# Detailed Specifications & Technical Data

**METRIC MEASUREMENT VERSION**

## 7922A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cables

For more Information
please call

1-800-Belden1

## General Description:

22 AWG Bonded-Pairs solid bare copper conductors, polyolefin insulation, industrial grade sunlight- and Oil-resistant PVC jacket, rip cord. Sequential marking at two foot intervals.

## Usage (Overall)

**Suitable Applications:** Industrial Ethernet Cable, Harsh Environments, 350MHz Enhanced Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, CMX - Outdoor, PLTC Listed, Approved for Cable Tray Use in Class 1, Division 2, Hazardous Areas and Non-hazardous Areas, Cable Trays, Raceways, Conduit and Supported by Messenger Wires, Approved for Outdoor Usage

## Physical Characteristics (Overall)

### Conductor

**AWG:**

| # Pairs | AWG | Stranding | Conductor Material | Dia. (mm) |
|---|---|---|---|---|
| 4 | 22 | Solid | BC - Bare Copper | 0.6604 |

**Total Number of Conductors:** 8

### Insulation

**Insulation Material:**

| Insulation Material | Wall Thickness (mm) | Dia. (mm) |
|---|---|---|
| PO - Polyolefin | 0.2794 | 1.2192 |

### Outer Shield

**Outer Shield Material:**

| Outer Shield Material |
|---|
| Unshielded |

### Outer Jacket

**Outer Jacket Material:**

| Outer Jacket Material | Nom. Wall Thickness (mm) |
|---|---|
| Industrial Grade PVC - Polyvinyl Chloride | 1.0922 |

**Outer Jacket Ripcord:** Yes

### Overall Cable

**Overall Nominal Diameter:** 7.645 mm

### Pair

**Pair Color Code Chart:**

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

## Mechanical Characteristics (Overall)

**Installation Temperature Range:** -10°C To +75°C

**Operating Temperature Range:** -25°C To +75°C

| | |
|---|---|
| **Bulk Cable Weight:** | 62.504 Kg/Km |
| **Max. Recommended Pulling Tension:** | 177.928 N |
| **Min. Bend Radius/Minor Axis:** | 7.620 mm |

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

| | |
|---|---|
| **NEC/(UL) Specification:** | PLTC, CMR, CMX-Outdoor |
| **NEC Articles:** | NEC 725 |
| **CEC/C(UL) Specification:** | CMR |
| **AWM Specification:** | UL Style 444 (300 V 75°C) |
| **Other Standards:** | 11801 Category 5 |
| **EU Directive 2000/53/EC (ELV):** | Yes |
| **EU Directive 2002/95/EC (RoHS):** | Yes |
| **EU RoHS Compliance Date (mm/dd/yyyy):** | 01/01/2004 |
| **EU Directive 2002/96/EC (WEEE):** | Yes |
| **EU Directive 2003/11/EC (BFR):** | Yes |
| **CA Prop 65 (CJ for Wire & Cable):** | Yes |
| **MII Order #39 (China RoHS):** | Yes |
| **Telecommunications Standards:** | ANSI/TIA/EIA 568B.2 Category 5e |
| **Other Specification:** | NEMA WC-63.1 Category 5e |

### Flame Test

| | |
|---|---|
| **UL Flame Test:** | UL1666 Vertical Riser |
| **C(UL) Flame Test:** | FT4 |

### Suitability

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

### Plenum/Non-Plenum

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

## Electrical Characteristics (Overall)

**Nom. Capacitance Conductor to Shield:**

| Capacitance (pF/m) |
|---|
| 49.215 |

| | |
|---|---|
| **Maximum Capacitance Unbalance (pF/100 m):** | 66 |

**Nominal Velocity of Propagation:**

| VP (%) |
|---|
| 70 |

**Maximum Delay:**

| Delay (ns/100 m) |
|---|
| 510 |

**Max. Delay Skew:**

| Delay Skew (ns/100 m) |
|---|
| 25 |

**Maximum Conductor DC Resistance:**

| DCR @ 20°C (Ohm/100 m) |
|---|
| 9 |

**Max. Operating Voltage - UL:**

| Voltage |
|---|
| 300 V RMS |

**Maximum DCR Unbalanced:**

| DCR Unbalance @ 20°C (%) |
|---|
| 3 |

## Electrical Characteristics-Premise (Overall)

**Premise Cable Electrical Table 1:**

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min RL (dB) |
|---|---|---|---|---|---|---|
| 1 | 2.0 | 65.3 | 65.3 | 63.3 | 63.3 | 20.0 |
| 4 | 4.0 | 56.3 | 56.3 | 52.3 | 52.3 | 23.0 |
| 8 | 5.7 | 51.8 | 51.8 | 46.1 | 46.1 | 24.5 |
| 10 | 6.4 | 50.3 | 50.3 | 43.9 | 43.9 | 25.0 |
| 16 | 8.1 | 47.3 | 47.3 | 39.1 | 39.1 | 25.0 |
| 20 | 9.2 | 45.8 | 45.8 | 35.2 | 35.2 | 25.0 |
| 25 | 10.3 | 44.3 | 44.3 | 34.1 | 34.1 | 24.3 |
| 31.25 | 11.6 | 42.9 | 42.9 | 31.3 | 31.3 | 23.6 |
| 62.5 | 16.8 | 38.4 | 38.4 | 21.6 | 21.6 | 21.5 |
| 100 | 21.7 | 35.3 | 35.3 | 17.1 | 17.1 | 20.1 |
| 155 | 27.7 | 32.5 | 32.5 | 4.7 | 4.7 | 19.0 |
| 200 | 32.0 | 30.8 | 30.8 | 3.0 | 3.0 | 19.0 |
| 250 | 36.4 | 29.3 | 29.3 | >0 | >0 | 18.0 |
| 300 | 40.5 | 28.2 | 28.2 | >0 | >0 | 18.0 |
| 310 | 41.3 | 27.9 | 27.9 | | | 18.0 |
| 350 | 44.3 | 27.2 | 27.2 | | | 17.0 |

**Premise Cable Electrical Table 2:**

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|---|---|---|---|---|
| 1 | 100 ± 12 | 105 ± 10 | 63.8 | 60.8 |
| 4 | 100 ± 12 | 100 ± 10 | 51.7 | 48.7 |
| 8 | 100 ± 12 | 100 ± 10 | 45.7 | 42.7 |
| 10 | 100 ± 12 | 100 ± 10 | 43.8 | 40.8 |
| 16 | 100 ± 12 | 100 ± 10 | 39.7 | 36.7 |
| 20 | 100 ± 12 | 100 ± 10 | 37.7 | 34.7 |
| 25 | 100 ± 15 | 100 ± 10 | 35.8 | 32.8 |
| 31.25 | 100 ± 15 | 100 ± 10 | 33.9 | 30.9 |
| 62.5 | 100 ± 15 | 100 ± 10 | 27.8 | 24.8 |
| 100 | 100 ± 15 | 100 ± 10 | 23.8 | 20.8 |
| 155 | 100 ± 18 | 100 ± 10 | 19.9 | 16.9 |
| 200 | 100 ± 20 | 100 ± 10 | 17.7 | 14.7 |
| 250 | 100 ± 20 | 100 ± 10 | 15.8 | 12.8 |
| 300 | 100 ± 20 | 100 ± 10 | 14.2 | 11.2 |
| 310 | 100 ± 20 | 100 ± 10 | 13.9 | 10.9 |
| 350 | 100 ± 22 | 100 ± 10 | 12.9 | 9.9 |

## Notes (Overall)

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

**Notes (Cont'd.):** Cable passes -25C Cold Bend per UL 1581

## Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---|---|---|---|---|---|
| 7922A 0101000 | 305 MT | 20.865 KG | BLACK | C | 4 PR #22 PP PVC |
| 7922A 0102000 | 610 MT | 41.731 KG | BLACK | C | 4 PR #22 PP PVC |
| 7922A 0105000 | 1,524 MT | 106.595 KG | BLACK | C | 4 PR #22 PP PVC |

## 7922A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cables

**Notes:**
C = CRATE REEL PUT-UP.

## Test Reports

**a) UL**
i) UL Test Reports are available on-line through the UL Client Document Access web portal.
ii) UL Inspection Reports are also available through the UL Client Document Access web portal.

**b) CSA**
i) CSA "Descriptive Report and Test Results" documents are available on the CSA Gateway Portal.
ii) CSA Inspection Reports are maintained on the CSA issued 'flash drive' at each manufacturing location.

* other test data may be available if requested at time of order.

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