

LanMarin® Cat 7 ARM SHF2 Solid

AWG 23/1

S/FTP Armoured

UV, SHF2

DNV

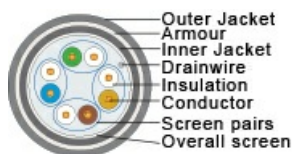
Application

Individual and collective screened lan-cable for ship and offshore, galvanized steel wire armour, low smoke, halogenfree and UV-resistant SHF2 jacket. The product is suitable for EMC-installations. It is tested according to IEC 61156-5 for transmission characteristics up to 600 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	Foam PE 1.34 ± 0.05 [mm]
No. of pairs	4
Colour code	IEC 60189-2
Individual Screen pairs	Al/Mylar tape
Drain wire	0.4mm solid Annealed Tinned Copper
Overall Screen	Tinned Cu-braid ≥ 60 [% coverage]
Inner jacket	SHF1 Ø = 8.0 [mm]
Armour	Galvanized steel wire braid ≥ 60 [% optical cover]
Outer Jacket	Black SHF2
O.D.	11.2 [mm]
Jacket marking	NEK Kabel – LanMarin® Cat 7 S/FTP – 4 x 2 x AWG23/1 ARM – SHF2 – IEC 60332-3-22 – DNV – <batch no> – <ddmmyy> – <meter marking>



Specifications

Operating temperature normal	-40 – +80
Temperature @ installation	-20 – +60 [°C]
Dielectric strength	DC1kV for 1min. (conductor to conductor, conductor to screen)
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] (IEC 61156-5)

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 ISO/IEC 11801-1
Flame resistance	IEC 60332-3-22
Flame retardant	IEC 60332-1
Smoke emission	IEC 61034-2 $\geq 60\%$
Oil and fuel resistant	IRM 902 100°C x 24h
UV-resistant	UL 1581 (300H)
Certification	DNV



Prod.no.	2030015
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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	3.50	25.0	90.0	87.0	98.0	95.0
8	4.83	30.0	90.0	87.0	93.0	90.0
10	5.40	30.0	90.0	87.0	89.0	86.0
16	6.92	30.0	90.0	87.0	85.0	82.0
20	7.80	28.0	90.0	87.0	83.0	80.0
25	8.80	27.0	90.0	87.0	81.0	78.0
31.25	9.90	25.0	90.0	87.0	79.0	76.0
62.5	14.11	24.0	85.0	82.0	73.0	70.0
100	17.90	24.0	83.0	80.0	69.0	66.0
200	25.67	21.0	81.0	78.0	63.0	60.0
250	28.83	20.0	78.0	75.0	61.0	58.0
300	31.69	19.0	78.0	75.0	55.0	52.0
400	36.96	19.0	73.0	70.0	52.0	49.0
500	41.72	19.0	73.0	70.0	50.0	47.0
600	65.45	19.0	73.0	70.0	48.0	45.0