

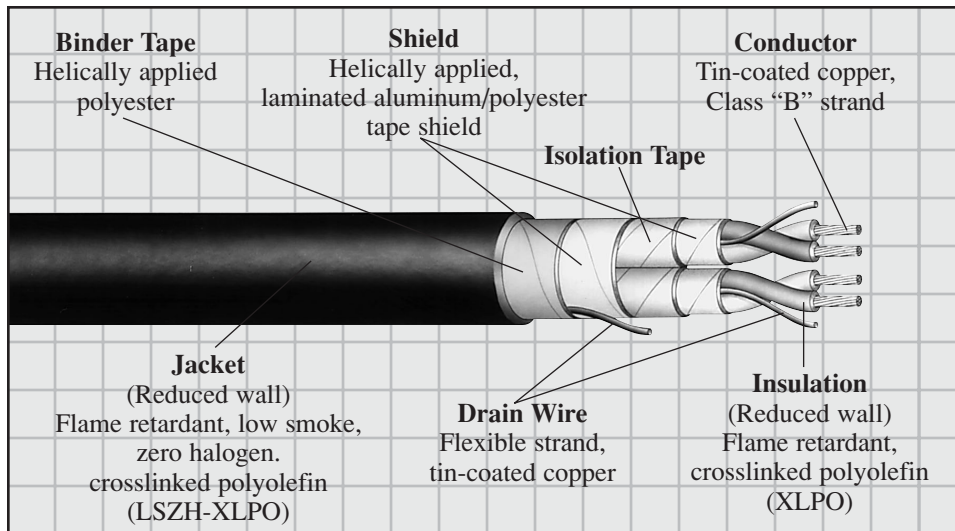
**Factory  
Mutual  
System**

## X-Link® TC Instrumentation Cable

Multi-Shielded Pairs  
With Overall Shield  
(XLPO/LSZH-XLPO)

90°C\*, 600 Volt  
NEC Type TC  
UL Listed

Spec. RSS-3-089



### Scope

X-Link® TC is the smallest thermoset, UL listed, Type TC Instrumentation cable available in the industry today. X-Link® TC is 30% to 40% smaller in diameter than standard 600 volt cable. It may be installed in wet and dry locations, indoors and outdoors, in metal trays, ducts, conduits, or in direct burial applications. It is ideal for applications in substations, cogeneration, waste/energy, petrochemical and industrial facilities to perform a variety of signaling, data acquisition and monitoring functions. *Designed for use on circuits where complete isolation is required between pairs and from external interference.*

### Features

- Thermoset insulation and jacket for enhanced thermal stability
- Small diameter & light weight
- Economical
- More cables per tray or conduit
- 600 volt rating allows cables to be run in trays without separation (300 vs 600 volt)
- Flame retardant
- Flexible
- Heat, sunlight, oil and abrasion resistant
- Easily pulled (low friction jacket)
- Tin-coated conductors for improved terminations and corrosion resistance
- Jackets have printed sequential footage markers for improved inventory control
- Jacket strippability facilitates termination
- Reduced halogen design
- Low smoke jacket
- Lead free jacket
- Superior insulation and jacket moisture resistance

### Performance Standards

- UL listed, Type TC (UL 1277) in accordance with the NEC
- UL listed sunlight resistance
- Factory Mutual Research Corp. group "1" fire rated per "Specification Test Standard for Cable Fire Propagation, Class 3972"†
- Passes IEEE-383 1974 70,000 BTU/hr vertical tray flame test and ICEA 70,000 BTU/hr vertical tray flame test (T-30-520)
- Single conductors pass UL VW-1 flame test
- Single conductors in accordance with performance requirements of ICEA S-95-658 and UL 44., Class XL
- Jacket exceeds the requirements of UL Class XL/90°C and ICEA Publication T-33-655, Type II
- UL approved for 90°C operation in both wet and dry locations
- Cable components are in compliance with the maximum leachable lead level required by the EPA in 40CFR, Part 261

### Construction†

**Conductor:**

Tin-coated copper conductors, Class "B" strand (ASTM B-8 & B-33)

**Insulation:**

20 mils of flame retardant crosslinked polyolefin meeting performance requirements of ICEA S-95-658 and UL 44 Class XL

**Pair Assembly:**

Two insulated conductors twisted with a flexible strand, tin-coated copper drain wire, a helically applied aluminum/ polyester laminated tape shield and an isolation tape

**Cabling:**

Required number of pairs cabled

**Circuit Identification:**

One black & one red insulated single conductor in each pair with printed pair numbers on both singles for pair identification (alternate methods also available)

**Fillers:**

(Where required)

**Overall Shield System:**

Helically applied aluminum/polyester laminated tape shield in continuous contact with a flexible strand, tin-coated copper drain wire

**Binder Tape:**

Helically applied polyester

**Jacket:**

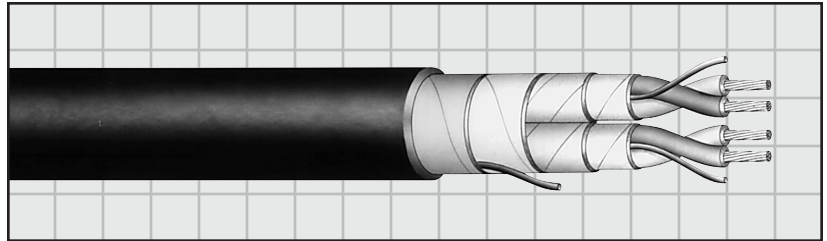
Reduced wall, black, flame retardant, low smoke, zero halogen, crosslinked polyolefin jacket

† Note: X-Link® TC is also available in other pair, triad and multi-conductor instrumentation configurations.

\* Rated 90°C for normal operation in wet and dry locations, 130°C for emergency overload conditions, and 250°C for short circuit conditions.

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NEC Type TC  
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Spec. RSS-3-089



## 16 AWG, 7 Strand

| Product Code | Number of Pairs | Insulation Thickness |      | Insulated Conductor Diameter (Inch) | Drain Wire Size/ Stranding | Jacket Thickness (Mils) | Nominal Overall Diameter |       | Approximate Net Weight (Lbs/M') |
|--------------|-----------------|----------------------|------|-------------------------------------|----------------------------|-------------------------|--------------------------|-------|---------------------------------|
|              |                 | (Inch)               | (mm) |                                     |                            |                         | (Inch)                   | (mm)  |                                 |
| I83-0024     | 2               | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 35                      | .45                      | 11.43 | 95                              |
| I83-0034     | 3               | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 35                      | .48                      | 12.19 | 125                             |
| I83-0044     | 4               | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 45                      | .57                      | 14.48 | 190                             |
| I83-0054     | 5               | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 45                      | .62                      | 15.75 | 225                             |
| I83-0074     | 7               | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 45                      | .68                      | 17.27 | 290                             |
| I83-0084     | 8               | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 45                      | .73                      | 18.54 | 330                             |
| I83-0094     | 9               | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 45                      | .79                      | 20.07 | 365                             |
| I83-0124     | 12              | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 65                      | .93                      | 23.62 | 505                             |
| I83-0154     | 15              | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 65                      | 1.03                     | 26.16 | 610                             |
| I83-0194     | 19              | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 65                      | 1.08                     | 27.43 | 740                             |
| I83-0374     | 37              | .020                 | 5.08 | .10                                 | 18 AWG (16/s)              | 65                      | 1.45                     | 36.83 | 1340                            |

## 18 AWG, 7 Strand

|          |    |      |      |     |               |    |      |       |     |
|----------|----|------|------|-----|---------------|----|------|-------|-----|
| I84-0024 | 2  | .020 | 5.08 | .09 | 20 AWG (10/s) | 35 | .41  | 10.41 | 70  |
| I84-0034 | 3  | .020 | 5.08 | .09 | 20 AWG (10/s) | 35 | .43  | 10.92 | 95  |
| I84-0044 | 4  | .020 | 5.08 | .09 | 20 AWG (10/s) | 35 | .49  | 12.45 | 130 |
| I84-0054 | 5  | .020 | 5.08 | .09 | 20 AWG (10/s) | 45 | .56  | 14.22 | 169 |
| I84-0074 | 7  | .020 | 5.08 | .09 | 20 AWG (10/s) | 45 | .61  | 15.49 | 215 |
| I84-0084 | 8  | .020 | 5.08 | .09 | 20 AWG (10/s) | 45 | .66  | 16.76 | 240 |
| I84-0094 | 9  | .020 | 5.08 | .09 | 20 AWG (10/s) | 45 | .71  | 18.03 | 265 |
| I84-0124 | 12 | .020 | 5.08 | .09 | 20 AWG (10/s) | 45 | .80  | 20.32 | 340 |
| I84-0154 | 15 | .020 | 5.08 | .09 | 20 AWG (10/s) | 65 | .92  | 23.37 | 450 |
| I84-0194 | 19 | .020 | 5.08 | .09 | 20 AWG (10/s) | 65 | .97  | 24.64 | 540 |
| I84-0374 | 37 | .020 | 5.08 | .09 | 20 AWG (10/s) | 65 | 1.30 | 33.02 | 965 |

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