



Product: [2128A](#)

Fieldbus, 2 Pr #16 Str TC, XLPE Ins, IS/OS, TPE Jkt, 600V TC-ER

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Product Description

Fieldbus, 2 Pair 16AWG (7x24) Tinned Copper, XLPE Insulation, Individual & Overall Beldfoil® Shield, TPE Outer Jacket, 600V TC-ER

Technical Specifications

Product Overview

Suitable Applications: harsh environment digital and serial two-way communication, oil and gas extraction and refining sites, petrochemical, Profibus process automation or Foundation FieldBus process automation, extreme temperature environments, exposure to humidity/moisture, dust, and oil, remote locations long distance applications, etc.

Construction Details

Conductor

| Element | No. of Elements | Size | Stranding | Material |
|---------|-----------------|--------|-----------|--------------------|
| Pair(s) | 2 | 16 AWG | 7x24 | TC - Tinned Copper |

Insulation

| Element | Material | Nom. Thickness | Color Code |
|---------|----------------------------------------------|--------------------|---------------------------|
| Pair(s) | XLPE - Cross-Linked Polyethylene (Thermoset) | 0.038 in (0.97 mm) | Blue, Orange and Numbered |

Inner Shield

| Element | Shield Type | Material | Coverage | Drainwire Type | Notes |
|---------|-------------|-------------------------|----------|------------------|-----------------------|
| Pair(s) | Tape | Bi-Laminate (Alum+Poly) | 100% | 18 AWG (7x26) TC | Individually Shielded |

Outer Shield

| Shield Type | Material | Coverage | Drainwire Type |
|-------------|-------------------------|----------|------------------|
| Tape | Bi-Laminate (Alum+Poly) | 100% | 16 AWG (7x24) TC |

Outer Jacket

| Material | Nom. Thickness | Nom. Diameter | Ripcord |
|-------------------------------|-------------------|--------------------|---------|
| TPE - Thermoplastic Elastomer | 0.063 in (1.6 mm) | 0.629 in (16.0 mm) | Yes |

Overall Cable Diameter (Nominal): 0.629 in (16.0 mm)

Electrical Characteristics

Electricals

| Nom. Conductor DCR | Max. Capacitance Unbalance | Nom. Capacitance Cond-to-Cond | Nom. Characteristic Impedence | Nom. Velocity of Prop. | Max. Current |
|----------------------------|----------------------------|-------------------------------|-------------------------------|------------------------|-------------------------|
| 4.2 Ohm/1000ft (14 Ohm/km) | 1.2 pF/ft (3.9 pF/m) | 22 pF/ft (72 pF/m) | 100 Ohm | 64% | 11.6 Amps per Conductor |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss (Attenuation) |
|-----------------|-----------------------------------|
| 0.039 | 0.065 dB/100ft |

High Frequency

| Max. Insertion Loss (Attenuation) | Max./Min. Input Impedance (unFitted) |
|-----------------------------------|--------------------------------------|
| 0.091 dB/100ft | 100 Ohm |

Voltage

UL Voltage Rating

600 V (TC-ER), 600 V (CSA CIC Type TC)

Mechanical Characteristics

Temperature

| UL Temperature | Operating |
|----------------|---------------|
| 90°C Wet/Dry | -40°C to 90°C |

| | |
|--------------------|----------------------------|
| Table Notes: | -40C |
| Max. Pull Tension: | 223 lbs (101 kg) |
| Bulk Cable Weight: | 165 lbs/1000ft (246 kg/km) |

Standards and Compliance

| | |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability: | Indoor, Outdoor, Sunlight Resistance, Oil Resistance, Burial |
| Flammability / Reaction to Fire: | UL 1581 Vertical Tray, IEC 60332-3-24 |
| NEC / UL Compliance: | Article 336, TC-ER |
| AWM Compliance: | AWM I A/B II A/B |
| CEC / C(UL) Compliance: | CIC, TC |
| ISO/IEC Compliance: | IEC 61158-2 |
| European Directive Compliance: | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE) |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |
| Other Standard Compliance(s): | ISA/SP-50 Type A |

History

| | |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.459 Revision Date: 04-30-2024 |
|----------------------|--------------------------------------------------|

Part Numbers

Variants

| Item # | Color | Putup Type | Length | UPC |
|---------------|-------------|------------|----------|--------------|
| 2128A 0061000 | Blue, Light | Reel | 1,000 ft | 612825130048 |
| 2128A 0065000 | Blue, Light | Reel | 5,000 ft | 612825130055 |
| 2128A 0031000 | Orange | Reel | 1,000 ft | 612825130024 |
| 2128A 0035000 | Orange | Reel | 5,000 ft | 612825130031 |

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