DNV·GL

Certificate No:
MEDB00000EV

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**

for **DNV GL AS**

DNV GL local station:
Kobe

Approval Engineer:
Olaf Gundersrud

Notified Body
No.: **0575**

Vidar Dolonen
Head of Notified Body

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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)[1)]
- IEC61162-1(2010)
- IEC61162-2(1998)
- IEC61162-450(2011)
- IEC62288(2014)
- IEC60945(2002) (as amended)
- CCNR Test standard Inland AIS Ed.2.0 (2012)

[1)]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.

USCG Approval

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

APPENDIX REV. NO. 0 (PAGE 1 OF 2)

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 **or**	GVA-100 DB-1	*May be exchanged with GPA-017S and separate VHF whip antenna*
GPS antenna and separate VHF antenna	GPA-017S **	***FAB-151D or analogous antenna as specified in the installation manual*
Software	0550255-01.xx[1)] 0550256-01.xx[2)] 48504650xx[3)]	*[1)] FA-1701* *[2)]FA-1702* *[3)]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

End of Certificate