



Product: [2121A](#)

Fieldbus, 8 Pr #18 Str TC, XLPO Ins, IS/OS, TPE Jkt, 600V TC-ER

[Request Sample](#)

Product Description

Fieldbus, 8 Pair 18AWG (7x26) Tinned Copper, XLPO Insulation, Individual & Overall Beldfoil® Shield, Orange TPE Outer Jacket, 600V TC-ER

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)	18	7x26	TC - Tinned Copper	8

Conductor Count:	16
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Insulation

Material	Nominal Wall Thickness
XLPE - Cross-Linked Polyethylene (Thermoset)	0.038 in

Color Chart

Number	Color
1	Blue, Orange and Numbered
2	
3	
4	
5	
6	
7	
8	

Inner Shield Material

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 Material

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

Material	Nominal Diameter	Nominal Wall Thickness	Ripcord
TPE - Thermoplastic Elastomer	0.8 in	0.063 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 μ H/ft

Impedance

Nominal Characteristic Impedance
100 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 Freq

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

Current

Element	Max. Recommended Current [A]
Per Conductor	7.6 Amps per Conductor

Voltage

Description	UL Voltage Rating
CSA CIC type TC	600 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 Temp Range:	-40°C to 90°C

Mechanical Characteristics

Oil Resistance:	Yes
Bulk Cable Weight:	313 lbs/1000ft
Max. Pull Tension:	481 lbs
Min. Bend Radius/Minor Axis:	8 in

Standards

NEC Articles:	Article 336
NEC/(UL) Compliance:	TC-ER
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, LS0H, Toxicity Testing

UL Flammability:	UL1581 Vertical Tray
CSA Flammability:	FT4
IEC Flammability:	60332-3-24 (Category C)
UL voltage rating:	600 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Part Number

Variants

Item #	Color	Put-Up Type	Length	UPC
2121A 0061000	Blue, Light	Reel	1,000 ft	612825129660
2121A 0065000	Blue, Light	Reel	5,000 ft	612825129677
2121A 0031000	Orange	Reel	1,000 ft	612825129646
2121A 0035000	Orange	Reel	5,000 ft	612825129653

History

Update and Revision:	Revision Number: 0.435 Revision Date: 09-10-2021
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