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Maritime & Coastguard Agency

Notified body authorised by the MCA

TÜV SÜD BABT

Marine Equipment Directive
EC Type Examination Module B Certificate

No: BABT-MED000080

This is to certify that TUV SUD BABT 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/ Amendment for the listed types of equipment

Implementing Regulation/ Amendment	**2015/559/EU**
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	**Annex A.1/5.5 HF Marine Safety Information Equipment** **Annex A.1/5.10 MF Radio capable of DSC and Radiotelephony** **Annex A.1/5.11 MF DSC Watchkeeping Receiver** **Annex A.1/5.14 MF/HF Radio capable of DSC, NBDP and Radiotelephony** **Annex A.1/5.15 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: 02 November 2016 Signature: T. J. Twyman Expiry Date: 05 August 2020

This certificate has been issued in accordance with the Certification Regulations of TUV SUD BABT (Notified Body Number 0168) 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

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Issued by TUV SUD BABT under document number BABT-MED000080 Issue 05

TÜV SÜD BABT • TÜV SÜD Group
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Annex to

Marine Equipment Directive Module B Type Examination Certificate

Description of Equipment

This certificate covers the following 250W System 6000B versions:

- 250W MF/HF SSB radiotelephone with integrated Class-A DSC controller and 2187.5kHz watchkeeping receiver
- 250W MF/HF SSB radiotelephone with integrated Class-A DSC controller and 6 channel scanning watchkeeping receiver
- 250W MF/HF SSB radiotelephone with integrated Class-A DSC controller, NBDP controller and 6 channel scanning watchkeeping receiver

Model: **SAILOR MF/HF 6320***
SAM MF/HF 6320
HIGHLANDER MF/HF 6320

*SAILOR is the brand name for Cobham SATCOM maritime products manufactured by Thrane & Thrane A/S.

System Components:

	SAILOR 6320 System	SAM 6320 System	HIGHLANDER 6320 System
Antenna Tuning Unit	SAILOR 6384 TT-6384B: 406384B	SAILOR 6384 TT-6384B: 406384B	SAILOR 6384 TT-6384B: 406384B
Transceiver Unit	SAILOR 6368B TT-6368B: 406368B	SAM 6368 TT-6368B: 406368B-SAM	HIGHLANDER 6368 TT-6368B: 406368B-BHL
MF/HF Control Unit	SAILOR 6301 TT-6301A: 406301A	SAM 6301 TT-6301A: 406301A-SAM	HIGHLANDER 6301 TT-6301A: 406301A-BHL
Handset	SAILOR 6201 TT-6201A: 406201A	SAILOR 6201 TT-6201A: 406201A	SAILOR 6201 TT-6201A: 406201A
Alarm Panel	SAILOR 6103 TT-6103A: 406103A	SAILOR 6103 TT-6103A: 406103A	SAILOR 6103 TT-6103A: 406103A
Message Terminal	SAILOR 6006 TT-6006A: 406006A	SAILOR 6006 TT-6006A: 406006A	SAILOR 6006 TT-6006A: 406006A
Message Terminal	SAILOR 6018 TT- 6018A: 406018A	SAILOR 6018 TT- 6018A: 406018A	SAILOR 6018 TT- 6018A: 406018A
Control Panel	SAILOR 6004 TT-6004A: 406004A	SAILOR 6004 TT-6004A: 406004A	SAILOR 6004 TT-6004A: 406004A
Printer	SAILOR H1252B H1252B/TT-3608A: 8012520006	SAILOR H1252B H1252B/TT-3608A: 8012520006	SAILOR H1252B H1252B/TT-3608A: 8012520006
Keyboard	SAILOR 6001 TT-6001A: 406001A	SAILOR 6001 TT-6001A: 406001A	SAILOR 6001 TT-6001A: 406001A
Accessory Connection Box	SAILOR 6209 TT-6209A: 406209A	SAILOR 6209 TT-6209A: 406209A	SAILOR 6209 TT-6209A: 406209A
CU Connection Box	SAILOR 6208 TT-6208A: 406208A	SAILOR 6208 TT-6208A: 406208A	SAILOR 6208 TT-6208A: 406208A
Power Supply	SAILOR 6080 TT-6080A: 406080A	SAILOR 6080 TT-6080A: 406080A	SAILOR 6080 TT-6080A: 406080A
Power Supply	SAILOR 6081 TT-6081A: 406081A	SAILOR 6081 TT-6081A: 406081A	SAILOR 6081 TT-6081A: 406081A
Loudspeaker	SAILOR 6270 TT-6270A: 406270A	SAILOR 6270 TT-6270A: 406270A	SAILOR 6270 TT-6270A: 406270A

IMO Resolutions	International Testing Standards	
IMO Res. A.699(17) IMO Res. A.700(17) IMO Res. A.804(19) IMO Res. A.806(19) IMO Res MSC 68(68) IMO Res. A.694(17) IMO Res. MSC.36(63) IMO Res. MSC.97(73) IMO COMSAR Circ.32	EN 60945 (2002) inc Corr.1	General Requirements for Marine Navigation Equipment (Inc. Corr1:2008)
	ETSI EN 300 373-1 V1.4.1 (2013-09)	Maritime mobile transmitters and receivers for use in the MF and HF bands
	ETSI EN 300 338-1 V1.3.1 (2010-02)	Electromagnetic compatibility and Radio spectrum Matters (ERM); 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 V1.3.1 (2010-02)	Part 2: Class A/B DSC
	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
	ETSI EN 300067 Ed.1 (1990-11) ETSI EN 300067 /A1 Ed.1 (1993-10)	Radio Equipment and Systems Radiotelex equipment operating in the maritime MF/HF service. Technical characteristics and methods of measurement
	EN 301 843-5 V1.1.1 (2004-06)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services; Part 5: Specific conditions for MF/HF radiotelephone transmitters and receivers
	EN 61162-1 (2011)	Maritime navigation and radiocommunication equipment and systems — Digital interfaces Part 1: Single talker and multiple listeners
	IMO MSC/Circ.862	Clarifications Of Certain Requirements In IMO Performance Standards For GMDSS Equipment
	IMO MSC.1/Circ.1460	Guidance On The Validity Of Radiocommunications Equipment Installed And Used On Ships

Relevant Technical Documentation

Supplier's Declaration(s) of Conformity:

99-154170-A Declaration of Conformity SAILOR MFHF 6000B_250W, 2016-10-14

User Guide:

Document number	Title & description
98-144591-B Nov 2015	Installation Manual SAILOR 6300 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 6303 Alarm Panel
98-131070-THR-E Dec 2015	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
98-150478-A Sep 2016	Installation Manual SAILOR 6018 Message Terminal

Test report numbers:

EN 60945 (2002) inc Corr.1	T209922, 2015-01-19 (Delta)
	E12207.00, 2012-11-19 (Nemko)
	138930-3, 2010-11-23 (Nemko)
	173410-2, 2011-06-09 (Nemko)
	E11129.01, 2015-04-08 (Nemko)
	173410-2, 2011-06-09 (Nemko)
	75928859 Report 02 Issue 2, 2015-08-07
	Delta T209922, 2015-01-19
	20103937200 Rev 1.0, 2011-06-22
	Corrosion Statement, 2011-01-06
	Corrosion Statement, 2015-03-23
	Corrosion Statement, 2012-12-19
	E12207.00, 2012-11-19
	TT-6101/6103, 2010-06-03
	E10178.05, 2011-05-04
	75934224 Report 06 Issue 1, 2016-08-10
	75934224 Report 01 Issue 1, 2016-07-08
	75934224 Report 07 Issue 1, 2016-10-05
EN 301 843-5 V1.1.1 (2004-06)	75928859 Report 08 Issue 1, 2015-07-10
	75928859 Report 09 Issue 2, 2015-08-06
	75928859 Report 10 Issue 1, 2015-07-10
ETSI EN 300 373-1 V1.4.1 (2013-09)	75928859 Report 01 Issue 3, 2015-08-05
	75928859 Report 05 Issue 3, 2015-08-05
	75928859 Report 06 Issue 2, 2015-08-05
	75934224 Report 07 Issue 1, 2016-10-05
ETSI EN 300067 Ed.1 (1990-11) ETSI EN 300067 /A1 Ed.1 (1993-10)	75928859 Report 04 Issue 3, 2015-08-07
	75928859 Report 07 Issue 2, 2015-08-05
	75928859 Report 11 Issue 2, 2015-08-05
	Telefication report 20103937309, 2011-05-31
	75934224 Report 07 Issue 1, 2016-10-05
ETSI EN 301 033 V1.4.1 (2013-09)	75928859 Report 08 Issue 1, 2015-07-10
EN 61162-1 (2011)	75928859 Report 03 Issue 1, 2015-04-30
	75934224 Report 05 Issue 1, 2016-07-22
ETSI EN 300 338-1 V1.3.1 (2010-02) ETSI EN 300 338-2 V1.3.1 (2010-02)	20103937307, 2011-05-30
	20103937308, 2011-05-30
	20103937311, 2011-05-30
	N.01.11, 2011-02-04
	75928859 Report 01 Issue 2, 2015-07-01
	75934224 Report 07 Issue 1, 2016-10-05

Approved Software:

Prior to IMO MSC.1/Circ.1460 implementation	MFHF System 6000B CU/TU	Version 2.08
	SAILOR 6018 Message Terminal	Version 1.03
	SAILOR 6006 Message Terminal	Version 1.07
For IMO MSC.1/Circ.1460 compliance (2017-01-01)	MFHF System 6000B CU/TU	Version 2.11
	SAILOR 6018 Message Terminal	Version 1.04
	SAILOR 6006 Message Terminal	Version 1.08

Approved Hardware : Bill of materials:

Antenna Tuning Unit 150-250W	57-139983 ATU.pdf	2015-04-13
Control Unit	57-127962 Controle.pdf 57-127963 HMI.pdf 57-127964 Interconnection.pdf	2015-04-22 08-04-2015 08-04-2015
Transceiver Unit 250W	57-122881 PA and filter.pdf 57-122882.pdf	2015-04-09 2015-04-08

Options:

MED Annex Reference	Options	
A.1/5.10 & A.1/5.11	Default	21875kHz Watchkeeping Receiver.
A.1/5.10, A.1/5.11 & A.1/5.15	HF DSC	6 Channel Watchkeeping Receiver enabled.
A.1/5.10, A.1/5.11 & A.1/5.15, A.1/5.5, A.1/5.14	HF DSC with NBDP	6 Channel Watchkeeping Receiver enabled. NBDP Enabled: Requires additional hardware: TT-6006A Message Terminal; TT-6001A Keyboard H1252B/TT-3608 Printer

Notes:

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

Conditions of Validity

This issue of the Annex to the referenced Marine Equipment Module B Certificate relates to Issue 5 of the Certificate.

This certificate will not 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 BABT or a person appointed by TÜV SÜD BABT to perform that role.

Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be reapproved prior to it/them being placed on board 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.

Signed:.. T.J. Twyman Date: 2nd November 2016

on behalf of TÜV SÜD BABT