

# LanMarin® Cat6 Solid SHF1

**S/FTP**  
**AWG23/1 Solid**  
**SHF1, UV**  
**DNV**

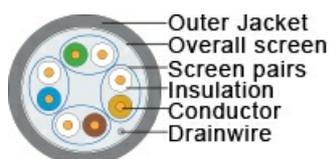
## Application

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



## Construction

Conductor	Solid plain Cu 0.56 [mm] AWG 23/1
Insulation	Foam PE $\varnothing = 1.34 \pm 0.05$ [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
Overall Screen	Tinned Cu-braid $\geq 60$ [% coverage]
Jacket	Grey SHF1
O.D.	$8.0 \pm 0.3$ [mm]
Jacket marking	NEK Kabel – LanMarin CAT6 4 x 2 x AWG23/1 – SHF1 – IEC 60332-3-22 – DNV – <batch> – dd/mm/yyyy – **** m

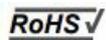


## Specifications

Operating temperature normal	-40 – +80 [°C]
Temperature @ installation	-20 – +60 [°C]
Dielectric strength	DC 1kV for 1min.
Conductor DC resistance	$\leq 93.8$ [ $\Omega$ /km]
Resistance DC unbalance	$\leq 5$ [%]
Insulation resistance	$\geq 5000$ [ $\Omega \times \text{km}$ ] (IEC 61156-5)
Power over Ethernet	IEEE 802.3at-2009 Type 4 (PoE++)
Rated voltage	$\geq 80$ [V]
Velocity factor	70 [%]
Capacitance core-earth	160 [pF/100m] (IEC 61156-5)
Mutual capacitance	48 [nF/km]

## Norms

Halogenfree, max content corrosive and toxic gases	IEC 60754-1 & IEC 60754-2
Material properties, insulation and sheath	IEC 60092-360
Transmission performance	IEC 61156-5
Flame resistance	IEC 60332-3-22
Flame retardant	IEC 60332-1-2
Toxic gases max.	IEC 61034-2 (≥ 60%)
Oil and fuel resistant	IRM 902 4h @ 70°C
UV-resistant	UL 1581 (300H)



Part No.	1089702
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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	3.83	23.0	66.3	63.3	56.0	53.0
8	5.37	24.5	61.8	58.8	49.9	46.9
10	6.00	25.0	60.3	57.3	48.0	45.0
16	7.61	25.0	57.2	54.2	43.9	40.9
20	8.53	25.0	55.8	52.8	42.0	39.0
25	9.57	24.3	54.3	51.3	40.0	37.0
31.25	10.75	23.6	52.9	49.9	38.1	35.1
62.5	15.48	21.5	48.4	45.4	32.1	29.1
100	19.92	20.1	45.3	42.3	28.0	25.0
150	25.30	18.8	42.4	39.4	24.2	21.2
200	29.14	18.0	40.8	37.8	22.0	19.0
250	33.02	17.3	39.3	36.3	20.0	17.0

## Updated

Date	Rev.	Description
15.03.2023	1	Added drainwire