



Product: [2108A](#)

Fieldbus, 50 Pr #18 Str TC, XLPO Ins, IS/OS, TPE Jkt, CMG

[Request Sample](#)

Product Description

Fieldbus, 50 Pair 18AWG (7x26) Tinned Copper, XLPO Insulation, Individual & Overall Beldfoil® Shield, Orange TPE Outer Jacket, CMG

Technical Specifications

Product Overview

Suitable Applications:	harsh environment digital and serial two-way communication, oil and gas extraction and refining sites, petrochemical, Profibus process automation or Foundation FieldBus process automation, extreme temperature environments, exposure to humidity/moisture, dust, and oil, remote locations long distance applications, etc.
------------------------	--

Physical Characteristics (Overall)

Conductor				
Element	AWG	Stranding	Material	No. of Pairs
Pair(s)	18	7x26	TC - Tinned Copper	50
Conductor Count:		100		

Insulation	
Material	Nominal Wall Thickness
XLPE - Cross-Linked Polyethylene (Thermoset)	0.032 in

Color Chart	
Number	Color
1	Blue, Orange and Numbered

Inner Shield						
Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	Bi-Laminate (Alum+Poly)	Beldfoil®	100%	TC - Tinned Copper	20	7x28

Outer Shield						
Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	Bi-Laminate (Alum+Poly)	Beldfoil®	100%	TC - Tinned Copper	18	7x26

Outer Jacket				
Material	Nominal Diameter	Nominal Wall Thickness	Ripcord	
TPE - Thermoplastic Elastomer	1.947 in	0.12 in	Yes	

Electrical Characteristics

Conductor DCR	
Nominal Conductor DCR	
5.86 Ohm/1000ft	

Capacitance	
Max. Capacitance Unbalance	Nom. Capacitance Conductor to Conductor
1.2 pF/ft	22 pF/ft

Inductance

Nominal Inductance
0.22 µH/ft

Impedance

Nominal Characteristic Impedance
120 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
0.039 MHz	0.08 dB/100ft

Delay

Nominal Velocity of Propagation (VP) [%]
64%

High Frequency

Max. Insertion Loss (Attenuation)	Max./Min. Input Impedance (unFitted)
0.091 dB/100ft	100 Ohm

Current

Element	Max. Recommended Current [A]
Per Conductor	5.4 Amps per Conductor

Voltage

Description	UL Voltage Rating
CSA CIC type TC	300 V

Electrical Characteristics Notes:	Max Propagation Delay Change From 7.812 kHz to 39.06 kHz: 518 pS/ft
Other Electrical Characteristic 2:	31.25 KBits/sec

Temperature Range

Installation Temp Rating:	-25°C
UL Temp Rating:	90°C
Operating Temperature Range:	-40°C to 90°C

Mechanical Characteristics

Oil Resistance:	Yes
Bulk Cable Weight:	1782 lbs/1000ft
Max. Pull Tension:	2892 lbs
Min. Bend Radius/Minor Axis:	19.5 in

Standards

NEC Articles:	Article 725, Article 727, Article 800
NEC/(UL) Compliance:	CMG, ITC, PLTC-ER
CEC/C(UL) Compliance:	CIC, TC
CSA AWM Compliance:	AWM I A/B II A/B
ISO/IEC Compliance:	IEC 61158-2
Other Standards:	ISA/SP-50 Type A

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Burial:	Yes
Suitability - Indoor:	Yes
Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1685 UL Loading
IEC Flammability:	IEC 60332-3-24
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
---------------	----

Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
2108A 0061000	Blue, Light	Reel	1,000 ft	612825129134
2108A 0031000	Orange	Reel	1,000 ft	612825129127

History

Update and Revision:	Revision Number: 0.268 Revision Date: 05-05-2023
----------------------	--

© 2023 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 here in 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 "ASIS" 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 all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information 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. The 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.