



Product: [1331A](#)

Fieldbus, 16 Pr #18 Str TC, PO Ins, IS/OS, PVC Jkt, CMG

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Product Description

Fieldbus, 16 Pair 18AWG (7x26) Tinned Copper, PO Insulation, Individual & Overall Beldfoil® Shield, Orange PVC 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. |
|------------------------|--|

Physical Characteristics (Overall)

| Conductor | | | | | |
|------------------|-----|-----------|--------------------|------------------|--------------|
| Element | AWG | Stranding | Material | Nominal Diameter | No. of Pairs |
| Pair(s) | 18 | 7x26 | TC - Tinned Copper | 0.048 in | 16 |
| Conductor Count: | | 32 | | | |

| Insulation |
|--------------------|
| Material |
| PP - Polypropylene |

| Color Chart | |
|--------------------|---------------------------|
| Number | Color |
| 1 | Blue, Orange and Numbered |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

| Inner Shield | | | | | |
|---------------------|-------------------------|---------------------|--------------|---------------|------------------------------|
| Type | Material | Material Trade Name | Coverage [%] | Drainwire AWG | Drainwire Construction n x D |
| Tape | Bi-Laminate (Alum+Poly) | Beldfoil® | 100% | 20 | 7x28 |
| | Tinned Copper (TC) | | | | |

| Outer Shield | | | | | | |
|---------------------|----------|---------------------|--------------|--------------------|---------------|------------------------------|
| 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 | Nominal Diameter | Ripcord |
|--------------------------|------------------|---------|
| PVC - Polyvinyl Chloride | 0.92 in | Yes |

Construction and Dimensions

Stranding

| Twists |
|------------|
| 6 twist/ft |

Electrical Characteristics

Conductor DCR

| Individual Pair Nominal Shield DCR | Nominal Conductor DCR | Nominal Outer Shield DCR |
|------------------------------------|-----------------------|--------------------------|
| 7.5 Ohm/1000ft | 5.86 Ohm/1000ft | 4.9 Ohm/1000ft |

Capacitance

| Max. Capacitance Unbalance | Nom. Capacitance Conductor to Shield | Nom.Mutual Capacitance |
|----------------------------|--------------------------------------|------------------------|
| 1.2 pF/ft | 45 pF/ft | 24 pF/ft |

Inductance

| Nominal Inductance |
|--------------------|
| 0.19 µH/ft |

Impedance

| Nominal Characteristic Impedance |
|----------------------------------|
| 100 Ohm |

High Frequency (Nominal/Typical)

| Nom. Insertion Loss |
|---------------------|
| 0.08 dB/100ft |

Delay

| Nominal Velocity of Propagation (VP) [%] |
|--|
| 66% |

High Frequency

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

Current

| Element | Max. Recommended Current [A] |
|---------------|------------------------------|
| Per Conductor | 5.2 Amps per Conductor |

Voltage

| UL Voltage Rating |
|-------------------|
| 300 V RMS |

| | |
|------------------------------------|---|
| 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: | 105°C |
| Operating Temperature Range: | -40°C to +105°C |

Mechanical Characteristics

| | |
|------------------------------|---------|
| Oil Resistance: | Yes |
| UV Resistance: | Yes |
| Max. Pull Tension: | 940 lbs |
| Min. Bend Radius/Minor Axis: | 9.2 in |

Standards

| | |
|-----------------------|---------------------------------------|
| NEC Articles: | Article 725, Article 727, Article 800 |
| NEC/(UL) Compliance: | CMG, CMX-Outdoor, ITC, PLTC-ER |
| CEC/C(UL) Compliance: | CMG |

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 - Burial: | Yes - UL |
| Suitability - Indoor: | Yes |
| Suitability - Oil Resistance: | Yes |
| Suitability - Outdoor: | Yes |
| Suitability - Sunlight Resistance: | Yes |

Flammability, LSOH, Toxicity Testing

| | |
|--------------------|--------------------|
| UL Flammability: | UL1685 FT4 Loading |
| IEC Flammability: | IEC 60332-3-24 |
| IEEE Flammability: | 1202 |
| UL voltage rating: | 300 V RMS |

Plenum/Non-Plenum

| | |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Related Part Numbers

Variants

| Item # | Color | Put-Up Type | Length | UPC |
|---------------|--------|-------------|----------|--------------|
| 1331A 0031000 | Orange | Reel | 1,000 ft | 612825112082 |

| | |
|-----------|------------------------|
| Footnote: | C - CRATE REEL PUT-UP. |
|-----------|------------------------|

History

| | |
|----------------------|--|
| Update and Revision: | Revision Number: 0.446 Revision Date: 04-30-2024 |
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