

4813 Multi-Conductor - Enhanced Category 6 Nonbonded-Pair Cable



For more Information
please call

1-800-Belden1



Description:

23 AWG Solid Bare Copper Conductors, Dual FRPO/FEP Teflon® insulation, X-Spline Center Member, Rip Cord, Flam arrest® 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 |
|--|
| FRPO/FEP - Flame Retardant Polyolefin/Fluorinated Ethylene Propylene |

Outer Shield

Outer Shield Material:

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

Outer Jacket

Outer Jacket Material:

| Outer Jacket Trade Name | Outer Jacket Material |
|-------------------------|---------------------------------------|
| Flam arrest® | LS PVC - Low Smoke Polyvinyl Chloride |

Outer Jacket Diameter:

| Nom. Dia. (in.) |
|-----------------|
| 0.255 |

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: Patented X-Spline Center Member

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: +5°C To +50°C

Operating Temperature Range: -20°C To +75°C

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| | |
|--|-----------------|
| Bulk Cable Weight: | 34 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 45 lbs. |
| Min. Bend Radius/Minor Axis: | 1.500 in. |
| Min. Bend/Installation: | 2.500 in. |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|--|-------------------------------------|
| NEC/(UL) Specification: | CMP |
| NEC Articles: | 800 |
| CEC/C(UL) Specification: | CMP |
| 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): | 07/01/2006 |
| 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 | 5563377 |
| US | 6074503 |
| US | 7663061 |
| CANADA | 2144694 |
| US | 7977575 |

Flame Test

| | |
|------------------------|----------|
| UL Flame Test: | NFPA 262 |
| CSA Flame Test: | FT6 |

Plenum/Non-Plenum

| | |
|---------------------------|------|
| Plenum (Y/N): | Yes |
| Non-Plenum Number: | 4812 |

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

| | |
|----------------------------|------|
| Capacitance (pF/ft) | 15.5 |
|----------------------------|------|

Maximum Capacitance Unbalance (pF/100 m): 330

Nominal Velocity of Propagation:

| | |
|---------------|--------|
| VP (%) | 70.000 |
|---------------|--------|

Maximum Delay:

| | |
|-------------------------|---------|
| Delay (ns/100 m) | 510.000 |
|-------------------------|---------|

Max. Delay Skew:

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

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25.000

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
6.600

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) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|
| 0.772 | 1.700 | 82 | 80 | 80.3 | 78.3 | |
| 1 | 1.800 | 80.3 | 78.3 | 78.5 | 76.5 | 20.000 |
| 4 | 3.400 | 71.3 | 69.3 | 67.9 | 65.9 | 23.000 |
| 8 | 4.800 | 66.8 | 64.8 | 62 | 60 | 24.500 |
| 10 | 5.300 | 65.3 | 63.3 | 60 | 58 | 25.000 |
| 16 | 6.800 | 62.2 | 60.2 | 55.5 | 53.5 | 25.000 |
| 20 | 7.600 | 60.8 | 58.8 | 53.2 | 51.2 | 25.000 |
| 25 | 8.500 | 59.3 | 57.3 | 50.8 | 48.8 | 25.000 |
| 31.25 | 9.600 | 57.9 | 55.9 | 48.3 | 46.3 | 24.200 |
| 62.5 | 13.800 | 53.4 | 51.4 | 39.6 | 37.6 | 22.900 |
| 100 | 17.800 | 50.3 | 48.3 | 32.5 | 30.5 | 22.100 |
| 155 | 22.700 | 47.4 | 45.4 | 24.8 | 22.8 | 21.300 |
| 200 | 26.200 | 45.8 | 43.8 | 19.6 | 17.6 | 20.900 |
| 250 | 29.700 | 44.3 | 42.3 | 14.6 | 12.6 | 20.400 |
| 300 | 33.000 | 43.1 | 41.1 | 10.2 | 8.2 | 20.100 |
| 350 | 36.000 | 42.1 | 40.1 | 6.1 | 4.1 | 19.800 |
| 400 | 39.000 | 41.3 | 39.3 | 2.3 | 0.3 | 19.600 |
| 450 | 41.800 | 40.5 | 38.5 | -1.3 | -3.3 | 19.400 |
| 500 | 44.500 | 39.8 | 37.8 | -4.6 | -6.6 | 19.200 |
| 550 | 47.100 | 39.2 | 37.2 | -7.9 | -9.9 | 19.000 |
| 600 | 49.600 | 38.6 | 36.6 | -11.0 | -13.0 | 18.900 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ACRF (dB) | Min. PSACRF (dB) |
|-------------|------------------------------|------------------|----------------|------------------|
| 0.772 | | 102 ± 15 | 77.0 | 74.0 |
| 1 | 100 ± 15 | 100 ± 15 | 74.8 | 71.8 |
| 4 | 100 ± 15 | 100 ± 15 | 62.8 | 59.8 |
| 8 | 100 ± 15 | 100 ± 15 | 56.7 | 53.7 |
| 10 | 100 ± 15 | 100 ± 15 | 54.8 | 51.8 |
| 16 | 100 ± 15 | 100 ± 15 | 50.7 | 47.7 |
| 20 | 100 ± 15 | 100 ± 15 | 48.8 | 45.8 |
| 25 | 100 ± 15 | 100 ± 15 | 46.8 | 43.8 |
| 31.25 | 100 ± 15 | 100 ± 15 | 44.9 | 41.9 |
| 62.5 | 100 ± 15 | 100 ± 15 | 38.9 | 35.9 |
| 100 | 100 ± 15 | 100 ± 15 | 34.8 | 31.8 |
| 155 | 100 ± 15 | 100 ± 15 | 31.0 | 28.0 |
| 200 | 100 ± 15 | 100 ± 15 | 28.8 | 25.8 |
| 250 | 100 ± 22 | 100 ± 15 | 26.8 | 23.8 |
| 300 | 100 ± 22 | 100 ± 15 | 25.3 | 22.3 |
| 350 | 100 ± 22 | 100 ± 15 | 23.9 | 20.9 |
| 400 | 100 ± 22 | 100 ± 15 | 22.8 | 19.8 |
| 450 | | | 21.7 | 18.7 |
| 500 | | | 20.8 | 17.8 |
| 550 | | | 20.0 | 17.0 |
| 600 | | | 19.2 | 16.2 |

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Premise Cable Electrical Table 4:

| Frequency (MHz) | Min. TCL (dB) | Min. ELTCTL (dB) |
|-----------------|---------------|------------------|
| 0.772 | 40.000 | 37.200 |
| 1.000 | 40.000 | 35.000 |
| 4.000 | 40.000 | 23.000 |
| 8.000 | 40.000 | 16.900 |
| 10.000 | 40.000 | 15.000 |
| 16.000 | 38.000 | 10.900 |
| 20.000 | 37.000 | 9.000 |
| 25.000 | 36.000 | 7.000 |
| 31.250 | 35.100 | |
| 62.500 | 32.000 | |
| 100.000 | 30.000 | |
| 155.000 | 28.100 | |
| 200.000 | 27.000 | |
| 250.000 | 26.000 | |

Notes (Overall)

Notes: Belden IBDN. Jacket sequentially marked at 2 ft./1m intervals. Values above 400 MHz are for Engineering Information Only. Third party verified to ANSI/TIA-568-C.2, Category 6.

Reference (Overall)

Previous Part Number: 24587785, 24587785+US, 25087885, 25087885+US, 24587185, 24587185+US, 24587385, 24587385+US, 24587336, 24587336+US, 24587315, 24587485, 24587485+US, 24587451+US, 24587985, 24587985+US, 24587915, 24587915+US

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-------------|-------|---------------------------|
| 4813 D15A1000 | 1,000 FT | 30.000 LB | BLUE | | CAT6E+ 4PR U/UTP CMP RIB |
| 4813 D151000 | 1,000 FT | 30.000 LB | BLUE | | CAT6E+ 4PR U/UTP CMP REEL |
| 4813 0041000 | 1,000 FT | 30.000 LB | YELLOW | | CAT6E+ 4PR U/UTP CMP REEL |
| 4813 0051000 | 1,000 FT | 30.000 LB | GREEN, DARK | | CAT6E+ 4PR U/UTP CMP REEL |
| 4813 0081000 | 1,000 FT | 30.000 LB | GRAY | | CAT6E+ 4PR U/UTP CMP REEL |
| 4813 009A1000 | 1,000 FT | 30.000 LB | WHITE | | CAT6E+ 4PR U/UTP CMP RIB |
| 4813 0091000 | 1,000 FT | 30.000 LB | WHITE | | CAT6E+ 4PR U/UTP CMP REEL |
| 4813 0092500 | 2,500 FT | 80.000 LB | WHITE | | CAT6E+ 4PR U/UTP CMP REEL |
| 4813 0101000 | 1,000 FT | 30.000 LB | BLACK | | CAT6E+ 4PR U/UTP CMP REEL |
| 4813 0103000 | 3,000 FT | 99.000 LB | BLACK | | CAT6E+ 4PR U/UTP CMP REEL |

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Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.