

NN00101

Backbone Cables

100 pair AWG24 CAT3 LSNH

2012-01-23 v2

Applications

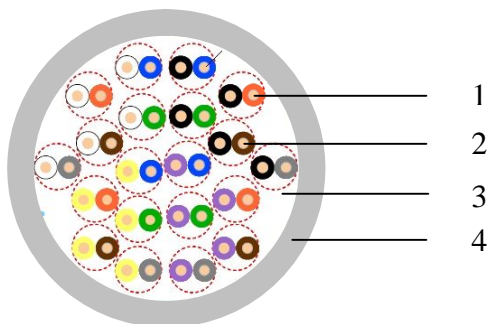
- Backbone cable
- Support current and future Category 3 applications

General standards

- International standard: ISO/IEC 11801 2nd edition (2002)

Construction & Dimensions

(picture represents a 20 pair cable)



1. Conductor

Material Solid bare copper ETP
Nominal diameter AWG 24 (0.51mm)

2. Insulation

Material Solid PE
Nominal diameter over insulation 0.88 mm

3. Cable core

Pair 2 twisted insulated conductors
Number of pairs 4 x 25 pair groups (Blue, orange, green and brown)

Pair	a-Wire	b-Wire
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown
5	White	Grey
6	Red	Blue
7	Red	Orange
8	Red	Green
9	Red	Brown
10	Red	Grey

Pair	a-Wire	b-Wire
11	Black	Blue
12	Black	Orange
13	Black	Green
14	Black	Brown
15	Black	Grey
16	Yellow	Blue
17	Yellow	Orange
18	Yellow	Green
19	Yellow	Brown
20	Yellow	Grey

Pair	a-Wire	b-Wire
21	Violet	Blue
22	Violet	Orange
23	Violet	Green
24	Violet	Brown
25	Violet	Grey

Core wrapping

Thread plus PET foil

4. Sheath

Material LSNH (grey)
Minimum wall thickness 1.2 mm
Maximum diameter 22.0 mm
Ripcord Under jacket
Standard text in white (+ date code and length indication per meter):

BELDEN (15182) NN00101 CATEGORY 3 UTP 100 PAIR LSOH

Electrical characteristics (at 20 °C)

Reference standard : ISO/IEC 11801 edition 2.0 (2002)

	Freq. [MHz]	Specification	Unit
D.C. resistance conductor		< 9,38	Ω/100m
Resistance unbalance: within a pair / between pairs		< 5	%
Mutual capacitance		< 66	nF/km
Capacitance unbalance pair to ground		< 330	pF/100m
Characteristic impedance	1-16	100 ± 15	Ohm
Structural return loss	1-10	> 12	dB/100m
Structural return loss	10-16	> 12-10*log(f/10)	dB/100m
Attenuation	1-16	≤ 2.32*√f + 0.238*f	dB/100m
NEXT	1-16	≥ 45 – 15*log(f/0.772)	dB/100m
PS-NEXT	1-16	≥ 43 – 15*log(f/0.772)	dB/100m

TYPE	0.772	1	4	8	10	16	MHz
Attenuation	2.2	2.6	5.6	8.5	9.7	13.1	dB/100m
NEXT	45	44	34	29	28	25	dB/100m
PS NEXT	43	41	32	27	26	23	dB/100m
Structural return loss	12	12	12	12	12	10	dB/100m

Environmental and overall characteristics

	Specification	Unit
Maximum operating voltage (for all temperatures cable is intended to be used)	72	V D.C.
Maximum continuous current per conductor (@25°C)	1.5	A
Temperature rating installation	0 / 50	°C
Temperature rating operation	- 30 / 60	°C
Total cable weight		kg/km
Minimum bending radius (during operation and installation)	15x cable diameter	
Maximum number of bend	5x	



Belden declares this product to be in compliance with the environmental regulations EU RoHS (Directive 2002/95/EC, 27 January 2003); this is valid for all material produced after the RoHS compliant date for this product.