



Product: [2133A](#)

Fieldbus, 20 Pr #16 Str TC, XLPO Ins, IS/OS, TPE Jkt, 600V TC-ER

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Product Description

Fieldbus, 20 Pair 16AWG (7x24H) 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)	16	7x24	TC - Tinned Copper	20

Conductor Count:	40
Total Number of Pairs:	20

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	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Inner Shield

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG

Tape	Bi-Laminate (Alum+Poly)	Beldfoil®	100%	TC - Tinned Copper	18
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Outer Shield

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Bi-Laminate (Alum+Poly)	Beldfoil®	100%	TC - Tinned Copper	16

Outer Jacket

Material	Nominal Diameter	Nominal Wall Thickness
TPE - Thermoplastic Elastomer	1.469 in	0.085 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR
4.2 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Conductor
22 pF/ft

Inductance

Nominal Inductance
0.22 µH/ft

Impedance

Nominal Characteristic Impedance
100 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
0.039 MHz	0.065 dB/100ft

Delay

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

Current

Max. Recommended Current [A]
7.2 Amps per Conductor

Voltage

UL Voltage Rating
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

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

Mechanical Characteristics

Oil Resistance:	Yes
Bulk Cable Weight:	1037 lbs/1000ft
Max. Pull Tension:	1911 lbs
Min. Bend Radius/Minor Axis:	14.75 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

Suitability

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

Flammability, LS0H, Toxicity Testing

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

Plenum/Non-Plenum

Plenum (Y/N):	No
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Related Part Numbers

Variants

Item #	Color	UPC
2133A 0061000	Blue, Light	612825130376
2133A 0031000	Orange	612825130369

History

Update and Revision:	Revision Number: 0.303 Revision Date: 11-09-2022
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