

# LanMarin® Cat 7A ARM Solid

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

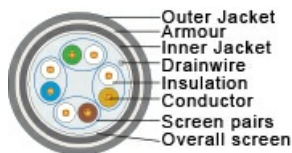
## Application

Individual and collective screened lan-cable for ship and offshore, galvanized steel wire 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 1 000 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 0.56 [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
Screen	Tinned Cu-braid ≥ 60 [% coverage]
Inner jacket	SHF1 Ø = 8.0 [mm]
Armour	0.3 mm
Armour alt.1	Galvanised steel wire braid ≥ 60 [% optical cover]
Armour alt.2	Tinned Cu-braid ≥ 60 [% optical cover]
Outer Jacket	Grey SHF1
O.D.	11.2 [mm]
Weight	120 [kg/km]
Jacket marking	NEK KABEL – LanMarin CAT7A 4x2xAWG23/1 ARMOURED – SHF1 – IEC 60332-3-22 – DNV – Batch no– DD/MM/YY – ****m



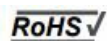


## Specifications

Operating temperature normal	-40 – 80 [°C]
Temperature @ installation	-20 – +60 [°C]
Dielectric strength	DC1kV for 1min.
Characteristic impedance	100 [Ω]
Conductor DC resistance	≤ 93.8 [Ω/km]
Resistance DC unbalance	≤ 2 [%]
Insulation resistance	≥ 5000 [MΩ x km] (IEC 60189-1)
Power over Ethernet	IEEE 802.3at-2009 Type 2 (PoE+)
Rated voltage	≥ 80 [V]
Capacitance unbalance	≤ 160 [pF/100m at 1kHz] (pair to ground)
Velocity factor	70 [%]
Mutual capacitance	48 [nF/km]
Transmission speed	IEC 61156-5
Min. bending radius installed	5 [x outer diam]
Min. bending radius @ installation	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 61034-2 ≥60%
Oil and fuel resistant	IRM 902 4h @ 70°C
UV-resistant	UL 1581 (300H)
Certification	DNV



Part No.	GSWB: 1089611 TCWB: 2030008
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## 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	5.22	24.5	78.0	75.0	77.2	74.2
10	5.82	25.0	78.0	75.0	75.3	72.3
16	7.34	25.0	78.0	75.0	71.2	68.2
20	8.20	25.0	78.0	75.0	69.3	66.3
25	9.17	24.3	78.0	75.0	67.3	64.3
31.25	10.26	23.6	78.0	75.0	65.4	62.4
62.5	14.57	21.5	78.0	75.0	59.4	56.4
100	18.52	20.1	75.4	72.5	55.3	52.3
200	26.47	18.0	70.9	67.9	49.3	46.3
250	29.73	17.3	69.4	66.4	47.3	44.3
300	32.69	17.3	68.2	65.2	45.8	42.8
500	42.76	17.3	64.9	61.9	41.3	38.3
600	47.10	17.3	63.7	60.7	39.7	36.7
800	54.92	16.1	61.9	58.9	37.2	34.2
1000	61.93	15.1	60.4	57.4	35.3	32.3

## Updated

Date	Rev.	Description
19.04.2019	1	DNV-GL Approval
14.03.2022	2	Additional informations
03.10.2023	3	Rated voltage