

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

**This is to certify:**

**That the Universal automatic identification system equipment (AIS)**

with type designation(s)  
**FA-170**

Issued to

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

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

**Annex A.1, item No. A.1/4.32 and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation V/18, V/19 & X/3, IMO Res A.694(17), IMO Res. MSC. 74(69) & 191(79), ITU R. M. 1371-5 (2015) and 2000 HSC Code 13**

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

This Certificate is valid until **2021-01-17**.

Issued at **Høvik** on **2016-01-18**

DNV GL local station:  
**Kobe**



for **DNV GL AS**

Approval Engineer:  
**Olaf Gundersrud**

Notified Body  
No.: **0575**

**Vidar Dolonen**  
**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.

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 Council Directive 96/98/EC, as amended.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment.

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

The FA-170 UAIS consists of the following units:

| Component       | Location  |
|-----------------|-----------|
| AIS transponder | Protected |
| MKD             | Protected |
| GPS antenna     | Exposed   |
| VHF antenna     | Exposed   |

For details, see Appendix.

For latest revision of the Appendix, see <http://exchange.dnv.com/tari>

## Application/Limitation

The internal GPS sensor of FA-170 may be used as back-up sensor for position reporting.  
The FA-170 components shall be installed in compliance with the Installation Manual Pub. No. IME-44900-Z3 (or later revisions).

Note: The FA-170 is examined and found to comply with the standards for interconnection with a Bridge Alarm Management System; IMO resolution MSC.302(87) "Bridge Alarm Management" and IEC 61924-2 "Modular structure for INS", Annex K and Annex M.

## Type Examination documentation

- For details, see Appendix.

## Tests carried out

- IEC61993-2(2012)
- IEC61108-1(2003)<sup>1)</sup>
- IEC61162-1(2010)
- IEC61162-2(1998)
- IEC61162-450(2011)
- IEC62288(2014)
- IEC60945(2002) (as amended)
- CCNR Test standard Inland AIS Ed.2.0 (2012)

<sup>1)</sup>as applicable for position reporting

## Marking of product

The designation of Manufacturer and Type shall be marked 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.

## Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.



Job Id: **344.1-004759-1**  
Certificate No: **MEDB00000EV**

### **USCG Approval**

The product has been assigned a **U.S. Coast Guard Module B number** 165.155/EC0575 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval 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.



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**Product description:**

The FA-170 UAIS comprises the following components:

| Unit   | Model Name   | Remark   |
|--|--|--|
| Transponder unit   | FA-1701  |  |
| Interfaces   | External displays  | 2 COM ports  |
|  | Pilot plug   | 4 COM ports  |
|  | Sensors  | 3 serial ports (IEC61162-1)  |
|  | LAN  | 1 RJ45 port (CAT5 STP)   |
|  | External alarm I/O   |  |
| Monitor unit (MKD)   | FA-1702  |  |
| GPS/VHF combined antenna and distributor unit<br><b>or</b> | GVA-100<br>DB-1  | May be exchanged with GPA-017S and separate VHF whip antenna                 |
| GPS antenna and separate VHF antenna                       | GPA-017S<br>**   | **FAB-151D or analogous antenna as specified in the installation manual      |
| Software   | 0550255-01.xx <sup>1)</sup><br>0550256-01.xx <sup>2)</sup><br>48504650xx <sup>3)</sup> | <sup>1)</sup> FA-1701<br><sup>2)</sup> FA-1702<br><sup>3)</sup> GPS receiver |

**Optional components:**

|                    |          |  |
|--------------------|----------|--|
| Pilot plug         | FA-1703  | Flush mounting panel   |
| VHF whip antenna   | FAB-151D | May be included in GVA-100 or combined with GPA-017S or replaced by an analogous antenna as specified in the installation manual |
| AC/DC power supply | PR-240   |  |

**Type Examination documentation**

| DNVGL No. | Document No.          | Document Title   |
|-----------|-----------------------|--|
| 6         | K20-17-815            | DNV type approval testing report (GP-170 GPS receiver)   |
| 7         | IME-44900-Z3          | Installation manual FA-170                               |
| 8         | OME-44900-Z5          | Operator's manual FA-170                                 |
| 11        | K05-17-833            | DNV Type Approval Testing Report - Class AIS             |
| 12        | K05-17-848            | DNV Type Approval Testing Report - Physical test         |
| 13        | K05-17-845            | DNV Type Approval Testing Report - IEC61162-1/2/450      |
| 14        | FLI-12-11-129         | Test Report - IEC61162-1 UAIS transponder FA-150         |
| 15        | BSH/4612/4322181/12-4 | Conformance Test Report - AIS class A, FA-150 IEC61162-1 |
| 16        | FLI-12-15-034         | Test Report - IEC61162-450 UAIS transponder FA-170       |
| 17        | FLI-12-15-033         | Test Report - IEC61162-1/-2 UAIS transponder FA-170      |
| 18        | K05-17-834            | DNV Type Approval Testing Report - Internal GPS- FA-170  |
| 19        | FLI-12-15-035         | Test Report - IEC62288 - UAIS transponder FA-170         |
| 20        | FLI-12-15-032         | Test Report - IEC60945 - radio frequency radiation       |
| 21        | FLI-12-15-031         | Test Report - IEC60945 - compass safe distance           |

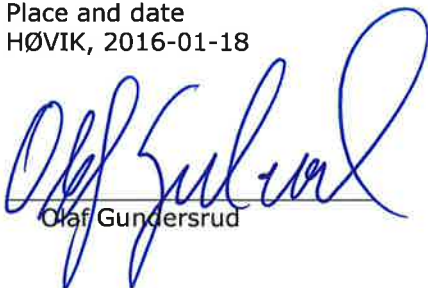


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### Type Examination documentation cont.

| DNVGL No. | Document No.  | Document Title  |
|-----------|---------------|---|
| 22        | FLI-12-15-030 | Test Report - IEC60945 - environmental + misc.            |
| 23        | FLI-12-15-029 | Test Report - IEC60945 - EMC                              |
| 28        | K05-17-880    | FA-170 DNV type approval testing report IEC61993-2        |
| 30        | K05-17-831    | FA-170 DNV Type Approval testing report (CCNR_inland AIS) |
| 34        | FLI-12-02-001 | FA-100 IEC60945 test report                               |
| 35        | FLI-12-04-049 | FA-150 IEC60945 test report                               |
| 36        | FLI-12-04-057 | PR240 IEC60945 test report                                |
| 37        | K05-17-832    | DNV type approval testing report (BAM) FA-170             |

Place and date  
HØVIK, 2016-01-18



Olaf Gundersrud



Skår 150  
End of Certificate