

METRIC MEASUREMENT VERSION

2107a Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable



For more Information
please call

1-800-Belden1



General Description:

24 pair, 18 AWG Stranded (7x26) Tinned Copper, 300V, Individually Foil Shielded Pairs, Overall Beldfoil Shield, Tinned Copper Drain Wires, XLP Insulation, Sunlight- and oil-resistant FR-PVC jacket

Physical Characteristics (Overall)

Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 24 | 18 | 7x26 | TC - Tinned Copper |

Total Number of Conductors: 48

Insulation

Insulation Material:

| Insulation Material |
|-------------------------------|
| XLP - Cross-linked Polyolefin |

Inner Shield

Inner Shield Material:

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

Inner Shield Drain Wire AWG:

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

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 |
|-----|-----------|------------|--------------------|
| 18 | 7x26 | | TC - Tinned Copper |

Outer Jacket

Outer Jacket Material:

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

Outer Jacket Ripcord: Yes

Overall Cable

Overall Nominal Diameter: 35.281 mm

Pair

Pair Color Code Chart:

| Number | Color |
|--------|--------------------------|
| 1 | Blue & Orange Numbered 1 |
| 2 | Blue & Orange Numbered 2 |
| 3 | Blue & Orange Numbered 3 |
| 4 | Blue & Orange Numbered 4 |

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| | |
|----|---------------------------|
| 5 | Blue & Orange Numbered 5 |
| 6 | Blue & Orange Numbered 6 |
| 7 | Blue & Orange Numbered 7 |
| 8 | Blue & Orange Numbered 8 |
| 9 | Blue & Orange Numbered 9 |
| 10 | Blue & Orange Numbered 10 |
| 11 | Blue & Orange Numbered 11 |
| 12 | Blue & Orange Numbered 12 |
| 13 | Blue & Orange Numbered 13 |
| 14 | Blue & Orange Numbered 14 |
| 15 | Blue & Orange Numbered 15 |
| 16 | Blue & Orange Numbered 16 |
| 17 | Blue & Orange Numbered 17 |
| 18 | Blue & Orange Numbered 18 |
| 19 | Blue & Orange Numbered 19 |
| 20 | Blue & Orange Numbered 20 |
| 21 | Blue & Orange Numbered 21 |
| 22 | Blue & Orange Numbered 22 |
| 23 | Blue & Orange Numbered 23 |
| 24 | Blue & Orange Numbered 24 |

Mechanical Characteristics (Overall)

| | |
|--|--|
| Operating Temperature Range: | -25°C Cold Impact, -40°C To +90°C, -55°C Cold Bend |
| UL Temperature Rating: | 90°C Wet/Dry |
| Installation Temperature Rating: | -25°C |
| Bulk Cable Weight: | 1186.095 Kg/Km |
| Max. Recommended Pulling Tension: | 6227.480 N |
| Min. Bend Radius/Minor Axis: | 355.600 mm |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|--|--|
| NEC(UL) Specification: | CMG, ITC, PLTC-ER |
| CSA Specification: | AWM I A/B II A/B, C22.2 #230 Type TC; C22.2#239 Type CIC |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| EU CE Mark: | Yes |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| 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: | IEC 61158-2 (ISA/SP-50) Type A |

Flame Test

| | |
|------------------------|-------------------------|
| UL Flame Test: | UL1685 FT4 Loading |
| CSA Flame Test: | FT4 |
| IEC Flame Test: | 60332-3-24 (Category C) |

Suitability

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

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Oil Resistance: Yes

Plenum/Non-Plenum

Plenum (Y/N): No

Electrical Characteristics (Overall)

Unaveraged Impedance:

| Description | Freq. (MHz) | Start Freq. (MHz) | Stop Freq. (MHz) | Impedance (Ohm) |
|-------------|-------------|-------------------|------------------|-----------------|
| | .03125 | | | 100 |

Nom. Inductance:

| Inductance (µH/m) |
|-------------------|
| 0.722 |

Nom. Capacitance Conductor to Conductor:

| Capacitance (pF/m) |
|--------------------|
| 72.182 |

Maximum Capacitance Unbalance:

| Capacitance (pF/m) |
|--------------------|
| 3.9372 |

Nominal Velocity of Propagation:

| VP (%) |
|--------|
| 64.000 |

Nom. Conductor DC Resistance:

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

Nom. Attenuation:

| Description | Freq. (MHz) | Start Freq. (MHz) | Stop Freq. (MHz) | Attenuation (dB/100m) |
|-------------|-------------|-------------------|------------------|-----------------------|
| | .039 | | | 0.26248 |

Max. Attenuation:

| () | Freq. (MHz) | Attenuation (dB/100m) |
|----------|-------------|-----------------------|
| 0.298571 | 0.039 | 0.299 |

Max. Operating Voltage - UL:

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

Max. Operating Voltage - Other:

| Voltage | Description |
|----------|-----------------|
| 300V RMS | CSA CIC type TC |

Max. Recommended Current:

| Description | Current |
|---------------|----------|
| Per Conductor | 5.4 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

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-------------|-------|--------------------------------|
| 2107A 0031000 | 1,000 FT | 965.000 LB | ORANGE | | 300V/PR/24/18AWG/7T/XLPE/ORGBL |
| 2107A 0061000 | 1,000 FT | 965.000 LB | BLUE, LIGHT | | 300V/PR/24/18AWG/7T/XLPE/ORGBL |

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