



**Product:** [1633PE](#)

Category 5e Cable, 4 Pair, F/UTP, PE Outdoor

Product Description

Category 5e Premise Horizontal Cable (100MHz), 4-Pair, 24 AWG solid bare copper conductors, F/UTP, Polyethylene insulation, Beldfoil® shield, AWG 26 solid tinned copper drainwire, PE jacket

Technical Specifications

Product Overview

|                        |                                                                                                                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable Applications: | Horizontal and building backbone cable; Support current and future Category 5e applications, such as: 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM, suitable for outdoor use |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Construction Details

Conductor

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

Insulation

| Element         | Material          | Nom. Insulation Diameter | Color Code                                                                         |
|-----------------|-------------------|--------------------------|------------------------------------------------------------------------------------|
| Individual Pair | PE - Polyethylene | 1.05 mm (0.0413 in)      | White/Blue & Blue, White/Green & Green, White/Orange & Orange, White/Brown & Brown |

Cable Core

| Description                                            |
|--------------------------------------------------------|
| 4 pairs twisted together covered with a polyester foil |

Outer Shield

| Shield Type | Material                | Coverage | Drainwire Type    |
|-------------|-------------------------|----------|-------------------|
| Tape        | Bi-Laminate (Alum+Poly) | 100%     | 26 AWG (Solid) TC |

|              |                                                    |
|--------------|----------------------------------------------------|
| Table Notes: | Aluminum facing outside in contact with drain wire |
|--------------|----------------------------------------------------|

Outer Jacket

| Material          | Nom. Diameter    |
|-------------------|------------------|
| PE - Polyethylene | 6.3 mm (0.25 in) |

|                                   |                  |
|-----------------------------------|------------------|
| Overall Cable Diameter (Nominal): | 6.3 mm (0.25 in) |
|-----------------------------------|------------------|

Electrical Characteristics

Electricals

| 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. |
|-----------------|------------------------|
| 40 ns/100m      | 69%                    |

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. TCL [dB] | Min. ELTCTL [dB] |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|---------------|------------------|
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|---------------|------------------|

|       |              |      |      |       |      |      |      |      |      |      |
|-------|--------------|------|------|-------|------|------|------|------|------|------|
| 1     | 2.1 dB/100m  | 65.3 | 62.3 | 63.2  | 60.2 | 64   | 61   | 20   | 40   | 35   |
| 4     | 4 dB/100m    | 56.3 | 53.3 | 52.32 | 49.3 | 52   | 49   | 23   | 34   | 23   |
| 10    | 6.3 dB/100m  | 50.3 | 47.3 | 44    | 41   | 44   | 41   | 25   | 30   | 15   |
| 16    | 8 dB/100m    | 47.2 | 44.2 | 39.2  | 36.2 | 39.9 | 36.9 | 25   | 28   | 10.9 |
| 20    | 9 dB/100m    | 45.8 | 42.8 | 36.8  | 33.8 | 38   | 35   | 25   | 27   | 9    |
| 31.25 | 11.4 dB/100m | 42.9 | 39.9 | 31.5  | 28.5 | 34.1 | 31.5 | 23.6 | 25.1 | 5.5  |
| 62.5  | 16.5 dB/100m | 38.4 | 35.4 | 21.9  | 18.9 | 28.1 | 25.1 | 21.5 | 22   |      |
| 100   | 21.3 dB/100m | 35.3 | 32.3 | 14    | 11   | 24   | 21   | 20.1 | 20   |      |

|              |                                                                              |
|--------------|------------------------------------------------------------------------------|
| Table Notes: | Limits below 4 MHz are for information only. Reference standard: IEC 61156-5 |
|--------------|------------------------------------------------------------------------------|

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 II              |
| 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 |

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 25 mm (0.98 in) | 50 mm             |

|                    |               |
|--------------------|---------------|
| Max. Pull Tension: | 72 N (16 lbf) |
| Bulk Cable Weight: | 39 kg/km      |

Standards and Compliance

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| Environmental Suitability:     | Outdoor, Outdoor - Black only, Sunlight Resistance - Black only |
| CPR Compliance:                | CPR Euroclass: Fca                                              |
| IEEE Compliance:               | PoE: IEEE 802.3bt Type 1, Type 2, Type 3                        |
| Data Category:                 | Category 5e                                                     |
| 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: 0.266 Revision Date: 12-12-2023 |
|----------------------|--------------------------------------------------|

Part Numbers

Variants

| Item #       | Color | Putup Type | Length | EAN           |
|--------------|-------|------------|--------|---------------|
| 1633PE.00500 | Black | Reel       | 500 m  | 8719605003096 |

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