



**Product:** [1891ELW](#)

Category 7A Enhanced Cable, 4 Pair, S/FTP, LSZH Indoor CPR Cca

**Product Description**

Category 7A Enhanced Premise Horizontal Cable (1300MHz), 4-Pair, 22 AWG solid bare copper conductors, S/FTP, Foam Polyethylene insulation, each pair with Beldfoil® shield, overall tinned copper braid shield (30% coverage), LSZH jacket

**Technical Specifications**

**Product Overview**

Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 6a, 7 and 7a applications: 25GBase-T (25 Gigabit Ethernet), 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
Individual Shielded Pair	22 AWG	Solid	BC - Bare Copper	4

**Insulation**

Element	Material	Nom. Insulation Diameter	Color Code
Individual Shielded Pair	PE - Polyethylene (Foam)	1.5 mm (0.059 in)	White & Blue, White & Orange, White & Green, White & Brown

**Cable Core**

Description
4 shielded pairs twisted together

**Inner Shield**

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

Table Notes:	Aluminum facing outside
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**Outer Shield**

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

**Outer Jacket**

Material	Nom. Diameter	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	8.2 mm (0.32 in)	Yes

Overall Cable Diameter (Nominal):	8.2 mm (0.32 in)
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**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.
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25 ns/100m	73%
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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	78	75	75.9	72.9	78	75	20	67	67	40	23
4	3.7	78	75	74.3	71.3	78	75	23	67	67	34	15
10	5.8	78	75	72.2	69.2	75.3	72.3	25	67	67	30	10.9
16	7.3	78	75	70.7	67.7	71.2	68.2	25	67	67	28	5.1
31.2	10.3	78	75	67.7	64.7	65.4	62.4	23.6	67	63.3	25.2	
62.5	14.6	78	75	63.4	60.4	59.4	56.4	21.5	67	57.3	22	
100	18.5	75.4	72.4	56.9	53.9	55.3	52.3	20.1	67	53.2	20	
155	23.2	72.5	69.5	49.3	46.3	51.5	48.5	18.8	67	49.4	18.1	
250	29.7	69.4	66.4	39.7	36.7	47.3	44.3	17.3	67	45.2	16	
500	42.8	64.9	61.9	22.2	19.2	41.3	38.3	17.3	67	39.2		
600	47.1	63.7	60.7	16.6	13.6	39.7	36.7	17.3	65.8	37.6		
1000	61.9	60.4	57.4			35.3	32.3	15.1	62.5	33.2		
1300	71.4	58.7	55.7			23.5	20.5	13.9	60.8	30.9		

Table Notes:	Limits below 4MHz and above 1000 MHz are for information only; Reference standard: IEC 61156-5
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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)	65 mm (2.6 in)

Max. Pull Tension:	105 N (23.6 lbf)
Bulk Cable Weight:	66 kg/km (44 lbs/1000ft)

Standards and Compliance

Environmental Suitability:	Indoor - Euroclass Cca
Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-3-24, IEC 60332-3-22
CPR Compliance:	CPR Euroclass: Cca-s1a,d1,a1
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 7A
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.
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History

Update and Revision:	Revision Number: 0.16 Revision Date: 10-18-2024
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