

LanMarin® Cat 6 Solid

F/UTP, Solid conductors

SHF1 UV resistant

AWG 23/1

DNV

Application

Collective screened LAN-cable for ship- and offshore for data transmission. Tested according to IEC 61156 - 5 for transmission characteristics up to 250 MHz - Horizontal floor wiring - Sectional specification. Ethernet IEEE 802.3at-2009 Type 2 (PoE+). This cable can be used in rough environments.



Construction

| | |
|----------------|--|
| Conductor | Solid Bare Cu 0.573 [mm] AWG 23/1 |
| Dielectricum | HDPE Ø=1.12 [mm] |
| Colour code | IEC |
| Tape | Mylar tape |
| Separator | PE-cross separator |
| Drainwire | Tinned Cu-wire |
| Screen | AL/Mylar ≥100% coverage |
| Jacket | Grey SHF1 |
| O.D. | 7.8 ± 0.4 [mm] |
| Weight | 60 [kg/km] |
| Jacket marking | NEK Kabel - LanMarin Cat 6 F/UTP 4 x 2 x AWG23/1 - SHF1 - IEC 60332-3-22 ****m - DD/MM/YY |

Specifications

| | |
|------------------------------|---------------------------------|
| Operating temperature normal | -40 - +80 |
| Temperature @ installation | -10 - +60 [°C] |
| Dielectric strength | DC1kV for 1min. |
| Characteristic impedance | 100 ± 15 Ω at 1 - 250MHz |
| Conductor resistance | ≤ 95 [Ω/km] |
| Resistance unbalance | ≤ 5 [%] |
| Insulation resistance | ≥ 5000 [Ω x km] |
| Power over Ethernet | IEEE 802.3at-2009 Type 2 (PoE+) |
| Rated voltage | ≥ 80 [V] |
| Capacitance unbalance | 160 [pF/100m] |
| Velocity factor | 60 [%] |
| Mutual capacitance | 60 [nF/km] |
| Delay skew | ≤ 45ns/100m [v/ 1 - 250MHz] |
| Min. bending radius | 10 [x outer diam] |

Norms

| | |
|--|--|
| Halogenfree, max content corrosive and toxic gases | IEC 60754-1 & IEC 60754-2 |
| Material properties, insulation and sheath | IEC 60092-360 (359) 3582 |
| Flame resistance | IEC 60332-3-22 Cat.A |
| Flame retardant | IEC 60332-1-2 |
| Smoke emission | IEC 61034-2 (≥60%) |
| Oil and fuel resistant | IEC 60811 IRM 902 23°C / 7 days, 70°C / 4h |
| UV-resistant | UL 1581 (300H) |
| CPR classification | Dca-s2,d2,a1 |
| Euroclass | Dca |
| Certification | DNV |

Part No. 1089623

Attenuation

| Freq. [MHz] | Att. std [dB] | Att.typ [dB] | RL std [dB] | RLtyp [dB] | NEXTst [dB] | NEXTtyp [dB] | PSNEXTstd [dB] | PSNEXT typ [dB] | ELFEXT std [dB] | ELFEXT typ [dB] |
|-------------|---------------|--------------|-------------|------------|-------------|--------------|----------------|-----------------|-----------------|-----------------|
| 4 | 3,83 | 3,70 | 23,0 | 25,0 | 66,3 | 85,0 | 63,3 | 82,0 | 56,0 | 93,0 |
| 8 | 5,37 | 5,10 | 24,5 | 26,0 | 61,8 | 80,0 | 58,8 | 77,0 | 49,9 | 87,0 |
| 10 | 6,00 | 5,70 | 25,0 | 28,0 | 60,3 | 78,0 | 57,3 | 75,0 | 48,0 | 83,0 |
| 16 | 7,61 | 7,40 | 25,0 | 28,0 | 57,2 | 75,0 | 54,2 | 72,0 | 43,9 | 83,0 |
| 20 | 8,53 | 8,10 | 25,0 | 28,0 | 55,8 | 72,0 | 52,8 | 69,0 | 42,0 | 83,0 |
| 25 | 9,57 | 9,30 | 24,3 | 27,2 | 54,3 | 70,0 | 51,3 | 67,0 | 40,0 | 78,0 |
| 31,25 | 10,75 | 10,00 | 23,6 | 27,0 | 52,9 | 69,0 | 49,9 | 66,0 | 38,1 | 73,0 |
| 62,5 | 15,48 | 14,93 | 21,5 | 25,0 | 48,4 | 65,0 | 45,4 | 62,0 | 32,1 | 70,0 |
| 100 | 19,92 | 19,00 | 20,1 | 24,0 | 45,3 | 63,0 | 42,3 | 60,0 | 28,0 | 66,0 |
| 150 | 25,30 | 23,60 | 18,8 | 22,0 | 42,4 | 60,0 | 39,4 | 57,0 | 24,2 | 63,0 |
| 200 | 29,14 | 27,70 | 18,0 | 21,0 | 40,8 | 58,0 | 37,8 | 55,0 | 22,0 | 61,0 |
| 250 | 33,02 | 31,40 | 17,3 | 20,0 | 39,3 | 55,0 | 36,3 | 52,0 | 20,0 | 58,0 |

Updated

| Date | Rev. | Description |
|------------|------|---------------|
| 15.04 2019 | 1 | DNV Approval |
| 10.10.2023 | 2 | Rated voltage |