Okobus
Single Pair: Type P-OS — Multi Pair: Type SP-OS
Type PLTC & Type ITC-ER Fieldbus Cable
Single Pair or Multiple Shielded Pairs - Overall Shield
300 Volts 75°C Rating

Specifications

Conductors: #18 AWG tinned copper, Class M, stranded per ASTM B-174.
Insulation: Okolene® (Polypropylene) per UL 13 and 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.
Jacket: Orange, flame-retardant, Okoseal per UL 13 and 2250. A rip cord is laid longitudinally under the jacket to facilitate removal.
Classifications: UL Listed as PLTC-Power Limited Tray Cable and as ITC-ER - Instrument Tray Cable/Exposed Run for use in accordance with Article 727 and Article 725 of the National Electrical Code.
Cables comply with ISA-S-50-02, UL 2250 and UL 13 for Fieldbus circuits and CL2 and CL3.

Applications

Okonite® OKOBUS® cables are designed for use in rugged plant environments utilizing networked discrete or process automation and control. ITC-ER (Instrument Tray Cable - Exposed Run) eliminated the need for conduit when installed in accordance with NEC Article 727.4(6). Fully complies with ANSI/ISA 50.02 part 2 for Fieldbus Cable.
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 or multi pair cables eliminates most of the static interference from the electrical field radiated by power cables and other electrical equipment.

Product Features

- 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.
- OSHA Acceptable.
- Flexible, easy to handle and terminate.
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Single Pair or Multiple Shielded Pairs - Overall Shield 300 V 75°C Rating

#18 AWG

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Number of Pairs</th>
<th>Jacket Thickness-mils</th>
<th>Nominal Cable O.D. Inches</th>
<th>Cross-Sectional Area (sq in)</th>
<th>Approx. Net Weight (lb/1000')</th>
<th>Approx. Ship Weight (lb/1000')</th>
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† Cross-sectional area for calculation of cable tray fill in accordance with NEC Section 392.22

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

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

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CHARACTERISTICS

a) Characteristic Impedance, \( z_0 \) 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 mm² (#18 AWG)

g) Minimum shield coverage ..................100%

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