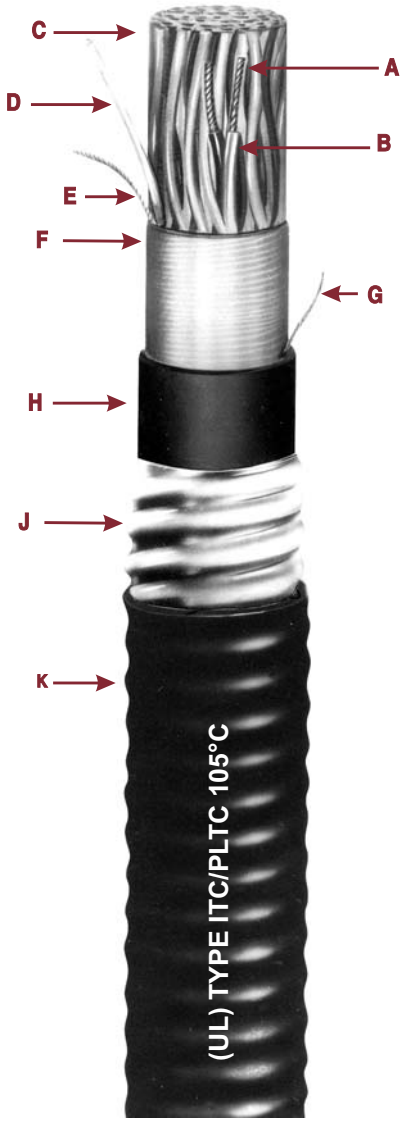
C-L-X® Type P-OS

Type ITC/PLTC Armored Instrumentation Cable

Multiple Pairs or Triads - Overall Shield
300 Volts - 105°C Rating
For Cable Tray Use



A Bare Stranded Copper Conductor
B Okoseal Insulation
C Twisted Pairs/Triads
D Communication Wire
E Tinned Stranded Copper Drain Wire
F Aluminum/Polyester Tape
G Rip Cord
H Inner Black Okoseal Jacket
J Impervious, Continuous, Corrugated Aluminum C-L-X Sheath
K Outer Black Okoseal Jacket

Specifications

Conductors: Bare soft annealed copper, Class B, 7-strand concentric per ASTM B-8.
Insulation: Flame-retardant Okoseal® (PVC) per UL 13 and UL 2250, 15 mils nominal thickness, 105°C temperature rating.
Conductor Identification: Pigmented black and white in pairs, black, red and white in triads; white conductor numerically printed for group identification.
Communication Wire: 22 AWG, solid bare copper conductor, 12 mils nominal flame-retardant Okoseal insulation, 105°C temperature rating.
Assembly: Pairs or triads assembled with left-hand lay. Flame-retardant, non-wicking fillers included where required to provide a round cable.
Cable Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a 7-strand tinned copper drain wire, same size as conductor.
Inner Jacket: Black, flame-retardant, low temperature Okoseal per UL 13 and UL 2250. A rip cord is laid longitudinally under the jacket to facilitate removal.
C-L-X Sheath: A close fitting, impervious, continuously welded and corrugated aluminum sheath provides complete protection against moisture, liquids, and gases, has excellent mechanical strength and provides equipment grounding through the sheath.
Outer Jacket: Black, flame-retardant, low temperature Okoseal per UL 13 and UL 2250.
Classifications: UL Listed as ITC/PLTC - Instrument Tray Cable/Power Limited Tray Cable for use in accordance with Article 335 and Article 722 of the 2023 National Electrical Code.
Cables comply with UL 2250 for ITC and UL 13 for PLTC, CL2 and CI3.

Applications

Okonite Type C-L-X P-OS (Pairs/triads - Overall Shield) instrumentation cables are designed for use in instrumentation, process control 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, but shielding against interference among groups is not required; indoors or outdoors; in wet or dry locations with conductor operating temperatures up to 150°C; in cable trays; in raceways; supported by a messenger wire; under raised floors; for direct burial. Suitable Class I, Division 2, Class II, Division 2, or Class III, Division 1 and Class I, Zone 2 hazardous locations. Also for use as power-Limited fire protective signaling cable (FPL) per NEC Article 760. 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.
The overall shield eliminates most of the static interference from the electric field radiated by power cables and other electrical equipment.
For dc service in wet locations, X-Olene® insulation is recommended.

Product Features

- Passes the UL 1581 & IEEE 383-1974 vertical tray flame tests.
- Passes the IEEE 1202-1991 vertical tray flame test (2 Pr #18 AWG and larger).
- Passes the 210,000 BTU/hr vertical tray flame test per ICEA T-29-520.
- UL listed for direct burial (8 PR #18 AWG and larger).
- Complete prepackaged, factory-tested wiring system-color coded.
- C-L-X cables are quality control inspected to meet or exceed applicable UL Standards.
- C-L-X enclosure permits installation in cable tray containing light and power cables without a barrier separator.
- Individual pairs or triads are numbered and color coded for simplified hook-up.
- Excellent noise rejection.
- Impervious, continuous sheath excludes moisture, gases and liquids.
- In addition, the aluminum CLX sheath exceeds the equipment grounding requirements of NEC Article 250.118 and 250.122, and can be used as the equipment grounding conductor.
- Excellent compression and impact resistance.
- Lower installed system cost than conduit or EMT systems.
- Suitable for low temperature installation to -40°C.

C-L-X Type P-OS

Type ITC/PLTC Armored Instrumentation Cable

Multiple Pairs or Triads - Overall Shield 300V - 105°C Rating

For Cable Tray Use

Catalog Number	Strand Size (AWG)	Number of Pairs	Number of Triads	Inner Jacket Thickness-mils	Nominal Core O.D. - Inches	C-L-X O.D. - Inches	Outer Jacket - mils	Nominal Cable O.D. - Inches	Cross-Sectional Area † (sq in)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
564-10-3202	20(7X)	2		40	0.35	0.58	50	0.69	0.37	171	210
564-10-3204		4		50	0.41	0.62	50	0.73	0.42	194	233
564-10-3206		6		50	0.45	0.67	50	0.78	0.48	245	325
564-10-3208		8		50	0.49	0.71	50	0.82	0.53	277	357
564-10-3210		10		50	0.53	0.75	50	0.86	0.58	324	404
564-10-3212		12		50	0.56	0.80	50	0.91	0.65	346	426
564-10-3216		16		60	0.66	0.89	50	1.00	0.79	424	504
564-10-3220		20		60	0.73	0.97	50	1.08	0.92	490	570
564-10-3224		24		60	0.79	1.06	50	1.17	1.08	545	625
564-10-3236		36		70	0.94	1.24	50	1.35	1.43	697	803
564-10-3250		50		70	1.06	1.34	50	1.45	1.65	930	1036
564-15-3204			4	50	0.43	0.67	50	0.78	0.48	242	322
564-15-3208			8	50	0.52	0.75	50	0.86	0.58	329	409
564-15-3212			12	50	0.60	0.84	50	0.95	0.71	419	499
564-15-3216			16	60	0.70	0.93	50	1.04	0.85	518	598
564-15-3224			24	60	0.84	1.11	50	1.22	1.17	680	760
564-15-3236			36	70	1.00	1.29	50	1.40	1.54	936	1026
564-10-3302	18(7X)	2		40	0.37	0.58	50	0.69	0.37	202	282
564-10-3304		4		50	0.44	0.67	50	0.78	0.48	244	324
564-10-3306		6		50	0.50	0.71	50	0.82	0.53	288	368
564-10-3308		8		50	0.55	0.80	50	0.91	0.65	330	410
564-10-3310		10		60	0.65	0.89	50	1.00	0.79	409	489
564-10-3312		12		60	0.68	0.93	50	1.04	0.85	440	520
564-10-3316		16		60	0.77	1.02	50	1.13	1.00	525	605
564-10-3320		20		60	0.83	1.06	50	1.17	1.08	611	691
564-10-3324		24		60	0.86	1.11	50	1.22	1.17	684	790
564-10-3336		36		70	0.99	1.29	50	1.40	1.54	946	1052
564-10-3350		50		70	1.15	1.47	50	1.58	1.96	1255	1398
564-15-3304			4	50	0.49	0.71	50	0.82	0.53	285	365
564-15-3308			8	50	0.59	0.80	50	0.91	0.65	401	481
564-15-3312			12	60	0.72	0.97	50	1.08	0.92	543	623
564-15-3316			16	60	0.82	1.06	50	1.17	1.08	658	738
564-15-3324			24	70	0.97	1.24	50	1.35	1.43	918	1008
564-15-3336			36	70	1.06	1.34	50	1.45	1.65	1231	1337
564-10-3402	16(7X)	2		40	0.36	0.58	50	0.69	0.37	234	314
564-10-3404		4		50	0.48	0.71	50	0.82	0.53	290	370
564-10-3406		6		50	0.57	0.80	50	0.91	0.65	359	439
564-10-3408		8		60	0.63	0.84	50	0.95	0.71	416	496
564-10-3410		10		60	0.69	0.93	50	1.04	0.85	512	592
564-10-3412		12		60	0.74	0.97	50	1.08	0.92	559	639
564-10-3416		16		60	0.85	1.11	50	1.22	1.17	674	754
564-10-3420		20		70	0.96	1.24	50	1.35	1.43	832	922
564-10-3424		24		70	1.04	1.34	50	1.45	1.65	937	1027
564-10-3436		36		70	1.20	1.51	60	1.65	2.14	1258	1401
564-10-3450		50		80	1.33	1.64	60	1.78	2.49	1751	1915
564-15-3404			4	50	0.51	0.75	50	0.86	0.58	346	426
564-15-3408			8	60	0.67	0.89	50	1.00	0.79	529	609
564-15-3412			12	60	0.79	1.06	50	1.17	1.08	713	793
564-15-3416			16	70	0.92	1.19	50	1.30	1.33	904	984
564-15-3424			24	70	1.11	1.42	50	1.53	1.84	1229	1335
564-15-3436			36	80	1.31	1.60	60	1.73	2.35	1757	1900

ELECTRICAL SPECIFICATIONS
Per UL Standard 13 & 2250

Conductor Resistance, nominal.....ohms/1000 ft. @20°C
- 20 AWG 10.4
- 18 AWG 6.5
- 16 AWG..... 4.1

Insulation Test Voltage (spark test).....5000 Volts ac

Dielectric Test Voltage .....1500 Volts ac for 15 sec.

Shield Isolation Test
- Pair to Cable Shield ..... exceeds 100M ohms/1000 ft.

Insulation Resistance Constant @60°F, minimum (natural material typical value).....2,000 Megohms-1000 ft.

Loop Resistance, nominal (2 conductor).....ohms-1000 ft @20°C
- 20 AWG 20.8
- 18 AWG 13.0
- 16 AWG..... 8.2

Mutual Capacitance (PF/ft.)*
- #20 37
- #18 41
- #16 44

*Typical Value

† **Cross-sectional** area for calculation of cable tray fill in accordance with NEC Section 392.22.

Jackets - Optional jacket types available - consult local sales office.

Copper or bronze C-L-X available on special order.

To order C-L-X Type P-OS without the outer Okoseal jacket, change the sixth digit of the catalog number from 3 to 1. For example, to order 1 pr. 20 AWG with a bare aluminum C-L-X, the catalog number would be 564-10-1212.

Length Tolerance: Cut lengths of 1000 feet or longer are subject to a tolerance of ± 10%; less than 1000 feet ± 15%.

THE OKONITE COMPANY
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