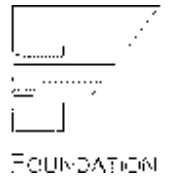


METRIC MEASUREMENT VERSION

## 2102A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable



For more Information  
please call

1-800-Belden1



### General Description:

5 pair, 18 AWG stranded (7x26) tinned copper conductors, XLP insulation, individual and overall Beldfoil® shields (100% coverage), tinned copper drain wire, sunlight- and oil-resistant FR-PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
5	18	7x26	TC - Tinned Copper

Total Number of Conductors: 10

#### 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: 17.196 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

## 2102A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable

5	Blue & Orange Numbered 5
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### 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:	324.428 Kg/Km
Max. Recommended Pulling Tension:	1374.494 N
Min. Bend Radius/Minor Axis:	177.800 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
Oil Resistance:	Yes

#### Plenum/Non-Plenum

Plenum (Y/N):	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:

Inductance (µH/m)	0.722
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#### Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m)	72.182
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#### Maximum Capacitance Unbalance:

Capacitance (pF/m)	
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METRIC MEASUREMENT VERSION

## 2102A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable

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	7.6 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
2102A 0031000	1,000 FT	312.000 LB	ORANGE		300V/PR/05/18AWG/7T/XLPE/ORGBL
2102A 0035000	5,000 FT	1,560.000 LB	ORANGE		300V/PR/05/18AWG/7T/XLPE/ORGBL
2102A 0061000	1,000 FT	251.000 LB	BLUE, LIGHT		300V/PR/05/18AWG/7T/XLPE/ORGBL
2102A 0065000	5,000 FT	1,255.000 LB	BLUE, LIGHT		300V/PR/05/18AWG/7T/XLPE/ORGBL

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