

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB000087C**

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 NAVTEX receiver

with type designation(s)  
**NX-900**

Issued to

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

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2022/1157**,

item No. **MED/5.3. SOLAS 74 as amended, Regulations IV/7, IV/14 & X/ 3, IMO Res A.694(17), IMO Res.**

**MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.148(77), IMO Res. MSC.302(87), IMO COMSAR Circ.32, ITU-R M.540-2 (06/90), ITU-R M.625-4 (03/12)**

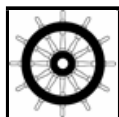
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-08-09**.

Issued at **Høvik** on **2023-08-10**

DNV local unit:  
**Kobe**

Approval Engineer:  
**Steinar Kristensen**



Notified Body  
No.: **0575**

for **DNV AS**

**Sverre Olav Bergli**  
**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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 NX-900 NAVTEX receiver consist of the following units:

| Unit         | Type/Part no. | Comment/ Description                                                                                                                                                                                                              | Location  |
|--------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Main Unit    | NX-900        | Navtex receiver with 5,7" colour LCD display and interfaces: <ul style="list-style-type: none"> <li>12-24V DC input power</li> <li>LAN (IEC 61162-450)</li> <li>Printer</li> <li>IEC 61162-1 in/out</li> <li>Alarm out</li> </ul> | Protected |
| Antenna Unit | NX-9HE        | Active ferrite loop antenna                                                                                                                                                                                                       | Exposed   |
| Printer      | PP-900        | Printer for NAVTEX messages                                                                                                                                                                                                       | Protected |
| Junction box | IF-900        | Relaying interfaces: <ul style="list-style-type: none"> <li>12-24V DC input power</li> <li>IEC 61162-1 in/out</li> <li>Alarm out</li> </ul>                                                                                       | Protected |
| Power Supply | PR-241        | AC/DC Power Supply Unit                                                                                                                                                                                                           | Protected |

Location specifies the location for the units according to IEC 60945 (2002).

### Software modules

- NX-900

### Version

0850202-01.XX

## Application/Limitation

The following applies for the NX-900 NAVTEX receiver:

- Shall be installed according to manufacturer's User & Installation Manual.
- Operating frequencies: 518 kHz, 490 kHz and 4209.5 kHz
- Complies with IMO Res. MSC.508(105) for receipt of NAVTEX information at the stated MF and HF operating frequencies, except for HF-MSI specified in section 4.2.
- Modulation method: F1B.

## Type Examination documentation

| DNV No | Document ID   | Rev.       | Description                                                                                                            |
|--------|---------------|------------|------------------------------------------------------------------------------------------------------------------------|
| 36     | LIC12-23-029  | 2023-04-17 | Report: Labotech, Compass Safe Distance test report for NX-900 NAVTEX receiver                                         |
| 32     | LIC 12-20-122 | 1          | Report: Labotech, Excessive conditions, acoustic noise and dangerous voltages test report for PR-241 Power Supply Unit |
| 31     | LIC 12-20-121 | 1          | Report: Labotech, Environmental test report for PR-241 Power Supply Unit                                               |
| 30     | LIC 12-20-120 | 1          | Report: Labotech, EMC test report for PR-241 Power Supply Unit                                                         |
| 29     | LIC 12-20-119 | 1          | Report: Labotech, Compass Safe Distance test report for PR-241 Power Supply Unit                                       |
| 27     | LIC12-23-033  | 1          | Report: Labotech, IEC 62288 (2021) test report NAVTEX Receiver NX-900                                                  |
| 26     | OME-57150-Z6  | 2023-05-24 | Manual: Furuno, Operator's Manual NAVTEX Receiver NX-900                                                               |
| 24     | C52-02302-Z1  | 2305       | Manual: Furuno, User's Guide for Model PP-900 printer                                                                  |
| 22     | LIC12-23-016  | 2          | Report: Labotech, IEC 61162-1 (2016) test report for NAVTEX Receiver NX-900                                            |
| 21     | LIC12-23-017  | 2          | Report: Labotech, IEC 61162-450 (2018) test report for NAVTEX Receiver NX-900                                          |
| 18     | LIC12-23-027  | 2023-04-10 | Report: Labotech, EMC test report for NAVTEX Receiver NX-900                                                           |
| 17     | LIC12-23-032  | 2023-04-17 | Report: Labotech, Maintenance, Manuals and Markings test report for NAVTEX Receiver NX-900                             |
| 16     | LIC12-23-031  | 2023-04-17 | Report: Labotech, IEC 60945 Operational checks for NAVTEX Receiver NX-900                                              |
| 15     | LIC12-23-030  | 2023-04-17 | Report: Labotech, Excessive conditions, acoustic noise and emission from VDU test report for NAVTEX Receiver NX-900    |
| 14     | LIC12-23-028  | 2023-04-17 | Report: Labotech, Environmental test report for NAVTEX Receiver NX-900                                                 |
| 12     | FLI12-13-044  |            | Report: Labotech, IEC 60945 test report for GPS Navigator GP-170                                                       |
| 11     | K08-17-220    | 2023-05-08 | Report: Furuno, DNV type approval testing report (IEC 61097-6 Physical)                                                |

| DNV No | Document ID | Rev.       | Description                                                                                                |
|--------|-------------|------------|------------------------------------------------------------------------------------------------------------|
| 9      | K08-17-222  | 2023-06-22 | Report: Furuno, DNV type approval testing report IEC 62923-1/-2 (2018) for NX-900 NAVTEX Receiver          |
| 8      | K08-17-221  | 2023-06-12 | Report: Furuno, DNV type approval testing report IEC 61162-1 (2016)/-450 (2018) for NX-900 NAVTEX Receiver |
| 6      | K08-17-219  | 2023-06-12 | Report: Furuno, DNV type approval testing report IEC 61097-6 Ed.2 for NX-900 NAVTEX Receiver               |

### Tests carried out

- Performance tests: IEC 61097-6 (2005) incl. A1 (2011) and A2 (2019)
- Environmental tests: IEC 60945 (2002) incl. Corr.1 (2008)
- Interface tests: IEC 61162-1 (2016) and IEC 61162-450 (2018)
- Presentation of information: IEC 62288 (2021)
- Bridge Alert Management: IEC 62923-1 (2018) and IEC 62923-2 (2018)

### Marking of product

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to the product. In addition the product shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.