



**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**

Element	Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
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	Tape	Bi-Laminate (Alum+Poly)	Beldfoil®	100%	TC - Tinned Copper	18
Data Pair(s)						

#### 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 Temp 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:	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	UPC
2133A 0061000	Blue, Light	612825130376
2133A 0031000	Orange	612825130369

## History

Update and Revision:	Revision Number: 0.285 Revision Date: 09-10-2021
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