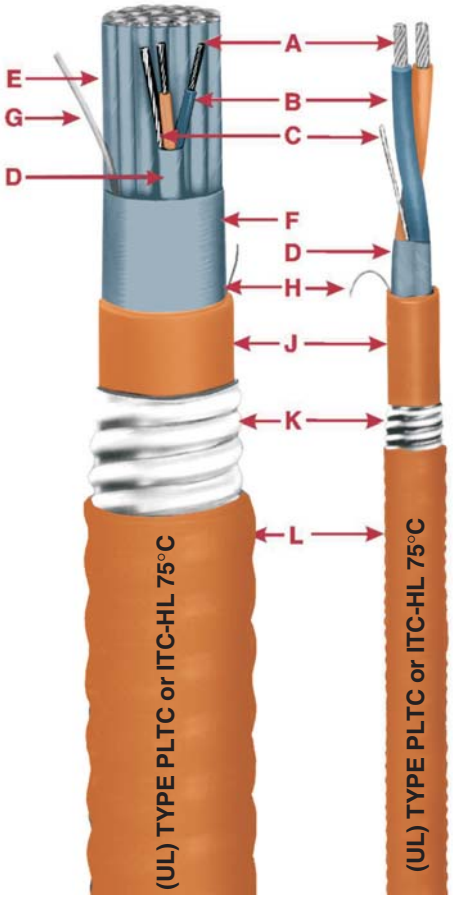
Okobus® C-L-X®

Single Pair: Type P-OS - Multi Pair: Type SP-OS

Type PLTC & Type ITC-HL Fieldbus Cable

Single Pair or Multiple Shielded Pairs - Overall Shield
300 Volts 75°C Rating



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

Specifications

Conductors: #18 AWG tinned copper, Class M, stranded per ASTM B-174.

Insulation: Okolene® (Polypropylene) per UL 13 and UL 2250, 32 mils nominal thickness, 75°C temperature rating.

Conductor Identification: Pigmented orange and blue in pairs, orange conductor numerically printed for group identification.

Pair Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a Class M tinned copper drain wire, two sizes smaller than the conductor. All multi-pair shields are isolated from each other.

Multiple Pair Assembly: Pairs assembled with a left-hand lay. Cable fillers included where required to provide a round cable.

Multiple Pair Cable Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a class M strand tinned copper drain wire, same size as conductor.

Inner Jacket: Orange, flame-retardant, 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: Orange, flame-retardant, Okoseal per UL 13 and UL 2250.

Classifications: UL Listed as PLTC-Power Limited Tray Cable and as ITC-HL - Instrument Tray Cable/Hazardous Locations for use in accordance with Article 335 and Article 722 of the 2023 National Electrical Code.

Cables comply with ISA S50.02, UL 2250 and UL 13 for Fieldbus circuits and CL2 and CL3.

Applications

C-L-X OKOBUS® cables are designed for use in rugged plant and environments utilizing networked discrete or process automation and control. ITC-HL (Instrument Tray Cable - Hazardous Locations) eliminates the need for conduit when installed in accordance with NEC Article 501.10(A)(1)(5) "ITC-HL" installations. Fully complies with ANS/ISA 50.02 Part 2 Fieldbus
Cable.

The isolated individual shields over each pair, in SP-OS cables, when properly grounded, prevent crosstalk or capacitive coupling between adjacent pairs which occurs with ac signals, particularly the pulse type.

The overall shield eliminates most of the static interference from the electrical field radiated by power cables and other electrical equipment.

The C-L-X sheath provides additional electrical shielding and physical protection against mechanical damage as well as complete protection against moisture or gases entering the cable.

Product Features

- Passes the UL 13 and IEEE 383 vertical tray flame tests.
- Passes IEEE 1202 vertical tray flame test.
- Sunlight & oil resistant.
- UL listed for direct burial.
- Complete pre-packaged, factory-tested wiring system-color coded.
- C-L-X enclosure permits installation in cable tray containing lighting and power cables without a barrier separator.
- Individual pairs are completely isolated.
- Impervious, continuous sheath excludes moisture, gases and liquids.
- In addition, the aluminum CLX sheath exceeds the equipment grounding requirements of NEC Articles 250.118 and 250.122, and can be used as the equipment grounding conductor in non-HL areas.
- Lower installed system cost than conduit or EMT systems.

Okobus — C-L-X

Single Pair Type P-OS - Multi Pair Type SP-OS Type PLTC & Type ITC-HL Fieldbus Cable

Single Pair or Multiple Shielded Pairs - Overall Shield 300 V 75°C Rating

#18 AWG

Catalog Number	Number of Pairs	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')
564-92-3301	1	45	0.34	0.53	40	0.62	0.30	155	194
561-92-3302	2	50	0.55	0.80	50	0.91	0.65	311	391
561-92-3304	4	60	0.71	0.93	50	1.04	0.85	400	480
561-92-3306	6	60	0.81	1.06	50	1.17	1.08	493	573
561-92-3308	8	70	0.91	1.15	50	1.26	1.25	587	693
561-92-3312	12	70	1.04	1.34	50	1.45	1.65	759	902
561-92-3316	16	70	1.17	1.47	50	1.58	1.96	902	1045
561-92-3320	20	80	1.33	1.64	50	1.75	2.41	1072	1236
561-92-3324	24	80	1.46	1.78	50	1.89	2.81	1308	1495

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

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

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

CHARACTERISTICS

a) Characteristic Impedance, Z_o, at fr (31.25kHz), minimum .....100 ohms
b) Maximum attenuation at 1.25 fr (39 kHz).....3.0 dB/km
c) Maximum capacitive unbalance to shield.....2 nF/km
d) Maximum DC resistance (per conductor) .....24 ohms/km
e) Maximum propagation delay change 0.25 fr to 1.25 fr.....1.7 μs/km
f) conductor cross-sectional area nominal (wire size) .....0.8 mm^2 (#18 AWG)
g) Minimum shield coverage 100%

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