



**Product:** [2117A](#)

Fieldbus, 36 Pr #16 Str TC, XLPO Ins, IS/OS, TPE Jkt, CMG

[Request Sample](#)

**Product Description**

Fieldbus, 36 Pair 16AWG (7x24H) Tinned Copper, XLPO Insulation, Individual & 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	36

Conductor Count:	72
Total Number of Pairs:	36

**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	
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32	
33	
34	
35	
36	

#### Inner Shield Material

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

#### Outer Shield Material

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

#### Outer Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness
TPE - Thermoplastic Elastomer	1.952 in	0.12 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 $\mu$ H/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
300 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:	1875 lbs/1000ft
Max. Pull Tension:	3412 lbs
Min. Bend Radius/Minor Axis:	19.75 in

## Standards

NEC Articles:	Article 725, Article 727, Article 800
NEC/(UL) Compliance:	CMG, ITC, PLTC-ER
CEC/C(UL) Compliance:	CIC, TC
CSA AWM Compliance:	AWM I A/B II A/B
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, LSOH, Toxicity Testing

UL Flammability:	UL1685 UL Loading
CSA Flammability:	FT4
IEC Flammability:	60332-3-24 (Category C)
UL voltage rating:	300 V RMS

## Plenum/Non-Plenum

Plenum (Y/N):	No
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## Part Number

### Variants

Item #	Color	Putup Type	Length	UPC
2117A 0061000	Blue, Light	Reel	1,000 ft	612825129448
2117A 0031000	Orange	Reel	1,000 ft	612825129431

## History

Update and Revision:	Revision Number: 0.135 Revision Date: 05-26-2021
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