



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

##### Insulation

Material
XLPE - Cross-Linked Polyethylene (Thermoset)

##### Color Chart

Number	Color
1	Blue, Orange and Numbered

##### Inner Shield

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)
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0.091 dB/100ft	100 Ohm
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## Current

Element	Max. Recommended Current [A]
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Per Conductor	11.6 Amps per Conductor
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## Voltage

Description	UL Voltage Rating	Voltage Rating [V]
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CSA CIC type TC	300 V	300 V RMS
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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
CSA Flammability:	FT4
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: 0.479 Revision Date: 11-09-2022
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