

CERTIFICATE

of
EC Type-examination (Module B)

Certificate No: 172120125/AA/02

Product Category: A.1/5.1; A.1/5.2

With respect to Marine Equipment Directive 2014/90/EU and the implementing Regulation (EU) 2018/773, Telefication Notified Body 0560 declares that the equipment:

Product description: **VHF radiotelephone with integrated DSC & ch70 watch keeping receiver**

Trademark: **FURUNO**

Type designation: **FM-8900S**

Software version: **0550249-03.xx**

Variants: --

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**

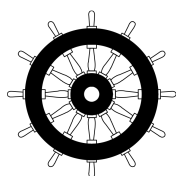
City: **662-8580 Nishinomiya**

Country: **JAPAN**

Validity of this certificate expires on date: **09 May 2022**

This certificate has **THREE** Annexes.

Zevenaar, 09 August 2018



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:

Based on the presently applied standards, the last date of (re)placement onboard ships is 1-2-2020.

Equipment utilizes channelset in accordance with Appendix 18 of WRC-2015.

Equipment complies with ATIS when channel-set for Europe Inland Waterways has been chosen.

Instead of category exposed as defined in EN 60945, the remote station RB-8900-W has been tested for dust (IP5X) and rain/spray (IPX6) according to IEC 60529.

System related equipment

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

- FM-8900S: VHF Radiotelephone, simplex, semi-duplex
- HS-2003: Handset
- HS-6000: Handset
- HS-8900: Remote handset
- IF-8900: Junction box
- RB-8900: Remote station
- HG-8900: Handset hanger
- RB-8900-W: Watertight Remote station (IP56 - IEC 60529)
- HS-8900-W: Watertight Remote handset (IP56 - IEC 60529)
- HG-8900-W: Watertight Handset hanger (IP56 - IEC 60529)
- IC-350: Alarm unit
- PP-510: Printer
- PP-520: Printer
- PP-8800A: Printer
- IF-8500: Printer interface
- PR-240: AC/DC Power supply unit
- PR-300: AC/DC Power supply unit
- RBD-VHF(B): Microphone receptacle box
- SEM-21Q: External loudspeaker
- RC-8900: VHF console

Documentation lodged for this EC type-examination

Test Reports:

- Telefication B.V.: 20114676300 rev 2.0, 29 March 2012
- Telefication B.V.: 20114676301 rev 1.0, 26 March 2012
- Furuno Labotech International Co. Ltd.: FLI 12-11-013, 29 February 2012
- Furuno Labotech International Co. Ltd.: FLI 12-11-131 Rev. 2, 12 March 2012
- Furuno Labotech International Co. Ltd.: FLI 12-12-061, 13 April 2012
- RES Laboratory Ltd.: N 17.11, 26 December 2011
- RES Laboratory Ltd.: N 17.11 Amendment 1, 26 December 2011
- RES Laboratory Ltd.: N 17.11 Amendment 2, 26 December 2011
- RES Laboratory Ltd.: N 17.11 Amendment 3, 26 December 2011
- Furuno Labotech International Co. Ltd.: FLI 12-11-012, 29 February 2012
- Furuno Labotech International Co. Ltd.: FLI 12-06-057, 10 November 2006
- TÜV Rheinland Japan Ltd. Yokohama Laboratory: 12603045 001, 27 November 2006
- Furuno Labotech International Co. Ltd.: FLI 12-12-081, 05 September 2012
- RES Laboratory Ltd.: N 12.16, 02 October 2016
- RES Laboratory Ltd.: N 10.17, 06 October 2017
- Labotech International Co., Ltd.: LIC 12-17-087, 08 September 2017

Product Documentation:

- Assembly drawings
- Bill of materials
- Block diagram
- Electrical diagrams
- Internal photos
- External photos
- Manual
- Installation manual
- Corrosion waiver

International Instruments and test standards

The equipment complies with:

Draft EN 301 843-1	July, 2017	V2.2.0
Draft EN 301 843-2	July, 2017	V2.2.0
EN 300 338-1	February, 2017	V1.4.1
EN 300 338-2	February, 2017	V1.4.1
EN 301 033	September, 2013	V1.4.1
EN 301 925	May, 2013	V1.4.1
IEC 60529	2001	Ed. 2.1
IEC 60945	August, 2002	Edition 4
IEC 60945/Corrigendum 1	April, 2008	Edition 4
IEC 61162-1	November, 2010	Ed. 4.0
IEC 62288	July, 2008	Ed. 1.0
IMO Resolution A.385(X)	1977	
IMO Resolution A.524 (13)	1983	
IMO Resolution A.694(17)	1991	
IMO Resolution A.803(19)	1995	
ITU-R M.489-2	October, 1995	

ITU-R M.493-14	September, 2015
ITU-R M.541-10	October, 2015
ITU-R M.689-3	March, 2012
ITU-R M.821-1	February, 1997
MSC Resolution 68(68)/A1	1997
MSC Resolution Cir. 862	1998
MSC.1/Circ. 1460	June, 2013

Technical features and characteristics

The product includes the following features and characteristics:

VHF equipment (simplex, semi-duplex)

- Operating frequency range: 155.0-164.2 MHz (RX); 155.0-161.600 MHz (TX)
- Modulation method(s): 16K0G3E; 16K0G2B
- Maximum output power: 25W; 1W rated
- DSC classification: class A; Integrated channel 70 watchkeeping receiver

Trademarks and Type designations:

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

- Product description: VHF radiotelephone with integrated DSC & ch70 watch keeping receiver
- Trademark: FURUNO
- Type designation: FM-8900S
- Software version: 0550249-03.xx