



**Product:** [7922A](#)

DataTuff® 5e, 4 Bonded-Pr #22 Sol BC, PO Ins, PVC Jkt, PLTC CMR

[Request Sample](#)

## Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 22AWG (Solid) Bare Copper, PO Insulation, PVC Outer Jacket, PLTC CMR

## Technical Specifications

### Product Overview

|                        |  |
|------------------------|--|
| Suitable Applications: | power-limited tray, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc. |
|------------------------|--|

### Physical Characteristics (Overall)

#### Conductor

| AWG | Stranding | Material         | Nominal Diameter | No. of Pairs |
|-----|-----------|------------------|------------------|--------------|
| 22  | Solid     | BC - Bare Copper | 0.026 in         | 4            |

|                        |   |
|------------------------|---|
| Conductor Count:       | 8 |
| Total Number of Pairs: | 4 |

#### Insulation

| Material   | Nominal Diameter | Nominal Wall Thickness |
|------------|------------------|------------------------|
| Polyolefin | 0.048 in         | 0.011 in               |

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

#### Color Chart

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

#### Outer Shield Material

|                 |
|-----------------|
| <b>Material</b> |
| No Shield       |

#### Outer Jacket Material

| Material                 | Nominal Diameter | Nominal Wall Thickness | Ripcord |
|--------------------------|------------------|------------------------|---------|
| PVC - Polyvinyl Chloride | 0.301 in         | 0.043 in               | Yes     |

### Electrical Characteristics

#### Conductor DCR

| Max. Conductor DCR | Max. DCR Unbalance |
|--------------------|--------------------|
| 9 Ohm/1000ft       | 3 %                |

#### Capacitance

| Max. Capacitance Unbalance | Nom. Capacitance Conductor to Shield |
|----------------------------|--------------------------------------|
| 66 pF/ft                   | 15 pF/ft                             |

#### Delay

| Max. Delay  | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|-------------|-----------------|--|
| 510 ns/100m | 25 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] | Max./Min. Input Impedance (unFitted) | Max./Min. Fitted Impedance |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|--------------------------------------|----------------------------|
| 1 MHz           | 2 dB/100m                         | 65.3 dB        | 65.3 dB          | 63.3 dB       | 63.3 dB         | 63.8 dB                 | 60.8 dB                     | 20 dB                      | 100 ± 12 Ohm                         | 105 ± 10 Ohm               |
| 4 MHz           | 4 dB/100m                         | 56.3 dB        | 56.3 dB          | 52.3 dB       | 52.3 dB         | 51.7 dB                 | 48.7 dB                     | 23 dB                      | 100 ± 12 Ohm                         | 100 ± 10                   |
| 8 MHz           | 5.7 dB/100m                       | 51.8 dB        | 51.8 dB          | 46.1 dB       | 46.1 dB         | 45.7 dB                 | 42.7 dB                     | 24.5 dB                    | 100 ± 12 Ohm                         | 100 ± 10                   |
| 10 MHz          | 6.4 dB/100m                       | 50.3 dB        | 50.3 dB          | 43.9 dB       | 43.9 dB         | 43.8 dB                 | 40.8 dB                     | 25 dB                      | 100 ± 12 Ohm                         | 100 ± 10                   |
| 16 MHz          | 8.1 dB/100m                       | 47.3 dB        | 47.3 dB          | 39.1 dB       | 39.1 dB         | 39.7 dB                 | 36.7 dB                     | 25 dB                      | 100 ± 12 Ohm                         | 100 ± 10                   |
| 20 MHz          | 9.2 dB/100m                       | 45.8 dB        | 45.8 dB          | 35.2 dB       | 35.2 dB         | 37.7 dB                 | 34.7 dB                     | 25 dB                      | 100 ± 12 Ohm                         | 100 ± 10                   |
| 25 MHz          | 10.3 dB/100m                      | 44.3 dB        | 44.3 dB          | 34.1 dB       | 34.1 dB         | 35.8 dB                 | 32.8 dB                     | 24.3 dB                    | 100 ± 15 Ohm                         | 100 ± 10                   |
| 31.25 MHz       | 11.6 dB/100m                      | 42.9 dB        | 42.9 dB          | 31.3 dB       | 31.3 dB         | 33.9 dB                 | 30.9 dB                     | 23.6 dB                    | 100 ± 15 Ohm                         | 100 ± 10                   |
| 62.5 MHz        | 16.8 dB/100m                      | 38.4 dB        | 38.4 dB          | 21.6 dB       | 21.6 dB         | 27.8 dB                 | 24.8 dB                     | 21.5 dB                    | 100 ± 15 Ohm                         | 100 ± 10                   |
| 100 MHz         | 21.7 dB/100m                      | 35.3 dB        | 35.3 dB          | 17.1 dB       | 17.1 dB         | 23.8 dB                 | 20.8 dB                     | 20.1 dB                    | 100 ± 15 Ohm                         |                            |
| 155 MHz         | 27.7 dB/100m                      | 32.5 dB        | 32.5 dB          | 4.7 dB        | 4.7 dB          | 19.9 dB                 | 16.9 dB                     | 19 dB                      | 100 ± 18 Ohm                         |                            |
| 200 MHz         | 32 dB/100m                        | 30.8 dB        | 30.8 dB          | 3 dB          | 3 dB            | 17.7 dB                 | 14.7 dB                     | 19 dB                      | 100 ± 20 Ohm                         |                            |
| 250 MHz         | 36.4 dB/100m                      | 29.3 dB        | 29.3 dB          | 0 dB          | 0 dB            | 15.8 dB                 | 12.8 dB                     | 18 dB                      | 100 ± 20 Ohm                         |                            |
| 300 MHz         | 40.5 dB/100m                      | 28.2 dB        | 28.2 dB          | 0 dB          | 0 dB            | 14.2 dB                 | 11.2 dB                     | 18 dB                      | 100 ± 20 Ohm                         |                            |
| 310 MHz         | 41.3 dB/100m                      | 27.9 dB        | 27.9 dB          |               |                 | 13.9 dB                 | 10.9 dB                     | 18 dB                      | 100 ± 20 Ohm                         |                            |
| 350 MHz         | 44.3 dB/100m                      | 27.2 dB        | 27.2 dB          |               |                 | 12.9 dB                 | 9.9 dB                      | 17 dB                      | 100 ± 22 Ohm                         |                            |

#### Voltage

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

#### Temperature Range

|                          |                |
|--------------------------|----------------|
| Installation Temp Range: | -10°C To +75°C |
| UL Temp Rating:          | 60°C           |
| Storage Temp Range:      | -25°C To +75°C |
| Operating Temp Range:    | -25°C To +75°C |

#### Mechanical Characteristics

|                                  |               |
|----------------------------------|---------------|
| Bulk Cable Weight:               | 42 lbs/1000ft |
| Max Recommended Pulling Tension: | 40 lbs        |
| Min Bend Radius/Minor Axis:      | 0.3 in        |

#### Standards

|                                       |                         |
|---------------------------------------|-------------------------|
| NEC/(UL) Specification:               | CMR, CMX-Outdoor, PLTC  |
| CEC/C(UL) Specification:              | CMR                     |
| ISO/IEC Compliance:                   | ISO 11801 Cat 5e        |
| CPR Euroclass:                        | Eca                     |
| Data Category:                        | Category 5e             |
| Telecommunications Standards:         | TIA-568-C.2 Category 5e |
| Third Party Performance Verification: | UL verified Cat 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 CE Mark:                           | Yes                           |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2004-01-04                    |
| MII Order #39 (China RoHS):           | Yes                           |

#### Suitability

|                       |     |
|-----------------------|-----|
| Suitability - Indoor: | Yes |
|-----------------------|-----|

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

## Flammability, LS0H, Toxicity Testing

|                       |                       |
|-----------------------|-----------------------|
| C(UL) Flammability:   | FT4                   |
| UL Flammability:      | UL1666 Vertical Riser |
| 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          |
|---------------|-------|------------|----------|--------------|
| 7922A 0101000 | Black | Reel       | 1,000 ft | 612825191292 |
| 7922A 0102000 | Black | Reel       | 2,000 ft | 612825191308 |
| 7922A 0105000 | Black | Reel       | 5,000 ft | 612825191315 |

|           |   |
|-----------|---|
| Footnote: | C - CRATE REEL PUT-UP.  |
| Patent:   | <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> |

## Product Notes

|        |  |
|--------|--|
| Notes: | US Patent #'s 5, 606, 151; 5, 734, 126. Operating temperatures are subject to length de-rating |
|--------|--|

## History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.305 Revision Date: 04-28-2020 |
|----------------------|--|

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