

7923A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable



For more Information
please call

1-800-Belden1



General Description:

24 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, EtherNet/IP™, 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, RJ-45 Compatible

Physical Characteristics (Overall)

Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material | Dia. (mm) |
|---------|-----|-----------|--------------------|-----------|
| 4 | 24 | Solid | BC - Bare Copper | 0.508 |

Total Number of Conductors: 8

Insulation

Insulation Material:

| Insulation Material | Wall Thickness (mm) | Dia. (mm) |
|---------------------|---------------------|-----------|
| PO - Polyolefin | 0.2286 | 0.889 |

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 Nominal Diameter: 5.842 mm

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)

Storage Temperature Range: -40°C To +85°C

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

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

Bulk Cable Weight: 37.205 Kg/Km

Max. Recommended Pulling Tension: 177.928 N

Min. Bend Radius/Minor Axis: 63.500 mm

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

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

CEC/C(UL) Specification: CMR

EU Directive 2011/65/EU (ROHS II): Yes

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| | |
|---------------------------------------|--|
| 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-KA060003 |
| Other Specification: | NEMA WC-63.1 Category 5e, UL verified to Category 5e, Ethernet/IP™ Compliant |

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/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 | 23.6 |
| 8 | 5.7 | 51.8 | 51.8 | 46.1 | 46.1 | 25.4 |
| 10 | 6.4 | 50.3 | 50.3 | 43.9 | 43.9 | 26.0 |
| 16 | 8.1 | 47.3 | 47.3 | 39.1 | 39.1 | 26.0 |
| 20 | 9.2 | 45.8 | 45.8 | 35.2 | 35.2 | 26.0 |
| 25 | 10.3 | 44.3 | 44.3 | 34.1 | 34.1 | 25.5 |
| 31.25 | 11.6 | 42.9 | 42.9 | 31.3 | 31.3 | 25.0 |
| 62.5 | 16.8 | 38.4 | 38.4 | 21.6 | 21.6 | 23.5 |
| 100 | 21.7 | 35.3 | 35.3 | 17.1 | 17.1 | 22.5 |
| 155 | 27.7 | 32.5 | 32.5 | 4.7 | 4.7 | 19.0 |

METRIC MEASUREMENT VERSION

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| | | | | | | |
|-----|------|------|------|-----|-----|------|
| 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 | 95-110 | 63.8 | 60.8 |
| 4 | 100 ± 12 | 95-110 | 51.7 | 48.7 |
| 8 | 100 ± 12 | 95-107 | 45.7 | 42.7 |
| 10 | 100 ± 12 | 95-107 | 43.8 | 40.8 |
| 16 | 100 ± 12 | 95-107 | 39.7 | 36.7 |
| 20 | 100 ± 12 | 95-107 | 37.7 | 34.7 |
| 25 | 100 ± 15 | 95-107 | 35.8 | 32.8 |
| 31.25 | 100 ± 15 | 95-107 | 33.9 | 30.9 |
| 62.5 | 100 ± 15 | 95-107 | 27.8 | 24.8 |
| 100 | 100 ± 15 | 95-107 | 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. Ethernet IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vendor Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.

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 |
|---------------|----------|-------------|-------------|-------|-----------------|
| 7923A 0021000 | 1,000 FT | 28.000 LB | RED | C | 4 PR #24 PP PVC |
| 7923A 0061000 | 1,000 FT | 28.000 LB | BLUE, LIGHT | C | 4 PR #24 PP PVC |
| 7923A 0081000 | 1,000 FT | 28.000 LB | GRAY | C | 4 PR #24 PP PVC |
| 7923A 0101000 | 1,000 FT | 28.000 LB | BLACK | C | 4 PR #24 PP PVC |
| 7923A 0102000 | 2,000 FT | 54.000 LB | BLACK | C | 4 PR #24 PP PVC |
| 7923A 1NH1000 | 1,000 FT | 28.000 LB | TEAL 1NH | C | 4 PR #24 PP PVC |

Notes:

C = CRATE REEL PUT-UP.

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