



REPRESENTATIVE IMAGE

**Product:** [3076F](#)

Fieldbus, 1 Pr #18 Str TC, PP Ins, OS, PVC Jkt, Flexible SUN RES OIL RES, PLTC-ER, ITC-ER, CMX-Outdoor, CM

[Request Sample](#)

## Product Description

Fieldbus, 1 Pair 18AWG (7x26) Tinned Copper, PP Insulation, Overall Beldfoil® Shield, PVC Outer Jacket, Flexible SUN RES OIL RES, PLTC-ER, ITC-ER, CMX-Outdoor, CM

## Technical Specifications

### Product Overview

**Suitable Applications:** exposure to rodent, crush, or cut through force, 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 | Number of Element | Size   | Stranding | Material           |
|---------|-------------------|--------|-----------|--------------------|
| Pair(s) | 1                 | 18 AWG | 7x26      | TC - Tinned Copper |

#### Insulation

| Element | Material           | Nom. Thickness     | Color Code    |
|---------|--------------------|--------------------|---------------|
| Pair(s) | PP - Polypropylene | 0.022 in (0.56 mm) | Blue & Orange |

#### Outer Shield

| Shield Type | Material                | Coverage | Drainwire Type   |
|-------------|-------------------------|----------|------------------|
| Tape        | Bi-Laminate (Alum+Poly) | 100%     | 20 AWG (7x28) TC |

#### Outer Jacket

| Material                 | Nom. Thickness    | Nom. Diameter      |
|--------------------------|-------------------|--------------------|
| PVC - Polyvinyl Chloride | 0.050 in (1.3 mm) | 0.280 in (7.11 mm) |

Overall Cable Diameter (Nominal): 0.280 in (7.11 mm)

### Electrical Characteristics

#### Electricals

| Element | Nom. Conductor DCR            | Max. Capacitance Unbalance | Nom. Capacitance Cond-to-Shield | Nom. Characteristic Impedance | Nom. Velocity of Prop. | Max. Current           |
|---------|-------------------------------|----------------------------|---------------------------------|-------------------------------|------------------------|------------------------|
| Pair(s) | 5.86 Ohm/1000ft (19.2 Ohm/km) | 1.2 pF/ft (3.9 pF/m)       | 45 pF/ft                        | 100 Ohm                       | 66%                    | 5.2 Amps per Conductor |

Nom. Outer Shield DCR: 7.5 Ohm/1000ft (25 Ohm/km)

#### High Frequency (Nominal/Typical)

| Element | Frequency [MHz] | Nom. Insertion Loss (Attenuation) |
|---------|-----------------|-----------------------------------|
| Pair(s) | 0.039           | 0.08 dB/100ft                     |

#### High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Max./Min. Input Impedance (unFitted) |
|-----------------|-----------------------------------|--------------------------------------|
| 0.031           | 0.091 dB/100ft                    | 100 Ohm                              |

#### Voltage

UL Voltage Rating

300 V (CM, PLTC-ER), 150 V (ITC)

## Mechanical Characteristics

### Temperature

| UL Temperature | Operating       |
|----------------|-----------------|
| 105°C          | -40°C to +105°C |

### Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 6.5 in (170 mm) | 6.5 in            |

|                    |                          |
|--------------------|--------------------------|
| Max. Pull Tension: | 60 lbs (27 kg)           |
| Bulk Cable Weight: | 38 lbs/1000ft (57 kg/km) |

## Standards and Compliance

|                                  |   |
|----------------------------------|---|
| Environmental Suitability:       | Indoor, Outdoor, Sunlight Resistance, Oil Resistance, Oil Resistance, Burial  |
| Flammability / Reaction to Fire: | UL 1666 Riser, FT4, FT4, IEEE 1202, IEC 60332-1-2   |
| CPR Compliance:                  | CPR Euroclass: Eca  |
| NEC / UL Compliance:             | Article 725, Article 727, Article 800, CM, CMX-Outdoor, ITC-ER, PLTC-ER   |
| CEC / C(UL) Compliance:          | CMG   |
| IEEE Compliance:                 | 1202, IEEE 383 Vertical Tray Flame Test (70,000 BTU)  |
| 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) |
| Other Standard Compliance(s):    | ISA/SP-50 Type A  |

## Product Notes

|        |   |
|--------|---|
| Notes: | Fieldbus: Orange jacket. Profibus PA: Intrinsically Safe Blue jacket. Jacket diameter tolerance: +/- .010 |
|--------|---|

## History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.441 Revision Date: 12-15-2021 |
|----------------------|--|

## Part Numbers

### Variants

| Item #         | Color       | Putup Type | Length   | UPC          |
|----------------|-------------|------------|----------|--------------|
| 3076F 0061000  | Blue, Light | Reel       | 1,000 ft | 612825140269 |
| 3076F 00310000 | Orange      |            |          | 612825140214 |
| 3076F 003250   | Orange      | Reel       | 250 ft   | 612825140221 |
| 3076F 003500   | Orange      | Reel       | 500 ft   | 612825140245 |
| 3076F 0031000  | Orange      | Reel       | 1,000 ft | 612825140207 |
| 3076F 0032500  | Orange      | Reel       | 2,500 ft | 612825140238 |
| 3076F 0035000  | Orange      | Reel       | 5,000 ft | 612825140252 |

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