

LanMarin® Cat 7 ARM Solid

S/FTP
AWG 23/1
Armoured
UV, SHF1
DNV / ABS

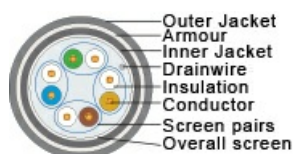
Application

Individual and collective screened Lan-cable for ship and offshore, tinned Cu-wire braid armour, low smoke, halogenfree and UV-resistant SHF1 jacket. The product is suitable for EMC-installations. It is tested according to IEC 61156-5 for transmission characteristics up to 600 MHz - Horizontal floor wiring - Sectional specification. IEEE 802.3at-2009 Type 2 (PoE+). This cable can be used in rough environments.



Construction

Conductor	Solid bare Cu 0.56 [mm] AWG 23/1
Insulation	Foamskin PE 1.34 ± 0.05 [mm]
No. of pairs	4
Colour code	IEC
Individual Screen pairs	Al/Mylar tape ≥ 100 [% optical cover]
Drain wire	Tinned Cu
Overall Screen	Tinned Cu-braid ≥ 60 [optical cover]
Inner jacket	SHF1 Ø = 8.0 ± 0.3 [mm]
Armour	Tinned Cu-braid ≥ 60 [% optical cover]
Outer Jacket	Grey SHF1
O.D.	11.2 [mm]
Weight	120 [kg/km]
Jacket marking	NEK KABEL – LanMarin CAT7 4x2xAWG23/1 –ARMOURED – SHF1 – IEC 60332-3-22 – ****M – DD/MM/YY





Specifications

Operating temperature normal	-40 – +80 [°C]
Temperature @ installation	-20 – 60 [°C]
Dielectric strength	DC1kV for 1min.
Characteristic impedance	100 ± 5 [Ω]
Conductor DC resistance	≤ 93.8 [Ω/km]
Resistance DC unbalance	≤ 2 [%]
Insulation resistance	≥ 5000 [MΩ x km] (IEC 60189-1)
Rated voltage	≥ 80 [V]
Power over Ethernet	IEEE 802.3at-2009 Type 2 (PoE+)
Capacitance unbalance	≤ 160 [pF/100m at 1kHz] (pair to ground)
Transmission speed	IEC 61156-5
Min. bending radius	5 [x outer diam]
Min. bending radius flexible	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
Design and testing standards	IEC 61156-5
Flame resistance	IEC 60332-3-22
Flame retardant	IEC 60332-1-2
Smoke emission	IEC 60754-2 ≥ 60 %
Oil and fuel resistant	IRM 902 100°C x 24h
UV-resistant	UL 1581 (300H)
Certification	DNV / ABS



Part No.	DNV: 2030012
	ABS: 2030021



Attenuation

Frequency (MHz)	Attenuation Max. (dB/100m)	Return Loss (dB/100m)	NEXT (dB/100m)	PS-NEXT (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)
4	3.74	23.0	78.0	75.0	78.0	75.0
8	5.24	24.5	78.0	75.0	77.2	74.2
10	5.86	25.0	78.0	75.0	75.3	72.3
16	7.41	25.0	78.0	75.0	71.2	68.2
20	8.29	25.0	78.0	75.0	69.3	66.3
25	9.29	24.3	78.0	75.0	67.3	64.3
31.25	10.41	23.6	78.0	75.0	65.4	62.4
62.5	14.88	21.5	75.5	72.5	59.4	56.4
100	19.02	20.1	72.4	69.4	55.3	52.3
200	27.47	18.0	67.9	64.9	51.5	48.5
250	31.97	17.3	66.4	63.4	49.3	46.3
300	34.19	17.3	65.2	62.2	45.8	42.8
500	45.26	17.3	61.9	58.9	41.3	38.3
600	50.10	17.3	60.7	57.7	39.7	36.7

Updated

Date	Rev.	Description
03.10.2023	1	Rated voltage