

7851A Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable



For more Information
please call

1-800-Belden1



Description:

23 AWG Bonded-Pairs, Solid Bare Copper Conductors, Non-Plenum, Polyolefin Insulation, Patented e-Spline Center Member, Rip Cord, PVC Jacket

Usage (Overall)

Suitable Applications: Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments

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 |
|--------------------------|
| PVC - Polyvinyl Chloride |

Outer Jacket Diameter:

| Nom. Dia. (mm) |
|----------------|
| 5.766 |
| 8.001 |

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: Patented E-Spline Center Member

Overall Nominal Diameter: 5.766 x 8.001 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)

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| | |
|-----------------------------------|----------------|
| Storage Temperature Range: | -20°C To +75°C |
| Installation Temperature Range: | -20°C To +75°C |
| Operating Temperature Range: | 0°C To +75°C |
| Bulk Cable Weight: | 52.087 Kg/Km |
| Max. Recommended Pulling Tension: | 200.169 N |
| Min. Bend Radius/Minor Axis: | 50.800 mm |
| Min. Bend/Installation: | 58.420 mm |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|-------------------------------------|
| NEC/(UL) Specification: | CMR |
| NEC Articles: | 800 |
| CEC/C(UL) Specification: | CMR |
| Other Standards: | ISO/IEC 11801 ed 2.1 (2008) Class E |
| EU CE Mark: | 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 |
| Telecommunications Standards: | Category 6 - TIA 568.C.2 |
| Other Specification: | UL Verified to Category 6 |

Applicable Patents:

| Country | Patent |
|---------|---------|
| US | 5606151 |
| US | 5734126 |
| US | 6074503 |
| US | 6855889 |
| US | 7663061 |
| US | 7838773 |
| US | 7977575 |

Flame Test

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

Suitability

| | |
|------------------------|-----|
| Suitability - Indoor: | Yes |
| Suitability - Outdoor: | No |
| Suitability - Burial: | No |
| Sunlight Resistance: | No |

Plenum/Non-Plenum

| | |
|----------------|-------|
| Plenum (Y/N): | No |
| Plenum Number: | 7852A |

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

Capacitance (pF/m)
50.8555

Maximum Capacitance Unbalance (pF/100 m): 90

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:

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 | 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 |

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| | | | | |
|-------|----------|-----------|------|------|
| 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: Belden IBDN. Jacket sequentially marked at 2 ft/1m intervals. Third party verified to ANSI/TIA-568-C.2, Category 6.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|----------------|--------|-------------|------------------|-------|----------------------------|
| 7851A F6HA1000 | 305 MT | 17.690 KG | GRAY, DARK PEARL | | CAT6E+ 4PRB U/UTP CMR RIB |
| 7851A F6H1000 | 305 MT | 16.329 KG | GRAY, DARK PEARL | C | CAT6E+ 4PRB U/UTP CMR REEL |
| 7851A 002A1000 | 305 MT | 17.690 KG | RED | | CAT6E+ 4PRB U/UTP CMR RIB |
| 7851A 0021000 | 305 MT | 16.329 KG | RED | | CAT6E+ 4PRB U/UTP CMR REEL |
| 7851A 003A1000 | 305 MT | 17.690 KG | ORANGE | | CAT6E+ 4PRB U/UTP CMR RIB |
| 7851A 0031000 | 305 MT | 16.329 KG | ORANGE | C | CAT6E+ 4PRB U/UTP CMR REEL |
| 7851A 004A1000 | 305 MT | 17.690 KG | YELLOW | | CAT6E+ 4PRB U/UTP CMR RIB |
| 7851A 0041000 | 305 MT | 16.329 KG | YELLOW | C | CAT6E+ 4PRB U/UTP CMR REEL |
| 7851A 005A1000 | 305 MT | 17.690 KG | GREEN, DARK | | CAT6E+ 4PRB U/UTP CMR RIB |
| 7851A 0051000 | 305 MT | 16.329 KG | GREEN, DARK | C | CAT6E+ 4PRB U/UTP CMR REEL |
| 7851A 006A1000 | 305 MT | 17.690 KG | BLUE, LIGHT | | CAT6E+ 4PRB U/UTP CMR RIB |
| 7851A 0061000 | 305 MT | 16.329 KG | BLUE, LIGHT | C | CAT6E+ 4PRB U/UTP CMR REEL |
| 7851A 009A1000 | 305 MT | 17.690 KG | WHITE | | CAT6E+ 4PRB U/UTP CMR RIB |
| 7851A 0091000 | 305 MT | 16.329 KG | WHITE | C | CAT6E+ 4PRB U/UTP CMR REEL |
| 7851A 010A1000 | 305 MT | 17.690 KG | BLACK | | CAT6E+ 4PRB U/UTP CMR RIB |
| 7851A 0101000 | 305 MT | 16.329 KG | BLACK | | CAT6E+ 4PRB U/UTP CMR REEL |

Notes:

C = CRATE REEL PUT-UP.

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Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.



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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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