



Part Number: 1583E.001000

Category 5e Nonbonded-Pair Cable

Product Description

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

Technical Specifications

| | |
|-------------------------------|---|
| 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 |
|-------------------------------|---|

Construction and Dimensions

Conductor:

| Element | AWG | Stranding | Material | No. of Pairs |
|--|-----|-----------|-------------|--------------|
| Individual pair | 24 | Solid | Bare copper | 4 |
| Total Number of Conductors: | | | | 8 |
| Total Number of Pairs: | | | | 4 |
| Min Elongation at Breakof Conductors: | | | | 10 % |

Insulation:

| Element | Type | Material | Nominal Diameter |
|--|------------|--------------|------------------|
| Individual pair | Dielectric | Polyethylene | 0.9 mm |
| Min Elongation at Breakof Insulation: | | | 100 % |

Color Chart 1:

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

Outerjacket 1:

| Material | Nominal Diameter | Diameter +/- Tolerance |
|----------|------------------|------------------------|
| PVC | 4.8 mm | 0.3 mm |

| | |
|------------------------------------|-------|
| Min Elongation at Break of 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 Ohm |

Capacitance:

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

| | |
|----------------------------|--------------|
| Min Insulation Resistance: | 5000 MOhm*km |
|----------------------------|--------------|

Impedance:

| Nominal Characteristic Impedance |
|----------------------------------|
| 100 Ohm |

Delay:

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

High Freq:

| Element | 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 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 | |

); Limits below 4MHz are for information only.

Current:

Max. Recommended Current [A]

1.5 A

Voltage:

Voltage Rating [V]

72 V

Use

| | |
|----------------------------------|----------|
| Burning Load: | 290 kJ/m |
| Max Recommended Pulling Tension: | 65 N |

Safety

| | |
|-----------------------|-------------|
| ISO/IEC Flammability: | IEC 60332-1 |
|-----------------------|-------------|

Temperature Range

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

Mechanical Characteristics

| | |
|--------------------------------------|-------|
| Min Bend Radius During Installation: | 40 mm |
| Min Bend Radius During Operation: | 20 mm |

Standards

| | |
|---------------------|---|
| ISO/IEC Compliance: | ISO/IEC 11801 2nd edition (2002) and ISO/IEC 11801 Amendment 2 (2010) |
| ANSI Compliance: | ANSI/TIA/EIA 568-B.2-1 (2002) |
| GENELEC Compliance: | EN 50173-1 (2011) |

History

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|------------------|---|
| Revision Number: | 3 |
|------------------|---|

Product Variants

| Part Number | Color | Put-Up Type | Length |
|--------------|-----------------|-------------|--------|
| 1583E.001000 | GRAY | Reel | 1000 m |
| 1583E.00305 | GRAY | Reel | 305 m |
| 1583E.003570 | GRAY, RAL 7032 | Reel | 3570 m |
| 1583E.00500 | GRAY | Reel | 500 m |
| 1583E.00B100 | GRAY | Flat Box | 100 m |
| 1583E.00U305 | GRAY | UnReel | 305 m |
| 1583E.011000 | BLUE | Reel | 1000 m |
| 1583E.01305 | BLUE | Reel | 305 m |
| 1583E.01500 | BLUE | Reel | 500 m |
| 1583E.01B100 | BLUE | Flat Box | 100 m |
| 1583E.01U305 | BLUE | UnReel | 305 m |
| 1583E.03305 | BLACK | Reel | 305 m |
| 1583E.03U305 | BLACK | UnReel | 305 m |
| 1583E.04500 | WHITE | Reel | 500 m |
| 1583E.04U305 | WHITE | UnReel | 305 m |
| 1583E.051030 | GRAY, RAL 7032 | Reel | |
| 1583E.08U305 | GRAY | UnReel | 305 m |
| 1583E.09305 | GREEN | Reel | 305 m |
| 1583E.001000 | GREEN | Reel | 500 m |
| 1583E.09U305 | GREEN | UnReel | 305 m |
| 1583E.10305 | YELLOW | Reel | 305 m |
| 1583E.10U305 | YELLOW | UnReel | 305 m |
| 1583E.11305 | RED | Reel | 305 m |
| 1583E.11U305 | RED | UnReel | 305 m |
| 1583E.12B100 | WHITE, RAL 9003 | Flat Box | 100 m |
| 1583E.12U305 | WHITE, RAL 9003 | UnReel | 305 m |

| | | | |
|--------------|----------------|--------|-------|
| 1583E.13U305 | GRAY, RAL 7032 | UnReel | 305 m |
| 1583E.001000 | GRAY | Reel | 305 m |
| 1583E.001000 | BLUE | Reel | 305 m |
| 1583E.001000 | GRAY | Reel | 305 m |
| 1583E.001000 | GREEN | Reel | 305 m |
| 1583E.001000 | GRAY | Reel | |
| 1583E=00305 | GRAY | Reel | 305 m |
| 1583E=00500 | GRAY | Reel | 500 m |
| 1583E=00U305 | GRAY | UnReel | 305 m |
| 1583E.001000 | | | |

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