

# LanMarin® Cat 7

S/FTP AWG 23/1 or 23/7

LSZH, UV resistant, SHF1

DNV / ABS

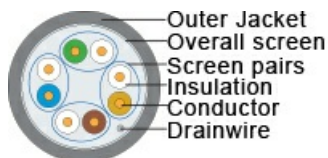
## Application

High performance offshore LAN cable with solid or stranded conductors, AWG 23/1 or AWG 23/7. Compliant with the category 7 standards, requiring bandwidths up to 600 MHz. Foil screened pairs with an overall tinned copper braid. Tested for high-frequency and transmission measurements for class F-link. RMRS on special request. Ethernet IEEE 802.3at-2009 Type 2 (PoE+). This cable can be used in rough environments.



## Construction

Conductor	Solid or stranded Bare Cu 0.560 [mm] AWG 23/1 or AWG 23/7
Drainwire	Tinned Cu
Insulation	Foam PE Solid: 1.34 ± 005 [mm] Stranded: 1.55 ± 0.05 [mm]
No. of pairs	4
Colour code	pair 1: blue - white/blue pair 2: orange - white/orange pair 3: green - white/green pair 4: brown - white/brown
Individual Screen pairs	Al/Mylar tape
Overall Screen	Tinned Cu-braid ≥ 60%
Jacket	Grey SHF1 LSZH , also available with black jacket
O.D.	Solid: 8.0 ± 0.3 [mm] Stranded: 8.5 ± 0.3 [mm]
Weight	Solid: 60 [kg/km] Stranded: 68 [kg/km]
Jacket marking	NEK Kabel LanMarin CAT7 S/FTP 4x2x22AWG/x – SHF1 – IEC 60332-3-22 – DNV – DD/MM/YY – ****m





## Specifications

Operating temperature normal	-40 – +80 [°C]
Temperature @ installation	-20 – +60 [°C]
Dielectric strength	DC1kV for 1min.
Characteristic impedance	100 ± 5 [Ω @ 100 MHz]
Power over Ethernet	IEEE 802.3at-2009 Type 2 (PoE+)
Conductor DC resistance	Solid: ≤ 93.8 [Ω/km] Stranded: ≤ 73.2 [Ω/km]
Tensile strength	> 100 [N]
Resistance DC unbalance	≤ 5 [%]
Insulation resistance	≥ 5000 [MΩ x km] (IEC 61156-5)
Rated voltage	≤ 80 [V]
Capacitance unbalance	≤ 160 [pF/100m] @ 1kHz (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 EN 50288-4-2
Flame resistance	IEC 60332-3-22 Cat.A
Flame retardant	IEC 60332-1
Smoke emission	IEC 61034-2 , ≥ 60%
Oil and fuel resistant	IRM 902 4h @ 70°C
UV-resistant	UL 1581 (300H)
Certification	DNV / ABS

Part No.	DNV: Solid grey: 1089667 Solid black: 2030001 Flexible: 1089666
	ABS: 2030020
	RS: Solid grey: 2030004 Flexible grey: 2030005





## 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	3,74	3,59	23,0	25,0	78,0	101,0	75,0	98,0	78,0	93,0
8	5,24	5,03	24,5	27,5	78,0	99,0	75,0	96,0	77,2	91,0
10	5,86	5,63	25,0	28,0	78,0	98,0	75,0	95,0	75,3	89,0
16	7,41	7,11	25,0	28,0	78,0	96,0	75,0	93,0	71,2	86,0
20	8,29	7,96	25,0	28,0	78,0	93,0	75,0	90,0	69,3	83,0
25	9,29	8,92	24,3	28,0	78,0	93,0	75,0	90,0	67,3	81,0
31,25	10,41	10,00	23,6	27,0	78,0	93,0	75,0	90,0	65,4	79,0
62,5	14,88	14,28	21,5	25,5	75,5	88,0	72,5	85,0	59,4	74,0
100	19,02	18,26	20,1	24,0	72,4	83,0	69,4	80,0	55,3	69,0
200	27,47	26,37	18,0	21,0	67,9	83,0	64,9	80,0	51,5	63,0
250	31,97	30,69	17,3	20,0	66,4	80,0	63,4	77,0	49,3	61,0
300	34,19	32,82	17,3	19,0	65,2	80,0	62,2	77,0	45,8	55,0
500	45,26	43,45	17,3	19,0	61,9	75,0	58,9	72,0	41,3	50,0
600	50,10	48,10	17,3	19,0	60,7	75,0	57,7	72,0	39,7	48,0

## Updated

Date	Rev.	Description
14.03.2022	1	New part no. for RS
13.04.2023	2	Additional info.