



**Product:** [10GXE03](#)

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

## Product Description

Category 6A Enhanced Premise Horizontal Cable (625MHz), 4-Pair, 23 AWG Solid Bare Copper conductors, U/FTP, Foam Polyethylene insulation, each pair with Beldfoil® shield, AWG 26 solid tinned copper drainwire, LSZH jacket, CPR Euroclass Eca

## 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 |
| Patent:                | This product has one or more applicable patents. More information on patents can be found at <a href="https://www.belden.com/patents">https://www.belden.com/patents</a> .                                   |

### Construction Details

#### Conductor

| Element                  | Size   | Stranding | Material         | No. of Pairs | No. of Elements |
|--------------------------|--------|-----------|------------------|--------------|-----------------|
| Individual Shielded Pair | 23 AWG | Solid     | BC - Bare Copper | 4            | 8               |

#### 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                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------|
| 2 twisted insulated conductors with overall foil, 4 pairs all twisted together with AWG 26 tinned copper drain wire |

#### Inner Shield

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

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

#### Outer Shield

| Drainwire Type    |
|-------------------|
| 26 AWG (Solid) TC |

|              |                          |
|--------------|--------------------------|
| Table Notes: | Aluminium facing outside |
|--------------|--------------------------|

#### Outer Jacket

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

|                                   |                  |
|-----------------------------------|------------------|
| Overall Cable Diameter (Nominal): | 6.9 mm (0.27 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) | 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 dB/100m                       | 75.3           | 72.3             | 73.2          | 70.2            | 68                      | 65                          | 20                         | 67                | 67                | 40            | 35               |
| 4               | 3.8 dB/100m                       | 66.3           | 63.3             | 62.5          | 59.5            | 56                      | 53                          | 23                         | 67                | 66.2              | 34            | 23               |
| 10              | 5.9 dB/100m                       | 60.3           | 57.3             | 54.4          | 51.4            | 48                      | 45                          | 25                         | 67                | 58.2              | 30            | 15               |
| 16              | 7.5 dB/100m                       | 57.2           | 54.2             | 49.8          | 46.8            | 43.9                    | 40.9                        | 25                         | 67                | 54.1              | 28            | 10.9             |
| 31.2            | 10.5 dB/100m                      | 52.9           | 49.9             | 42.4          | 39.4            | 38.1                    | 35.1                        | 23.6                       | 67                | 48.3              | 25.1          | 5.1              |
| 62.5            | 15 dB/100m                        | 48.4           | 45.4             | 33.4          | 30.4            | 32.1                    | 29.1                        | 21.5                       | 65.6              | 42.3              | 22            |                  |
| 100             | 19.1 dB/100m                      | 45.3           | 42.3             | 26.2          | 23.2            | 28                      | 25                          | 20.1                       | 62.5              | 38.2              | 20            |                  |
| 125             | 21.5 dB/100m                      | 43.8           | 40.8             | 22.3          | 19.3            | 26.1                    | 23.1                        | 19.4                       | 61                | 36.3              | 19            |                  |
| 200             | 27.6 dB/100m                      | 40.8           | 37.8             | 13.2          | 10.2            | 22                      | 19                          | 18                         | 58                | 32.2              | 17            |                  |
| 250             | 31.1 dB/100m                      | 39.3           | 36.3             | 8.3           | 5.3             | 20                      | 17                          | 17.3                       | 56.5              | 30.2              | 16            |                  |
| 300             | 34.3 dB/100m                      | 38.1           | 35.1             | 3.9           | 0.9             | 18.5                    | 15.5                        | 17.3                       | 55.3              | 28.7              |               |                  |
| 500             | 45.3 dB/100m                      | 34.8           | 31.8             | -10.4         | -13.4           | 14                      | 11                          | 17.3                       | 52                | 24.2              |               |                  |
| 625             | 51.2 dB/100m                      | 33.4           | 30.4             | -17.8         | -20.8           | 12.1                    | 9.1                         | 17.3                       | 50.6              | 22.3              |               |                  |

|              |                                                                                             |
|--------------|---------------------------------------------------------------------------------------------|
| 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              |
| 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. |
|-----------------|-------------------|
| 33 mm (1.3 in)  | 66 mm (2.6 in)    |

|                    |                          |
|--------------------|--------------------------|
| Max. Pull Tension: | 110 N (25 lbf)           |
| Bulk Cable Weight: | 44 kg/km (30 lbs/1000ft) |

Standards and Compliance

|                                  |                                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability:       | Indoor - Euroclass Eca                                                                                                                                                                                       |
| Flammability / Reaction to Fire: | IEC 60332-1-2                                                                                                                                                                                                |
| CPR Compliance:                  | CPR Euroclass: 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, IEC 61034-2 - Smoke Density Min Transmittance = 60%                                                                                                                                         |
| 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 |
| 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: 0.285 Revision Date: 07-31-2024 |
|----------------------|--------------------------------------------------|

Part Numbers

Variants

| Item #         | Color  | Putup Type | Length  | EAN           |
|----------------|--------|------------|---------|---------------|
| 10GXE03.06500  | Blue   | Reel       | 500 m   | 8719605000460 |
| 10GXE03.061000 | Blue   | Reel       | 1,000 m | 8719605000453 |
| 10GXE03.08500  | Gray   | Reel       | 500 m   | 8719605000484 |
| 10GXE03.07500  | Purple | Reel       | 500 m   | 8719605000477 |
| 10GXE03.09500  | White  | Reel       | 500 m   | 8719605180278 |

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