

## 2412 Multi-Conductor - Enhanced Category 6 Nonbonded-Pair Cables



For more Information  
please call

1-800-Belden1



### Description:

23 AWG solid bare copper conductors, polyolefin insulation, film tape separator, PVC jacket with ripcord, sequential footage marking every two feet.

### Usage (Overall)

**Suitable Applications:** Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM

### Physical Characteristics (Overall)

#### Conductor

**AWG:**

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4       | 23  | Solid     | BC - Bare Copper   |

#### 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 Ripcord:** Yes

#### Overall Cabling

**Overall Cabling Fillers:** Center Tape

**Overall Nominal Diameter:** 0.220 in.

#### Pair

**Pair Color Code Chart:**

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

### Mechanical Characteristics (Overall)

**Storage Temperature Range:** -20°C To +75°C

**Installation Temperature Range:** +5°C To +50°C

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

**Bulk Cable Weight:** 24 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 40 lbs.

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Min. Bend Radius (Install)/Minor Axis: 1 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

|                                       |                                    |
|---------------------------------------|------------------------------------|
| CEC/C(UL) Specification:              | CMR                                |
| 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:         | 568-B.2-1 Category 6               |
| Other Specification:                  | Third party verified to Category 6 |

#### Flame Test

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

#### Plenum/Non-Plenum

|                |      |
|----------------|------|
| Plenum (Y/N):  | No   |
| Plenum Number: | 2413 |

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/ft)  
17.000

#### Nominal Velocity of Propagation:

VP (%)  
70

Maximum Capacitance Unbalance (pF/100 m): 330

#### Maximum Delay:

Delay (ns/100 m)  
537 @ 100MHz

#### Max. Delay Skew:

Delay Skew (ns/100 m)  
45

#### 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 (%)  
5

### 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)

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|       |        |      |      |       |       |        |
|-------|--------|------|------|-------|-------|--------|
| 0.772 | 1.800  | 77.0 | 75.0 | 75.2  | 73.2  |        |
| 1     | 2.000  | 75.3 | 73.3 | 73.3  | 71.3  | 20.000 |
| 4     | 3.700  | 66.3 | 64.3 | 62.6  | 60.6  | 23.000 |
| 8     | 5.200  | 63.3 | 61.3 | 58.1  | 56.1  | 24.500 |
| 10    | 5.800  | 61.8 | 59.8 | 56.0  | 54.0  | 25.000 |
| 16    | 7.400  | 58.6 | 56.6 | 51.2  | 49.2  | 25.000 |
| 20    | 8.300  | 57.1 | 55.1 | 48.8  | 46.8  | 25.000 |
| 25    | 9.300  | 55.5 | 53.5 | 46.3  | 44.3  | 24.300 |
| 31.25 | 10.400 | 54.0 | 52.0 | 43.6  | 41.6  | 23.600 |
| 62.5  | 15.000 | 49.1 | 47.1 | 34.1  | 32.1  | 21.500 |
| 100   | 19.300 | 45.8 | 43.8 | 26.5  | 24.5  | 20.800 |
| 155   | 24.500 | 42.7 | 40.7 | 18.2  | 16.2  | 19.500 |
| 200   | 28.300 | 40.9 | 38.9 | 12.6  | 10.6  | 18.700 |
| 250   | 32.100 | 39.3 | 37.3 | 7.2   | 5.2   | 18.000 |
| 300   | 35.600 | 38.1 | 36.1 | 2.5   | -0.5  | 17.500 |
| 350   | 38.900 | 37.1 | 35.1 | -1.7  | -3.7  | 17.000 |
| 400   | 42.000 | 36.3 | 34.3 | -5.7  | -7.7  | 16.600 |
| 450   | 45.000 | 35.5 | 33.5 | -9.5  | -11.5 | 16.200 |
| 500   | 47.900 | 34.8 | 32.8 | -13.0 | -15.0 | 15.900 |
| 550   | 50.600 | 34.2 | 32.2 | -16.4 | -18.4 | 15.600 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-------------|------------------------------|------------------|------------------|--------------------|
| 0.772       |                              | 102 ± 15         | 73.0             | 70.0               |
| 1           | 100 ± 15                     | 102 ± 15         | 70.8             | 67.8               |
| 4           | 100 ± 15                     | 100 ± 15         | 58.8             | 55.8               |
| 8           | 100 ± 15                     | 100 ± 15         | 52.7             | 49.7               |
| 10          | 100 ± 15                     | 100 ± 15         | 50.8             | 47.8               |
| 16          | 100 ± 15                     | 100 ± 15         | 46.7             | 43.7               |
| 20          | 100 ± 15                     | 100 ± 15         | 44.8             | 41.8               |
| 25          | 100 ± 15                     | 100 ± 15         | 42.8             | 39.8               |
| 31.25       | 100 ± 15                     | 100 ± 15         | 40.9             | 37.9               |
| 62.5        | 100 ± 15                     | 100 ± 15         | 34.9             | 31.9               |
| 100         | 100 ± 15                     | 100 ± 15         | 30.8             | 27.8               |
| 155         | 100 ± 22                     | 100 ± 15         | 27.0             | 24.0               |
| 200         | 100 ± 22                     | 100 ± 15         | 24.8             | 21.8               |
| 250         | 100 ± 32                     | 100 ± 15         | 22.8             | 19.8               |
| 300         | 100 ± 32                     | 100 ± 15         | 21.3             | 18.3               |
| 350         |                              |                  | 19.9             | 16.9               |
| 400         |                              |                  | 18.8             | 15.8               |
| 450         |                              |                  | 17.7             | 14.7               |
| 500         |                              |                  | 16.8             | 13.8               |
| 550         |                              |                  | 16.0             | 13.0               |

### Notes (Overall)

**Notes:** Jacket sequentially marked at 2 ft./1m intervals. Third party verified to TIA/EIA-568-B.2-1, Category 6. Values above 300 MHz are for Engineering Information Only. US Patents 5424491, 6570095, 6998537.

### Reference (Overall)

**Previous Part Number:** 24566415, 25066515T, 24566745, 24566745T, 24566745T+HU, 24566736T, 24566715, 24566715T, 25066885, 25066885T, 25066815T, 24566945, 24566945T, 24566945T+HU, 24566931, 24566931T, 24566931T+HU, 24566936T, 24566915, 24566915T, 24566915T+HU, 24566015, 24566015T, 24566P15, 24566P15T, 24566185, 24566185T, 24566185T+HU, 24566115T, 24566345, 24566345T, 24566345T+HU, 24566336T, 24566315, 24566315T, 24566315T+HU, 24566485, 24566485T, 24566415T, 24566415T

### Put Ups and Colors:

| Item #        | Putup    | Ship Weight | Color  | Notes | Item Desc             |
|---------------|----------|-------------|--------|-------|-----------------------|
| 2412 003A1000 | 1,000 FT | 28.000 FT   | ORANGE |       | 4PR23 CMR (25066515T) |
| 2412 004A1000 | 1,000 FT | 28.000 FT   | YELLOW |       | 4PR23 CMR (24566715T) |

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|               |          |           |             |                       |
|---------------|----------|-----------|-------------|-----------------------|
| 2412 0041000  | 1,000 FT | 25.000 LB | YELLOW      | 4PR23 CMR (24566745T) |
| 2412 0042500  | 2,500 FT | 0.000     | YELLOW      | 4PR23 CMR (24566736T) |
| 2412 005A1000 | 1,000 FT | 28.000 FT | GREEN, DARK | 4PR23 CMR (25066815T) |
| 2412 0051000  | 1,000 FT | 25.000 LB | GREEN, DARK | 4PR23 CMR (25066885T) |
| 2412 006A1000 | 1,000 FT | 28.000 FT | BLUE, LIGHT | 4PR23 CMR (24566915T) |
| 2412 0061000  | 1,000 FT | 25.000 LB | BLUE, LIGHT | 4PR23 CMR (24566945T) |
| 2412 0061400  | 1,400 FT | 0.000     | BLUE, LIGHT | 4PR23 CMR (24566931T) |
| 2412 0062500  | 2,500 FT | 0.000     | BLUE, LIGHT | 4PR23 CMR (24566936T) |
| 2412 007A1000 | 1,000 FT | 28.000 FT | VIOLET      | 4PR23 CMR (24566915T) |
| 2412 0081000  | 1,000 FT | 25.000 LB | GRAY        | 4PR23 CMR (24566185T) |
| 2412 009A1000 | 1,000 FT | 28.000 FT | WHITE       | 4PR23 CMR (24566315T) |
| 2412 0091000  | 1,000 FT | 25.000 LB | WHITE       | 4PR23 CMR (24566345T) |
| 2412 0092500  | 2,500 FT | 0.000     | WHITE       | 4PR23 CMR (24566336T) |
| 2412 010A1000 | 1,000 FT | 28.000 FT | BLACK       | 4PR23 CMR (24566415T) |
| 2412 0101000  | 1,000 FT | 25.000 LB | BLACK       | 4PR23 CMR (24566485T) |

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