

YE00917-CTS

Backbone Cables
50 pair AWG24 CAT3
Outdoor armoured LSNH
 2011-10-11 v1

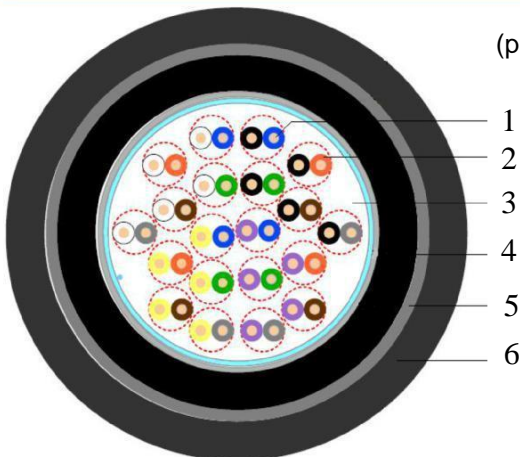
Applications

- 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 HDPE
 Nominal diameter over insulation 1.0 mm

3. Cable core

Pair 2 twisted insulated conductors
 Number of pairs 12 pair unit (blue tape), 13 pair unit (blue tape), 12 pair unit (orange tape) and 13 pair unit (orange tape)

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

Filling

Core wrapping

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

Petroleum-jelly compound

Thread plus crepe paper

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

Moisture barrier	PE/AL/PE tape
4. Inner sheath	
Material	PE (black)
Minimum wall thickness	1.2 mm
Nominal diameter	19.4 mm
5. Armour	
Armour type	2x Fe/Zn tape spirally wrapped
6. Outer sheath	
Material	LSNH (black)
Minimum wall thickness	1.4 mm
Maximum cable diameter	25.5 mm
Standard text in white (+ date code and length indication per meter):	

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	770	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.