



Product: [7958A](#)

DataTuff® Cat 5e, 4 Bonded-Pr #23 Sol BC, PO Ins, OS, PVC Jkt, CMR AWM 21047

Request Sample

Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, Overall Beldfoil® Shield, PVC Outer Jacket, CMR 600V AWM 21047

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Suitable Applications: | noisy environment, mining, in cabinet with high volt devices, such as motor control center, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc. |
| Patent: | This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/patents . |

Construction Details

Conductor

| Element | Size | Stranding | Material | Number of Pairs | Number of Element |
|---------|--------|-----------|------------------|-----------------|-------------------|
| Pair(s) | 24 AWG | Solid | BC - Bare Copper | 4 | 4 |

Insulation

| Material | Color Code |
|-----------------|--|
| PO - Polyolefin | White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown |

| | |
|--------------|-----|
| Bonded-Pair: | Yes |
|--------------|-----|

Outer Shield

| Shield Type | Material | Coverage | Drainwire Type |
|-------------|-------------------------------------|----------|------------------|
| Tape | Polyester + Bi-Laminate (Alum+Poly) | 100% | 24 AWG (7x32) TC |

Outer Jacket

| Material | Nom. Diameter |
|--------------------------|--------------------|
| PVC - Polyvinyl Chloride | 0.275 in (6.99 mm) |

| | |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.275 in (6.99 mm) |
|-----------------------------------|--------------------|

Electrical Characteristics

Electricals

| Max. Conductor DCR | Max. Capacitance Unbalance |
|-------------------------------|----------------------------|
| 93.8 Ohm/km (28.6 Ohm/1000ft) | 150 pF/ft |

Delay

| Max. Delay | Max. Delay Skew | Nom. Velocity of Prop. |
|-------------|-----------------|------------------------|
| 538 ns/100m | 45 ns/100m | 70% |

High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. NEXT [dB] | Min. PSNEXT [dB] | Min. ACR [dB] | Min. PSACR [dB] | Min. ACRF (ELFEXT) [dB] | Min. PSACRF (PSELFEXT) [dB] | Min. RL (Return Loss) [dB] | Min. SRL (Structural Return Loss) [dB] | Max./Min. Input Impedance (unFitted) [Ohm] | Max./Min. Fitted Impedance [Ohm] |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|--|--|----------------------------------|
| 1 | 2.0 dB/100m | 65.3 | 62.3 | 63 | 60 | 63.8 | 60.8 | 20 | 20 | 100 ± 15 | 100 ± 15 |
| 4 | 4.1 dB/100m | 56.3 | 53.3 | 51 | 49 | 51.7 | 48.7 | 23.6 | 23.6 | 100 ± 15 | 100 ± 15 |
| 8 | 5.8 dB/100m | 51.8 | 48.8 | 46 | 43 | 45.7 | 42.7 | 25.4 | 25.4 | 100 ± 15 | 100 ± 15 |

| | | | | | | | | | | | |
|-------|--------------|------|------|------|------|------|------|------|------|----------|----------|
| 10 | 6.5 dB/100m | 50.3 | 47.3 | 43 | 41 | 43.8 | 40.8 | 26 | 26 | 100 ± 15 | 100 ± 15 |
| 16 | 8.2 dB/100m | 47.3 | 44.3 | 39 | 36 | 39.7 | 36.7 | 26 | 26 | 100 ± 15 | 100 ± 15 |
| 20 | 9.3 dB/100m | 45.8 | 42.8 | 36.5 | 33.5 | 37.7 | 34.7 | 26 | 26 | 100 ± 15 | 100 ± 15 |
| 25 | 10.4 dB/100m | 44.3 | 41.3 | 33.9 | 30.9 | 35.8 | 32.8 | 25.5 | 25.5 | 100 ± 15 | 100 ± 15 |
| 31.25 | 11.7 dB/100m | 42.9 | 39.9 | 31 | 28 | 33.9 | 30.9 | 25 | 25 | 100 ± 15 | 100 ± 15 |
| 62.5 | 17.0 dB/100m | 38.4 | 35.4 | 22 | 19 | 27.8 | 24.8 | 23.5 | 23.5 | 100 ± 15 | 100 ± 15 |
| 100 | 22.0 dB/100m | 35.3 | 32.3 | 14 | 11 | 23.8 | 20.8 | 22.5 | 22.5 | 100 ± 15 | |
| 200 | 32.4 dB/100m | | 27.8 | | 1 | | 14.7 | | | 100 ± 25 | |

Voltage

| UL Voltage Rating |
|---|
| 300 V (CMR, CMX-Outdoor), 600 V (AWM 21047) |

Mechanical Characteristics

Temperature

| UL Temperature | Operating | Installation | Storage |
|----------------|----------------|----------------|----------------|
| 60°C | -40°C To +75°C | -25°C To +75°C | -40°C To +75°C |

Bend Radius

| Stationary Min. |
|-------------------|
| 2.10 in (53.3 mm) |

| | |
|--------------------|----------------|
| Max. Pull Tension: | 35 lbs (16 kg) |
| Bulk Cable Weight: | 32 lbs/1000ft |

Standards and Compliance

| | |
|----------------------------------|---|
| Environmental Suitability: | Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance |
| Flammability / Reaction to Fire: | UL1666 Riser, FT4, IEC 60332-1-2 |
| CPR Compliance: | CPR Euroclass: Eca; CPR UKCA Class: Eca |
| NEC / UL Compliance: | Article 800, CMR, CMX-Outdoor |
| AWM Compliance: | AWM 21047 |
| CEC / C(UL) Compliance: | CMR |
| NEMA Compliance: | NEMA WC-63.1 |
| Data Category: | Category 5e |
| TIA/EIA Compliance: | ANSI/TIA-568.2-D Category 5e |
| ISO/IEC Compliance: | ISO/IEC 11801-1, IEC 61156-5 |
| European Directive Compliance: | EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16 |
| UK Regulation Compliance: | UKCA Mark |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |

Product Notes

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| Notes: | EtherNet/IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vender Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. *Special RJ45 plug required. See WWW. BELDEN.COM - Tools - Connector Cross Reference. Not intended for 600 V electrical power delivery. |
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History

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| Update and Revision: | Revision Number: 0.564 Revision Date: 04-14-2023 |
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Part Numbers

Variants

| Item # | Color | Putup Type | Length | UPC |
|---------------|-------|------------|----------|--------------|
| 7958A 0101000 | Black | Reel | 1,000 ft | 612825192084 |
| 7958A 0102000 | Black | Reel | 2,000 ft | 612825192091 |
| 7958A 0061000 | Blue | | | 612825192060 |
| 7958A 0061000 | Blue | Reel | 1,000 ft | 612825192060 |
| 7958A 0081000 | Gray | Reel | 1,000 ft | 612825192077 |
| 7958A 0021000 | Red | Reel | 1,000 ft | 612825192053 |
| 7958A 1NH1000 | Teal | Reel | 1,000 ft | 612825192107 |

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