

YE00916

Backbone Cables

25 pair AWG24 CAT3

Outdoor armoured LSNH

2011-10-11 v1

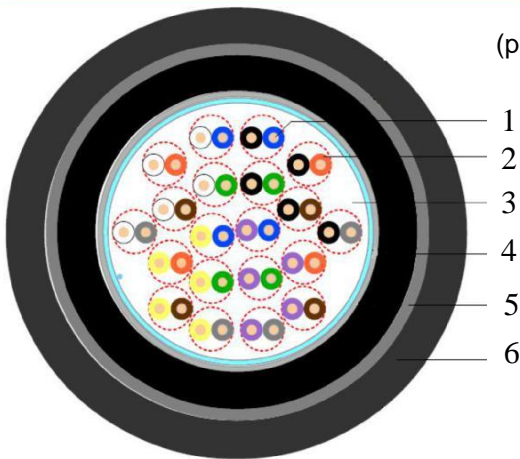
Applications

- 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 2+8+15, all twisted concentric together

| 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 |
| | | |
| | | |
| | | |
| | | |

Filling Petroleum-jelly compound

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| | |
|------------------------|--------------------------------|
| Core wrapping | Thread plus crepe paper |
| Moisture barrier | PE/AL/PE tape |
| 4. Inner sheath | |
| Material | PE (black) |
| Minimum wall thickness | 1.2 mm |
| Nominal diameter | 15.1 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 | 21.0 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 | 510 | 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.