



EC TYPE EXAMINATION (MODULE B) CERTIFICATE (EC-US MRA)

No. **03-001617/031324**

THIS IS TO CERTIFY:

That Croatian Register of Shipping did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with requirements of Marine Equipment Directive (MED) 2014/90/EU, subject to any conditions in the schedule attached hereto.

TYPE AND DESCRIPTION OF PRODUCT

Navigational echo-sounder

with type designation - **S3009**

NUMBER AND ITEM DESIGNATION (in accordance with Annex of Regulation (EU) 2017/306)

MED/4.6 – Echo-sounding equipment

MANUFACTURER:

**NAVICO HOLDING AS, Nyåskaiveien 2,
4374 Egersund – Norway**

REGULATIONS AND STANDARDS (in accordance with Annex of Regulation (EU) 2017/306)

SOLAS 1974 as amended, Reg. V/18, SOLAS 1974 as amended, Reg. X/3
IMO Res.A.224(VII), IMO Res.A.694(17), IMO Res. MSC.36(63), IMO Res.MSC.97(73), IMO Res.MSC.191(79),
IMO Res.MSC.74(69) Annex 4, IMO Res.MSC.302(87).

USCG Module B number: 165.107/EC2489/03-001617

NOTICE:

- Further details of the product and conditions for certification are given overleaf.
- 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 the notified body named on this certificate.
- Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they 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 II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.
- In case limitations of use apply, these should be indicated of in the Schedule of Approval.
- This product has been assigned **U.S. Coast Guard Module B number** in accordance with the European Council Decision 2004/425/EC dated 21 April 2004 on the conclusion of an Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment.

Issued by Croatian Register of Shipping, notified body number 2489.

This certificate is valid until: 2022-03-07

Place and date: Split, 2018-03-07



Seal


Signature
Marinko Popović, dipl.ing.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

S3009 Navigational echo-sounder system consists of the following components:

	<i>Item name</i>	<i>Description</i>	<i>Item No.</i>	<i>Location</i>
1.	<i>S3009 Control unit</i>	<i>Multifunction Sonar Display</i>	<i>000-14215-001</i>	<i>Protected</i>
2.	<i>S5100 Sonar module</i>	<i>Sonar Microcontroller Box with 3 independent sonar channels</i>	<i>000-13260-001</i>	<i>Protected</i>
3.	<i>S3009 + S5100</i>	<i>Transceiver for dual TDX</i>	<i>000-14217-001</i>	<i>Protected</i>
3.	<i>TDX, TGM60-50-20L TDX W/20M CBL</i>	<i>Transducer 50 kHz</i>	<i>000-14218-001</i>	<i>Submerged</i>
4.	<i>TDX, TGM50-200-20L TDX W/20M CBL</i>	<i>Transducer 200 kHz</i>	<i>000-14219-001</i>	<i>Submerged</i>
5.	<i>CBL JOINT, BLACK, GEL. IP68, 6.5-12mm CBL</i>	<i>Interconnecting cable</i>	<i>000-14556-001</i>	<i>Protected</i>
6.	<i>CBL JOINT, GREEN, GEL. IP68, 12-18mm CBL</i>	<i>Interconnecting cable</i>	<i>000-14557-001</i>	<i>Protected</i>

2. APPLICATION/LIMITATION OF USE

S3009 Navigational echo-sounder system is tested for compliance with BAM requirements – IMO Res.MSC.302(87). System comply with functional requirements of the paragraph 9.3.2 - Navigational equipment functionality, Polar Code – MSC.385(94). The dual split screen option allows viewing of depth signals from two transducers at the same time simultaneously. Connectivity – Power, Transducer, NMEA 2000, NMEA 0183 & Ethernet.

3. DESIGN DRAWINGS AND SPECIFICATIONS

*Simrad S3009 Navigational echo-sounder – User Manual, No. 988-12043-001,
Simrad S3009 Navigational echo-sounder – Quick guide, No. 988-12044-001,
S2009 & R2009 & S3009 Mounting Template – No. 988-10916-002,
Gilligan 9" Base Board – System Block Diagram, No. 017-23906-B0,
Gilligan 9" Base Board – Master Schematic, No. 017-23906-B0,
Simrad – Transducer Tank 50/200 kHz, 003-25890-00 Rev. B,
TOKIN a KEMET Company – Piezoelectric Ceramics, 9470PIEVOL01E1705H1 Vol.01, dated 2017.05.17.*

4. TYPE TEST RECORDS/LABORATORY RECOGNITION STATUS

*Environmental testing – IEC 60945(2002) including Corrigendum 1(2008);
Serial interface testing – IEC 61162-1(2010) Ed.4.0 (2010-11);
Presentation of navigation information – IEC 62288 Ed.2 (2014-07);
Performance testing – ISO 9875:2000 incl. ISO Technical Corr. 1:2006.*

5. MATERIALS OR COMPONENTS REQUIRED TO BE TYPE APPROVED OR TYPE TESTED

This approval remains valid for subsequent minor software amendments, as allowed by the SW 1.0.x & 1.6.x format (x=a numeral), where written details of any such modification have been submitted to and accepted by the approvals authority.

6. OTHER MATERIALS AND/OR COMPONENT

There are several combinations for installation with or without S5100 Echo-sounder module:

- *Small Vessel Setup without S5100 Echo-sounder module including transducer cable up to 300m,*
- *Single Bow Transducer Setup with or without S5100 Echo-sounder module including extension cable up to 300m,*
- *Large Vessel Setup with S5100 Echo-sounder module (Bow & Stern Transducers – 2 independent sonar channels).*

7. PRODUCTION SURVEY REQUIREMENTS

S3009 Navigational echo-sounder system shall be supplied by 12 / 24VDC in accordance with User Manual.

8. ONBOARD INSTALLATION AND MAINTENANCE REQUIREMENTS

The installation on board shall be verified and tested according to S3009 Navigational Echo-sounder User Manual.

9. MARKING AND IDENTIFICATION



xxxx/yy

Subject to compliance with the conditions in this Schedule of Approval which forms part of certificate, and those of Articles 9, 10 and 15 of the Directive, the Manufacturer is allowed to affix the “Mark of Conformity” to the Product described herein.

xxxx - the number of the Notified Body undertaking surveillance module(2489 in case of CRS)
yy - the last two digits of year mark affixed

This product has been assigned US Coast Guard Module B number **165.107/EC2489/03-001617**. In those instances where the Notified Body conducting the conformity assessment in accordance with either Module D, E or F of the Marine Equipment Directive is not CRS, such Notified Body would use the above U.S. Coast Guard Module B number to provide the manufacturer with the U.S. Coast Guard approval number by noting it on the Certificate of Conformity, thereby authorizing the manufacturer to mark the product accordingly.

10. OTHER

SOFTWARE:

	Item name	SW version
1.	S3009 Control unit	1.0.x
2.	S5100Echo-sounder module	1.6.x

APPENDIX – TYPE EXAMINATION DOCUMENTATION

	Document title	Identification number	Revision index
1.	ISO 9875:2000-11-01 Third edition Test Report – Navico Tulsa – witnessed by CRS	2227 Gilligan	3.0 02.08.2018
2.	Applica Technical Report – EMC testing of Echo Sounding equipment	21232	1.0 22.01.2018.
3.	Applica Technical Report – Environmental, Digital interface and Display testing of S3009 and S5100 Echo Sounding equipment	21232	2.0 06.03.2018.
4.	IEC 60945 Edition 4.0 (2002-08) Test Report - Navico Egersund – compliance verified by CRS	2227 Gilligan	01.02.2018.
5.	IEC 61162-1 Edition 5.0 (2016-08) Test Report - Navico Egersund – compliance verified by CRS	2227 Gilligan	26.01.2018.
6.	IEC 62288 Edition 2.0 (2014-07) Test Report - Navico Egersund – compliance verified by CRS	2227 Gilligan	31.01.2018.
7.	TGM60-50-15L, TGM50-200-10L – Environmental test result	5200-4D-8002	JAN.26, 2018
8.	NEC/TOKIN XDCR Molding Process	-	7Apr.2017.

- END OF CERTIFICATE -

