

# Part Number: 7929A

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

Request Sample

### Product Description

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

### Technical Specifications

#### Product Overview

| | |
|---|---|
| Suitable Applications: | Industrial Ethernet Cable, Harsh Environments, 200MHz Category 5e, Industrial Ethernet, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, CMX - Outdoor, RJ-45 Compatible* |

#### Physical Characteristics (Overall)

**Conductor**

| AWG | Stranding | Material | No. of Pairs |
|---|---|---|---|
| 24 | Solid | BC - Bare Copper | 2 |

| | |
|---|---|
| Conductor Count: | 8 |
| Total Number of Pairs: | 4 |
| Conductor Size: | 24 AWG |

**Insulation**

| Material | Nominal Diameter | Nominal Wall Thickness |
|---|---|---|
| PO - Polyolefin | 0.044 in | 0.01 in |

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

**Color Chart**

| Number | Color |
|---|---|
| 1 | White/Blue Stripe & Blue |
| 2 | White/Orange Stripe & Orange |
| 3 | White/Green Stripe & Green |
| 4 | White/Brown Stripe & Brown |

**Outer Shield Material**

| Type | Material | Material Trade Name | Coverage [%] | Drainwire Material | Drainwire AWG | Drainwire Construction n x D |
|---|---|---|---|---|---|---|
| Tape | Aluminum/Polyester | Beldfoil® | 100 % | TC - Tinned Copper | 24 | 7x32 mm |

**Outer Jacket Material**

| Material | Nominal Diameter |
|---|---|
| Industrial Grade PVC - Polyvinyl Chloride | 0.265 in |

#### Electrical Characteristics

**Conductor DCR**

| Max. Conductor DCR | Max. DCR Unbalance |
|---|---|
| 9.38 Ohm/1000ft | 3 % |

**Capacitance**

| Max. Capacitance Unbalance | Nom.Mutual Capacitance |
|---|---|
| 330 pF/ft | 15 pF/ft |

**Delay**

| Max. Delay | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|---|---|---|
| 538 ns/100m | 45 ns/100m | 70 % |

**High Freq**

| 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) | Max./Min. Input Impedance (unFitted) | Max./Min. Fitted Impedance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 MHz | 2 dB/100m | 65.3 dB | 62.3 dB | 63 dB | 60 dB | 63.8 dB | 60.8 dB | 20 dB | 23 dB | 100 ± 15 Ohm | 100 ± 15 Ohm |
| 4 MHz | 4.1 dB/100m | 56.3 dB | 53.3 dB | 51 dB | 49 dB | 51.7 dB | 48.7 dB | 23 dB | 23 dB | 100 ± 15 Ohm | 100 ± 15 |
| 8 MHz | 5.8 dB/100m | 51.8 dB | 48.8 dB | 46 dB | 43 dB | 45.7 dB | 42.7 dB | 24.5 dB | 24.5 dB | 100 ± 15 Ohm | 100 ± 15 |
| 10 MHz | 6.5 dB/100m | 50.3 dB | 47.3 dB | 43 dB | 41 dB | 43.8 dB | 40.8 dB | 25 dB | 25 dB | 100 ± 15 Ohm | 100 ± 15 |
| 16 MHz | 8.2 dB/100m | 47.3 dB | 44.3 dB | 39 dB | 36 dB | 39.7 dB | 36.7 dB | 25 dB | 25 dB | 100 ± 15 Ohm | 100 ± 15 |
| 20 MHz | 9.3 dB/100m | 45.8 dB | 42.8 dB | 36.5 dB | 33.5 dB | 37.7 dB | 34.7 dB | 25 dB | 25 dB | 100 ± 15 Ohm | 100 ± 15 |
| 25 MHz | 10.4 dB/100m | 44.3 dB | 41.3 dB | 33.9 dB | 30.9 dB | 35.8 dB | 32.8 dB | 24.3 dB | 24.3 dB | 100 ± 15 Ohm | 100 ± 15 |
| 31.25 MHz | 11.7 dB/100m | 42.9 dB | 39.9 dB | 31 dB | 28 dB | 33.9 dB | 30.9 dB | 23.6 dB | 23.6 dB | 100 ± 15 Ohm | 100 ± 15 |
| 62.5 MHz | 17 dB/100m | 38.4 dB | 35.4 dB | 22 dB | 19 dB | 27.8 dB | 24.8 dB | 21.5 dB | 21.5 dB | 100 ± 15 Ohm | 100 ± 15 |
| 100 MHz | 22 dB/100m | 35.3 dB | 32.3 dB | 14 dB | 11 dB | 23.8 dB | 20.8 dB | 20.1 dB | 20.1 dB | 100 ± 15 Ohm | |
| 200 MHz | 32.4 dB/100m | | 27.8 dB | | 1 dB | | 14.7 dB | | 15 dB | 100 ± 25 Ohm | |

**Voltage**

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

## Temperature Range

| | |
|---|---|
| Installation Temp Range: | -25°C To +75°C |
| UL Temp Rating: | 60°C |
| Storage Temp Range: | -40°C To +80°C |
| Operating Temp Range: | -40°C To +75°C |

## Mechanical Characteristics

| | |
|---|---|
| Bulk Cable Weight: | 30 lbs/1000ft |
| Max Recommended Pulling Tension: | 20 lbs |
| Min Bend Radius/Minor Axis: | 0.5 in |

## Standards

| | |
|---|---|
| NEC/(UL) Specification: | CM, UL 444 |
| CEC/C(UL) Specification: | CMG |
| CPR Euroclass: | Eca |
| Data Category: | Category 5e |

## 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 II): | Yes |
| EU Directive 2012/19/EU (WEEE): | Yes |
| EU Directive 2015/863/EU: | Yes |
| EU Directive Compliance: | EU Directive 2003/11/EC (BFR) |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2004-01-04 |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |

## Suitability

| | |
|---|---|
| Suitability - Oil Resistance: | Yes |
| Suitability - Outdoor: | Yes |

| | |
|---|---|
| Suitability - Sunlight Resistance: | Yes |

## Flammability, LS0H, Toxicity Testing

| | |
|---|---|
| UL Flammability: | UL1666 Vertical Riser |
| CSA Flammability: | FT4 |
| ISO/IEC Flammability: | IEC 60332-1-2 |
| UL voltage rating: | 300 V RMS |

## Plenum/Non-Plenum

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

## Part Number

**Variants**

| Item # | Color | UPC | Length | Footnote |
|---|---|---|---|---|
| 7929A 0101000 | Black | 612825191520 | 1,000 ft | C |
| 7929A 0102000 | Black | 612825191537 | 2,000 ft | C |
| 7929A 0105000 | Black | 612825191544 | 5,000 ft | C |
| 7929A 0061000 | Blue | 612825191506 | 1,000 ft | C |
| 7929A 0081000 | Gray | 612825191513 | 1,000 ft | C |
| 7929A 0021000 | Red | 612825191490 | 1,000 ft | C |
| 7929A 1NH1000 | Teal | 612825191551 | 1,000 ft | C |

| | |
|---|---|
| Footnote: | C - CRATE REEL PUT-UP. |
| Patent: | https://www.belden.com/resources/patents |

## Product Notes

| | |
|---|---|
| Notes: | US Patent #'s 5, 606, 151; 5, 734, 126. 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. |

## History

| | |
|---|---|
| Update and Revision: | Revision Number: 0.300 Revision Date: 07-11-2019 |

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