



**Product:** [7919A](#)

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

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**Product Description**

Industrial Ethernet Cat 5e, 4 Pair 24AWG (Solid) Bare Copper, PO Insulation, Overall Beldfoil® Shield, 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. |
|------------------------|------------------------------------------------------------------------------------------------------------------|

**Construction Details**

**Conductor**

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

**Insulation**

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

**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 | 0.265 in (6.73 mm) |

|                                   |                    |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.265 in (6.73 mm) |
|-----------------------------------|--------------------|

**Electrical Characteristics**

**Electricals**

| Max. Conductor DCR | Max. Capacitance Unbalance |
|--------------------|----------------------------|
| 93.8 Ohm/km        | 330 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) | Max./Min. Fitted Impedance |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|----------------------------------------|--------------------------------------|----------------------------|
| 1               | 2.0 dB/100m                       | 65.3           | 62.3             | 63            | 60              | 63.8                    | 60.8                        | 20                         | 23                                     | 100 ± 15 Ohm                         | 100 ± 15 Ohm               |
| 4               | 4.1 dB/100m                       | 56.3           | 53.3             | 51            | 49              | 51.7                    | 48.7                        | 23                         | 23                                     | 100 ± 15 Ohm                         | 100 ± 15 Ohm               |
| 8               | 5.8 dB/100m                       | 51.8           | 48.8             | 46            | 43              | 45.7                    | 42.7                        | 24.5                       | 24.5                                   | 100 ± 15 Ohm                         | 100 ± 15 Ohm               |
| 10              | 6.5 dB/100m                       | 50.3           | 47.3             | 43            | 41              | 43.8                    | 40.8                        | 25                         | 25                                     | 100 ± 15 Ohm                         | 100 ± 15 Ohm               |
| 16              | 8.2 dB/100m                       | 47.3           | 44.3             | 39            | 36              | 39.7                    | 36.7                        | 25                         | 25                                     | 100 ± 15 Ohm                         | 100 ± 15 Ohm               |
| 20              | 9.3 dB/100m                       | 45.8           | 42.8             | 36.5          | 33.5            | 37.7                    | 34.7                        | 25                         | 25                                     | 100 ± 15 Ohm                         | 100 ± 15 Ohm               |

|       |              |      |      |      |      |      |      |      |      |              |              |
|-------|--------------|------|------|------|------|------|------|------|------|--------------|--------------|
| 25    | 10.4 dB/100m | 44.3 | 41.3 | 33.9 | 30.9 | 35.8 | 32.8 | 24.3 | 24.3 | 100 ± 15 Ohm | 100 ± 15 Ohm |
| 31.25 | 11.7 dB/100m | 42.9 | 39.9 | 31   | 28   | 33.9 | 30.9 | 23.6 | 23.6 | 100 ± 15 Ohm | 100 ± 15 Ohm |
| 62.5  | 17.0 dB/100m | 38.4 | 35.4 | 22   | 19   | 27.8 | 24.8 | 21.5 | 21.5 | 100 ± 15 Ohm | 100 ± 15 Ohm |
| 100   | 22.0 dB/100m | 35.3 | 32.3 | 14   | 11   | 23.8 | 20.8 | 20.1 | 20.1 | 100 ± 15 Ohm | 100 ± 15 Ohm |

Voltage

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

Mechanical Characteristics

Temperature

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

Bend Radius

| Stationary Min. |
|-----------------|
| 1 in (25 mm)    |

|                    |                |
|--------------------|----------------|
| Max. Pull Tension: | 25 lbs (11 kg) |
| Bulk Cable Weight: | 30 lbs/1000ft  |

Standards and Compliance

|                                  |                                                                                                                                                     |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability:       | Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance, Aerial                                                                        |
| 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, CMR, CMX-Outdoor                                                                                                                       |
| CEC / C(UL) Compliance:          | CMX-Outdoor                                                                                                                                         |
| NEMA Compliance:                 | NEMA WC-63.1                                                                                                                                        |
| Data Category:                   | Category 5e                                                                                                                                         |
| TIA/EIA Compliance:              | ANSI/TIA-568.2-D Category 5e                                                                                                                        |
| 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-KA060004-MSHA                                                                                                                                  |

Product Notes

|        |                                                                                                                                                                                         |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes: | Operating temperatures are subject to length de-rating. Cable passes -40°C Cold Bend per UL 1581. T568A Plug Compatible Part Number: R301603 T568B Plug Compatible Part Number: R301604 |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.533 Revision Date: 09-05-2023 |
|----------------------|--------------------------------------------------|

Part Numbers

Variants

| Item #         | Color | Putup Type | Length   | UPC          | Footnote |
|----------------|-------|------------|----------|--------------|----------|
| 7919A 01010000 | Black |            |          | 612825191216 | C        |
| 7919A 0101000  | Black | Reel       | 1,000 ft | 612825191209 | C        |
| 7919A 0102000  | Black | Reel       | 2,000 ft | 612825191223 | C        |
| 7919A 0105000  | Black | Reel       | 5,000 ft | 612825191230 | C        |
| 7919A 0061000  | Blue  | Reel       | 1,000 ft | 612825191193 | C        |

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