

METRIC MEASUREMENT VERSION

## 2122A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable



For more Information  
please call

1-800-Belden1



### General Description:

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

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
12	18	7x26	TC - Tinned Copper

Total Number of Conductors: 24

#### 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
TPE - Thermoplastic Elastomer

Outer Jacket Ripcord: Yes

#### Overall Cable

Overall Nominal Diameter: 25.781 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

### Mechanical Characteristics (Overall)

<b>Operating Temperature Range:</b>	-25°C Cold Impact, -40°C To +90°C, -55°C Cold Bend
<b>Bulk Cable Weight:</b>	708.383 Kg/Km
<b>Max. Recommended Pulling Tension:</b>	3162.670 N
<b>Min. Bend Radius/Minor Axis:</b>	260.350 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

<b>NEC/(UL) Specification:</b>	TC-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>	UL1581 Vertical Tray
<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
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### Electrical Characteristics (Overall)

#### Unaveraged Impedance:

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

#### Nom. Inductance:

<b>Inductance (µH/m)</b>
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)**

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**

600 V RMS

**Max. Operating Voltage - Other:**

Voltage	Description
600V 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
2122A 0031000	1,000 FT	610.000 LB	ORANGE		600V/PR/12/18AWG/7T/XLPE/ORGBL
2122A 0035000	5,000 FT	2,900.000 LB	ORANGE		600V/PR/12/18AWG/7T/XLPE/ORGBL
2122A 0061000	1,000 FT	610.000 LB	BLUE, LIGHT		600V/PR/12/18AWG/7T/XLPE/ORGBL
2122A 0065000	5,000 FT	2,900.000 LB	BLUE, LIGHT		600V/PR/12/18AWG/7T/XLPE/ORGBL

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