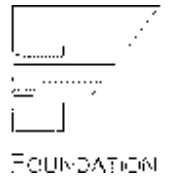


METRIC MEASUREMENT VERSION

## 2112A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable



For more Information  
please call

1-800-Belden1



### General Description:

8 pair, 16 AWG Stranded (7x24) Tinned Copper, 300V, Individually Foil Shielded Pairs, Overall Beldfoil (100% Shield Coverage), Tinned Copper Drain Wires, XLP Insulation, Sunlight- and oil-resistant FR-PVC jacket

### Physical Characteristics (Overall)

#### Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 8       | 16  | 7x24      | TC - Tinned Copper |

Total Number of Conductors: 16

#### 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 |
|-----|-----------|--------------------|
| 18  | 7x26      | 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 |
|-----|-----------|------------|--------------------|
| 16  | 7x24      |            | TC - Tinned Copper |

#### Outer Jacket

Outer Jacket Material:

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

Outer Jacket Ripcord: Yes

#### Overall Cable

Overall Nominal Diameter: 24.943 mm

#### Pair

Pair Color Code Chart:

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

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|   |                          |
|---|--------------------------|
| 4 | Blue & Orange Numbered 4 |
| 5 | Blue & Orange Numbered 5 |
| 6 | Blue & Orange Numbered 6 |
| 7 | Blue & Orange Numbered 7 |
| 8 | Blue & Orange Numbered 8 |

### Mechanical Characteristics (Overall)

|  |  |
|--|--|
| <b>Operating Temperature Range:</b>      | -25°C Cold Impact, -40°C To +90°C, -55°C Cold Bend |
| <b>UL Temperature Rating:</b>            | 90°C Wet/Dry                                       |
| <b>Installation Temperature Rating:</b>  | -25°C  |
| <b>Bulk Cable Weight:</b>                | 711.360 Kg/Km                                      |
| <b>Max. Recommended Pulling Tension:</b> | 3496.285 N   |
| <b>Min. Bend Radius/Minor Axis:</b>      | 254 mm   |

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

|  |  |
|--|--|
| <b>NEC/(UL) Specification:</b>               | CMG, ITC, PLTC-ER  |
| <b>CSA Specification:</b>                    | AWM I A/B II A/B, C22.2 #230 Type TC; C22.2#239 Type CIC |
| <b>EU Directive 2011/65/EU (ROHS II):</b>    | Yes  |
| <b>EU CE Mark:</b>                           | Yes  |
| <b>EU Directive 2000/53/EC (ELV):</b>        | Yes  |
| <b>EU Directive 2002/95/EC (RoHS):</b>       | Yes  |
| <b>EU Directive 2002/96/EC (WEEE):</b>       | Yes  |
| <b>EU Directive 2003/11/EC (BFR):</b>        | Yes  |
| <b>CA Prop 65 (CJ for Wire &amp; Cable):</b> | Yes  |
| <b>MII Order #39 (China RoHS):</b>           | Yes  |
| <b>Other Specification:</b>                  | IEC 61158-2 (ISA/SP-50) Type A                           |

#### Flame Test

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

#### Suitability

|                               |     |
|-------------------------------|-----|
| <b>Suitability - Indoor:</b>  | Yes |
| <b>Suitability - Outdoor:</b> | Yes |
| <b>Sunlight Resistance:</b>   | Yes |
| <b>Oil Resistance:</b>        | Yes |

#### Plenum/Non-Plenum

|                      |    |
|----------------------|----|
| <b>Plenum (Y/N):</b> | 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:

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**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)**

13.780

**Nom. Attenuation:**

**Freq. (MHz) Attenuation (dB/100m)**

|       |       |
|-------|-------|
| 0.039 | 0.213 |
|-------|-------|

**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 | 10.1 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                      |
|---------------|----------|--------------|-------------|-------|--------------------------------|
| 2112A 0031000 | 1,000 FT | 612.000 LB   | ORANGE      |       | 300V/PR/08/16AWG/7T/XLPE/ORGBL |
| 2112A 0035000 | 5,000 FT | 2,915.000 LB | ORANGE      |       | 300V/PR/08/16AWG/7T/XLPE/ORGBL |
| 2112A 0061000 | 1,000 FT | 612.000 LB   | BLUE, LIGHT |       | 300V/PR/08/16AWG/7T/XLPE/ORGBL |
| 2112A 0065000 | 5,000 FT | 2,915.000 LB | BLUE, LIGHT |       | 300V/PR/08/16AWG/7T/XLPE/ORGBL |

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