



## Product: [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: mining, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc.

#### Physical Characteristics (Overall)

##### Conductor

| AWG | Stranding | Material         | No. of Pairs |
|-----|-----------|------------------|--------------|
| 24  | Solid     | BC - Bare Copper | 4            |

Conductor Count: 8

Total Number of Pairs: 4

##### Insulation

| Material   | Nominal Diameter | Nominal Wall Thickness |
|------------|------------------|------------------------|
| 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 | Alum / Poly | Beldfoil®           | 100 %        | TC - Tinned Copper | 24            | 7x32                         |

#### Outer Jacket Material

| Material                 | Nominal Diameter |
|--------------------------|------------------|
| 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. PSACRF [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                    |
| 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 | Putup Type | Length   | UPC          |
|---------------|-------|------------|----------|--------------|
| 7929A 0101000 | Black | Reel       | 1,000 ft | 612825191520 |
| 7929A 0102000 | Black | Reel       | 2,000 ft | 612825191537 |
| 7929A 0105000 | Black | Reel       | 5,000 ft | 612825191544 |
| 7929A 0061000 | Blue  | Reel       | 1,000 ft | 612825191506 |
| 7929A 0081000 | Gray  | Reel       | 1,000 ft | 612825191513 |
| 7929A 0021000 | Red   | Reel       | 1,000 ft | 612825191490 |
| 7929A 1NH1000 | Teal  | Reel       | 1,000 ft | 612825191551 |

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: 0.317 Revision Date: 04-28-2020

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