



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	(EU)2024/1975
Certificate Holder and Manufacturer	Koden Electronics Co.,Ltd. 5278 Uenohara, Uenohara-shi, Yamanashi Japan
EC Representative	Koden Elektronik GmbH Am Gewerbepark 15 D-64823 Gross-Umstadt Germany
Product(s)	KRS-1611P KRS-1911P KRS-1211P KRS-1411P
Product Sector	Navigation Equipment
Product Type	MED/4.64 Radar Equipment (CAT 2 and CAT 3)

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

Valid from: 07 May 2025

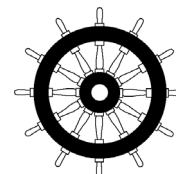
(Andy Little)

Expiry Date: 27 February 2029

This certificate has been issued in accordance with the TÜV SÜD Testing, Certification Validation and Verification 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](mailto:BABT@tuvsud.com)



2443

Issued by TÜV SÜD DANMARK ApS under document number: DK-MED000171 Issue 01

Page 1 of 4

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# Annex to Marine Equipment Directive Module B Type Examination Certificate

## 1 Equipment Description

Radar System (Category 2 and Category 3)

### 1.1 Models

Model
KRS-1611P 16 CAT3 Radar System
KRS-1911P 19 CAT3 Radar System
KRS-1211P 22 CAT2 Radar System
KRS-1411P 24 CAT2 Radar System

#### 1.1.1 System Components Note 1

Model	Description
RSD-16P	16" Radar Display
RSD-19P	19" Radar Display
RSD-12P	22" Radar Display
RSD-14P	24" Radar Display
RSB-111P	Scanner Unit
RSA-1SP	Antenna (6ft)
E70648	VCM100 Voltage Converter Module
A80792	Data Collection Unit (DCU)
A80788	Trackball

### 1.2 Software Note 2

Identity	Description
Application Software	Version 2.0
Operating SW Raymarine Lighthouse	Version 4.5
RSB-111P Software	Version 2.44
DCU	Version 2.508

## 1 Specified Requirements

### 1.1 Implementing Regulation (EU)2024/1975 MED/4.64 Row 1 of 1 Note 3

Type approval requirements	Carriage and Performance Requirements
SOLAS 74 Reg V/18 IMO Res.MSC.36(63)-(1994 HSC Code) 14 IMO Res.MSC.97(73)-(2000 HSC Code) 14	SOLAS 74 Reg. V/19, IMO Res. A.278(VIII), IMO Res. A.694(17), IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13. IMO Res. MSC.191(79), IMO Res. MSC.192(79), IMO Res. MSC.302(87), IMO MSC.1/Circ.1349, ITU-R M.1177-4 (04/11).

# Annex to Marine Equipment Directive Module B Type Examination Certificate



Danmark

Assessed Testing Standards	
IEC 60945:2002 incl. IEC 60945 Corr. 1:2008	IEC 61162-1:2016
IEC 61162-2 Ed.1.0:1998-09	IEC 61162-450:2018
IEC 62288 Ed. 3.0:2021	IEC 62388 Ed. 2.0: 2013-06 incl. IEC 62388 Corr 1:2014
IEC 62923-1:2018	IEC 62923-2:2018.

## 2 Technical Documentation

### 2.1 Declaration of Conformity

1)KRS-xx11P - DoC Modified 2025-01-22

### 2.2 User Guide

Operation manual Solid State Radar KRS Series (0093114241-00) Dated 2025-03-14  
Operation manual Solid State Radar KRS Series (0093114242-00) Dated 2025-03-14

### 2.3 Test Reports

#### 2.3.1 IEC 60945:2002 incl. IEC 60945 Corr. 1:2008

TRA-057423-38-00B Issued 2022-05-19  
TL22253 Issued 2022-07-04  
75958876-04 Issue 02 Issued 2024-02-23  
16R096CR Issued 2016-03-03  
75958876 Report 02 Issue 1 Dated 2024-01-16  
Salt Mist Waiver Dated 2024-02-26  
Salt Mist Waiver - NSI Dated 2024-02-21  
Salt Mist Waiver - DCU Dated 2024-02-21  
11656-R01 Dated 2024-02-26

#### 2.3.2 IEC 62388 Ed. 2.0: 2013-06 incl. IEC 62388 Corr 1:2014

TP\_0953\_1048 Wind\_Tunnel ESO Test v1 Dated 2021-05-04  
596704-1-1 Dated 2021-02-17  
75958876 Report 01 Issue 2 Dated 2024-02-23  
75950287-04 Issue 01 Issued 2021-04-23  
RAY-PFR-STR-001 Issue 1 Dated 2024-02-12  
RCM-TA-2025-001 Dated 2025-03-18  
PFR240312A Dated 2025-04-11

#### 2.3.3 IEC 62288 Ed. 3.0:2021

75958876 Report 02 Issue 1 Dated 2024-01-16

#### 2.3.4 IEC 61162-1:2016, IEC 61162-2 Ed.1.0:1998-09 & IEC 61162-450:2018

19/N0584 Dated 2019-12-09  
75958876 Report 06 Issue 1 Issued 2024-02-16  
75958876 Report 08 Issue 1 Issued 2024-02-27  
75958876 Report 09 Issue 1 Issued 2024-02-22  
75958876 Report 10 Issue 1 Issued 2024-02-22

#### 2.3.5 IEC 62923-1 & IEC 62923-2 :2018

75958876 Report 06 Issue 2 Issued 2024-02-20



Danmark

# Annex to Marine Equipment Directive Module B Type Examination Certificate

## 2.4 Build Status

### 2.4.1 Hardware

RAY_PF_DP_0001	Dated	2024-02-23
DP076-P1B6_Schematic	Dated	2024-02-23
DP076-P1B6_BOM	Dated	2024-02-23

## 2.5 Notes

- Note 1 Installations should include only one radar scanner connected to a single display.
- Note 2 This approval remains valid for equipment including subsequent minor software amendments which have been formally accepted in accordance with the Testing, Certification, Validation and Verification Regulation.
- Note 3 The product(s) listed meet(s) the requirements of IEC 62923-1 for EUT function type P.

## 3 U.S. Coast Guard Number

This product has been assigned U.S. Coast Guard Module B number

165.116/EC2443 CAT 2 Radar  
165.117/EC2443 CAT 3 Radar

To note type approval to Module B only as it pertains to obtaining US Coastguard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", Decision No. 1/2023 signed May 26<sup>th</sup>, 2023.

## 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:

(Andy Little)

Date:

07/05/2025

On behalf of TÜV SÜD DANMARK ApS