

Application

- Horizontal and building backbone cable.
- Support current and future **Category 7** applications, such as:
100 Base TX, 100 Base VG AnyLan, 155 ATM and 1000 Base-T (**Gigabit Ethernet**), FDDI.

Key features and Standards

- General standards: **ISO/IEC 11801 2nd edition (2002)**, **EN 50173 2nd edition (2001)**
- Provides extended performance far in excess of industry standards
- Superior NEXT performance

Construction & Dimensions



- Construction: 4 individually shielded twisted pairs
- Conductor: solid bare copper
- Conductor diameter: AWG 23 (0,60 mm)
- Conductor insulation material: Foam skin Polyolefine
- Diameter over insulation: 1.45 mm
- Shield: Tinned copper braid
Coverage > 40%
- Ripcord: Polyester
- Jacket material: FRNC
- Outer diameter: 8,0 mm \pm 0.30 mm

Pair 1	White/Blue
Pair 2	White/Orange
Pair 3	White/Green
Pair 4	White/Brown

Electrical characteristics (at 20 °C)

Nominal mutual capacitance at 1 kHz	48 nF/km
Maximum conductor DCR	75 Ohm/km
NVP - Nominal Velocity of Propagation	0.75 c
SKEW – Propagation delay difference (100 MHz)	typical \leq 15 ns/100m
Mean Characteristic Impedance 4-1000 MHz ¹⁾	100 \pm 5 Ohm

¹⁾ According to cable requirements of ISO/IEC 11801 category 7, Sept. 2002

General and environmental characteristics

Temperature range - operation	-20°C - +60°C
Temperature range - installation	+0°C - +50°C
Minimum bending radius - operation	30 mm
Minimum bending radius - installation	60 mm
Maximum pulling tension	90 N
Flame retardancy	IEC 60332-1
Caloric value	500 kJ/m
Weight (approx.)	60 kg/km
Maximum operating voltage	72 V rms
Maximum continuous current per conductor (25°C)	1.4 A

Electrical characteristics (at 20 °C)

Attenuation

Frequency	1	4	10	16	20	31.2	62.5	100	155	250	600	1000	MHz
Spec. (Max.) ¹⁾	-	3.7	5.9	7.4	8.3	10.4	14.9	19.0	24.0	31.0	50.1	66.9	dB/100m
Typical	[1.9]	3.5	5.4	6.9	7.6	9.6	13.6	17.4	21.7	28.0	43.5	56.6	dB/100m

NEXT (Near end crosstalk)

Frequency	1	4	10	16	20	31.2	62.5	100	155	250	600	1000	MHz
Spec. (Min.) ¹⁾	-	80.0	80.0	80.0	80.0	80.0	75.5	72.4	69.5	66.4	60.7	57.4	dB/100m
Typical	[100]	100	100	100	100	100	100	95	95	95	90	90	dB/100m

Power sum NEXT

Frequency	1	4	10	16	20	31.2	62.5	100	155	250	600	1000	MHz
Spec. (Min.) ¹⁾	-	77.0	77.0	77.0	77.0	77.0	72.5	69.4	66.5	63.4	57.7	54.4	dB/100m
Typical	[98]	98	98	98	98	98	98	93	93	93	88	88	dB/100m

Power sum ELFEXT

Frequency	1	4	10	16	20	31.2	62.5	100	155	250	600	1000	MHz
Spec. (Min.) ¹⁾	-	75.0	71.0	66.9	65.0	61.1	55.1	51.0	47.2	43.0	35.4	31.0	dB/100m
Typical	[95]	95	95	90	87	84	80	76	72	67	60	56	dB/100m

Power sum ACR

Frequency	1	4	10	16	20	31.2	62.5	100	155	250	600	1000	MHz
Spec. (Min.) ¹⁾	-	73.3	71.1	69.6	68.7	66.6	57.6	50.4	42.6	32.5	7.6	-	dB/100m
Typical	[96]	94	92	91	90	88	84	75	71	68	44	31	dB/100m

Return Loss

Frequency	1	4	10	16	20	31.2	62.5	100	155	250	600	1000	MHz
Spec. (Min.) ¹⁾	-	23	25	25	25	23.7	21.5	20.1	18.8	17.3	17.3	13.1	dB/100m
Typical	[26]	30	35	35	35	34	32	31	29	29	28	20	dB/100m

¹⁾: Specification values according to cable requirements of ISO/IEC 11801 category 7, Sept. 2002. Specification values at 1000 MHz are based on extrapolation of limits of mentioned standard.

Note: Values between brackets are for information only

Ordering information

MARKING

Text on the cable jacket Inkjet printing

**BELDEN 1885ENH ISTEP CAT7 4PR AWG23 LSNH ISO/IEC 11801 EN50173
(DIN 44312-5) -- TESTED TO 1000 MHZ -- VERIFIED 100 OHM**

Meter marking: Yes

JACKET COLOUR

Colour	RAL code
Grey	RAL 7032

PACKAGING (PUT UP)

500m and 1000m Crate Reels