



Product: [2109A](#)

Fieldbus, 1 Pr #16 Str TC, XLPO Ins, OS, TPE Jkt, CMG

Request Sample

Product Description

Fieldbus, 1 Pair 16AWG (7x24H) Tinned Copper, XLPO Insulation, 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.
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Physical Characteristics (Overall)

Conductor				
Element	AWG	Stranding	Material	No. of Pairs
Pair(s)	16	7x24	TC - Tinned Copper	1
Conductor Count:			2	
Total Number of Pairs:			1	

Material
XLPE - Cross-Linked Polyethylene (Thermoset)

Color Chart	
Number	Color
1	Blue, Orange and Numbered

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

Outer Shield
Material
Bi-Laminate (Alum+Poly)

Outer Jacket		
Material	Nominal Diameter	Ripcord
TPE - Thermoplastic Elastomer	0.365 in	Yes

Electrical Characteristics

Conductor DCR	
Nominal Conductor DCR	
4.2 Ohm/1000ft	

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

Inductance

Nominal Inductance
0.22 µH/ft

Impedance

Nominal Characteristic Impedance
120 Ohm

High Frequency (Nominal/Typical)

Nom. Insertion Loss
0.065 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	11.6 Amps per Conductor

Voltage

Description	UL Voltage Rating	Voltage Rating [V]
CSA CIC type TC	300 V	300 V RMS

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 Wet/Dry
Operating Temperature Range:	-25°C Cold Impact -40°C to +90°C -55°C Cold Bend

Mechanical Characteristics

Bulk Cable Weight:	67 lbs/1000ft
Max. Pull Tension:	93 lbs
Min. Bend Radius/Minor Axis:	3.75 in

Standards

NEC Articles:	Article 725, Article 727, Article 800
NEC/(UL) Compliance:	CMG, ITC, PLTC-ER
CSA AWM Compliance:	AWM I A/B II A/B, C22.2 #230 Type TC; C22.2#239 Type CIC

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	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 - Indoor:	Yes
Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

UL Flammability:	UL1685 FT4 Loading
IEC Flammability:	IEC 60332-3-24
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
2109A 0061000	Blue, Light	Reel	1,000 ft	612825129172
2109A 0065000	Blue, Light	Reel	5,000 ft	612825129189
2109A 0035000	Orange	Reel	5,000 ft	612825129165

History

Update and Revision:	Revision Number: 0.481 Revision Date: 05-05-2023
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