 and Smaller Follow Steps 10 through 12.

10. Using a hacksaw blade or tubing cutter, circumferentially score the C-L-X armor. Grip the cable in both hands with the score centered between hands, and flex the cable at the score line until it opens. Slide the sheath off the cable.

11. For C-L-X cables with an inner jacket or cable constructions where the C-L-X armor is tight fitting around the insulated conductors, the C-L-X saw should be used with the optional red colored cable guide. This guide assists in centering the saw on small diameter cable. The procedures and precautions of steps 3 to 9 apply here also.

12. Remove the cable fillers and marker tape and install the C-L-X fitting as per the manufacturers instructions. The cable is now ready to be terminated into the enclosure.

CONDUCTOR COLOR CODING SEQUENCE

ICEA S-73-532 TABLE E-2
Color Sequence (No Green or White Conductors)

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	

Special Order: Any or all of the following conductors may be added when specifically requested by the customer to meet his specific application requirements. These conductor codings comply with UL and NEC requirements

Purpose	Base Color	Tracer Color
Equipment Grounding	Uninsulated Green	
	Green	1 or more continuous yellow stripes
Grounded	White	
	White	Black continuous stripe
	White	Red continuous stripe
	White	Blue continuous stripe
	White	Orange continuous stripe
	White	Brown continuous stripe
	White	Numeric Printing

CONDUCTOR COLOR CODING SEQUENCE

ICEA S-73-532 TABLE E-1
Color Sequence (INCLUDES GREEN AND WHITE CONDUCTORS)

Conductor Number	Base Color	Tracer Color
1	Black	
2	White	
3	Red	
4	Green	
5	Orange	
6	Blue	
7	White	Black
8	Red	Black
9	Green	Black
10	Orange	Black
11	Blue	Black
12	Black	White
13	Red	White
14	Green	White
15	Blue	White
16	Black	Red
17	White	Red
18	Orange	Red
19	Blue	Red
20	Red	Green
21	Orange	Green

CONDUCTOR IDENTIFICATION INFORMATION

E-1 Color sequences for utility conductor identification, see Appendix E, Table E-1, ICEA Standard S-73-532, includes green and white.

E-2 Color sequence for industrial conductor identification, see Appendix E, Table E-2, ICEA Standard S-73-532, excludes green and white.

METHOD-1 Conductor identification, colored compounds with tracers in accordance with the ICEA standard.

METHOD-2 Conductor identification, neutral compounds with tracers in accordance with the ICEA Standard.

METHOD-3 Conductor identification, neutral or single colored compounds with surface printing of numbers and color designations in accordance with the ICEA Standard.

METHOD-4 Conductor identification, neutral or single colored compounds with surface printing of numbers in accordance with the ICEA Standard.

METHOD-5 Conductor identification, individual color coding with braids in accordance with the ICEA Standard.

MISCELLANEOUS INFORMATION

Decimal equivalents of one inch

8ths	16ths	32nds	64ths	Decimal
—	—	—	1	.015625
—	—	1	2	.03125
—	—	—	3	.046875
—	1	2	4	.0625
—	—	—	5	.078125
—	—	3	6	.09375
—	—	—	7	.109375
1	2	4	8	.125
—	—	—	9	.140625
—	—	5	10	.15625
—	—	—	11	.171875
—	3	6	12	.1875
—	—	—	13	.203125
—	—	7	14	.21875
—	—	—	15	.234375
2	4	8	16	.25
—	—	—	17	.265625
—	—	9	18	.28125
—	—	—	19	.296875
—	5	10	20	.3125

Useful Identities, Equations and Conversion Factors

1 mil = 0.001”
1 circular mil = $(1 \text{ mil})^2$
Area of a circle = Πr^2 or $\Pi D^2/4$
where,
$\Pi = 3.1416$
r = radius
D = diameter

1 mm = 39.4 mils
1 mile = 5280 ft
1 km = 0.6214 miles
1 km = 3281 ft
1 mile = 1.609 km
1 inch = 25.4 mm
1 meter = 3.281 ft
1 meter = 39.37 inches
1 ton (US) = 2000 lbs

To Convert	Multiply by	To Obtain
mils	0.0254	millimeters
circular mils	5.07×10^{-4}	square millimeters
inches	1.0×10^{3}	mils
inches	25.4	millimeters
feet	3.048×10^{-4}	kilometers
miles	1.609	kilometers
kilometers	0.6214	miles
kilometers	3.281×10^{3}	feet
pounds	0.4536	kilograms
pounds	4.448	Newtons (joules/meter)
pounds/ft	1.488	kilograms/meter
tons (US)	0.9078	tons (metric)
psi	0.00689	megapascals (Mpa)
volts/mil	0.03937	kV/mm
ohms/1000 ft	3.28	ohms/km
gigaohms - 1000 ft	305	gigaohms-meter

Temperature conversion table

TO CONVERT DEGREES		
To C	F or C	To F
-65.	-85	-121
-62.22	-80	-112
-59.45	-75	-103
-56.67	-70	-94
-53.89	-65	-85
-51.11	-60	-76
-48.34	-55	-67
-45.56	-50	-58
-42.78	-45	-49
-40.	-40	-40
-37.22	-35	-31
-34.44	-30	-22
-31.67	-25	-13
-28.89	-20	-4
-26.11	-15	5
-23.33	-10	14
-20.56	-5	23
-17.78	0	32
-15.	5	41
-12.22	10	50
-9.44	15	59
-6.67	20	68
-3.89	25	77
-1.11	30	86
1.67	35	95
4.44	40	104
7.22	45	113
10.	50	122
12.78	55	131
15.56	60	140
18.33	65	149
21.11	70	158
23.89	75	167
26.67	80	176
29.44	85	185
32.22	90	194
35.	95	203
37.78	100	212
40.56	105	221
43.33	110	230
46.11	115	239
48.89	120	248
51.67	125	257
54.44	130	266
57.22	135	275
60.	140	284
62.78	145	293
65.56	150	302
68.33	155	311
71.11	160	320
73.89	165	329
76.67	170	338
79.44	175	347
82.22	180	356
85.	185	365
87.78	190	374
90.56	195	383
93.33	200	392
96.11	205	401
98.89	210	410
101.67	215	419
104.44	220	428
107.22	225	437
110.	230	446
112.78	235	455
115.56	240	464
118.33	245	473
121.11	250	482
123.89	255	491
126.67	260	500
129.44	265	509
132.22	270	518
135.	275	527

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THE OKONITE COMPANY
102 Hilltop Road, Ramsey, New Jersey 07446 • Phone 201.825.0300 • www.okonite.com

MADE IN THE USA
QUALITY CABLES SINCE 1878