



# Okobus C-L-X

**Twisted Shielded Single Pair: Type P-OS**

**Twisted Shielded Multi Pair: Type SP-OS**

**Type PLTC & Type ITC-HL Fieldbus Cable**

Shielded Single Pair or Multiple Shielded Pairs

Overall Shield 300 Volts 90°C Rating

## Specifications

**Conductors:** #18 AWG and #16 AWG tinned copper, Class B, stranded per ASTM B-8.

**Insulation:** X-Olene (crossed linked polyethylene) per UL 13 and UL 2250, 32 mils nominal thickness, 90°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 B tinned copper drain wire, two sizes smaller than the conductor. All multi-pair shields are isolated from each other.

**Multiple Pair Assembly:** Twisted 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 B strand tinned copper drain wire, same size as conductor.

**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, continuously welded and corrugated aluminum sheath providing complete protection against moisture, liquids, and gases, with excellent mechanical strength. It exceeds the equipment grounding requirements of NEC Articles 250.118 and 250.122 and may be used as the equipment grounding conductor in non-HL areas.

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

Meets ASTM D746 brittle point at -40°C.

## Applications

C-L-X OKOBUS® cables are designed for use in rugged plant and off-shore marine 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 Fieldcom Group FF-844.

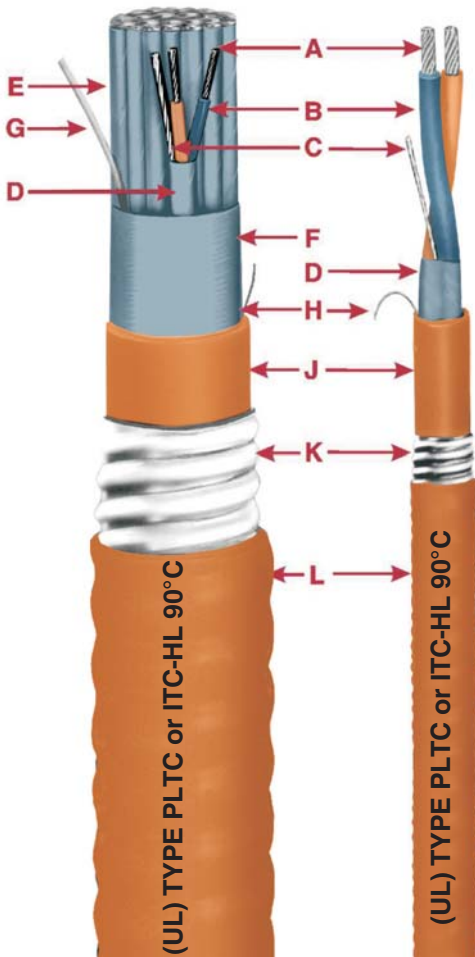
The isolated individual shields over each pair, when properly grounded, prevent crosstalk or capacitive coupling between adjacent pairs which occurs with ac signals, particularly the pulse type.

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

- FF-844 Foundation Fieldbus Type A.
- Foundation Fieldbus Registered.
- -40°C to 90°C.
- Passes the UL 13 and IEEE 383 vertical tray flame tests.
- Single pair passes IEEE 1202 vertical tray flame test.
- Sunlight & oil resistant.
- UL listed for direct burial.
- Individual pairs are completely isolated.
- 100% shield coverage for reduced electromagnetic noise pick-up.
- Excellent external noise rejection.
- Excellent weathering characteristics.
- Flexible, easy to handle and terminate.
- C-L-X enclosure permits installation in cable tray containing lighting and power cables without a barrier separator.
- Impervious to moisture, gases and liquids.
- Lower installed cost than conduit or EMT.
- Minimum installation temperature of -40°C or °F.



- A Tinned Copper Stranded Conductor
- B X-Olene 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

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 Type PLTC & Type ITC-HL Fieldbus Cable

Shielded Single Pair or Multiple Shielded Pairs - Overall Shield 300 V 90°C Rating

## Product Data Section 5: Sheet 48A



### #18 AWG

Catalog Number	Number of Pairs	Inner Jacket Thickness-mils	Nominal Core O.D. - Inches	C-L-X O.D. Inches	Outer Jacket Thickness-mils	Nominal Cable O.D. Inches	Cross-Sectional Area † (sq in)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
567-30-3751	1	40	0.32	0.53	50	0.64	0.32	153	174
567-30-3752	2	50	0.55	0.75	50	0.86	0.58	262	299
567-30-3754	4	60	0.70	0.93	50	1.04	0.85	370	428
567-30-3756	6	60	0.80	1.06	50	1.17	1.08	472	539
567-30-3758	8	60	0.88	1.15	50	1.26	1.25	547	641
567-30-3762	12	70	1.04	1.34	50	1.45	1.64	716	810
567-30-3766	16	70	1.17	1.47	50	1.58	1.95	858	986
567-30-3770	20	70	1.29	1.60	60	1.73	2.36	1033	1174
567-30-3774	24	80	1.43	1.74	60	1.87	2.75	1206	1394

### #16 AWG

Catalog Number	Number of Pairs	Inner Jacket Thickness-mils	Nominal Core O.D. - Inches	C-L-X O.D. Inches	Outer Jacket Thickness-mils	Nominal Cable O.D. Inches	Cross-Sectional Area † (sq in)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
567-30-3721	1	40	0.37	0.58	50	0.69	0.37	206	567
567-30-3722	2	50	0.62	0.84	50	0.95	0.71	313	371
567-30-3724	4	60	0.77	1.02	50	1.13	1.00	447	514
567-30-3726	6	60	0.89	1.15	50	1.26	1.25	574	668
567-30-3728	8	70	1.01	1.29	50	1.40	1.53	702	796
567-30-3732	12	70	1.22	1.51	60	1.65	2.13	954	1088
567-30-3736	16	80	1.43	1.73	60	1.87	2.75	1203	1391
567-30-3740	20	80	1.53	1.87	60	2.00	3.14	1441	1629
567-30-3744	24	80	1.66	2.01	60	2.14	3.61	1693	1954

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

▲ Authorized Stock Item: Available from our Customer Service Centers.

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

#### CHARACTERISTICS

Nominal Characteristic Impedance,  $Z_0$ , at fr (31.25kHz), nominal.....100 ohms  
 Maximum attenuation at 1.25 fr (39 kHz).....3.0 dB/km  
 Maximum capacitive unbalance to shield.....2 nF/km  
 Mutual Capacitance  
 #18 AWG.....30 nF/km  
 #16 AWG.....65 nF/km  
 Pair Inductance  
 #18 AWG.....760 mH/km  
 #16 AWG.....720 mH/km

Maximum DC resistance per conductor  
 #18 AWG.....22 ohms/km  
 #16 AWG.....14 ohms/km  
 Conductor cross-sectional area nominal  
 #18 AWG .....0.8 mm<sup>2</sup>  
 #16 AWG.....1.3 mm<sup>2</sup>  
 Drain Wire Maximum DC Resistance  
 #20 AWG .....35 ohms/km  
 #18 AWG.....22 ohms/km  
 Minimum shield coverage.....100%  
 Minimum Bend Radius.....7 x OD

-All values at 25C