Belden



# Product: 10GXE02

10GX Category 6A Enhanced Cable, 4 Pair, S/FTP, LSZH Indoor CPR Eca

## Product Description

Category 6A Enhanced Premise Horizontal Cable (625MHz), 4-Pair, 23 AWG Solid Bare Copper conductors, S/FTP, Foam Polyethylene insulation, each pair with Beldfoil® shield, tinned copper braid shield (30%), PE jacket

## Technical Specifications

### Product Overview

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

### Construction Details

**Conductor**

| Element | Size | Stranding | Material | No. of Pairs |
|---|---|---|---|---|
| Individual Shielded Pair | 23 AWG | Solid | BC - Bare Copper | 4 |

**Insulation**

| Element | Material | Nom. Insulation Diameter | Color Code |
|---|---|---|---|
| Individual Shielded Pair | PE - Polyethylene (Foam) | 1.32 mm (0.0520 in) | White & Blue, White & Orange, White & Green, White & Brown |

**Cable Core**

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

**Inner Shield**

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

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

**Outer Shield**

| Shield Type | Material | Coverage |
|---|---|---|
| Braid | Tinned Copper (TC) | 30% |

**Outer Jacket**

| Material | Nom. Diameter | Ripcord |
|---|---|---|
| LSZH - Low Smoke Zero Halogen (Flame Retardant) | 6.9 mm (0.27 in) | Yes |

| | |
|---|---|
| Overall Cable Diameter (Nominal): | 7.0 mm (0.28 in) |

### Electrical Characteristics

**Electricals**

| Max. Conductor DCR | Max. Mutual Capacitance | Max. Capacitance Unbalance | Nom. Characteristic Impedance |
|---|---|---|---|
| 95 Ohm/km (29 Ohm/1000ft) | 56 pF/m (17 pF/ft) | 160 pF/100m | 100 Ohm |

**Delay**

| Max. Delay Skew | Nom. Velocity of Prop. |
|---|---|
| 45 ns/100m | 77% |

**High Frequency**

| Frequency [MHz] | Max. Insertion Loss (Attenuation) [dB/100m] | 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 | 2.1 | 75.3 | 72.3 | 73.2 | 70.2 | 68 | 65 | 20 | 67 | 67 | 40 | 35 |
| 4 | 3.8 | 66.3 | 63.3 | 62.5 | 59.5 | 56 | 53 | 23 | 67 | 66.2 | 34 | 23 |
| 10 | 5.9 | 60.3 | 57.3 | 54.4 | 51.4 | 48 | 45 | 25 | 67 | 58.2 | 30 | 15 |
| 16 | 7.5 | 57.2 | 54.2 | 49.8 | 46.8 | 43.9 | 40.9 | 25 | 67 | 54.1 | 28 | 10.9 |
| 31.2 | 10.5 | 52.9 | 49.9 | 42.4 | 39.4 | 38.1 | 35.1 | 23.6 | 67 | 48.3 | 25.1 | 5.1 |
| 62.5 | 15 | 48.4 | 45.4 | 33.4 | 30.4 | 32.1 | 29.1 | 21.5 | 65.6 | 42.3 | 22 | |
| 100 | 19.1 | 45.3 | 42.3 | 26.2 | 23.2 | 28 | 25 | 20.1 | 62.5 | 38.2 | 20 | |
| 125 | 21.5 | 43.8 | 40.8 | 22.3 | 19.3 | 26.1 | 23.1 | 19.4 | 61 | 36.3 | 19 | |
| 200 | 27.6 | 40.8 | 37.8 | 13.2 | 10.2 | 22 | 19 | 18 | 58 | 32.2 | 17 | |
| 250 | 31.1 | 39.3 | 36.3 | 8.3 | 5.3 | 20 | 17 | 17.3 | 56.5 | 30.2 | 16 | |
| 300 | 34.3 | 38.1 | 35.1 | 3.9 | 0.9 | 18.5 | 15.5 | 17.3 | 55.3 | 28.7 | | |
| 500 | 45.3 | 34.8 | 31.8 | -10.4 | -13.4 | 14 | 11 | 17.3 | 52 | 24.2 | | |
| 625 | 51.2 | 33.4 | 30.4 | -17.8 | -20.8 | 12.1 | 9.1 | 17.3 | 50.6 | 22.3 | | |

| | |
|---|---|
| High Frequency Table Notes: | Limits below 4 MHz and at 625 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 Ib |
| Screening Table Notes: | Coupling Attenuation |

**Voltage**

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

## Mechanical Characteristics

**Temperature**

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

**Bend Radius**

| Stationary Min. | Installation Min. |
|---|---|
| 29 mm (1.1 in) | 58 mm (2.3 in) |

| | |
|---|---|
| Max. Pull Tension: | 110 N (25 lbf) |
| Bulk Cable Weight: | 46 kg/km (31 lbs/1000ft) |

## Standards and Compliance

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|---|---|
| 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 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 = d |
| European Halogen Free Standards: | IEC 62821-1 Halogen Free Compliance = Yes, IEC 60754-1 - Halogen Amount = Zero, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 2.5 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3, IEC 61034-2 - Smoke Density Min. Transmittance = 60% |
| European Directive Compliance: | EU CE Mark |
| UK Regulation Compliance: | UKCA Mark |

## Product Notes

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

## History

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|---|---|
| Update and Revision: | Revision Number: 0.426 Revision Date: 08-19-2026 |

## Part Numbers

**Variants**

| Item # | Color | Putup Type | Length | EAN |
|---|---|---|---|---|
| 10GXE02.10500 | Black | Reel | 500 m | 8719605222268 |
| 10GXE02 006305M | Blue | Reel | 305 m | |
| 10GXE02.06500 | Blue | Reel | 500 m | 8719605000385 |
| 10GXE02.K6500 | Blue | Reel | 500 m | 8719605000422 |
| 10GXE02 006500M | Blue | Reel | 500 m | |
| 10GXE02.S6500 | Blue | Reel | 500 m | 8719605229670 |
| 10GXE02.08100 | Gray | Reel | 100 m | 8719605000408 |
| 10GXE02.K8100 | Gray | Reel | 100 m | 8719605147868 |
| 10GXE02 008305M | Gray | Reel | 305 m | |
| 10GXE02.08500 | Gray | Reel | 500 m | 8719605000415 |
| 10GXE02.K8500 | Gray | Reel | 500 m | 8719605000446 |
| 10GXE02 008500M | Gray | Reel | 500 m | |
| 10GXE02.05500 | Green | Reel | 500 m | 8719605222077 |
| 10GXE02.03500 | Orange | Reel | 500 m | 8719605130068 |
| 10GXE02.07305 | Purple | Reel | 305 m | |
| 10GXE02 007305M | Purple | Reel | 305 m | |
| 10GXE02.07500 | Purple | Reel | 500 m | 8719605000392 |
| 10GXE02.K7500 | Purple | Reel | 500 m | 8719605000439 |
| 10GXE02 007500M | Purple | Reel | 500 m | |
| 10GXE02.02500 | Red | Reel | 500 m | 8719605195012 |
| 10GXE02 009305M | White | Reel | 305 m | |
| 10GXE02.09500 | White | Reel | 500 m | 8719605222251 |
| 10GXE02 009500M | White | Reel | 500 m | |
| 10GXE02 004305M | Yellow | Reel | 305 m | |
| 10GXE02.04500 | Yellow | Reel | 500 m | 8719605195029 |
| 10GXE02 004500M | Yellow | Reel | 500 m | |

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