

CERTIFICATE

of
EC Type-examination (Module B)

Certificate No: 172120124/AA/05
Product Category: MED/5.13; MED/5.4

With respect to Marine Equipment Directive 2014/90/EU and the implementing Regulation (EU) 2019/1397, Telefication Notified Body 0560 declares that the equipment:

Product description: **Inmarsat-C satellite earth station**
Trademark: **FURUNO**
Type designation: **FELCOM18**
Hardware / Software version: -- / **PCTERMINAL: 1650240-01; IC-218: 1650247-01**

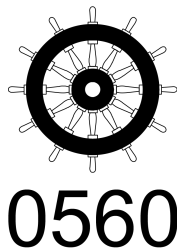
Manufacturer: **Furuno Electric Co., Ltd.**
Address: **9-52 Ashihara cho**
City: **662-8580 Nishinomiya**
Country: **JAPAN**

Complies with the international instruments and test standards as listed in the Annex.
This certificate is granted to:

Name: **Furuno Electric Co., Ltd.**
Address: **9-52 Ashihara cho**
City: **662-8580 Nishinomiya**
Country: **JAPAN**

Validity of this certificate expires on date: **09 May 2022**
This certificate has **THREE** Annexes.

Zevenaar, 25 June 2020



Willem Jan Jong
Manager Product Certification



General conditions

- Each product to which this certificate relates shall be provided with Marine markings. The Marine marking consist of symbol in the form of a wheel followed by the identification number of the responsible Notified Body for module D, E, F or G, and by the last two digits of the number of the year in which the mark is affixed.
- The holder of this Certificate has drawn up a Declaration of conformity to type with Directive 2014/90/EU and Implementing Regulations, declaring that the product(s) described in this EC Type- examination certificate, satisfy the requirements that apply to them.
- Each product shall be identified by means of type, batch and/or serial numbers and the name of the manufacturer and/or importer.
- If the equipment is to be modified, Telefication shall be notified immediately. Depending on the modifications, Telefication may have additional examinations carried out in consultation with the applicant.
- Enforcement of a new Implementing Regulation may void the validity of this certificate regarding (re)placement of the product onboard ships.

Remarks and observations

The following conditions are applicable:

Optional SSAS functionality has been tested in accordance with Resolution MSC.147(77).

Optional LRIT functionality has been tested in accordance with SOLAS Chapter V/19-1, Resolution MSC.263(84) and IEC 62729.

The equipment is categorized as MES Class 2 (Inmarsat-C + EGC) and includes an integral GPS receiver (not MED approved).

System related equipment

The product to which this certificate relates includes to following units or equipment:

- IC-218: Communication unit
- IC-118: Antenna unit
- IC-318: Junction box
- IC-305: Distress alert / Received call unit
- IC-306: Alarm unit
- IC-307: SSAS Alert unit
- IC-350: Alarm unit
- 5139U: Mini Keyboard
- PP-510: Printer
- PP-520: Printer
- PR-240: AC/DC Power Supply Unit
- SKB-E3U: Keyboard

Documentation lodged for this EC type-examination

Test Reports:

- Furuno Electric Co., Ltd.: K16-18-381, 04 September 2012
- Furuno Labotech International Co. Ltd.: FLI-12-12-081, 05 September 2012
- RES Laboratory Ltd.: N 13.12, 26 April 2012
- RES Laboratory Ltd.: N 12.12, 26 April 2012
- Furuno Labotech International Co. Ltd.: FLI 12-12-035, 05 April 2012
- Furuno Labotech International Co. Ltd.: FLI 12-12-037, 13 April 2012
- Furuno Labotech International Co. Ltd.: FLI 12-12-038, 13 April 2012
- Furuno Electric Co., Ltd.: K16-18-365, 20 April 2012
- Furuno Labotech International Co. Ltd.: FLI 12-14-115, 23 January 2015
- Furuno Electric Co., Ltd.: K16-17-706-1 Rev. 1, 13 March 2015
- Labotech International Co., Ltd.: LIC 12-18-087, 14 September 2018
- Labotech International Co., Ltd.: LIC 01-19-033, 29 May 2019
- Labotech International Co., Ltd.: LIC 12-19-085, 29 May 2019
- Furuno Electric Co., Ltd.: K16-17-840, 07 November 2019
- RES Laboratory Ltd.: N 10.19, 12 November 2019
- Labotech International Co., Ltd.: LIC 12-20-051, 07 May 2020
- Labotech International Co., Ltd.: LIC 12-20-052, 07 May 2020
- Labotech International Co., Ltd.: LIC 12-20-053, 07 May 2020

Product Documentation:

- Assembly drawings
- Bill of materials
- Block diagram
- Electrical diagrams
- Internal photos
- External photos
- Manual
- Test setup photos
- Installation manual
- Corrosion waiver
- Inmarsat certificate: 4FE100, issued 23 April 2012

International Instruments and test standards

The equipment complies with:

IEC 60945	August, 2002	Edition 4
IEC 60945/Corrigendum 1	April, 2008	Ed. 4
IEC 61097-4	June, 2019	Ed. 3.0 Amendment 2
IEC 61097-4	August, 2016	Ed. 3.0 Amendment 1
IEC 61097-4	May, 2012	Ed. 3.0
IEC 61162-1	August, 2016	Ed. 5.0
IEC 61162-450	May, 2018	Ed. 2.0
IEC 62923-1	August, 2018	Ed. 1.0
IEC 62923-2	August, 2018	Ed. 1.0
IMO Resolution A.570(14)	1985	
IMO Resolution A.664(16)	1998	
IMO Resolution A.694(17)	1991	

IMO Resolution A.807(19)	1995
MSC Resolution 147(77)	May, 2003
MSC Resolution 263(84)	May, 2008
MSC Resolution 302(87)	May, 2010
MSC Resolution 306(87)	May, 2010
MSC Resolution 431(98)	June, 2017
MSC Resolution 68(68)/A4	1997
MSC Resolution Cir. 862	1998

Technical features and characteristics

The product includes the following features and characteristics:

Satellite Earth Station

- Operating frequency range: RX: 1537.0-1544.2 MHz; TX: 1626.5-1646.5 MHz
- Modulation method(s): BPSK
- Maximum output power: 12 to 16 dBW EIRP rated

Trademarks and Type designations:

The product as described in this EC type-examination includes the following type designations:

- Product description: Inmarsat-C satellite earth station
- Trademark: FURUNO
- Type designation: FELCOM18
- Hardware version: --
- Software version: PCTERMINAL: 1650240-01; IC-218: 1650247-01