DANAK
PROD Reg.No. 7035
Member of EA MLA

TÜV SÜD
Danmark

Marine Equipment Directive
EC Type Examination Module B Certificate

This is to certify that TÜV SÜD DANMARK ApS did undertake the relevant type approval procedures for the equipment identified below, which was found to be in compliance with the Marine Equipment Directive (2014/90/EU) requirements, under the following Implementing Regulation for the listed types of equipment

Implementing Regulation	**(EU)2019/1397**
Certificate Holder and Manufacturer	**Japan Marina Co., Ltd. 36-2-1001 Udagawa-cho Shibuya-ku Tokyo 150-0042 Japan**
EC Representative	**Günter Lange Weissdornstieg 21B 25469 Halstenbek Germany**
Product(s)	**F-2000 SAM 4620 E-2**
Product Sector	**Navigation**
Product Type	**MED/4.6 Echo-sounding equipment**

and on the basis of the Technical Data and information detailed in the Annex to this certificate.

Valid from: 30 April 2020 (Tom Twynam) Expiry Date: 31 December 2020

This certificate has been issued in accordance with the TÜV SÜD Testing and Certification Regulations and constitutes page 1 of the combined Certificate and Annex.
The Conditions for the validity of this certificate are listed in the Annex.
For further details, related to this certification please contact BABT@TUV-SUD.co.uk

2443

Issued by TÜV SÜD DANMARK ApS under document number: DK-MED000137 Issue 01

TÜV SÜD DANMARK ApS • Strandvejen 125 • 2900 Hellerup • Denmark

TÜV®

A4 / 07.17

1 Equipment Description

Navigation Echo-sounder

1.1 Models

Model	Description
F-2000	Echo-sounder, JMC
SAM 4620	Echo-sounder, SAM Electronics
E-2	Echo-sounder, CONSILIUM

1.1.1 System Components

Model	Description
JMC F-2000 / SAM 4620 / E-2	Main Unit
Atlas SW 6016 (100 kHz)	Echo Sounding Transducer
Radarsonic 570-50 (50 kHz)	Echo Sounding Transducer
ELAC LSE 297 (50 kHz)	Echo Sounding Transducer
ELAC LSE 313 (200 kHz)	Echo Sounding Transducer
ELAC LSE 328 (100 kHz)	Echo Sounding Transducer
ELAC LSE 329 (100 kHz)	Echo Sounding Transducer
TOKIN TGM 60-50-20L (50 kHz)	Echo Sounding Transducer
TOKIN TGM 80-200-20L (200 kHz)	Echo Sounding Transducer
TOKIN TGM 50-200-20L (200 kHz)	Echo Sounding Transducer

1.1.2 Optional Components

Model	Description
Plath UDR	Digital Display
Skipper IR 301	Digital Display
Atlas 9205 T / ELAC DAZ 25 / DEBUG 4650 T / FILIA 522	Digital Display
SAM 4900	Digital Display
AC-2000	AC Power Adaptor

1.2 Software[Note 1]

Identity	Description
Ver. 1.00 Rev.1.56	Main unit software

2 Assessed Requirements

2.1 Implementing Regulation (EU)2019/1397

2.2 Compliance Requirements for MED/4.6

IMO Resolutions	International Testing Standards	
Resolution A.224(VII) Resolution MSC.74(69) Annex 4	ISO 9875:2000 incl. ISO Technical Corr. 1:2006	Ships and marine technology — Marine echo-sounding equipment
IMO Res. A.694(17)	IEC 60945 (2002) incl. IEC 60945 Corr.1 (2008)	Maritime navigation and radiocommunication equipment and systems — General requirements
Resolution MSC.191(79)	IEC 62288:2014	Maritime navigation and radiocommunication equipment and systems — Presentation of navigation-related information on shipborne navigational displays
Resolution MSC.302(87)	IEC 62923-1:2018	Maritime navigation and radiocommunication equipment and systems – Bridge alert management Part 1: Operational and performance requirements
	IEC 62923-2:2018	Maritime navigation and radiocommunication equipment and systems – Bridge alert management Part 2: Alert and cluster identifiers and other additional features
	IEC 61162-1 (2016)	Maritime navigation and radiocommunication equipment and systems — Digital interfaces Part 1: Single talker and multiple listeners

3 Technical Documentation

3.1 Declaration of Conformity

Draft F-2000 DoC	Dated	2020-02-01

3.2 User Guide

UM-F2000-3.4, March 2015

3.3 Test Reports

3.3.1 IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008)

BL 9233 T 559	Issued	2006-03-13
05188.027.06	Issued	2006-02-09
05308.139.06	Issued	2006-07-27
486	Issued	2006-08-10
BSH-F2000-TA-01	Issued	2006-08-10

3.3.2 ISO 9875 (2000) inc ISO Technical Corr. 1 (2006)

4612/4060208/06	Issued	2006-07-10
BSH/4543/001/4062790/15	Issued	2015-09-16

3.3.3 IEC 62288 (2014)

4581/001/4062673/15	Issued	2015-01-30

3.3.4 IEC 61162-1 (2016) & IEC 62693-1/-2 (2018)

4612/4060208/06	Issued	2006-07-10
454.ESE/EMC/JMC F-2000/1	Issued	2019-11-27

3.4 Build Status

3.4.1 Hardware

F-2000 Circuit Diagram	Modified	2019-11-14

3.5 Notes

Note 1 This approval remains valid for equipment including subsequent minor software amendments which have been formally accepted in accordance with the TÜV SÜD Testing and Certification Regulations.

4 Additional Information

The products listed on this certificate were originally assessed and certified by BSH under Notified Body number 0735. This certificate replaces BSH Certificate Number 4581/001/4062673/15.

5 U.S. Coast Guard Number

This product has been assigned U.S. Coast Guard Module B number

165.107/EC2443

To note type approval to Module B only as it pertains to obtaining US Coastguard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 18th, 2019

6 Conditions of Validity

This certificate ceases to be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with TÜV SÜD DANMARK ApS or a person appointed by TÜV SÜD DANMARK ApS to perform that role.

Should the specified regulations (internal conventions and the relevant resolutions and circulars of the IMO) or standards be amended and enforced through an Implementing Regulation during the validity of this certificate, the product(s) is/are to be reapproved prior to it/them being placed on the market or onboard vessels to which the amended regulations or standards apply.

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-control phase module (D, E, or F) of Annex B of the directive is fully complied with and controlled by a written inspection agreement with a notified body.

Signature: T. J. Twynam Date: 2020-04-30

(Tom Twynam)

On behalf of TÜV SÜD DANMARK ApS