

## 1701A Multi-Conductor - Enhanced Category 5E Bonded-Pair Cable



For more Information  
please call

1-800-Belden1

**General Description:**

CAT5e+ (350MHz), 4-Bonded-Pairs, U/UTP-Unshielded, Plenum-CMP, Premise Horizontal Cable, 24 AWG Solid Bare Copper Conductors, FEP insulation, Ripcord, Flamarrest® 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 Video, RS-422, Noisy Environments

**Physical Characteristics (Overall)****Conductor**

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4       | 24  | Solid     | BC - Bare Copper   |

Total Number of Conductors:

8

**Insulation**

Insulation Material:

| Insulation Material                  |
|--------------------------------------|
| FEP - Fluorinated Ethylene Propylene |

**Outer Shield**

Outer Shield Material:

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

**Outer Jacket**

Outer Jacket Material:

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

Outer Jacket Diameter:

| Nom. Dia. (in.) |
|-----------------|
| 0.195           |

Outer Jacket Ripcord:

Yes

**Overall Cable**

Overall Nominal Diameter:

0.195 in.

**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)**

|                                   |                 |
|-----------------------------------|-----------------|
| 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:                | 22 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 40 lbs.         |
| Min. Bend Radius/Minor Axis:      | 0.500 in.       |
| Min. Bend/Installation:           | 2 in.           |

**Applicable Specifications and Agency Compliance (Overall)**

Applicable Standards & Environmental Programs

**1701A Multi-Conductor - Enhanced Category 5E Bonded-Pair Cable**

|                                       |                                                      |
|---------------------------------------|------------------------------------------------------|
| NEC/(UL) Specification:               | CMP                                                  |
| CEC/C(UL) Specification:              | CMP                                                  |
| EU Directive 2011/65/EU (ROHS II):    | Yes                                                  |
| 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): | 01/01/2005                                           |
| EU Directive 2002/96/EC (WEEE):       | Yes                                                  |
| EU Directive 2003/11/EC (BFR):        | Yes                                                  |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                                                  |
| MIL Order #39 (China RoHS):           | Yes                                                  |
| Telecommunications Standards:         | Category 5e - TIA 568.C.2                            |
| Other Specification:                  | NEMA WC-63.1 Category 5e, UL Verified to Category 5e |

**Applicable Patents:****Country**

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**Flame Test**

|                   |          |
|-------------------|----------|
| UL Flame Test:    | NFPA 262 |
| C(UL) Flame Test: | FT6      |
| CSA Flame Test:   | FT6      |

**Suitability**

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

**Plenum/Non-Plenum**

|                    |       |
|--------------------|-------|
| Plenum (Y/N):      | Yes   |
| Non-Plenum Number: | 1700A |

**Electrical Characteristics (Overall)****Nom. Mutual Capacitance:****Capacitance (pF/ft)**

15

|                                           |    |
|-------------------------------------------|----|
| Maximum Capacitance Unbalance (pF/100 m): | 66 |
|-------------------------------------------|----|

**Nominal Velocity of Propagation:****VP (%)**

72

**Maximum Delay:****Delay (ns/100 m)**

510

**Max. Delay Skew:****Delay Skew (ns/100 m)**

25

**Maximum Conductor DC Resistance:****DCR @ 20°C (Ohm/100 m)**

9

**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:**

## 1701A Multi-Conductor - Enhanced Category 5E Bonded-Pair Cable

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. PSNEXT (dB) | Min. PSACR (dB) | Min RL (dB) |
|-------------|-----------------------------|------------------|-----------------|-------------|
| 1           | 2.000                       | 69.3             | 67.3            | 20.000      |
| 4           | 4.000                       | 60.3             | 56.3            | 23.000      |
| 8           | 5.700                       | 55.8             | 50.1            | 24.500      |
| 10          | 6.400                       | 54.3             | 47.9            | 25.000      |
| 16          | 8.100                       | 51.2             | 43.1            | 25.000      |
| 20          | 9.100                       | 49.8             | 40.7            | 25.000      |
| 25          | 10.200                      | 48.3             | 38.2            | 25.000      |
| 31.25       | 11.400                      | 46.9             | 35.5            | 25.000      |
| 62.5        | 16.400                      | 42.4             | 26.0            | 25.000      |
| 100         | 21.000                      | 39.3             | 18.3            | 25.000      |
| 155         | 26.600                      | 36.4             | 9.8             | 19.000      |
| 200         | 30.400                      | 34.8             | 4.4             | 19.000      |
| 250         | 34.400                      | 32.3             | >0              | 18.000      |
| 300         | 38.000                      | 28.1             |                 | 18.000      |
| 350         | 41.400                      | 27.1             |                 | 17.000      |
| 400         | 44.500                      | 26.3             |                 | 17.000      |
| 450         | 47.600                      | 25.5             |                 | 17.000      |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. PSACRF (dB) |
|-------------|------------------------------|------------------|------------------|
| 1           | 100 ± 12                     | 105 ± 10         | 65.8             |
| 4           | 100 ± 12                     | 100 ± 10         | 53.8             |
| 8           | 100 ± 12                     | 100 ± 10         | 47.7             |
| 10          | 100 ± 12                     | 100 ± 10         | 45.8             |
| 16          | 100 ± 12                     | 100 ± 10         | 41.7             |
| 20          | 100 ± 12                     | 100 ± 10         | 39.8             |
| 25          | 100 ± 15                     | 100 ± 10         | 37.8             |
| 31.25       | 100 ± 15                     | 100 ± 10         | 35.9             |
| 62.5        | 100 ± 15                     | 100 ± 10         | 29.9             |
| 100         | 100 ± 15                     | 100 ± 10         | 25.8             |
| 155         | 100 ± 18                     | 100 ± 10         | 22.0             |
| 200         | 100 ± 20                     | 100 ± 10         | 19.8             |
| 250         | 100 ± 20                     | 100 ± 10         | 17.8             |
| 300         | 100 ± 20                     | 100 ± 10         | 14.3             |
| 350         | 100 ± 22                     | 100 ± 10         | 12.9             |
| 400         | 100 ± 22                     | 100 ± 10         | 11.8             |
| 450         | 100 ± 22                     | 100 ± 10         | 10.7             |

Premise Cable Electrical Table 4:

| Frequency (MHz) | Min. TCL (dB) | Min. ELTCTL (dB) |
|-----------------|---------------|------------------|
| 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. intervals. Third party verified to ANSI/TIA-568-C.2, Category 5e. Values above 350 MHz are for Engineering Information Only.

### Put Ups and Colors:

| Item #         | Putup    | Ship Weight | Color  | Notes | Item Desc                  |
|----------------|----------|-------------|--------|-------|----------------------------|
| 1701A B02U1000 | 1,000 FT | 23.000 LB   | PURPLE |       | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A B021000  | 1,000 FT | 24.000 LB   | PURPLE | C     | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A D15U1000 | 1,000 FT | 23.000 LB   | BLUE   |       | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A D151000  | 1,000 FT | 24.000 LB   | BLUE   | C     | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A D153000  | 3,000 FT | 69.000 LB   | BLUE   | C     | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A 002U1000 | 1,000 FT | 23.000 LB   | RED    |       | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A 0021000  | 1,000 FT | 24.000 LB   | RED    | C     | CAT5E+ 4PRB U/UTP CMP REEL |

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|                |          |           |             |   |                            |
|----------------|----------|-----------|-------------|---|----------------------------|
| 1701A 003U1000 | 1,000 FT | 23.000 LB | ORANGE      |   | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A 003I000  | 1,000 FT | 24.000 LB | ORANGE      | C | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A 004U1000 | 1,000 FT | 23.000 LB | YELLOW      |   | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A 004I000  | 1,000 FT | 24.000 LB | YELLOW      | C | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A 005U1000 | 1,000 FT | 23.000 LB | GREEN, DARK |   | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A 005I000  | 1,000 FT | 24.000 LB | GREEN, DARK | C | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A 008U1000 | 1,000 FT | 23.000 LB | GRAY        |   | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A 008I000  | 1,000 FT | 24.000 LB | GRAY        | C | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A 009U1000 | 1,000 FT | 23.000 LB | WHITE       |   | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A 009I000  | 1,000 FT | 24.000 LB | WHITE       | C | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A 010U1000 | 1,000 FT | 23.000 LB | BLACK       | C | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A 010I000  | 1,000 FT | 24.000 LB | BLACK       |   | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A 877U1000 | 1,000 FT | 23.000 LB | NATURAL     |   | CAT5E+ 4PRB U/UTP CMP BOX  |
| 1701A 877I000  | 1,000 FT | 24.000 LB | NATURAL     | C | CAT5E+ 4PRB U/UTP CMP REEL |
| 1701A 8773000  | 3,000 FT | 69.000 LB | NATURAL     | C | CAT5E+ 4PRB U/UTP CMP REEL |

**Notes:**

C = CRATE REEL PUT-UP.

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9