

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)2021/1158
Certificate Holder and Manufacturer	Thrane & Thrane A/S Lundtoftegaardsvej 93 D DK-2800 Kgs. Lyngby Denmark
Product(s)	SAILOR MF/HF System 6000B (250W)
Product Sector	Radiocommunication Equipment
Product Type	MED/5.5 HF Marine Safety Information Equipment MED/5.10 MF Radio capable of DSC and Radiotelephony MED/5.11 MF DSC Watchkeeping Receiver MED/5.14 MF/HF Radio capable of DSC, NBDP and Radiotelephony MED/5.15 MF/HF DSC Scanning Watchkeeping Receiver

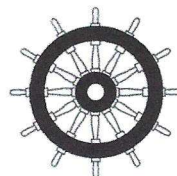
and on the basis of the Technical Data and information detailed in the Annex to this certificate.

Valid from: 18 November 2021


(Tom Twynam)

Expiry Date: 28 July 2025

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@tuvsud.com



2443

Issued by TÜV SÜD DANMARK ApS under document number: DK-MED000080 Issue 09

Page 1 of 6

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Annex to Marine Equipment Directive Module B Type Examination Certificate



Danmark

1 Equipment Description

MF/HF SSB radiotelephone with integrated Class-A DSC controller and watch-keeping receiver.

1.1 Models

Model	Description
SAILOR MF/HF 6320 ^{Note 1}	250W MF/HF SSB radiotelephone with integrated Class-A DSC controller and 2187.5kHz watchkeeping receiver
HIGHLANDER MF/HF 6320	250W MF/HF SSB radiotelephone with integrated Class-A DSC controller, NBDP controller and 6 channel scanning watchkeeping receiver

1.1.1 System Components

	SAILOR 6320	HIGHLANDER 6320
Antenna Tuning Unit	SAILOR 6384 TT-6384B: 406384B	SAILOR 6384 TT-6384B: 406384B
Transceiver Unit	SAILOR 6368 TT-6368B: 406368B	HIGHLANDER 6368 TT-6368B: 406368B-BHL
MF/HF Control Unit	SAILOR 6301 TT-6301A: 406301A	HIGHLANDER 6301 TT-6301A: 406301A-BHL
Handset	SAILOR 6201 TT-6201A: 406201A	SAILOR 6201 TT-6201A: 406201A
Alarm Panel	SAILOR 6103 TT-6103A: 406103A	SAILOR 6103 TT-6103A: 406103A
Message Terminal	SAILOR 6018 TT- 6018A: 406018A	SAILOR 6018 TT- 6018A: 406018A
Control Panel	SAILOR 6004 TT-6004A: 406004A	SAILOR 6004 TT-6004A: 406004A
Printer	SAILOR H1252B H1252B/TT-3608A: 8012520006	SAILOR H1252B H1252B/TT-3608A: 8012520006
Keyboard	SAILOR 6001 TT-6001A: 406001A	SAILOR 6001 TT-6001A: 406001A
Accessory Connection Box	SAILOR 6209 TT-6209A: 406209A	SAILOR 6209 TT-6209A: 406209A
CU Connection Box	SAILOR 6208 TT-6208A: 406208A	SAILOR 6208 TT-6208A: 406208A
Power Supply	SAILOR 6080 TT-6080A: 406080A	SAILOR 6080 TT-6080A: 406080A
Power Supply	SAILOR 6081 TT-6081A: 406081A	SAILOR 6081 TT-6081A: 406081A
Loudspeaker	SAILOR 6270 TT-6270A: 406270A	SAILOR 6270 TT-6270A: 406270A

Annex to Marine Equipment Directive Module B Type Examination Certificate



Danmark

1.1.2 Options

MED Item	Option	Description
MED/5.10 & MED/5.11	Default	21875 kHz Watchkeeping Receiver
MED/5.10, MED/5.11 & MED/5.15	HF DSC	6 Channel Watchkeeping Receiver enabled
MED/5.10, MED/5.11 & MED/5.15, MED/5.5, MED/5.14	HF DSC with NBDP	6 Channel Watchkeeping Receiver enabled, NBDP enabled: Requires additional hardware: TT-6018A Message Terminal TT-6001A Keyboard H1252B/TT-3608 Printer

2 Assessed Requirements

2.1 Implementing Regulation (EU)2021/1158 ^{Note 3}

2.2 Compliance Requirements for MED/5.5, MED/5.10, MED/5.11, MED/5.14 and MED/5.15

IMO Resolutions	International Testing Standards	
IMO Res. A.699(17) IMO Res. A.700(17)	EN 60945 (2002) incl. IEC 60945 Corr.1 (2008)	Maritime navigation and radiocommunication equipment and systems – General requirements
IMO Res. A.804(19) IMO Res. A.806(19) IMO Res. MSC.68(68) IMO Res. A.694(17)	EN 61162-1 (2016)	Maritime navigation and radiocommunication equipment and systems — Digital interfaces; Part 1: Single talker and multiple listeners
IMO Res. MSC.36(63) IMO Res. MSC.97(73) IMO Res. MSC.302(87)	EN IEC 61162-450 (2018)	Maritime navigation and radiocommunication equipment and systems – Digital interfaces; Part 450: Multiple talkers and multiple listeners – Ethernet interconnection
IMO COMSAR Circ.32 IMO MSC/Circ.862 IMO MSC.1/Circ.1460	EN IEC 62923-1 (2018)	Maritime navigation and radiocommunication equipment and systems – Bridge alert management; Part 1: Operational and performance requirements
ITU-R M.492-6 ITU-R M.540-2 ITU-R M.625-4 ITU-R M.688	EN IEC 62923-2 (2018)	Maritime navigation and radiocommunication equipment and systems – Bridge alert management; Part 2: Alert and cluster identifiers and other additional features
ITU-R M.493-14 ITU-R M.541-10 ITU-R M.1173-1 ITU-R M.476-5	ETSI EN 300 067 Ed.1 (1990-11) ETSI EN 300 067/A1 Ed.1 (1993-10)	Radio Equipment and Systems Radiotelex equipment operating in the maritime MF/HF service. Technical characteristics and methods of measurement
	ETSI EN 300 338-1 V1.4.2 (2017-11)	Technical characteristics and methods of measurement for equipment for generation, transmission and reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and/or VHF mobile service; Part 1: Common requirements
	ETSI EN 300 338-2 V1.4.1 (2017-02)	Technical characteristics and methods of measurement for equipment for generation, transmission and reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and/or VHF mobile service; Part 2: Class A/B DSC
	ETSI EN 300 373-1 V1.4.1 (2013-09)	Maritime mobile transmitters and receivers for use in the MF and HF bands; Part 1: Technical characteristics and methods of measurement
	ETSI EN 301 033 V1.4.1 (2013-09)	Technical characteristics and methods of measurement for shipborne watchkeeping receivers for reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and VHF bands

Annex to Marine Equipment Directive Module B Type Examination Certificate



Danmark

IMO Resolutions	International Testing Standards
	ETSI EN 301 843-5 V2.2.1 (2017-11)
	ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services; Part 5: Specific conditions for MF/HF radiotelephone transmitters and receivers

3 Technical Documentation

3.1 Declaration of Conformity

99-154170-J Declaration of Conformity SAILOR MFHF 6000B_250W – MED Dated 2021-09-30
(draft)

3.2 User Guide

98-144591-G September 2021	Installation Manual SAILOR 6000B MF/HF DSC 150W/150W FCC/250W/500W
98-144542-A Dec 2015	Installation Guide SAILOR 6300 MF/HF Transceiver Unit & Antenna Tuning Unit 150/250/500W
98-132396-B July 2013	Installation Guide SAILOR 630x MF/HF Control Unit
98-130981-B Aug 2013	Installation and User Manual SAILOR 6101 and 6103 Alarm Panel
98-131070-THR-H Sep 2021	User Manual SAILOR 6300 MF/HF DSC 150W/150W FCC/250W/500W
98-131070-NEU-E Dec 2015	User Manual TT-6300B MF/HF DSC 150W/250W/500W
98-132519-B Oct 2011	User Manual SAILOR 6300 MF/HF Radio Telex
97-147768-C Sep 2021	User Manual SAILOR 6300B MF/HF Service Interface
98-150478-C Sep 2021	Installation Manual SAILOR 6018 Message Terminal
98-151795-B Sep 2021	User Manual SAILOR MF/HF System 6000B Radiotelex

3.3 Test Reports

3.3.1 EN 60945 (2002) incl. IEC 60945 Corrigendum 1 (2008)

T209922 (Delta)	Issued	2015-01-19
E12207.00 (Nemko)	Issued	2012-11-19
138930-3 (Nemko)	Issued	2010-11-23
173410-2 (Nemko)	Issued	2011-06-09
E11129.01 (Nemko)	Issued	2015-04-08
75928859 Report 02 Issue 2	Issued	2011-06-09
20103937200 Rev 1.0	Issued	2011-06-22
Corrosion Statement	Issued	2011-01-06
Corrosion Statement	Issued	2015-03-23
Corrosion Statement	Issued	2012-12-19
TT-6101/6103	Issued	2010-06-03
E10178.05	Issued	2011-05-04
75934224 Report 06 Issue 1	Issued	2016-08-10
75934224 Report 01 Issue 1	Issued	2016-07-08
75934224 Report 07 Issue 1	Issued	2016-10-05
98735330	Issued	2001-12-17

3.3.2 ETSI EN 301 843-5 V2.2.1

75934224 Report 01 Issue 01	Issued	2016-07-08
75928859 Report 09 Issue 2	Issued	2015-08-06
75928859 Report 10 Issue 1	Issued	2015-07-10
99-166345-A	Issued	2019-02-22

3.3.3 ETSI EN 300 373-1 V1.4.1

75928859 Report 01 Issue 3	Issued	2015-08-05
75928859 Report 05 Issue 3	Issued	2015-08-05



Danmark

Annex to Marine Equipment Directive Module B Type Examination Certificate

75928859 Report 06 Issue 2	Issued	2015-08-05
75934224 Report 07 Issue 1	Issued	2016-10-05

3.3.4 ETSI EN 300 067 Ed.1 & ETSI EN 300 067/A1 Ed.1

75928859 Report 04 Issue 3	Issued	2015-08-07
75928859 Report 07 Issue 2	Issued	2015-08-05
75928859 Report 11 Issue 2	Issued	2015-08-05
Telefication report 20103937309	Issued	2011-05-31
75934224 Report 07 Issue 1	Issued	2016-10-05

3.3.5 ETSI EN 301 033 V1.4.1

75928859 Report 08 Issue 1	Issued	2015-07-10
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3.3.6 EN 61162-1 (2016)

75928859 Report 03 Issue 1	Issued	2015-04-30
75934224 Report 05 Issue 1	Issued	2016-07-22
N.01.17	Issued	2017-03-10
99-166345-A	Issued	2019-02-22

3.3.7 ETSI EN 300 338-1 V1.4.2 & ETSI EN 300 338-2 V1.4.1

20103937307	Issued	2011-05-30
20103937308	Issued	2011-05-30
20103937311	Issued	2011-05-30
N.01.11	Issued	2011-02-04
N.07.16	Issued	2016-07-07
75928859 Report 01 Issue 2	Issued	2015-07-01
75934224 Report 07 Issue 1	Issued	2016-10-05
N 03.19	Issued	2019-03-24

3.3.8 EN IEC 61162-450 (2018)

96-176713-B	Issued	2021-09-28
96-176714-B	Issued	2021-09-28
75952676 SoT 03 Issue 1	Issued	2021-11-17
75952676 SoT 04 Issue 1	Issued	2021-11-16

3.3.9 EN IEC 62923-1 (2018) & EN IEC 62923-2 (2018)

96-176736-C	Issued	2021-10-08
96-176737-B	Issued	2021-09-28
75952676 SoT 01 Issue 1	Issued	2021-11-16
75952676 SoT 02 Issue 1	Issued	2021-11-16

3.4 Build Status

3.4.1 Hardware (BOM)

99-173369-C_Software_Hardware_version_MF_HF	Issued	2021-10-04
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3.4.2 Software ^{Note 2}

Identity	Version
MFHF System 6000B CU/TU	Version 2.20
SAILOR 6018 Message Terminal	Version 1.07



Danmark

Annex to Marine Equipment Directive Module B Type Examination Certificate

3.5 Notes

- Note 1 SAILOR is the brand name for Cobham SATCOM maritime products manufactured by Thrane & Thrane A/S.
- Note 2 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.
- Note 3 (EU)2021/1158 gives a last placing on board date of 12/08/2023 for equipment approved against the test standards listed above. See Conditions of Validity.

4 Conditions of Validity

This certificate ceases to be valid if the manufacturer makes any changes or modifications to the approved type of 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.

During the period of validity of this certificate the applicable regulations (international conventions and relevant resolutions and circulars of the IMO) and testing standards of the Commission Implementing Regulation may change, therefore the product conformity may need to be re-assessed by TÜV SÜD DANMARK ApS.

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 the directive is fully complied with and controlled by a written inspection agreement with a notified body.

Signature: *T. J. Twynam*
(Thomas J. Twynam)

Date: 2021-11-18

On behalf of TÜV SÜD DANMARK ApS