

LanMarin® Cat 6A ARM Solid-SHF2

S/FTP

Solid AWG 23/1

UV, SHF2

Armoured

DNV & ABS

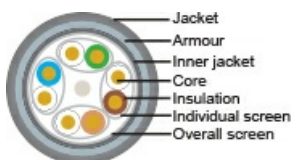
Application

Reinforced cable for ship- and offshore LAN installations. The product is approved and available in alternative designs. Galvanized steel wire braid or tinned Cu-wire braid armour. This product is suitable for use in EMC-installations for ship and offshore. Cable for transmission characteristics up to 500 MHz - horizontal floor wiring. 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
Dielectricum	Foamed 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 100 % [optical cover]
Overall Screen	Tinned Cu-braid ≥ 55 [optical cover]
Inner jacket	SHF1 $\varnothing = 8.0 \pm 0.4$ [mm]
Armour alt.1	Galvanised steel wire braid
Armour alt.2	Tinned Cu-braid
Jacket	Grey SHF2 other colours on request.
O.D.	11.2 ± 0.6 [mm]
Weight	172 [kg/km]
Jacket marking	NEK KABEL – LanMarin® Cat 6A ARMOURED 4X2XAWG23/1 – SHF2 – IEC 60332-3-22 – **** M – (Batch) – YY/MM/DD





Specifications

Operating temperature normal	-40 – +80 [°C]
Temperature @ installation	-20 – +60 [°C]
Dielectric strength	DC1kV for 1min.
Characteristic impedance	100 ± 15 [Ω @ 100 MHz]
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]
Delay skew	≤ 45
Capacitance unbalance	≤ 160 [pF/100m at 1kHz] (IEC 61156-5)
Min. bending radius	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
Transmission performance	IEC 61156-5
Flame resistance	IEC 60332-3-22
Flame retardant	IEC 60332-1
Smoke emission	IEC 61034-2 , ≥ 60 %
Oil and fuel resistant	IRM 902 & IRM 903
UV-resistant	UL 1581 (300H)
Certification	DNV / ABS



Part No.	Grey, GSWB DNV: 2020007 Orange, TCWB ABS: 2020022 Blue, TCWB ABS: 2020032 Grey, TCWB ABS: 2020035
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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	3.8	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	40.0
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	35.0
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	38.4	31.8	14.0	11.0

Updated

Date	Rev.	Description
16.10.2023	1	Rated voltage