



Product: [1303EPU](#)

CAT6A Category 6A Cable, 4 Pair, S/FTP, PVC PUR upjacketed

**Product Description**

CAT6A Category 6A Cable, 4 Pair, S/FTP, PVC PUR upjacketed

**Technical Specifications**

Product Overview

|                        |  |
|------------------------|--|
| Suitable Applications: | Field deployable CAT6a patch horizontal and building backbone cable; AVB, Dante, CobraNET, eSnake, Ethersound, Digital audio over Ethernet; Support current and future Category 6A and 6 applications, such as: 10GBase - T(10 Gigabit Ethernet), 1000 Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM; Compatible connectors Belden R301601 000S1 (T568A) and R301602 000S1 (T568B) |
|------------------------|--|

Construction Details

| Element                  | Size   | Stranding | Material         | No. of Pairs | No. of Elements |
|--------------------------|--------|-----------|------------------|--------------|-----------------|
| Individual Shielded Pair | 24 AWG | 7x32      | BC - Bare Copper | 4            | 8               |

| Element                  | Material                 | Nom. Insulation Diameter | Color Code   |
|--------------------------|--------------------------|--------------------------|--|
| Individual Shielded Pair | PE - Polyethylene (Foam) | 1.4 mm (0.055 in)        | White & Blue, White & Orange, White & Green, White & Brown |

| Description                       |
|-----------------------------------|
| 4 shielded pairs twisted together |

| Element                  | Shield Type | Material                | Coverage |
|--------------------------|-------------|-------------------------|----------|
| Individual Shielded Pair | Tape        | Bi-Laminate (Alum+Poly) | 100%     |

|              |                         |
|--------------|-------------------------|
| Table Notes: | Aluminum facing outside |
|--------------|-------------------------|

| Shield Type | Material           | Coverage | Drainwire Type   |
|-------------|--------------------|----------|------------------|
| Braid       | Tinned Copper (TC) | 80%      | 26 AWG (7x34) TC |

| Layer | Separator      | Material                 | Nom. Diameter    |
|-------|----------------|--------------------------|------------------|
| 1     |                | PVC - Polyvinyl Chloride | 7.2 mm (0.28 in) |
| 2     | non-Woven Tape | PUR - Polyurethane       | 8.7 mm (0.34 in) |

|              |                             |
|--------------|-----------------------------|
| Table Notes: | Matte Finish, Rugged Sheath |
|--------------|-----------------------------|

|                                   |                  |
|-----------------------------------|------------------|
| Overall Cable Diameter (Nominal): | 8.7 mm (0.34 in) |
|-----------------------------------|------------------|

Electrical Characteristics

| Max. Conductor DCR | Max. Mutual Capacitance | Max. Capacitance Unbalance | Nom. Characteristic Impedance |
|--------------------|-------------------------|----------------------------|-------------------------------|
| 95 Ohm/km          | 56 pF/m (17 pF/ft)      | 160 pF/100m                | 100 Ohm                       |

Delay

| Max. Delay Skew | Nom. Velocity of Prop. |
|-----------------|------------------------|
| 25 ns/100m      | 77%                    |

High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. NEXT [dB] | Min. PSNEXT [dB] | Min. ACR [dB] | Min. PSACR [dB] | Min. ACRF (ELFEXT) [dB] | Min. PSACRF (PSELFEXT) [dB] | Min. RL (Return Loss) [dB] | Min. PSANEXT [dB] | Min. PSAACRF [dB] | Min. TCL [dB] | Min. ELTCTL [dB] |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|-------------------|-------------------|---------------|------------------|
| 1               | 2.5 dB/100m                       | 75.3           | 72.3             | 72.8          | 69.8            | 68                      | 65                          | 20                         | 67                | 67                | 40            | 35               |
| 4               | 4.6 dB/100m                       | 66.3           | 63.3             | 61.7          | 58.7            | 56                      | 53                          | 23                         | 67                | 66.2              | 34            | 23               |
| 10              | 7.1 dB/100m                       | 60.3           | 57.3             | 53.2          | 50.2            | 48                      | 45                          | 25                         | 67                | 58.2              | 30            | 15               |
| 16              | 9 dB/100m                         | 57.2           | 54.2             | 48.3          | 45.3            | 43.9                    | 40.9                        | 25                         | 67                | 54.1              | 28            | 10.9             |
| 31.2            | 12.6 dB/100m                      | 52.9           | 49.9             | 50.4          | 47.3            | 38.1                    | 35.1                        | 23.6                       | 67                | 48.3              | 25.1          | 5.1              |
| 62.5            | 18 dB/100m                        | 48.4           | 45.4             | 30.4          | 27.4            | 32.1                    | 9.1                         | 21.5                       | 65.6              | 42.3              | 22            |                  |
| 100             | 23 dB/100m                        | 45.3           | 42.3             | 22.3          | 19.3            | 28                      | 25                          | 20.1                       | 62.5              | 38.2              | 20            |                  |
| 125             | 25.8 dB/100m                      | 43.8           | 40.8             | 18            | 15              | 26.1                    | 23.1                        | 19.4                       | 61                | 36.3              | 19            |                  |
| 200             | 33.1 dB/100m                      | 40.8           | 37.8             | 7.7           | 4.7             | 22                      | 19                          | 18                         | 58                | 32.2              | 17            |                  |
| 250             | 37.3 dB/100m                      | 39.3           | 36.3             | 2             | -1              | 20                      | 17                          | 17.3                       | 56.5              | 30.2              | 16            |                  |
| 300             | 41.1 dB/100m                      | 38.1           | 35.1             | -3            | -6              | 18.5                    | 15.5                        | 17.3                       | 55.3              | 28.7              |               |                  |
| 500             | 54.3 dB/100m                      | 34.8           | 31.8             | -19.5         | -22.5           | 14                      | 11                          | 17.3                       | 52                | 24.2              |               |                  |

|              |                                 |
|--------------|---------------------------------|
| Table Notes: | Reference standard: IEC 61156-6 |
|--------------|---------------------------------|

Transfer Impedance

| Frequency | Max. Transfer Impedance |
|-----------|-------------------------|
| 1 Mhz     | Max. 50 mOhm/m          |
| 10 Mhz    | Max. 100 mOhm/m         |
| 30 Mhz    | Max. 200 mOhm/m         |
| 100 Mhz   | Max. 1000 mOhm/m        |

|                           |                      |
|---------------------------|----------------------|
| Transfer Impedance Class: | Grade 2              |
| Screening Class:          | Type Ib              |
| Table Notes:              | Coupling Attenuation |

Voltage

| Voltage Rating |
|----------------|
| 72 V DC        |

Mechanical Characteristics

Temperature

| Operating      | Installation |
|----------------|--------------|
| -30°C to +60°C | 0°C To +50°C |

Trailing/Flexing Properties

| Motion           | Number of Cycles | Radius | Speed | Acceleration | Traverse Length |
|------------------|------------------|--------|-------|--------------|-----------------|
| Trailing/Bending | 2,000,000        | 80 mm  | 5 m/s | 5 m/s²       | 5 m             |

|              |                 |
|--------------|-----------------|
| Table Notes: | Drag chain test |
|--------------|-----------------|

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 35 mm (1.4 in)  | 70 mm             |

|                    |               |
|--------------------|---------------|
| Max. Pull Tension: | 75 N (17 lbf) |
| Bulk Cable Weight: | 83 kg/km      |

Standards and Compliance

|                                  |   |
|----------------------------------|---|
| Environmental Suitability:       | Indoor/Outdoor  |
| Flammability / Reaction to Fire: | IEC 60332-1-2   |
| IEEE Compliance:                 | PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4      |
| Data Category:                   | Category 6A   |
| TIA/EIA Compliance:              | ANSI/TIA 568.2-D                                      |
| ISO/IEC Compliance:              | ISO/IEC 11801-1                                       |
| CENELEC Compliance:              | EN 50173-1, Segregation class according EN50174-2 = c |

|                                |            |
|--------------------------------|------------|
| European Directive Compliance: | EU CE Mark |
| UK Regulation Compliance:      | UKCA Mark  |

Product Notes

|        |  |
|--------|--|
| Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. |
|--------|--|

History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.538 Revision Date: 04-29-2024 |
|----------------------|--|

Part Numbers

Variants

| Item #          | Color | Putup Type | Length   | UPC/EAN       |
|-----------------|-------|------------|----------|---------------|
| 1303EPU.00305   | Black | Reel       | 305 m    | 8719605001009 |
| 1303EPU 010500  | Black | Reel       | 500 ft   | 612825381808  |
| 1303EPU.00500   | Black | Reel       | 500 m    | 8719605001016 |
| 1303EPU 0101000 | Black | Reel       | 1,000 ft | 612825381785  |
| 1303EPU 0101640 | Black | Reel       | 1,640 ft | 612825381792  |

© 2024 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.