

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:**That the Navigation lights**

with type designation(s)

Navigation lights Serie AHD

Issued to

**Böning Automationstechnologie GmbH & Co.KG
Ganderkese, Niedersachsen, Germany**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/6.1. COLREG 72 as amended, Annex I/14, IMO Res. A.694(17), IMO Res. MSC.253(83)

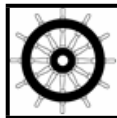
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-06-10**.

Issued at **Hamburg** on **2019-02-26**

DNV GL local station:
Bremerhaven

Approval Engineer:
Didier Girardin



Notified Body
No.: **0098**

for **DNV GL SE**

.....
Sven Dudzus
Head of Notified Body

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

Navigation Lights LED-Series AHD

1	Port light, red 112,5°	**)	2 nm
2	Port light, red 112,5°		3 nm
3	Double Port light, red 112,5°		3 nm
4	Starboard light, green 112,5°	**)	2 nm
5	Starboard light, green 112,5°		3 nm
6	Double Starboard light, green 112,5°		3 nm
7	Stern light, white 135°	**)	2 nm
8	Stern light, white 135°		3 nm
9	Double Stern light, white 135°		3 nm
10	Stern light, yellow 135°	**)	2 nm
11	Stern light, yellow 135°		3 nm
12	Double Stern light, yellow 135°		3 nm
13	Stern light, red 135°	**)	2 nm
14	Stern light, red 135°		3 nm
15	Double Stern light, red 135°		3 nm
16	Masthead light, white 225°	*)	3 nm
17	Masthead light, white 225°	**)	5 nm
18	Masthead light, white 225°		6 nm
19	Double Masthead light, white 225°		6 nm
20	Bicolor Sidelight, red/green 225°	*)	2 nm
21	Tricolor light, red/white/green 112,5°/135°/112,5°	*)	2 nm
22	Combined Tricolor red/white/green 112,5°/135°/112,5° an anchor light, white 360°	*)	2 nm
23	All-round light, white 360°	**)	2 nm
24	All-round light, white 360°		3 nm
25	Double All-round light, white 360°		3 nm
26	All-round light, red 360°	**)	2 nm
27	All-round light, red 360°		3 nm
28	Double All-round light, red 360°		3 nm
29	All-round light, green 360°	**)	2 nm
30	All-round light, green 360°		3 nm
31	Double All-round light, green 360°		3 nm
32	All-round light, yellow 360°	**)	2 nm
33	All-round light, yellow 360°		3 nm
34	Double All-round light, yellow 360°		3 nm
35	Anchor manoeuvre light 360°		5 nm
36	All-round light, white, flash 360°		3 nm
37	Signal light, white 180°	**)	2 nm
38	Signal light, white 180°		3 nm
39	Double Signal light, white 180°		3 nm
40	Signal light, red 180°	**)	2 nm
41	Signal light, red 180°		3 nm
42	Double Signal light, red 180°		3 nm
43	Signal light, green 180°	**)	2 nm
44	Signal light, green 180°		3 nm
45	Double Signal light, green 180°		3 nm
46	Signal light, yellow 180°	**)	2 nm
47	Signal light, yellow 180°		3 nm
48	Double Signal light, yellow 180°		3 nm

*) Electric navigation lights on vessels of less than 20m

***) Electric navigation lights on vessels of less than 50m

Navigation Lights model description serie AHD

1 Navigation lamps							
Version		Type		Ship length		Colour	
0	Standard	0	Backboard	0	Up to 50 m	0	White
1	Standard Weiss	1	Starboard	3	20 m & more	1	Red
3	Base	2	Stern	6	20 m & more double lantern	2	Green
4	Base Weiss	3	Topmast 3 sm *			3	Yellow
5	Standard Alubronze	4	Topmast greater			4	Blue
6	Nickel	5	Signal **			8	multi
8	Base Alubronze	6	2 colours *				
		7	yachts 3 colours *				
		8	Mooring light 3 colours				

*) Ship length up to 20m

**) Applicable also for 180° Signallamps

Application/Limitation

Navigation lamp LED bulbs can't be removed and replaced. Navigation lamp shall be replaced integrally if needed.

Each product is to be supplied with its manual for installation, maintenance and use

Type Examination documentation

- BSH/4542/001/6013164/17
- BSH/4543/001/6012846/15
- BSH/4543/001/6012685/13
- BSH/46162/0141926/11
- BSH/4615/6011300/09

Tests carried out

- EN 14744 (2005 - including AC 2006)
- IEC 60945 Ed. 4.0, 2002 incl. Corr.1, 2008
- COLREG 72, Annex I/14
- MSC.253(83)
- IMO Resolution A694(17)

Marking of product

- According to Article 10 of the Council Directive (MED) and including information required by the LSA Code § 1.2.2.9 and § 1.2.3
- Company Logo
- Type Identification