

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%), 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

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
4 pairs twisted together

Inner Shield

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

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)	7.0 mm (0.28 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	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 +60°C

Bend Radius

Stationary Min.	Installation Min.
29 mm (1.1 in)	58 mm

Max. Pull Tension:	110 N (25 lbf)
Bulk Cable Weight:	52 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 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: 0.345 Revision Date: 08-08-2024

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 006500M	Blue	Reel	500 m	
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 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 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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