

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of the Kingdom of Norway.

## This is to certify:

**That the Transmitting heading device THD (GNSS method)**

with type designation(s)  
**SC-70 and SC-130**

Issued to

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

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

Regulation **(EU) 2015/559,**

**Annex A.1, item No. A.1/4.41 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation V/18, V/19 & X/3, IMO Res. A.694(17), 2000 HSC Code 13, IMO Res. MSC.116(73) and IMO Res. MSC.191(79)**

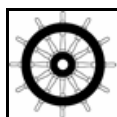
**IMO Resolution MSC.302(87) Performance standards for Bridge Alert Management**

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

This Certificate is valid until **2022-02-28.**

Issued at **Høvik** on **2017-03-01**

DNV GL local station:  
**Kobe**



for **DNV GL AS**

Approval Engineer:  
**Olaf Gundersrud**

Notified Body  
No.: **0575**

**Vidar Dolonen**  
**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 GL 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Job Id: **344.1-005712-1**  
Certificate No: **MEDB00001BY**

The SC-70/SC-130 THD consists of the following units:

<b>Unit</b>	<b>Location</b>
Antenna unit	Exposed
Display unit	Protected
Junction box	Protected

For details, see Appendix.

### **Application/Limitation**

The SC-70/SC-130 shall be installed and setup as IMO-compliant and commissioned in accordance with the installation instructions of Pub. No. OME-72820-A10 (or later version).

The optional remote display RD-50 may be installed as additional equipment in compliance with SOLAS V/18.7.

### **Type Examination documentation**

- See Appendix.

### **Tests carried out**

- ISO22090-3(2014)
- IEC61162-1(2016)
- IEC61162-2(1998)
- IEC61162-450(2011)
- IEC62288(2014)
- IEC60945(2002)

### **Marking of product**

The designation of Manufacturer and Type to be fixed 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.

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## APPENDIX

### Product description:

The SC-70/SC-130 THD includes the following units:

Unit	Model Name	Remark
Antenna unit	SC-703	SC-70
	SC-1303	SC-130
Display unit	SC-702	
Junction box	SC-701	
Interfaces	IEC61162-1 IEC61162-2 IEC61162-450	4 ports 1 port 1 port
Remote display unit	RD-50	option
Software versions	20151562-01.xx 20151566-01.xx 20151570-01.xx	SC-701 SC-702 SC-703/SC-1303

### Type Examination documentation

NPS No.*	Document No.	Ver.	Document Title
1	K24-17-1258		SC-70/130 DNV type approval testing report
4	OME-72820-A10		Operator's Manual SC-70 / SC-130
5	K20-17-1311		SC-70/130 : Testing report For pending items
6	K20-17-1260		SC-70/130 : Testing report For pending items
7	K20-17-1259		Testing report of Static error test (ISO22090-3)
8	K20-17-1257-0		Testing report of Interferring signal - S band
9	K20-17-1256-0		Testing report of Interferring signal - L band
13	LIC 12-16-065		EMC test report SC-70: IEC60945
14	LIC 12-16-066		Test report SC-70: IEC60945 (environ.)
15	LIC 12-16-067		Test report IEC60945 (other): SC-70
16	LIC 12-16-068		EMC Test report IEC60945: SC-130
17	LIC 12-16-069		Test report IEC60945 (environ.): SC-130
18	LIC 12-16-070		Test report IEC60945 (other): SC-130
19	LIC 12-16-071		CSD test report IEC60945 (other): SC-70/SC-130
20	LIC12-16-072		Test report IEC61162-1/2: SC-70/SC-130
21	LIC12-16-073		Test report IEC61162-450: SC-70/SC-130
22	LIC12-16-074		Test report IEC62288: SC-702
25	K20-19-010	1	NMEA and LAN interfaces
26	OME-44530-D		Operator's manual; RD-50 remote display
27	LIC 12-16-075		IEC62288 test report for RD-50

\*ref. NPS folder 344.1-005710