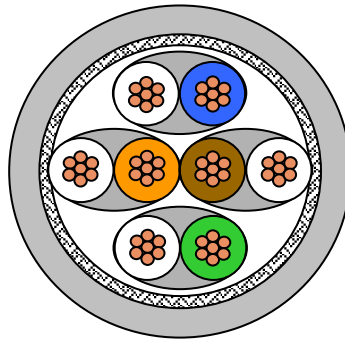


Bergen Cabling DNV approved Maritime LAN S/FTP Cat6A stranded cable



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Application

Generic Data transmission. This cable is a **Cat6A S/FTP** cable meant for use as installation/horizontal cable in tougher electrical and mechanical environment, including ships and offshore units.

Standards

EN 50173-1; EN 50288-4-1
ISO/IEC 11801; IEC 61156-5
Power over Ethernet(PoE/PoE+)
Det Norske Veritas (DNV) specification No. 6-827.50-2

Fire rating

LSHF-FR(SHF1) : IEC 60754-2; IEC 61034, IEC 60332-3-24, EN 50399 Class D_{ca}s2d1a1

Chemical resistance

Mineral oils IRM 902 (IEC60811-404) : 7 days/23°C, 4 hours/70°C
Diesel - IRM 903 (IEC60811-404) : 7 days/23°C, 4 hours/70°C



Construction

Conductor	Stranded copper wire \varnothing 0.27 mm ² , AWG23
Insulation	PE, \varnothing 1.6 mm
Twisting	2 cores to the pair
Cable lay up	4 pairs
Pair screen	Al-laminated plastic foil around each pair
Overall screen	Copper braid, tinned \varnothing 6,6 mm
Sheath	Oil resistant, Fire retardant and halogen free LSHF-FR, SHF1, acc. to IEC60092-360. Standard colour Grey RAL7035

Mechanical Properties

Bending radius	Installation	8 x D
	Installed	4 x D
Temperature range	During operation	-40°C to + 85°C
	During installation	-15°C to + 50°C
Fire load	4 pair	670 MJ/km
Maximum tensile load	During operation	No load
	During installation	100 N

Electrical Properties

at 20°C

DC loop resistance		$\leq 138 \Omega/\text{km}$
Resistance unbalance		$\leq 2\%$
Insulation resistance	(500 V)	$\geq 5000 \text{ M}\Omega\text{xkm}$
Capacitance	at 800 Hz	Nom. 43 nF/km
Capacitance unbalance	(pair to ground)	$\leq 1500 \text{ pF/km}$
Mean Characteristic impedance	@ 100 MHz	$100 \pm 5 \Omega$
Nominal velocity of propagation		0,76c
Propagation delay		$\leq 450 \text{ ns}/100 \text{ m}$
Delay skew		$\leq 15 \text{ ns}/100 \text{ m}$
Transfer impedance	at 1 MHz	$\leq 10 \text{ m}\Omega / \text{m}$
	at 10 MHz	$\leq 8 \text{ m}\Omega / \text{m}$
	at 30 MHz	$\leq 10 \text{ m}\Omega / \text{m}$
Coupling attenuation		$\geq 85 \text{ dB}$
Segregation classification	Acc. to EN 50174-2	"D"

Nominal Transmission characteristics

at 20°C

F (MHz)	Attenuation (dB/100m)	NEXT (dB)	ACR (dB/100m)	Return loss (dB)	PS-NEXT (dB)	PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)
1	2,0	90	88		87	85	85	82
4	3,6	90	86	27	87	83	85	82
10	5,5	90	84	30	87	81	79	76
16	7,5	90	82	30	87	79	75	72
20	7,7	90	82	30	87	79	73	70
31.25	9,8	90	80	30	87	77	69	66
62.50	14,0	86	72	30	83	69	63	60
100	17,9	83	65	30	80	62	59	56
155.00	22,4	81	59	26	78	55	57	54
200.00	25,6	78	52	25	75	49	53	50
250.00	28,8	77	51	25	74	45	51	48
500.00	41,9	72	45	19	69	42	45	41



Technical data

Reference code	Description	Colour	Euro class	Fire load		Outer diameter (mm)	Weight kg/km
				MJ/km	kWh/m		
BC-10-025	BC Cat6A stranded wires LSHF-FR 4x2/0.27mm ²	Grey RAL7035	D _{ca}	670	0,186	8,1	75

Country of origin: DE

HS code: 85444911

Certification

This cable is certified by: Det Norske Veritas (DNV) certificate number TAE0000009
CPR classification No 1240330

Ordering info

Part No.	El No.	EqHub No.	Description
BC-10-025			Bergen Cabling DNV Maritime Cat6A S/FTP stranded LSHF-FR