



**Product:** [2120A](#)

Fieldbus, 5 Pr #18 Str TC, XLPO Ins, IS/OS, TPE Jkt, 600V TC-ER

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**Product Description**  
Fieldbus, 5 Pair 18AWG (7x26) Tinned Copper, XLPO Insulation, Individual & Overall Beldfoil® Shield, Orange 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. |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Physical Characteristics (Overall)**

| <b>Conductor</b> |     |           |                    |              |
|------------------|-----|-----------|--------------------|--------------|
| Element          | AWG | Stranding | Material           | No. of Pairs |
| Pair(s)          | 18  | 7x26      | TC - Tinned Copper | 5            |
| Conductor Count: |     | 10        |                    |              |

| <b>Insulation</b>                            |                        |
|----------------------------------------------|------------------------|
| Material                                     | Nominal Wall Thickness |
| XLPE - Cross-Linked Polyethylene (Thermoset) | 0.038 in               |

| <b>Color Chart</b> |                           |
|--------------------|---------------------------|
| Number             | Color                     |
| 1                  | Blue, Orange and Numbered |
| 2                  |                           |
| 3                  |                           |
| 4                  |                           |
| 5                  |                           |

| <b>Inner Shield</b> |                         |                     |              |                    |               |                              |
|---------------------|-------------------------|---------------------|--------------|--------------------|---------------|------------------------------|
| Type                | Material                | Material Trade Name | Coverage [%] | Drainwire Material | Drainwire AWG | Drainwire Construction n x D |
| Tape                | Bi-Laminate (Alum+Poly) | Beldfoil®           | 100%         | TC - Tinned Copper | 20            | 7x28                         |

| <b>Outer Shield</b> |                         |                     |              |                    |               |                              |
|---------------------|-------------------------|---------------------|--------------|--------------------|---------------|------------------------------|
| Type                | Material                | Material Trade Name | Coverage [%] | Drainwire Material | Drainwire AWG | Drainwire Construction n x D |
| Tape                | Bi-Laminate (Alum+Poly) | Beldfoil®           | 100%         | TC - Tinned Copper | 18            | 7x26                         |

| <b>Outer Jacket</b>           |                  |                        |         |
|-------------------------------|------------------|------------------------|---------|
| Material                      | Nominal Diameter | Nominal Wall Thickness | Ripcord |
| TPE - Thermoplastic Elastomer | 0.677 in         | 0.063 in               | Yes     |

**Electrical Characteristics**

| <b>Conductor DCR</b>  |                 |
|-----------------------|-----------------|
| Nominal Conductor DCR | 5.86 Ohm/1000ft |

**Capacitance**

| Max. Capacitance Unbalance | Nom. Capacitance Conductor to Conductor |
|----------------------------|-----------------------------------------|
| 1.2 pF/ft                  | 22 pF/ft                                |

Inductance

| Nominal Inductance |
|--------------------|
| 0.22 µH/ft         |

Impedance

| Nominal Characteristic Impedance |
|----------------------------------|
| 100 Ohm                          |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 0.039 MHz       | 0.08 dB/100ft       |

Delay

| Nominal Velocity of Propagation (VP) [%] |
|------------------------------------------|
| 64%                                      |

High Frequency

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

Current

| Element       | Max. Recommended Current [A] |
|---------------|------------------------------|
| Per Conductor | 7.6 Amps per Conductor       |

Voltage

| Description     | UL Voltage Rating |
|-----------------|-------------------|
| CSA CIC type TC | 600 V             |

|                                    |                                                                     |
|------------------------------------|---------------------------------------------------------------------|
| Electrical Characteristics Notes:  | Max Propagation Delay Change From 7.812 kHz to 39.06 kHz: 518 pS/ft |
| Other Electrical Characteristic 2: | 31.25 KBits/sec                                                     |

Temperature Range

|                              |               |
|------------------------------|---------------|
| Installation Temp Rating:    | -25°C         |
| UL Temp Rating:              | 90°C          |
| Operating Temperature Range: | -40°C to 90°C |

Mechanical Characteristics

|                              |                |
|------------------------------|----------------|
| Oil Resistance:              | Yes            |
| Bulk Cable Weight:           | 218 lbs/1000ft |
| Max. Pull Tension:           | 309 lbs        |
| Min. Bend Radius/Minor Axis: | 7 in           |

Standards

|                      |                  |
|----------------------|------------------|
| NEC Articles:        | Article 336      |
| NEC/(UL) Compliance: | TC-ER            |
| CSA AWM Compliance:  | AWM I A/B II A/B |
| ISO/IEC Compliance:  | IEC 61158-2      |
| Other Standards:     | ISA/SP-50 Type A |

Applicable Environmental and Other Programs

|                                              |                               |
|----------------------------------------------|-------------------------------|
| EU Directive 2000/53/EC (ELV):               | Yes                           |
| EU Directive 2003/11/EC (BFR):               | Yes                           |
| EU Directive 2011/65/EU (RoHS 2):            | Yes                           |
| EU Directive 2012/19/EU (WEEE):              | Yes                           |
| EU Directive 2015/863/EU (RoHS 2 amendment): | Yes                           |
| EU Directive Compliance:                     | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                                  | Yes                           |

|                             |     |
|-----------------------------|-----|
| MII Order #39 (China RoHS): | Yes |
|-----------------------------|-----|

Suitability

|                                    |     |
|------------------------------------|-----|
| Suitability - Burial:              | Yes |
| Suitability - Indoor:              | Yes |
| Suitability - Oil Resistance:      | Yes |
| Suitability - Outdoor:             | Yes |
| Suitability - Sunlight Resistance: | Yes |

Flammability, LSOH, Toxicity Testing

|                    |                      |
|--------------------|----------------------|
| UL Flammability:   | UL1581 Vertical Tray |
| IEC Flammability:  | IEC 60332-3-24       |
| UL voltage rating: | 600 V RMS            |

Plenum/Non-Plenum

|               |    |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Related Part Numbers

Variants

| Item #        | Color       | Put-Up Type | Length   | UPC          |
|---------------|-------------|-------------|----------|--------------|
| 2120A 0061000 | Blue, Light | Reel        | 1,000 ft | 612825129592 |
| 2120A 0065000 | Blue, Light | Reel        | 5,000 ft | 612825129608 |
| 2120A 0031000 | Orange      | Reel        | 1,000 ft | 612825129578 |
| 2120A 0035000 | Orange      | Reel        | 5,000 ft | 612825129585 |

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.466 Revision Date: 05-05-2023 |
|----------------------|--------------------------------------------------|

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