



Product: [7965E](#)

Category 6 Cable, 4 Pair, U/UTP, PVC Indoor CPR Eca

Product Description

Category 6 Premise Horizontal Cable (250MHz), 4-Pair, 23 AWG solid bare copper conductors, U/UTP, Polyethylene insulation, PVC jacket, CPR Eca

Technical Specifications

Product Overview

|                        |                                                                                                                                                                                   |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable Applications: | Horizontal and building backbone cable; Support current and future Category 6 and 5e applications, such as: 1000Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Construction Details

Conductor

| Element         | Size   | Stranding | Material         | Number of Pairs | Number of Element |
|-----------------|--------|-----------|------------------|-----------------|-------------------|
| Individual Pair | 23 AWG | Solid     | BC - Bare Copper | 4               | 8                 |

Insulation

| Element         | Material          | Nom. Insulation Diameter | Color Code                                                                         |
|-----------------|-------------------|--------------------------|------------------------------------------------------------------------------------|
| Individual Pair | PE - Polyethylene | 0.96 mm (0.038 in)       | White/Blue & Blue, White/Green & Green, White/Orange & Orange, White/Brown & Brown |

Cable Core

| Description              | Separator                          |
|--------------------------|------------------------------------|
| 4 pairs twisted together | Center Member (Patented X-Spline®) |

Outer Jacket

| Material                 | Nom. Diameter    |
|--------------------------|------------------|
| PVC - Polyvinyl Chloride | 5.4 mm (0.21 in) |

Overall Cable Diameter (Nominal): 5.4 mm (0.21 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      | 70%                    |

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                       | 75.3           | 72.3             | 73.2          | 70.2            | 70                      | 67                          | 20                         | 40            | 35               |
| 4               | 3.8 dB/100m                       | 66.3           | 63.3             | 62.4          | 59.4            | 58                      | 55                          | 23                         | 34            | 23               |
| 10              | 6 dB/100m                         | 60.3           | 57.3             | 54.3          | 51.3            | 50                      | 47                          | 25                         | 30            | 15               |
| 16              | 7.6 dB/100m                       | 57.2           | 54.2             | 49.6          | 46.6            | 45.9                    | 42.9                        | 25                         | 28            | 10.9             |
| 20              | 8.5 dB/100m                       | 55.8           | 52.8             | 47.3          | 44.3            | 44                      | 41                          | 25                         | 27            | 9                |
| 31.2            | 10.7 dB/100m                      | 52.9           | 49.9             | 42.1          | 39.1            | 40.1                    | 37.1                        | 23.6                       | 25.1          | 5.1              |
| 62.5            | 15.5 dB/100m                      | 48.4           | 45.4             | 32.9          | 29.9            | 34.1                    | 31.1                        | 21.5                       | 22            |                  |

|                  |              |                                                                              |      |      |      |      |      |      |      |  |
|------------------|--------------|------------------------------------------------------------------------------|------|------|------|------|------|------|------|--|
| 100              | 19.9 dB/100m | 45.3                                                                         | 42.3 | 25.4 | 22.4 | 30   | 27   | 20.1 | 20   |  |
| 155              | 25.3 dB/100m | 42.4                                                                         | 39.4 | 17.1 | 14.1 | 26.2 | 23.2 | 18.8 | 18.1 |  |
| 200              | 29.1 dB/100m | 40.8                                                                         | 37.8 | 11.6 | 8.6  | 24   | 21   | 18   | 17   |  |
| 250              | 33 dB/100m   | 39.3                                                                         | 36.3 | 6.3  | 3.3  | 22   | 19   | 17.3 | 16   |  |
| Table Notes:     |              | Limits below 4 MHz are for information only. Reference standard: IEC 61156-5 |      |      |      |      |      |      |      |  |
| Screening Class: |              | Type III                                                                     |      |      |      |      |      |      |      |  |
| 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. |
|-----------------|-------------------|
| 23 mm (0.91 in) | 46 mm             |

|                    |               |
|--------------------|---------------|
| Max. Pull Tension: | 80 N (18 lbf) |
| Bulk Cable Weight: | 37 kg/km      |

Standards and Compliance

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Environmental Suitability:       | Indoor - Euroclass Eca                                |
| Flammability / Reaction to Fire: | IEC 60332-1-2                                         |
| CPR Compliance:                  | CPR Euroclass: Eca; CPR UKCA Class: Eca               |
| IEEE Compliance:                 | PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4      |
| Data Category:                   | Category 6                                            |
| 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 = a |
| 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: 0.336 Revision Date: 04-12-2022 |
|----------------------|--------------------------------------------------|

Part Numbers

Variants

| Item #       | Color          | Putup Type  | Length  | EAN           |
|--------------|----------------|-------------|---------|---------------|
| 7965E.05A305 | Black          | Reel-in-Box | 305 m   | 8719605016997 |
| 7965E.05500  | Black          | Reel        | 500 m   | 8719605160706 |
| 7965E.01B100 | Blue           | Flat Box    | 100 m   | 8719605016942 |
| 7965E.01200  | Blue           | Reel        | 200 m   | 8719605016904 |
| 7965E.01305  | Blue           | Reel        | 305 m   | 8719605016911 |
| 7965E.01A305 | Blue           | Reel-in-Box | 305 m   | 8719605016935 |
| 7965E.01500  | Blue           | Reel        | 500 m   | 8719605016928 |
| 7965E.011000 | Blue           | Reel        | 1,000 m | 8719605016898 |
| 7965E.00B100 | Gray, RAL 7032 | Flat Box    | 100 m   | 8719605016881 |
| 7965E.00305  | Gray, RAL 7032 | Reel        | 305 m   | 8719605016850 |
| 7965E.00A305 | Gray, RAL 7032 | Reel-in-Box | 305 m   | 8719605016874 |
| 7965E.00500  | Gray, RAL 7032 | Reel        | 500 m   | 8719605016867 |
| 7965E.001000 | Gray, RAL 7032 | Reel        | 1,000 m | 8719605016836 |
| 7965E.03305  | Green          | Reel        | 305 m   | 8719605016966 |
| 7965E.03500  | Green          | Reel        | 500 m   | 8719605016973 |

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