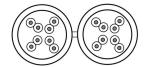


**Product:** <u>1667E</u> ☑



Cat 5e Duplex Cable, U/UTP, PVC, 8 Pair, AWG 24, Indoor CPR Eca

# **Product Description**

Cat. 5e (100MHz) shotgun, 2 x 4-Pair, U/UTP Unshielded, Premise Horizontal Cable, 24 AWG solid bare copper conductors, Polyethylene insulation, PVC jacket, RJ-45 compatible

# **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 |
|------------------------|---|
|------------------------|---|

# **Physical Characteristics (Overall)**

#### Conductor

| Element                | AWG | Stranding | Ma      | terial    | No. of Pairs |
|------------------------|-----|-----------|---------|-----------|--------------|
| Individual pair        | 24  | Solid     | BC - Ba | re Copper | 8            |
| Conductor Count:       |     | 16        |         |           |              |
| Total Number of Pairs: |     | 8         |         |           |              |

### Insulation

| Element         | Туре       | Material        | Nominal Diamete |
|-----------------|------------|-----------------|-----------------|
| Individual pair | Dielectric | PO - Polyolefin | 0.9 mm          |
| Bonded-Pair:    |            |                 | No              |

# Color Chart

| Number | Color                 |
|--------|-----------------------|
| Pair 1 | White/Blue & Blue     |
| Pair 2 | White/Orange & Orange |
| Pair 3 | White/Green & Green   |
| Pair 4 | White/Brown & Brown   |

# Outer Jacket Material

|       | Material             | Nominal Diameter | Diameter +/- Tolerance |
|-------|----------------------|------------------|------------------------|
| PVC   | - Polyvinyl Chloride | 4.6 mm           | 0.3 mm                 |
| Table | e Notes:             | F                | Figure 8 construction  |

#### **Construction and Dimensions**

| Min Elongation at Breakof Conductors: | 10 %  |
|---------------------------------------|-------|
| Min Elongation at Breakof Insulation: | 100 % |
| OuterJacket1, Nominal Width:          | 10 mm |
| Min Elongation at Breakof Jacket:     | 100 % |
| Min Tensile Strength of Jacket:       | 9 MPa |

# **Electrical Characteristics**

### Conductor DCR

Max. Conductor DCR | Max DCR Unbalanced Between Pairs [%] | Max. DCR Unbalanced Within Pair [%]

95 Ohm/km 4 % 2 %

#### Capacitance

| Max. Capacitance Unbalance | Max. Mutual Capacitance |
|----------------------------|-------------------------|
| 1,600 pF/m                 | 56 pF/m                 |

#### Impedance

Nominal Characteristic Impedance
100 Ohm

# Delay

| Max. Delay Skew | Min. Velocity of Propagation |
|-----------------|------------------------------|
| 40 ns/100m      | 60%                          |

#### High Freq

| Frequency<br>[MHz] | Max. Insertion Loss<br>(Attenuation) | Min. NEXT<br>[dB] | Min. PSNEXT<br>[dB] | Min. ACR<br>[dB] | Min. PSACR<br>[dB] | Min. ACRF<br>(ELFEXT) [dB] | Min. PSACRF<br>(PSELFEXT) [dB] | Min. RL (Return<br>Loss) [dB] | Min. TCL<br>[dB] | Min. ELTCTL<br>[dB] |
|--------------------|--------------------------------------|-------------------|---------------------|------------------|--------------------|----------------------------|--------------------------------|-------------------------------|------------------|---------------------|
| 1 MHz              | 2.1 dB/100m                          | 65.3 dB           | 62.3 dB             | 63.2 dB          | 60.2 dB            | 64 dB                      | 61 dB                          | 20 dB                         | 40 dB            | 35 dB               |
| 4 MHz              | 4 dB/100m                            | 56.3 dB           | 53.3 dB             | 52.32 dB         | 49.3 dB            | 52 dB                      | 49 dB                          | 23 dB                         | 34 dB            | 23 dB               |
| 10 MHz             | 6.3 dB/100m                          | 50.3 dB           | 47.3 dB             | 44 dB            | 41 dB              | 44 dB                      | 41 dB                          | 25 dB                         | 30 dB            | 15 dB               |
| 16 MHz             | 8 dB/100m                            | 47.2 dB           | 44.2 dB             | 39.2 dB          | 36.2 dB            | 39.9 dB                    | 36.9 dB                        | 25 dB                         | 28 dB            | 10.9 dB             |
| 20 MHz             | 9 dB/100m                            | 45.8 dB           | 42.8 dB             | 36.8 dB          | 33.8 dB            | 38 dB                      | 35 dB                          | 25 dB                         | 27 dB            | 9 dB                |
| 31.25 MHz          | 11.4 dB/100m                         | 42.9 dB           | 39.9 dB             | 31.5 dB          | 28.5 dB            | 34.1 dB                    | 31.5 dB                        | 23.6 dB                       | 25.1 dB          | 5.5 dB              |
| 62.5 MHz           | 16.5 dB/100m                         | 38.4 dB           | 35.4 dB             | 21.9 dB          | 18.9 dB            | 28.1 dB                    | 25.1 dB                        | 21.5 dB                       | 22 dB            |                     |
| 100 MHz            | 21.3 dB/100m                         | 35.3 dB           | 32.3 dB             | 14 dB            | 11 dB              | 24 dB                      | 21 dB                          | 20.1 dB                       | 20 dB            |                     |

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

General Electrical Parameters Notes:
Reference standard: ISO/IEC 61156-5

Segregation class according EN50174-2:
a

#### Current

Max. Recommended Current [A]

1.5 Amps per Conductor

# Voltage

Voltage Rating [V]

# **Temperature Range**

| Installation Temp Range: | 0°C To +50°C   |
|--------------------------|----------------|
| Operating Temp Range:    | -30°C To +60°C |

# **Mechanical Characteristics**

| Bulk Cable Weight:                   | 57 kg/km |
|--------------------------------------|----------|
| Max. Pull Tension:                   | 130 N    |
| Min Bend Radius During Installation: | 40 mm    |
| Min Bend Radius During Operation:    | 20 mm    |

# **Standards**

| IEC Compliance:     | ISO/IEC 11801-1                          |
|---------------------|--|
| CPR Euroclass:      | Eca                                      |
| CENELEC Compliance: | EN 50173-1                               |
| Data Category:      | Category 5e                              |
| ANSI Compliance:    | ANSI/TIA 568.2-D (2018)                  |
| IEEE Compliance:    | PoE: IEEE 802.3bt Type 1, Type 2, Type 3 |

# **Applicable Environmental and Other Programs**

| Environmental Space:                  | Indoor - Euroclass Eca |
|---------------------------------------|------------------------|
| EU RoHS Compliance Date (yyyy-mm-dd): | 2005-09-30             |

# Flammability, LS0H, Toxicity Testing

| IEC Flammability: | IEC 60332-1-2 |
|-------------------|---------------|
| Burning Load:     | 620 kJ/m      |

#### **Part Number**

#### Variants

| Item #       | Color | Putup Type | Length  | EAN           |
|--------------|-------|------------|---------|---------------|
| 1667E.00305  | Gray  | Reel       | 305 m   | 8719605003119 |
| 1667E.00500  | Gray  | Reel       | 500 m   | 8719605003126 |
| 1667E.001000 | Gray  | Reel       | 1,000 m | 8719605003102 |

#### **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: 0.213 Revision Date: 09-30-2020 |
|----------------------|--|

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