

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Data transmission cables and systems**with type designation(s)  
**Maritime LAN 6A S/FTP**

Issued to

**Sohome AS**  
**SØREIDGREND, Norway**is found to comply with  
**DNV GL rules for classification – Ships, offshore units, and high speed and light craft****Application :****Data communication cable, cat. 6A****Installation / Horizontal cable****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2018-01-10**This Certificate is valid until **2022-12-31**.DNV GL local station: **Bergen**Approval Engineer: **Ivar Bull**for **DNV GL**

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**Andreas Kristoffersen**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



## Product description

Type(s): **Maritime LAN 6A S/FTP**  
 Standards: Category 6A, Installation cable according to:  
 EN 50173-1; EN 50288-4-1  
 ISO/IEC 11801; IEC 61156-5  
 Conductors: Solid Copper (Class 1) (AWG23)  
 Core insulation: Polyethylene foamskin  
 Screen: Al/polyester tape  
 Metal covering: Tinned, Copper wire braid  
 Outer sheath: SHF1

4 Pairs AWG23 (0,26mm<sup>2</sup>)

### Electrical data at 20°C

Frequency	Attenuation, nom	NEXT
MHz	[dB/100m]	[dB]
1,0	1,8	100
4,0	3,4	100
10,0	5,4	100
16,0	6,8	100
20,0	7,7	100
31,2	9,6	100
62,5	13,7	100
100,0	17,4	100

Frequency	Attenuation, nom	NEXT
MHz	[dB/100m]	[dB]
125,0	19,5	95
155,5	21,9	94
175,0	23,3	93
200,0	25,0	92
250,0	28,1	90
300,0	30,9	89
450,0	38,3	87
500,0	43,0	86

Characteristic impedance: 100 Ohm  
 DC-loop resistance: ≤ 150 Ω/km

## Manufactured by

DNV id: 10082991

## Application/Limitation

Temperature window  
 Operation: - 40°C to +85°C  
 Installation: - 15°C to +50°C

The requirements of SOLAS Amendments Chapter II-1, Part D, Reg. 45, 5.2 (provision to be taken to limit Fire Propagation along Bunches of Cables or Wires) are fulfilled without any additional measures.

## Type Approval documentation

### Tests carried out

Standard	Release	General description	Limitation
DNV GL CP-0403	2015-12	DNV GL class program for data communication cables – category cables	
IEC 61156-5	2013-01	Multicore and symmetrical pair/quad cables for digital communications – Part 5: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz – Horizontal floor wiring – Sectional specification	Reference to requirement for category cable: 6A (500 MHz),
ISO/IEC 11801	2010-04	Information technology – Generic cabling for customer premises, inc Amd 1 and 2.	Reference to requirement for category cable: 6A (500MHz)

Job Id: **262.1-015821-2**  
Certificate No: **TAE00002HN**

IEC 60332-3-24	2009-02	Tests on electric and optical fibre cables under fire conditions – Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category C	Bunch test Category C
IEC 60754-1	2011-12	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2011-12	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-1/2	2013-07/9	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance ≥60%
IEC 60092-360	2014-04	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	

### Marking of product

Bergen Cabling Maritime LAN DNV GL approved - Cat.6A IEC 60332-3-24 -factory code - <part no > - order no - date – meter marking

### Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine tests (RT) and selected type tests (ref. to applicable class programs) checked (if not available these tests shall be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE