

EC TYPE EXAMINATION CERTIFICATE

MED-B-19071

In compliance with Module B of Council Directive 2014/90/EU of the European Parliament and included the Council Regulation (EU) 2018/773 of 15 May 2018, this certificate is issued to the manufacturer:

Thrane & Thrane A/S
Lundtoftegaardsvej 93 D
DK-2800 Kgs. Lyngby, Denmark

And applies to the product

VHF DSC Class A
VHF DSC watch-keeping receiver
SAILOR 6222 VHF DSC Class A

This certificate attest that provisions according to type examination requirements given in

SOLAS 74 as amended, Regulation IV/14, IV/7, X/3
IMO Res.A.385(X)
IMO Res.A.524(13)
IMO Res.A.694(17)
IMO Res.A.803(19) incl. amd. MSC.68(68)
IMO Res. MSC.36(63)-(1994 HSC code) 14
IMO Res. MSC.97(73)-(2000 HSC code) 14
IMO MSC/Circ.862
IMO MSC.1/Circ.1460
IMO COMSAR Circ.32
ITU-R M.489-2 (10/95)
ITU-R M.493-14 (09/15)
ITU-R M.541-10 (10/15)

A.1/5.1
IMO MSC/Circ.862
EN 60945 (2002) incl. IEC 60945 Corr. 1 (2008)
EN 61162 series
ETSI EN 300 338-1 V1.3.1 (2010-02)
ETSI EN 300 338-2 V1.3.1 (2010-02)
ETSI EN 301 843-2 V2.1.1 (2016-03)
ETSI EN 301 925 V1.4.1 (2013-05)

A.1/5.2
EN 60945 (2002) incl. IEC 60945 Corr. 1 (2008)
EN 61162 Series
ETSI EN 300 338-1 V1.3.1 (2010-02)
ETSI EN 300 338-2 V1.3.1 (2010-02)
ETSI EN 301 033 V1.4.1 (2013-09)
ETSI EN 301 843-2 V2.1.1 (2016-03)

This certificate replaces certificate no MED-B-16501, which is revoked.

This certificate loses its validity if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to and agreed upon with Nemko. Software changes and updates: - See Product description in the Annex. Should the specified regulations or standards be amended during the validity of this certificate, the products are to be re-approved prior to them being placed on board vessels to which the amended regulations or standards apply.

The attached Schedule of Approval forms part of this certificate. The certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Oslo, 2019-03-12

Date of expiry: 2020-11-30

Notified Body Id. no. 0470
Nemko AS
P.O. Box 73 Blindern
NO-0314 Oslo, Norway



Roy Uggerud
Nemko AS

Annex I to EC Type-Examination Certificate, No. MED-B-19071

SCHEDULE OF APPROVAL

Product description

The product covered by this certificate are marketed under the brand SAILOR 6222 VHF DSC Class-A

The EC Type-Examination Certificate covers the products listed below.

Software version: 2.18

Minor software changes are given version number as shown above, with a notification to Nemko. Major software changes, version number e.g. 3.xx, must be recorded and documentation must be provided to Nemko for review and acceptance before implementation.

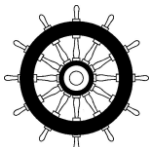
Item no.	Type	Designation	Manufacturer
1	TT-6222A	SAILOR 6222 VHF DSC Class A	Thrane & Thrane A/S
1A	TT-6222A	SAM 6222 VHF DSC	Thrane & Thrane A/S
1B	TT-6222A	Highlander 6222 VHF DSC	Thrane & Thrane A/S
2	TT-6201A	SAILOR 6201 Handset	Thrane & Thrane A/S
3	TT-6203A	SAILOR 6203 Handset WP	Thrane & Thrane A/S
4	TT-6202A	SAILOR 6202 Hand microphone	Thrane & Thrane A/S
5	TT-6204A	SAILOR 6204 Control Speaker Microphone	Hytera (China)
6	TT-6207A	SAILOR 6207 Accessory Connection box	Thrane & Thrane A/S
7	TT-6208A	SAILOR 6208 CU Connection box	Thrane & Thrane A/S
8	TT-6209A	SAILOR 6209 Accessory Connection box	Thrane & Thrane A/S
9	TT-6103A	SAILOR 6103 Multi Alarm panel	Thrane & Thrane A/S
10	SAILOR N163S	SAILOR N163S Power Supply (AC/DC)	Thrane & Thrane A/S
11	SAILOR N420	SAILOR N420 (DC/DC)	Thrane & Thrane A/S
12	TT-6090A	SAILOR 6090 Power Converter	Thrane & Thrane A/S
13	TT-6270A	SAILOR 6270 Loudspeaker	Thrane & Thrane A/S
14	TT-6197A	SAILOR 6197 Ethernet switch	Moxa Inc.

Note: Power supplies are not a part of the GMDSS system. Previous wheel marked power supplies or any other 60945 approved power supplies are therefore allowed.

Type approval documentation

Document	Document no.	Rev.	doc. no
Test Report RES Laboratory Ltd: ETSI EN 300 338-1 v.1.3.1 (2010-02), ETSI EN 300 338-2 v.1.3.1 (2010-02), Rec. ITU-R M.493-13 (2009), IEC 61162-1, ed.3; (2007). N 10.10 Checking of software and performance algorithms.	95-164766-A	31.12.2010	005
Test Report RES Laboratory Ltd: Amendment to Test report N 10.10	95-164767-A	20.01.2011	006
Statement Nemko: Sailor 6222 confirms with IMO Res.A.803(19) + amendment MSC.68(68). Sailor 6110 Sailor 6222 confirms with IMO Res.A.807(19) + amendment MSC.68(68).	Statement Sailor 6222_6110	16.04.2013	007
Statement Nemko: Statement Sailor 6222_DSC	Statement Sailor 6222_DSC	31.05.2013	008
Test Report Nemko: EN 60945 testing of DC/DC converter TT-6090A Mains AC/DC N163S + DC/DC Regulator N420	E10269.01	18.07.2011	009
Test Report Nemko: Performance tests and requirements according to parts of: EN 60945 (2002), ETSI EN 301925, ETSI EN 300162, IEC 61097-3, IEC 61097-7	158780/4	02.02.2011	010
Test Report Nemko: Performance tests and requirements according to parts of: EN 60945 (2002), ETSI EN 301925, ETSI EN 300162, IEC 61097-3, IEC 61097-7	177602/6	19.07.2011	011
Compliance Report Nemko: ETSI EN 301 033 V1.2.1 (2005-12), IEC 61097-8 First edition 1998-09	206819/2	25.4.2012	012
Test Report Cobham: SAILOR 6222 VHF firmware Adaption to Final Acts WRC-15, Appendix 18 – Table of transmitting frequencies in the VHF maritime mobile band	95-154416-A	01.11.2016	013
Test Report RES Laboratory Ltd: Rec. ITU-R M.493-14 (2015), Rec. ITU-R M.541-10 (2015), Radio Regulations (2016), IMO Res. A.803(19), N 08.17	95-164768-A	23.06.17	014
Test Report DELTA: EMC immunity test - Cobham SATCOMThrane & Thrane AS, DANAK-19/18030	96-160412-A_117-27869	26.06.2017	015
Statement Cobham: VHF6222_EN300843-2v211_compliance	99-164769-A	14.11.2018	016
Manual Cobham: SAILOR 6222 VHF DSC - User manual	98-131184-K	01.08.2018	017
6222 Block diagram VHF	99-166700-A	08.03.2019	018
EU Declaration of Conformity	99-145170-H	14.01.2019	019
Type Label Layout Sailor 6222	48-128160-E	10.08.2010	020
Software and Hardware Revisions Sailor 6222	99-166699-B	08.03.2019	021

Limitations/restrictions



"The Mark of Conformity" (i.e. the Wheel mark) 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 (Production Quality Assurance), E (Product Quality Assurance), or F (Product Verification), of Annex B of the Directive (MED) is fully complied with and controlled by a written inspection agreement with a notified body."

----- End of certificate -----