

METRIC MEASUREMENT VERSION

2108A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable



For more Information
please call

1-800-Belden1



General Description:

50 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
50	18	7x26	TC - Tinned Copper

Total Number of Conductors: 100

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: 49.454 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

2108A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable

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
25	Blue & Orange Numbered 25
26	Blue & Orange Numbered 26
27	Blue & Orange Numbered 27
28	Blue & Orange Numbered 28
29	Blue & Orange Numbered 29
30	Blue & Orange Numbered 30
31	Blue & Orange Numbered 31
32	Blue & Orange Numbered 32
33	Blue & Orange Numbered 33
34	Blue & Orange Numbered 34
35	Blue & Orange Numbered 35
36	Blue & Orange Numbered 36
37	Blue & Orange Numbered 37
38	Blue & Orange Numbered 38
39	Blue & Orange Numbered 39
40	Blue & Orange Numbered 40
41	Blue & Orange Numbered 41
42	Blue & Orange Numbered 42
43	Blue & Orange Numbered 43
44	Blue & Orange Numbered 44
45	Blue & Orange Numbered 45
46	Blue & Orange Numbered 46
47	Blue & Orange Numbered 47
48	Blue & Orange Numbered 48
49	Blue & Orange Numbered 49
50	Blue & Orange Numbered 50

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:	2651.972 Kg/Km
Max. Recommended Pulling Tension:	12864.194 N
Min. Bend Radius/Minor Axis:	495.300 mm

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMG, ITC, PLTC-ER
--------------------------------	-------------------

2108A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable

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
----------------------	----

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

METRIC MEASUREMENT VERSION

2108A Multi-Conductor - DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cable

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
2108A 0031000	1,000 FT	2,126.000 LB	ORANGE		300V/PR/50/18AWG/7T/XLPE/ORGBL
2108A 0061000	1,000 FT	2,126.000 LB	BLUE, LIGHT		300V/PR/50/18AWG/7T/XLPE/ORGBL

Revision Number: 1 Revision Date: 09-29-2014

© 2019 Belden, Inc
All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 2014/35/EU).