



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 <a href="https://www.belden.com/patents">https://www.belden.com/patents</a> . |

#### 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 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, FT4, IEEE 1202 Vertical Tray Flame Test, IEC 60332-1-2   |
| CPR Compliance:                       | CPR Euroclass: Eca  |
| NEC / UL Compliance:                  | Article 800, CMR;CMX-Outdoor;CMG  |
| 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 |
| APAC Compliance:                      | China RoHS II (GB/T 26572-2011)   |
| Other Standard Compliance(s):         | P-07-KA060003-MSHA, Ethernet/IP™ Compliant  |

#### Product Notes

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

#### History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.509 Revision Date: 06-30-2022 |
|----------------------|--|

#### Part Numbers

##### Variants

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

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