



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 2022/1157

Certificate Holder and Manufacturer Aquamate Products T/A Echomax
Champers Farm
Bardfield End Green
Thaxted CM6 3PX
Essex
United Kingdom

EC Representative ScanMarine DK Aps
Egensevej 25
2770 Kastrup
Danmark

Product(s) Echomax EM230 Radar Reflector

Product Sector Life-saving appliances

Product Type MED/1.33 Radar reflector for lifeboats and rescue boats (passive)

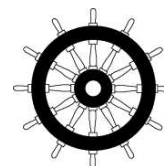
and on the basis of the Technical Data and information detailed in the Annex to this certificate.

Valid from: 07 November 2022

(Signature) *M Hardy*

Expiry Date: 06 November 2027

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**

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



Danmark

Annex to Marine Equipment Directive Module B Type Examination Certificate

1 Equipment Description

Passive radar reflector for use on lifeboats and rescue boats

1.1 Models

Model
Echomax EM230
Echomax EM230BR
Echomax EM230BM3

1.1.1 System Component

Model
Echomax EM230

1.1.2 Optional Components (EM230)

Model	Description
EM230DB	Deck mount Bracket
EM230BM3	Base mount Fixing
EM230MB	Mast mount Bracket

1.1.3 Variant System

Model
Echomax EM230BR

1.1.4 Variant Optional Components (EM230BR)

Model	Description
EM230DB(BR)	Deck mount Bracket
EM230BM3	Base mount Fixing
EM230MB	Mast mount Bracket

1.1.5 Variant System

Model
Echomax EM230BM3

2 Assessed Requirements

2.1 Implementing Regulation (EU) 2022/1157

2.2 Compliance Requirements for MED/1.33

IMO Resolutions	International Testing Standards	
Resolution A694(17)	IEC 60945:2002 inc. Corr.1:2008	Maritime navigation and radiocommunication equipment and systems — General requirements — Methods of testing and required test results
IMO Res. A.384(X)	EN ISO 8729:1998	Ships and marine technology — Marine radar reflectors

Annex to Marine Equipment Directive Module B Type Examination Certificate



3 Technical Documentation

3.1 Declaration of Conformity

Declaration of Conformity	Modified	2022-09-26
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3.2 User Guide

Radar Reflector Mounting Instructions	Dated	2017-05-24
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3.3 Test Reports

3.3.1 • EN ISO 8729(1998) incorporating IEC 60945:2002 inc. Corr.1:2008

Qinetiq Report TT03/03	Dated	2003-04-03
RR-Assess-01/2012, Issue 1	Dated	2012-08-24

3.4 Hardware Build Status

Bill of Material ECHOMAX EM230 and EM230BR	Dated	2012-08-18
3stackarray2d emax230	Dated	2012-08-20

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.
- Note 2 The Echomax EM230 radar reflectors meets the requirements of IMO.Res.A384(X) for X-band (9 320 MHz and 9 500 MHz).
- Note 3 The Echomax EM230 radar reflectors are required to be mounted vertically and at least 2m above water level.

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:

M Hardy
(Michelle Hardy)

Date:

07/11/2022

On behalf of TÜV SÜD DANMARK ApS