# **Detailed Specifications & Technical Data**



#### METRIC MEASUREMENT VERSION

### 7930A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable



For more Information please call

1-800-Belden1



## **Description:**

24 AWG stranded (7x32) bare copper conductors, twisted pairs, polyolefin insulation, industrial grade sunlight- and oil-resistant PVC jacket. Sequential marking at two foot intervals.

#### **Usage (Overall)**

Suitable Applications:

Industrial Ethernet, Harsh Environments, Flexible Applications, 200MHz Category 5e, Industrial Patch Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, CMX - Outdoor, RJ-45 Compatible

|   | · · · · · · · · · · · · · · · · · · · |
|---|---------------------------------------|
| Physical Characteristics (Overall)                            |                                       |
| Conductor   |                                       |
| AWG:  |                                       |
| # Pairs AWG Stranding Conductor Material                      |                                       |
| 4 24 7x32 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 Nom. Wa                                 | all Thickness (mm)                    |
| Industrial Grade PVC - Polyvinyl Chloride 0.762               |                                       |
|   |                                       |
| Overall Cable   |                                       |
| Overall Nominal Diameter:                                     | 6.096 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 |                                       |
| 4 Wille/blown Stilpe & blown                                  |                                       |
| Aechanical Characteristics (Overall)                          |                                       |
| Installation Temperature Range:                               | -10°C To +75°C                        |
| Operating Temperature Range:                                  | -25°C To +75°C                        |
|   |                                       |

 Bulk Cable Weight:
 38.693 Kg/Km

 Max. Recommended Pulling Tension:
 111.205 N

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| Min. Bend Radius/Minor Axis:                     | 24.384 mm  |  |  |  |  |
|--|--|--|--|--|--|
| Applicable Specifications and Agency Con         | npliance (Overall)   |  |  |  |  |
| Applicable Standards & Environmental Progra      | ms   |  |  |  |  |
| NEC/(UL) Specification:                          | CMR, CMX-Outdoor, UL444  |  |  |  |  |
| CEC/C(UL) Specification:                         | CMR  |  |  |  |  |
| Other Standards:                                 | 11801 Category 5e Patch  |  |  |  |  |
| 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:                    | 568-B.2 Category 5e Patch  |  |  |  |  |
| Other Specification:                             | NEMA WC-63.1 Category 5e Patch, ICEA 661 Category 5 Patch, UL verified to<br>Category 5e |  |  |  |  |
| Flame Test                                       |  |  |  |  |  |
| UL Flame Test:                                   | UL1666 Riser   |  |  |  |  |
| CSA 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. Mutual Capacitance:                         |  |  |  |  |  |
| Capacitance (pF/m)<br>49.215                     |  |  |  |  |  |
| Maximum Capacitance Unbalance (pF/100 m):        | 330  |  |  |  |  |
| Nominal Velocity of Propagation:<br>VP (%)<br>69 |  |  |  |  |  |
| Maximum Delay:                                   |  |  |  |  |  |
| Delay (ns/100 m)<br>510 @ 100MHz                 |  |  |  |  |  |
| Typical Delay Skew:                              |  |  |  |  |  |
| Delay Skew (ns/m)<br>39.372                      |  |  |  |  |  |
| Max. Delay Skew:<br>Delay Skew (ns/100 m)<br>45  |  |  |  |  |  |
| Maximum Conductor DC Resistance:                 |  |  |  |  |  |
| DCR @ 20°C (Ohm/100 m)<br>9.38                   |  |  |  |  |  |
|  |  |  |  |  |  |

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Max. Operating Voltage - UL:

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           | 2.5                         | 65.3           | 62.3             | 62.8          | 59.8            | 20.0        | 23.0          |
| 4           | 4.9                         | 56.3           | 53.3             | 51.4          | 48.4            | 23.0        | 23.0          |
| 8           | 6.9                         | 51.8           | 48.8             | 44.9          | 41.9            | 24.5        | 24.5          |
| 10          | 7.8                         | 50.3           | 47.3             | 42.5          | 39.5            | 25.0        | 25.0          |
| 16          | 9.9                         | 47.3           | 44.3             | 37.4          | 34.4            | 25.0        | 25.0          |
| 20          | 11.1                        | 45.8           | 42.8             | 34.7          | 31.7            | 25.0        | 25.0          |
| 25          | 12.5                        | 44.3           | 41.3             | 21.8          | 28.8            | 24.3        | 24.3          |
| 31.25       | 14.1                        | 42.9           | 39.9             | 28.8          | 25.8            | 23.6        | 23.6          |
| 62.5        | 20.4                        | 38.4           | 35.4             | 18.0          | 15.0            | 21.5        | 21.5          |
| 100         | 26.4                        | 35.3           | 32.3             | 8.9           | 5.9             | 20.1        | 20.1          |
| 155         | 33.7                        | 32.5           | 29.5             |               |                 | 15.8        |               |
| 200         | 38.9                        | 30.8           | 27.8             |               |                 | 15.0        |               |

#### 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               |
| 155         | 100 ± 25                     | 100 ± 15         | 19.9             | 16.9               |
| 200         | 100 ± 25                     | 100 ± 15         | 17.7             | 14.7               |

#### **Notes (Overall)**

Notes: Operating temperatures are subject to length de-rating. Cable passes -25C Cold Bend per UL 1581.

#### **Put Ups and Colors:**

| Item #        | Putup  | Ship Weight | Color | Notes | Item Desc       |
|---------------|--------|-------------|-------|-------|-----------------|
| 7930A 0101000 | 305 MT | 13.154 KG   | BLACK | С     | 4 PR #24 PP PVC |
| 7930A 0102000 | 610 MT | 25.401 KG   | BLACK | С     | 4 PR #24 PP PVC |

Notes:

C = CRATE REEL PUT-UP.

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