



REPRESENTATIVE IMAGE

Product: [7923A](#)

DataTuff® Cat 5e, 4 Bonded-Pr #24 Sol BC, PO Ins, PVC Jkt, MSHA CMR

Request Sample

Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, PVC Outer Jacket, MSHA CMR

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Suitable Applications: | mining, 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 | No. of Pairs | No. of Elements |
|---------|--------|-----------|------------------|--------------|-----------------|
| 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 Jacket

| Material | Nom. Diameter | Ripcord |
|-----------------------------------|--------------------|---------|
| PVC - Polyvinyl Chloride | 0.230 in (5.84 mm) | Yes |
| Overall Cable Diameter (Nominal): | 0.230 in (5.84 mm) | |

Electrical Characteristics

Electricals

| Max. Conductor DCR | Max. Capacitance Unbalance |
|-------------------------------|----------------------------|
| 93.8 Ohm/km (28.6 Ohm/1000ft) | 66 pF/ft |

Delay

| Max. Delay | Max. Delay Skew | Nom. Velocity of Prop. |
|-------------|-----------------|------------------------|
| 510 ns/100m | 25 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] | Max./Min. Input Impedance (unFitted) [Ohm] | Max./Min. Fitted Impedance [Ohm] |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|--|----------------------------------|
| 1 | 2.4 dB/100m | 65.3 | 65.3 | 62.9 | 62.9 | 63.8 | 60.8 | 20 | 100 ± 12 | 105 ± 10 |
| 4 | 4.8 dB/100m | 56.3 | 56.3 | 51.5 | 51.5 | 51.7 | 48.7 | 23.6 | 100 ± 12 | 100 ± 10 |
| 8 | 6.8 dB/100m | 51.8 | 51.8 | 45.0 | 45.0 | 45.7 | 42.7 | 25.4 | 100 ± 12 | 100 ± 10 |
| 10 | 7.7 dB/100m | 50.3 | 50.3 | 42.6 | 42.6 | 43.8 | 40.8 | 26 | 100 ± 12 | 100 ± 10 |
| 16 | 9.7 dB/100m | 47.3 | 47.3 | 37.5 | 37.5 | 39.7 | 36.7 | 26 | 100 ± 12 | 100 ± 10 |
| 20 | 11.0 dB/100m | 45.8 | 45.8 | 34.8 | 34.8 | 37.7 | 34.7 | 26 | 100 ± 12 | 100 ± 10 |
| 25 | 12.4 dB/100m | 44.3 | 44.3 | 31.9 | 31.9 | 35.8 | 32.8 | 25.5 | 100 ± 15 | 100 ± 10 |
| 31.25 | 13.9 dB/100m | 42.9 | 42.9 | 29.0 | 29.0 | 33.9 | 30.9 | 25 | 100 ± 15 | 100 ± 10 |

| | | | | | | | | | | |
|------|--------------|------|------|------|------|------|------|------|----------|----------|
| 62.5 | 20.2 dB/100m | 38.4 | 38.4 | 18.3 | 18.3 | 27.8 | 24.8 | 23.5 | 100 ± 15 | 100 ± 10 |
| 100 | 26.0 dB/100m | 35.3 | 35.3 | 9.2 | 9.2 | 23.8 | 20.8 | 22.5 | 100 ± 15 | 100 ± 10 |
| 155 | 33.2 dB/100m | 32.5 | 32.5 | 4.7 | 4.7 | 19.9 | 16.9 | 19 | 100 ± 18 | 100 ± 10 |
| 200 | 38.4 dB/100m | 30.8 | 30.8 | 3 | 3 | 17.7 | 14.7 | 19 | 100 ± 20 | 100 ± 10 |
| 250 | 43.7 dB/100m | 29.3 | 29.3 | 0 | 0 | 15.8 | 12.8 | 18 | 100 ± 20 | 100 ± 10 |
| 300 | 48.6 dB/100m | 28.2 | 28.2 | 0 | 0 | 14.2 | 11.2 | 18 | 100 ± 20 | 100 ± 10 |
| 310 | 49.5 dB/100m | 27.9 | 27.9 | | | 13.9 | 10.9 | 18 | 100 ± 20 | 100 ± 10 |
| 350 | 53.2 dB/100m | 27.2 | 27.2 | | | 12.9 | 9.9 | 17 | 100 ± 22 | 100 ± 10 |

Voltage

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

Mechanical Characteristics

Temperature

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

Bend Radius

| Stationary Min. |
|-----------------|
| 2.5 in (64 mm) |

| | |
|--------------------|----------------|
| Max. Pull Tension: | 40 lbs (18 kg) |
| Bulk Cable Weight: | 25 lbs/1000ft |

Standards and Compliance

| | |
|---------------------------------------|---|
| Environmental Suitability: | Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance |
| Flammability / Reaction to Fire: | UL1666 Riser, FT4, IEEE 1202 Vertical Tray Flame Test, IEC 60332-1-2 |
| CPR Compliance: | CPR Euroclass: Eca |
| NEC / UL Compliance: | Article 800 |
| CEC / C(UL) Compliance: | CMX-Outdoor;CMG |
| Data Category: | Category 5e |
| TIA/EIA Compliance: | ANSI/TIA-568.2-D Category 5e |
| Third Party Performance Verification: | Category 5e |
| ISO/IEC Compliance: | ISO/IEC 11801-1, IEC 61156-5 |
| European Directive Compliance: | EU CE Mark, 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) |
| Other Standard Compliance(s): | P-07-KA060003-MSHA |

Product Notes

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| Notes: | Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. |
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History

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| Update and Revision: | Revision Number: 0.548 Revision Date: 01-20-2023 |
|----------------------|--|

Part Numbers

Variants

| Item # | Color | Putup Type | Length | UPC | Footnote |
|---------------|-------|------------|----------|--------------|----------|
| 7923A 0101000 | Black | Reel | 1,000 ft | 612825191353 | C |
| 7923A 0102000 | Black | Reel | 2,000 ft | 612825191360 | C |
| 7923A 0061000 | Blue | Reel | 1,000 ft | 612825191339 | C |
| 7923A 0081000 | Gray | Reel | 1,000 ft | 612825191346 | C |
| 7923A 0021000 | Red | Reel | 1,000 ft | 612825191322 | C |
| 7923A 1NH1000 | Teal | Reel | 1,000 ft | 612825191377 | C |

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