

## 7927A Multi-Conductor - Category 6 DataTuff® Twisted Pair Cable

For more Information  
please call

1-800-Belden1



### General Description:

23 AWG Bonded-Pair solid bare copper conductors, polyolefin insulation, E-Spline center member, 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, 600 MHz Enhanced Category 6, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, RJ-45 Compatible

### Physical Characteristics (Overall)

#### Conductor

**AWG:**

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4       | 23  | Solid     | BC - Bare Copper   |

**Total Number of Conductors:** 8

#### Insulation

**Insulation Material:**

| Insulation Material |
|---------------------|
| PO - Polyolefin     |

#### Outer Shield

**Outer Shield Material:**

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

#### Outer Jacket

**Outer Jacket Material:**

| Outer Jacket Material                     |
|---|
| Industrial Grade PVC - Polyvinyl Chloride |

**Outer Jacket Ripcord:** Yes

#### Overall Cable

**Overall Cabling Fillers:** E-Spline Center Member

**Overall Cabling Color Code Chart:**

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

**Overall Nominal Diameter:** 6.375 x 8.611 mm

### Mechanical Characteristics (Overall)

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

**Operating Temperature Range:** -40°C To +75°C

**Bulk Cable Weight:** 49.855 Kg/Km

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|                                   |           |
|-----------------------------------|-----------|
| Max. Recommended Pulling Tension: | 200.169 N |
| Min. Bend Radius/Minor Axis:      | 63.500 mm |

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

|                                       |                           |
|---------------------------------------|---------------------------|
| NEC/(UL) Specification:               | CMR                       |
| CEC/C(UL) Specification:              | CMR                       |
| AWM Specification:                    | UL Style 444 (300 V 75°C) |
| EU Directive 2011/65/EU (ROHS II):    | Yes                       |
| EU Directive 2000/53/EC (ELV):        | Yes                       |
| EU Directive 2002/95/EC (RoHS):       | Yes                       |
| EU RoHS Compliance Date (mm/dd/yyyy): | 10/13/2005                |
| 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                       |
| Other Specification:                  | UL Verified to Category 6 |

#### Applicable Patents:

|                  |
|------------------|
| Country          |
| www.belden.com/p |

#### Flame Test

|                   |              |
|-------------------|--------------|
| UL Flame Test:    | UL1666 Riser |
| C(UL) Flame Test: | FT4          |
| IEEE Flame Test:  | 1202         |

#### Suitability

|                      |     |
|----------------------|-----|
| Sunlight Resistance: | Yes |
| Oil Resistance:      | Yes |

#### Plenum/Non-Plenum

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

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

|                    |
|--------------------|
| Capacitance (pF/m) |
| 50.8555            |

|   |      |
|---|------|
| Maximum Capacitance Unbalance (pF/100 m): | 65.6 |
|---|------|

#### Nominal Velocity of Propagation:

|        |
|--------|
| VP (%) |
| 67     |

#### Maximum Delay:

|                  |
|------------------|
| Delay (ns/100 m) |
| 538 @ 100MHz     |

#### Max. Delay Skew:

|                       |
|-----------------------|
| Delay Skew (ns/100 m) |
| 38                    |

#### Maximum Conductor DC Resistance:

|                        |
|------------------------|
| DCR @ 20°C (Ohm/100 m) |
| 8.2                    |

#### Max. Operating Voltage - UL:

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**Voltage**

300 V RMS

**Maximum DCR Unbalanced:**

**DCR Unbalance @ 20°C (%)**

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### 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) | Min. SRL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|---------------|
| 1           | 1.9                         | 82.3           | 80.3             | 80.5          | 78.5            | 20.0        | 27.0          |
| 4           | 3.6                         | 73.3           | 71.3             | 69.7          | 67.7            | 23.0        | 27.0          |
| 8           | 5.1                         | 68.8           | 66.8             | 63.7          | 61.7            | 24.5        | 27.0          |
| 10          | 5.7                         | 67.3           | 65.3             | 61.6          | 59.6            | 25.0        | 27.0          |
| 16          | 7.2                         | 64.3           | 62.3             | 57.0          | 55.0            | 25.0        | 27.0          |
| 20          | 8.1                         | 62.8           | 60.8             | 54.7          | 52.7            | 25.0        | 27.0          |
| 25          | 9.1                         | 61.3           | 59.3             | 52.3          | 50.3            | 25.0        | 27.0          |
| 31.25       | 10.2                        | 59.9           | 57.9             | 49.7          | 47.7            | 25.0        | 27.0          |
| 62.5        | 14.7                        | 55.4           | 53.4             | 40.7          | 38.7            | 25.0        | 27.0          |
| 100         | 18.9                        | 52.3           | 50.3             | 33.4          | 31.4            | 25.0        | 27.0          |
| 155         | 23.9                        | 49.5           | 47.5             | 25.5          | 23.5            | 22.8        | 24.7          |
| 200         | 27.5                        | 47.8           | 45.8             | 20.3          | 18.3            | 21.7        | 23.4          |
| 250         | 31.2                        | 46.3           | 44.3             | 15.2          | 13.2            | 20.5        | 22.2          |
| 300         | 34.5                        | 43.2           | 41.2             | 10.6          | 8.6             | 20.2        | 21.2          |
| 310         | 35.2                        | 42.9           | 40.9             | 9.8           | 7.8             | 20.1        | 21.1          |
| 350         | 37.7                        | 42.2           | 40.2             | 6.5           | 4.5             | 19.8        | 20.4          |
| 400         | 40.6                        | 41.3           | 39.3             | 2.6           | 0.6             | 19.5        | 19.7          |
| 450         | 43.5                        | 40.5           | 38.5             | 2.1           | 0.10            | 18.9        | 19.1          |
| 460         | 44.0                        | 40.4           | 38.4             | 0             | 0               | 18.8        | 19.0          |
| 500         | 46.2                        | 39.8           | 37.8             |               |                 | 18.4        | 18.5          |
| 550         | 48.8                        | 39.2           | 37.2             |               |                 | 18.0        | 18.0          |
| 600         | 51.4                        | 38.6           | 36.6             |               |                 | 17.6        | 17.6          |

**Premise Cable Electrical Table 2:**

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-------------|------------------------------|------------------|------------------|--------------------|
| 1           | 100 ± 12                     | 100 ± 15         | 73.8             | 70.8               |
| 4           | 100 ± 12                     | 100 ± 10.4       | 61.8             | 58.8               |
| 8           | 100 ± 12                     | 100 ± 8          | 55.7             | 52.7               |
| 10          | 100 ± 12                     | 100 ± 7.3        | 53.8             | 50.8               |
| 16          | 100 ± 12                     | 100 ± 5.7        | 49.7             | 46.7               |
| 20          | 100 ± 12                     | 100 ± 5          | 47.8             | 44.8               |
| 25          | 100 ± 15                     | 100 ± 5          | 45.8             | 42.8               |
| 31.25       | 100 ± 15                     | 100 ± 5          | 43.9             | 40.9               |
| 62.5        | 100 ± 15                     | 100 ± 5          | 37.9             | 34.9               |
| 100         | 100 ± 15                     | 100 ± 5          | 33.8             | 30.8               |
| 155         | 100 ± 15                     | 100 ± 5          | 30.0             | 27.0               |
| 200         | 100 ± 15                     | 100 ± 5          | 27.8             | 24.8               |
| 250         | 100 ± 20                     | 100 ± 5          | 25.8             | 22.8               |
| 300         | 100 ± 20                     | 100 ± 5          | 24.3             | 21.3               |
| 310         | 100 ± 20                     | 100 ± 5          | 24.0             | 21.0               |
| 350         | 100 ± 22                     | 100 ± 5          | 22.9             | 19.9               |
| 400         | 100 ± 22                     | 100 ± 5          | 21.8             | 18.8               |
| 450         | 100 ± 22                     | 100 ± 5          | 20.7             | 17.7               |
| 460         | 100 ± 22                     | 100 ± 5          | 20.5             | 17.5               |
| 500         | 100 ± 22                     | 100 ± 5          | 19.8             | 16.8               |
| 550         | 100 ± 22                     | 100 ± 5          | 19.0             | 16.0               |
| 600         | 100 ± 22                     | 100 ± 5          | 18.2             | 15.2               |

### Notes (Overall)

**Notes:** Third party verified to TIA/EIA-568-B.2, Category 6. Operating temperature subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.

## 7927A Multi-Conductor - Category 6 DataTuff® Twisted Pair Cable

**Notes (Cont'd.):**

T568A Plug Compatible Part Number: R301603 T568B Plug Compatible Part Number: R301604

### Put Ups and Colors:

| Item #        | Putup    | Ship Weight | Color | Notes | Item Desc       |
|---------------|----------|-------------|-------|-------|-----------------|
| 7927A 0101000 | 1,000 FT | 42.000 LB   | BLACK | C     | 4 PR #23 PP PVC |
| 7927A 0102000 | 2,000 FT | 84.000 LB   | BLACK | C     | 4 PR #23 PP PVC |
| 7927A 0105000 | 5,000 FT | 205.000 LB  | BLACK | C     | 4 PR #23 PP PVC |

**Notes:**

C = CRATE REEL PUT-UP.

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