EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB000011T
Revision No:
3

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as “Forskrift om Skipsutstyr” by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

that the Bridge Navigational Watch Alarm System (BNWAS)

with type designation(s)
BR-500

issued to
Furuno Electric Co., Ltd.
Nishinomiya, Hyogo Pref, **Japan**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2024/1975,**
item No. MED/4.57. SOLAS 74 as amended, Regulations V/18 & V/19, IMO Res. A.694(17), IMO Res. MSC.128(75), IMO Res. MSC.191(79), IMO Res. MSC.302(87), IMO MSC.1/Circ.1474

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

This Certificate is valid until **2026-03-02**.

Issued at **Høvik** on **2024-11-08**

DNV local unit:
Japan CMC

Approval Engineer:
Steinar Kristensen

Notified Body
No.: **0575**

for **DNV AS**
Digitally signed by
Elter, Frederik Tore
Location: DNV
Høvik, Norway

Mydlak-Röder, Christine
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2023 dated August 21st, 2023.

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 AS 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees (“DNV”) arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

The BR-500, Bridge Navigational Watch Alarm System, consists of the following components:

Unit	Name	Location/comment
Main Alarm Panel	BR-510	*Protected*
Processor Unit	BR-520	*Protected*
Timer Reset Panel	BR-530	*Protected*
Cabin Panel	BR-540	*Protected*
Watertight Timer Reset Panel	BR-550	*Exposed*
Motion Detector (reset device)*	BR-560	*Protected (*optional)*
Flash Beacon	BR-570	*Protected*
Software versions	2450056-02.xx	*Processor*
	2450060-02.xx	*Alarm panel*

Application/Limitation

- The BR-500 shall be powered from the ship's main power supply. Additionally 24 VDC power supply with capacity of at least 6 hours shall be provided.
- The interconnection with a Central Alert Management system for transfer of unacknowledged alarms is via contact closure.
- The installation of the system shall be undertaken in accordance with manual OME-44610-G10 (or later version).
- The system may comply with DNVGL rules for Nautical Safety. The actual configuration and interfacing with associated equipment is subject to case-by-case approval.

Type Examination documentation

DNV No	Document ID	Rev.	Description
27	K24-17-1137	2024-07-09	Report: Furuno, Type Approval test report according to IEC 62288 (2021) for BR-500 BNWAS
22	K24-17-1023	2021-03-03	Report: Furuno, IEC 62923-1/-2 - DNVGL type approval testing report Model: BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM - BR-500
18	OME-44610-J3	2023-10-24	Manual: Furuno, Operator's Manual for Bridge Navigational Watch Alarm System (BNWAS) Model BR-500
17	K24-17-692-1	2014-10-15	Report: Furuno, DNVGL type approval testing report IEC 62288 (2014)
16	K24-17-670-2	2014-10-15	Report: Furuno, DNVGL type approval testing report: MSC.302(87)
15	FLI 12-12-057	2012-06-29	Report: Labotech, IEC 61162-1 test report for Furuno BR-500 BNWAS
14	K24-17-440-1	2012-09-12	Report: Furuno, DNV Type approval testing report for BR-500 BNWAS
11	GM211062c	2011-10-11	Report: Green Mountain Electromagnetics, EMC test report for BR-500 BNWAS
10	GM211063s	2011-10-20	Report: Green Mountain Electromagnetics, IEC 60945 Safety, Maintenance, Manuals and Marking&Identification test report for BR-500 BNWAS
9	GM211065x	2011-10-20	Report: Green Mountain Electromagnetics, Acoustic noise & signals and compass safe distance test report for BR-500 BNWAS
8	GM211064E	2011-10-26	Report: Green Mountain Electromagnetics, Environmental test report for BR-500 BNWAS
7	TR-305203-11I	0	Report: NTS, Vibration test report for BR-500 BNWAS
5	K24-17-293	2010-10-27	Report: Furuno, IEC 61162-1 (2007) and IEC 61162-2 (1998) test report for BR-500 BNWAS
4	FLI 12-10-042	2010-12-14	Report: Labotech, EMC and environmental test report for BR-500 BNWAS
3	K24-17-290-3	2010-12-02	Report: Furuno, DNV type approval testing report for BR-500 BNWAS

Tests carried out

- IEC 60945 (2002) incl. Corr.1 (2008)
- IEC 61162-1 (2016)
- IEC 62288 (2021)
- IEC 62616 (2010)
- IEC 62923-1 (2018) and IEC 62923-2 (2018)

Marking of product

The name and contact address of the manufacturer and type designation of the product is to be affixed to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.