

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



For more Information
please call

1-800-Belden1



General Description:

CAT6+ (350MHz), 4-Pair, U/UTP-Unshielded, Riser-CMR, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Tape Separator, Ripcord, PVC Jacket

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 |

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) |
|----------------|
| 5.588 |

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: Patented Dielectric Tape

Overall Nominal Diameter: 5.588 mm

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

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| | |
|-----------------------------------|---------------|
| Installation Temperature Range: | +5°C To +50°C |
| Operating Temperature Range: | 0°C To +75°C |
| Bulk Cable Weight: | 35.717 Kg/Km |
| Max. Recommended Pulling Tension: | 177.928 N |
| Min. Bend Radius/Minor Axis: | 19.050 mm |
| Min. Bend/Installation: | 57.150 mm |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|-------------------------------------|
| NEC/(UL) Specification: | CMR |
| CEC/C(UL) Specification: | CMR |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| 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: | Third party verified to Category 6 |

Applicable Patents:

| Country | Patent |
|---------|---------|
| US | 6570095 |
| US | 6998537 |
| US | 7179999 |
| US | 7977575 |

Flame Test

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

Plenum/Non-Plenum

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

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

| | |
|--------------------|--------|
| Capacitance (pF/m) | 55.777 |
|--------------------|--------|

| | |
|---|-----|
| Maximum Capacitance Unbalance (pF/100 m): | 330 |
|---|-----|

Nominal Velocity of Propagation:

| | |
|--------|----|
| VP (%) | 70 |
|--------|----|

Maximum Delay:

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

METRIC MEASUREMENT VERSION

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537 @ 100MHz

Max. Delay Skew:

Delay Skew (ns/100 m)
35.000

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
7.800

Max. Operating Voltage - UL:

Voltage
300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
3.000

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 | 2.000 | 75.3 | 75.3 | 73.3 | 73.3 | 20.000 |
| 4 | 3.700 | 66.3 | 66.3 | 62.6 | 62.6 | 23.000 |
| 8 | 5.200 | 61.8 | 61.8 | 56.6 | 56.6 | 24.500 |
| 10 | 5.800 | 60.3 | 60.3 | 54.5 | 54.5 | 25.000 |
| 16 | 7.400 | 57.2 | 57.2 | 49.9 | 49.9 | 25.000 |
| 20 | 8.300 | 55.8 | 55.8 | 47.5 | 47.5 | 25.000 |
| 25 | 9.300 | 54.3 | 54.3 | 45.1 | 45.1 | 24.300 |
| 31.25 | 10.400 | 52.9 | 52.9 | 42.5 | 42.5 | 23.600 |
| 62.5 | 15.000 | 48.4 | 48.4 | 33.4 | 33.4 | 21.500 |
| 100 | 19.300 | 45.3 | 45.3 | 26.0 | 26.0 | 20.800 |
| 155 | 24.600 | 42.4 | 42.4 | 17.9 | 17.9 | 19.500 |
| 200 | 28.300 | 40.8 | 40.8 | 12.5 | 12.5 | 18.700 |
| 250 | 32.100 | 39.3 | 39.3 | 7.2 | 7.2 | 18.000 |
| 300 | 35.600 | 38.1 | 36.1 | 0.5 | 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. ACRF (dB) | Min. PSACRF (dB) |
|-------------|------------------------------|------------------|----------------|------------------|
| 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 | 100 ± 32 | 100 ± 15 | 19.9 | 16.9 |
| 400 | 100 ± 32 | 100 ± 15 | 18.8 | 15.8 |
| 450 | 100 ± 32 | 100 ± 15 | 17.7 | 14.7 |
| 500 | 100 ± 32 | 100 ± 15 | 16.8 | 13.8 |
| 550 | 100 ± 32 | 100 ± 15 | 16.0 | 13.0 |

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Notes (Overall)

Notes: Jacket sequentially marked at 2 ft./1m intervals. Third party verified to ANSI/TIA-568-C.2, Category 6. Values above 350 MHz are for Engineering Information Only. In addition to the colors below, Pink is also available as a special, p/n 2412 012 U1000, or 2412 012 A1000.

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 002A1000 | 305 MT | 12.247 KG | RED | C | CAT6+ 4PR U/UTP CMR RIB |
| 2412 003A1000 | 305 MT | 12.247 KG | ORANGE | | CAT6+ 4PR U/UTP CMR RIB |
| 2412 003U1000 | 305 MT | 10.886 KG | ORANGE | | CAT6+ 4PR U/UTP CMR BOX |
| 2412 004A1000 | 305 MT | 12.247 KG | YELLOW | | CAT6+ 4PR U/UTP CMR RIB |
| 2412 004U1000 | 305 MT | 10.886 KG | YELLOW | | CAT6+ 4PR U/UTP CMR BOX |
| 2412 0041000 | 305 MT | 11.340 KG | YELLOW | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 0042500 | 762 MT | 28.350 KG | YELLOW | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 005A1000 | 305 MT | 12.247 KG | GREEN, DARK | | CAT6+ 4PR U/UTP CMR RIB |
| 2412 005U1000 | 305 MT | 10.886 KG | GREEN, DARK | | CAT6+ 4PR U/UTP CMR BOX |
| 2412 0051000 | 305 MT | 11.340 KG | GREEN, DARK | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 006A1000 | 305 MT | 12.247 KG | BLUE, LIGHT | | CAT6+ 4PR U/UTP CMR RIB |
| 2412 006U1000 | 305 MT | 10.886 KG | BLUE, LIGHT | | CAT6+ 4PR U/UTP CMR BOX |
| 2412 0061000 | 305 MT | 11.340 KG | BLUE, LIGHT | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 0061400 | 427 MT | 15.876 KG | BLUE, LIGHT | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 0062500 | 762 MT | 28.350 KG | BLUE, LIGHT | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 0065000 | 1,524 MT | 56.699 KG | BLUE, LIGHT | C | CAT6+ 4PR U/UTP CMR REEL |
| 2412 007A1000 | 305 MT | 12.247 KG | VIOLET | | CAT6+ 4PR U/UTP CMR RIB |
| 2412 007U1000 | 305 MT | 10.886 KG | VIOLET | | CAT6+ 4PR U/UTP CMR BOX |
| 2412 008A1000 | 305 MT | 12.247 KG | GRAY | | CAT6+ 4PR U/UTP CMR RIB |
| 2412 008U1000 | 305 MT | 10.886 KG | GRAY | | CAT6+ 4PR U/UTP CMR BOX |
| 2412 0081000 | 305 MT | 11.340 KG | GRAY | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 009A1000 | 305 MT | 12.247 KG | WHITE | | CAT6+ 4PR U/UTP CMR RIB |
| 2412 009U1000 | 305 MT | 10.886 KG | WHITE | | CAT6+ 4PR U/UTP CMR BOX |
| 2412 0091000 | 305 MT | 11.340 KG | WHITE | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 0092500 | 762 MT | 28.350 KG | WHITE | | CAT6+ 4PR U/UTP CMR REEL |
| 2412 0095000 | 1,524 MT | 56.699 KG | WHITE | C | CAT6+ 4PR U/UTP CMR REEL |
| 2412 010A1000 | 305 MT | 12.247 KG | BLACK | | CAT6+ 4PR U/UTP CMR RIB |
| 2412 010U1000 | 305 MT | 10.886 KG | BLACK | | CAT6+ 4PR U/UTP CMR BOX |
| 2412 0101000 | 305 MT | 11.340 KG | BLACK | | CAT6+ 4PR U/UTP CMR REEL |

Notes:
C = CRATE REEL PUT-UP.

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