

## 3076F Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable



For more Information  
please call

1-800-Belden1



### General Description:

1 pair 18 AWG stranded (7x26) tinned copper conductors, polyolefin insulation, polyolefin filler, Beldfoil® shield (100% coverage), tinned copper drain wire, binder, PVC jacket. Fieldbus Foundation Registered Product.

### Physical Characteristics (Overall)

#### Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material | Dia. (mm) |
|---------|-----|-----------|--------------------|-----------|
| 1       | 18  | 7x26      | TC - Tinned Copper | 1.168     |

Total Number of Conductors: 2

#### Insulation

Insulation Material:

| Insulation Material |
|---------------------|
| PO - Polyolefin     |

#### Outer Shield

Outer Shield Material:

| Outer Shield Trade Name | Type | Outer Shield Material        | Coverage (%) |
|-------------------------|------|------------------------------|--------------|
| Beldfoil®               | Tape | Aluminum Foil-Polyester Tape | 100          |

Outer Shield Drain Wire AWG:

| AWG | Stranding | Drain Wire Conductor Material |
|-----|-----------|-------------------------------|
| 20  | 7x28      | TC - Tinned Copper            |

#### Outer Jacket

Outer Jacket Material:

| Outer Jacket Material    |
|--------------------------|
| PVC - Polyvinyl Chloride |

Outer Jacket Diameter:

| Nom. Dia. (mm) |
|----------------|
| 7.112          |

#### Overall Cable

Overall Cabling Fillers: Polypropylene

Overall Cabling Lay Length & Direction:

| Length (mm) | Twists (twist/m) |
|-------------|------------------|
| 57.150      | 17.3893          |

### Mechanical Characteristics (Overall)

Operating Temperature Range: -40°C To +105°C

UL Temperature Rating: 105°C

Bulk Cable Weight: 56.552 Kg/Km

Max. Recommended Pulling Tension: 266.892 N

Min. Bend Radius/Minor Axis: 63.500 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC(UL) Specification: CM, CMX-Outdoor, PLTC-ER

NEC Articles: 725, 727, 800

CEC/C(UL) Specification: CMG

EU Directive 2011/65/EU (ROHS II): Yes

EU CE Mark: Yes

## METRIC MEASUREMENT VERSION

### 3076F Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable

|                                       |            |
|---------------------------------------|------------|
| EU Directive 2000/53/EC (ELV):        | Yes        |
| EU Directive 2002/95/EC (RoHS):       | Yes        |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2004 |
| EU Directive 2002/96/EC (WEEE):       | Yes        |
| EU Directive 2003/11/EC (BFR):        | Yes        |
| CA Prop 65 (CJ for Wire & Cable):     | Yes        |
| MII Order #39 (China RoHS):           | Yes        |
| Other Specification:                  | ITC-ER     |

#### Flame Test

|                   |  |
|-------------------|--|
| UL Flame Test:    | UL1666 Riser   |
| C(UL) Flame Test: | FT4  |
| IEEE Flame Test:  | 1202, IEEE 383 Vertical Tray Flame Test (70,000 BTU) |

#### Suitability

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

#### Plenum/Non-Plenum

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

### Electrical Characteristics (Overall)

#### Unaveraged Impedance:

| Freq. (MHz) | Impedance (Ohm) |
|-------------|-----------------|
| 0.031       | 100.000         |

#### Nom. Inductance:

| Inductance (µH/m) |
|-------------------|
| 0.62339           |

#### Nom. Capacitance Conductor to Shield:

| Capacitance (pF/m) |
|--------------------|
| 147.645            |

#### Nom. Mutual Capacitance:

| Capacitance (pF/m) |
|--------------------|
| 78.744             |

#### Maximum Capacitance Unbalance:

| Capacitance (pF/m) |
|--------------------|
| 3.937              |

#### Nominal Velocity of Propagation:

| VP (%) |
|--------|
| 66     |

#### Nom. Conductor DC Resistance:

| DCR @ 20°C (Ohm/km) |
|---------------------|
| 19.2267             |

#### Nominal Outer Shield DC Resistance:

| DCR @ 20°C (Ohm/km) |
|---------------------|
| 24.608              |

#### Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100m) |
|-------------|-----------------------|
| 0.039       | 0.262                 |

#### Max. Attenuation:

| ()       | Freq. (MHz) | Attenuation (dB/100m) |
|----------|-------------|-----------------------|
| 0.298571 | 0.039       | 0.300                 |

#### Max. Operating Voltage - UL:

| Voltage   |
|-----------|
| 300 V RMS |

#### Max. Recommended Current:

| Description | Current |
|-------------|---------|
|-------------|---------|

## METRIC MEASUREMENT VERSION

### 3076F Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable

|               |          |
|---------------|----------|
| Per Conductor | 5.2 Amps |
|---------------|----------|

**Other Electrical Characteristic 1:** Max Propagation Delay Change From 7.812 kHz to 39.06 kHz: 518 pS/ft

**Other Electrical Characteristic 2:** 31.25 KBits/sec

#### Notes (Overall)

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

#### Related Documents:

[FieldbusCertificate-3076F.pdf](#) - This is a Foundation H1 Cable Registration Certification for 3076F.

#### Put Ups and Colors:

| Item #         | Putup     | Ship Weight | Color       | Notes | Item Desc           |
|----------------|-----------|-------------|-------------|-------|---------------------|
| 3076F 0031000  | 1,000 FT  | 48.000 LB   | ORANGE      | C     | TW PR #18 PP FS PVC |
| 3076F 00310000 | 10,000 FT | 510.000 LB  | ORANGE      | C N   | TW PR #18 PP FS PVC |
| 3076F 003250   | 250 FT    | 14.000 LB   | ORANGE      | C     | TW PR #18 PP FS PVC |
| 3076F 0032500  | 2,500 FT  | 120.000 LB  | ORANGE      | C     | TW PR #18 PP FS PVC |
| 3076F 003500   | 500 FT    | 25.500 LB   | ORANGE      | C     | TW PR #18 PP FS PVC |
| 3076F 0035000  | 5,000 FT  | 240.000 LB  | ORANGE      | C N   | TW PR #18 PP FS PVC |
| 3076F 0061000  | 1,000 FT  | 48.000 LB   | BLUE, LIGHT | C     | TW PR #18 PP FS PVC |

**Notes:**

C = CRATE REEL PUT-UP.

N = FINAL PUT-UP LENGTH MAY VARY -0% TO +10% FROM LENGTH SHOWN.

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