

# LanMarin® Cat 6A Solid SHF1

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

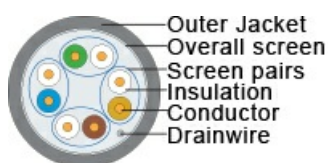
## Application

Individual and collective screened LAN-cable, designed for ship- and offshore applications. The cable is used for datatransmission with characteristic impedance for 100 Ω and 500 MHz bandwidth. Ethernet IEEE 802.3at-2009 Type 4 (PoE++). This cable can be used in rough environments.



## Construction

Conductor	Solid Bare Cu 0.56 [mm] AWG 23/1
Insulation	Foam PE 1.34 ± 0.05 [mm]
No. of pairs	4
Colour code	pair 1: white/blue - blue pair 2: white/orange - orange pair 3: white/green - green pair 4: white/brown - brown
Individual Screen pairs	Al/Mylar tape
Drain wire	0.4mm solid Annealed Tinned Copper
Screen 2	Tinned Cu braid ≥ 60 [% optical coverage]
Jacket	Grey SHF1 , other colours on request.
O.D.	8.0 ± 0.3 [mm]
Weight	60 [kg/km]
Jacket marking	NEK KABEL AS – LanMarin CAT6A 4x2xAWG23/1 SHF1 – DNV – IEC 60332-3-22 – ****m – (Batch) – YY/MM/DD



## Specifications

Operating temperature normal	-40 – +80 [°C]
Temperature @ installation	-20 – +60 [°C]
Dielectric strength	DC 1kV for 1min.
Characteristic impedance	100 [Ω]
Conductor DC resistance	≤ 93.8 [Ω/km]
Tensile strength	> 100 [N]
Resistance DC unbalance	≤ 5 [%]
Insulation resistance	≤ 5000 [MΩ x km] (IEC 61156-5)
Power over Ethernet	IEEE 802.3at-2009 Type 4 (PoE++)
Rated voltage	≥ 80 [V]
Capacitance unbalance	≤ 160 [pF/100m]
Velocity factor	70 [%]
Mutual capacitance	48 [nF/km]
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
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 23°C / 7 days, 70°C / 4h
UV-resistant	UL 1581 (300H)
Certification	DNV



Part No.	1089669
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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	3.80	23.0	66.3	63.3	56.0	53.0
8	5.31	24.5	61.8	58.8	49.9	46.9
10	5.93	25.0	60.3	57.3	48.0	45.0
16	7.49	25.0	57.2	54.2	43.9	40.9
20	8.38	25.0	55.8	52.8	42.0	39.0
25	9.38	24.3	54.3	51.3	40.0	37.0
31.25	10.50	23.6	52.9	49.9	38.1	35.1
62.5	14.99	21.5	48.4	45.4	32.1	29.1
100	19.14	20.1	45.3	42.3	28.0	25.0
200	27.58	18.0	40.8	37.8	22.0	19.0
250	31.07	17.3	39.3	36.3	20.0	17.0
300	34.27	17.3	38.1	35.1	18.5	15.5
400	40.05	17.3	36.3	33.3	16.0	13.0
500	45.26	17.3	34.8	31.8	14.0	11.0

## Updated

Date	Rev.	Description
21.03.2022	1	Attenuation + additional info.
13.04.2023	2	Additional info.
17.10.2023	3	Rated voltage