

## 7919A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

24 AWG solid bare copper conductors, twisted pairs, polyolefin insulation, overall Beldfoil shield (100% coverage), 24 AWG stranded TC drain wire, 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, 100MHz Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, RS-422, CMX - Outdoor, RJ-45 Compatible, Noisy Environments

### Physical Characteristics (Overall)

#### Conductor

##### AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4       | 24  | Solid     | BC - Bare Copper   |

**Total Number of Conductors:** 8

#### Insulation

##### Insulation Material:

| Insulation Material | Wall Thickness (in.) |
|---------------------|----------------------|
| PO - Polyolefin     | .010                 |

#### Outer Shield

##### Outer Shield Material:

| Outer Shield Trade Name | Type | Outer Shield Material        | Coverage (%) |
|-------------------------|------|------------------------------|--------------|
| Beldfoil®               | Tape | Aluminum Foil-Polyester Tape | 100          |

##### Outer Shield Drain Wire AWG:

| AWG | Stranding | Drain Wire         | Conductor Material |
|-----|-----------|--------------------|--------------------|
| 24  | 7x32      | TC - Tinned Copper |                    |

#### Outer Jacket

##### Outer Jacket Material:

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

**Outer Jacket Ripcord:** No

### Overall Cable

**Overall Nominal Diameter:** 0.265 in.

### Pair

##### Pair Color Code Chart:

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

### Mechanical Characteristics (Overall)

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

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

**Bulk Cable Weight:** 30 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 25 lbs.

**Min. Bend Radius/Minor Axis:** 1 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

**NEC/(UL) Specification:** CMR, CMX-Outdoor, UL444

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|                                       |  |
|---------------------------------------|--|
| CEC/C(UL) Specification:              | CMR  |
| 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): | 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  |
| PMSHA Specification:                  | P-07-KA060004  |
| Other Specification:                  | NEMA WC-63.1 Category 5e, UL verified to Category 5e |

**Applicable Patents:**

|  |
|--|
| Country  |
| <a href="http://www.belden.com/p">www.belden.com/p</a> |

**Flame Test**

|                  |              |
|------------------|--------------|
| UL Flame Test:   | UL1666 Riser |
| CSA Flame Test:  | FT4          |
| IEEE Flame Test: | 1202         |

**Suitability**

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

**Plenum/Non-Plenum**

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

### Electrical Characteristics (Overall)

**Nom. Mutual Capacitance:**

|                     |
|---------------------|
| Capacitance (pF/ft) |
| 15                  |

|   |     |
|---|-----|
| Maximum Capacitance Unbalance (pF/100 m): | 330 |
|---|-----|

**Nominal Velocity of Propagation:**

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

**Maximum Delay:**

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

**Max. Delay Skew:**

|                       |
|-----------------------|
| Delay Skew (ns/100 m) |
| 45                    |

**Maximum Conductor DC Resistance:**

|                        |
|------------------------|
| DCR @ 20°C (Ohm/100 m) |
| 9.38                   |

**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) | Min. SRL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|---------------|
| 1           | 2.0                         | 65.3           | 62.3             | 63.0          | 60.0            | 20.0        | 23            |
| 4           | 4.1                         | 56.3           | 53.3             | 51.0          | 49.0            | 23.0        | 23.0          |
| 8           | 5.8                         | 51.8           | 48.8             | 46.0          | 43.0            | 24.5        | 24.5          |
| 10          | 6.5                         | 50.3           | 47.3             | 43.0          | 41.0            | 25.0        | 25.0          |
| 16          | 8.2                         | 47.3           | 44.3             | 39.0          | 36.0            | 25.0        | 25.0          |

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|       |      |      |      |      |      |      |      |
|-------|------|------|------|------|------|------|------|
| 20    | 9.3  | 45.8 | 42.8 | 36.5 | 33.5 | 25.0 | 25.0 |
| 25    | 10.4 | 44.3 | 41.3 | 33.9 | 30.9 | 24.3 | 24.3 |
| 31.25 | 11.7 | 42.9 | 39.9 | 31.0 | 28.0 | 23.6 | 23.6 |
| 62.5  | 17.0 | 38.4 | 35.4 | 22.0 | 19.0 | 21.5 | 21.5 |
| 100   | 22.0 | 35.3 | 32.3 | 14.0 | 11.0 | 20.1 | 20.1 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-------------|------------------------------|------------------|------------------|--------------------|
| 1           | 100 ± 15                     | 100 ± 15         | 63.8             | 60.8               |
| 4           | 100 ± 15                     | 100 ± 15         | 51.7             | 48.7               |
| 8           | 100 ± 15                     | 100 ± 15         | 45.7             | 42.7               |
| 10          | 100 ± 15                     | 100 ± 15         | 43.8             | 40.8               |
| 16          | 100 ± 15                     | 100 ± 15         | 39.7             | 36.7               |
| 20          | 100 ± 15                     | 100 ± 15         | 37.7             | 34.7               |
| 25          | 100 ± 15                     | 100 ± 15         | 35.8             | 32.8               |
| 31.25       | 100 ± 15                     | 100 ± 15         | 33.9             | 30.9               |
| 62.5        | 100 ± 15                     | 100 ± 15         | 27.8             | 24.8               |
| 100         | 100 ± 15                     | 100 ± 15         | 23.8             | 20.8               |

### Notes (Overall)

**Notes:** Operating temperatures are subject to length de-rating. Cable passes -40°C Cold Bend per UL 1581.

### Put Ups and Colors:

| Item #         | Putup     | Ship Weight | Color       | Notes | Item Desc          |
|----------------|-----------|-------------|-------------|-------|--------------------|
| 7919A 0061000  | 1,000 FT  | 35.000 LB   | BLUE, LIGHT | C     | 4 PR #24 PP FS PVC |
| 7919A 0101000  | 1,000 FT  | 35.000 LB   | BLACK       | C     | 4 PR #24 PP FS PVC |
| 7919A 01010000 | 10,000 FT | 360.000 LB  | BLACK       | C     | 4 PR #24 PP FS PVC |
| 7919A 0102000  | 2,000 FT  | 64.000 LB   | BLACK       | C     | 4 PR #24 PP FS PVC |
| 7919A 0105000  | 5,000 FT  | 160.000 LB  | BLACK       | C     | 4 PR #24 PP FS PVC |

**Notes:**

C = CRATE REEL PUT-UP.

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