



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)2023/1667
Certificate Holder and Manufacturer	Japan Radio Co., Ltd. 4-10-1, Nakano Nakano Central Park East 3F Nakano-ku Tokyo 164-0001 Japan
EC Representative	JRC Dublin 77 Camden Street Lower St. Kevin's Dublin 2 DO2 XE80 Ireland
Product(s)	JLR-8600 / JLR-8600-D
Product Sector	Navigation Equipment
Product Type	MED/4.63 GNSS Equipment (GPS)

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

Valid from: 17 April 2024

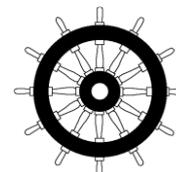
(M J Hardy)

Expiry Date: 16 April 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

**2443**

Issued by TÜV SÜD DANMARK ApS under document number: DK-MED000123 Issue 06

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Annex to Marine Equipment Directive Module B Type Examination Certificate

1 Equipment Description

Marine GPS Receiver System

1.1 Models

Model
JLR-8600
JLR-8600-D

1.1.1 System Components

Model	Description
JLR-4350 or JLR-4341 ^{Note 1}	GPS Receiver / Antenna Unit
NWZ-1650 ^{Note 2}	GPS Display / Operator control Unit
NDC-4100	Processing Unit

1.1.2 Optional Components

Model	Description
NBG-320, NBD-577C, NBD-904	AC Power Supply
NKG-94, NKG-104, DPU-414 or RP-D10	Printer
NCZ-777, NCZ-1663 or NCZ-1537B	Select Switch
NQE-7700A	Junction Box
NQA-4251A or NQA-4351	Output buffer
NQD-4414 (consisting of NQD-4410 & NQD-4411)	Coaxial Cable Kit
CQD-10	Junction Box

1.2 Software ^{Note 3}

Identity	Description
R41.0	Sensor Unit JLR-4350
R40.0	Sensor Unit JLR-4341
R56.02	Display Unit
R60.02	Processing Unit

2 Specified Requirements

2.1 Implementing Regulation (EU)2023/1667 MED/4.63 Row 2 of 2 ^{Note 4}

Type approval requirements	Carriage and Performance Requirements
SOLAS 74 Reg V/18 SOLAS 74 Reg X/3 IMO Res.MSC.36(63)-(1994 HSC Code) 13 IMO Res.MSC.97(73)-(2000 HSC Code) 13	SOLAS 74 Reg. V/19 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.302(87) IMO Res. MSC.112(73)

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Assessed Testing Standards	
IEC 61108-1 Ed. 2.0: 2003	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 62923-1:2018	IEC 62923-2:2018

3 Technical Documentation

3.1 Declaration of Conformity

176f) MED DoC JLR-8600+D Modified 2024-03-31

3.2 User Guide

JLR-8600 GPS Navigator Installation Manual Edition 3 (7ZPNA4707) Dated 2021-05-20
 JLR-8600 GPS Navigator Instruction Manual Edition 3 (7ZPNA4699A) Dated 2023-07-05
 JLR-8600-D GPS Navigator Instruction Manual Edition 3 (7ZPNA4773A) Dated 2023-07-05
 JLR-8600-D GPS Navigator Installation Manual Edition 2 (7ZPNA4774) Dated 2021-05-20

3.3 Test Reports

3.3.1 IEC 61108-1 Ed. 2.0: 2003

BSH/4542/001/4143277/19 Issued 2019-01-28
 75943232 Report 01 Issue 1 Issued 2019-05-16
 75943232 Report 03 Issue 2 Issued 2019-06-28
 BSH/4542/001/4143301/19 Issued 2019-05-15
 NA20ZZ1209B Dated 2020-12-09
 QINETIQ/MS/EES/TSTR0903362/3 Issued 2009-08-13
 NA13ZZ0307B Dated 2013-03-07
 75921110 Report 04 Issue 1 Issued 2013-05-17

3.3.2 IEC 60945:2002 incl. IEC 60945 Corr. 1:2008

17-338 (E) Issued 2017-11-06
 17-402 (E) Issued 2018-01-26
 17-398 (E) Issued 2018-01-26
 17-400 (E) Issued 2018-01-26
 17-401 (E) Issued 2018-01-26
 17-399 (E) Issued 2018-01-26
 ENV18022 Issued 2018-08-23
 EMC18095 Issued 2018-07-05
 NA17ZZ0821A Dated 2017-08-23
 NA15AS0320A Rev.2 Dated 2015-04-14
 YN0506009-1 Issued 2005-07-15
 EMC12257 Issued 2013-01-07
 RM614104/01 Issue 1 Issued 2005-06-24
 RM611325-01 Issue 2 Issued 2004-04-14
 75904457 Report 02 Issue 2 Issued 2009-01-30
 NA14ZZ0311C Dated 2014-03-12
 EMC18077 Issued 2018-06-21
 EMC18013 Issued 2018-06-28
 JRCSC120309A Dated 2012-03-11
 Corrosion Statement Dated 2013-12-16
 NA19ZZ0516F Dated 2019-05-15
 NA19ZZ0519A Dated 2019-05-19
 NA13ZZ0322A Dated 2013-03-25
 Z071C-08254 Issued 2008-12-03



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3.3.3 IEC 61162 Series

75943232 Report 04 Issue 1	Issued	2019-05-16
75943232 Report 05 Issue 1	Issued	2019-05-14
NA18AS0628B	Dated	2018-06-28
NA19ZZ0516G	Dated	2019-05-16
NA21ZZ0517B	Dated	2021-05-17
NA21ZZ0628D	Dated	2021-06-29

3.3.4 IEC 62923-1:2018 and IEC 62923-2:2018

NA21ZZ0520C	Dated	2021-05-20
NA21ZZ0520D	Dated	2021-05-20
NA21ZZ0628C	Dated	2021-05-29

3.3.5 IEC 62288 Ed. 3.0:2021

CML/Inspection/T2018-01	Dated	2018-12-19
NA23ZZ0705C	Dated	2023-07-07

3.4 Build Status

3.4.1 Hardware

Parts Lists and Diagrams of JLR-8600 NA19ZZ0325A	Dated	2019-03-25
Circuit Diagram MD00-CMJ-611	Dated	2018-06-18
Circuit Diagram ED01-CMA-920	Dated	2009-02-14
Circuit Diagram MD00-CMJ-610	Dated	2018-06-07
Circuit Diagram MD00-CMH-2500	Dated	2018-06-16
Circuit Diagram 90P47584	Dated	2017-04-26
Circuit Diagram 90P47500-E	Dated	2018-10-03
Circuit Diagram 90P47499-C	Dated	2017-04-27
JLR-7900 7600 Parts List	Modified	2013-01-19
CMJ-610 Parts List	Modified	2024-04-15
NDC-4100 CMH-2500 Parts List	Modified	2024-04-15
CMJ-611_Parts List	Modified	2019-03-29
CCN-1650 Parts List	Modified	2024-04-15
CGC-600 Parts List	Modified	2024-04-15
CMH-2501 Parts List	Modified	2024-04-15
CMJ-612 Parts List - modified	Modified	2024-04-15

3.5 Notes

Note 1	The GPS Antenna/Receiver heads incorporates additional receivers which are outside the scope of this type approval. The JLR-8600 uses the JLR-4350 GPS Antenna and the JLR-8600-D uses the JLR-4341 GPS Antenna
Note 2	The plotting and navigation assistance functions of the JLR-8600 are outside of the scope of this type approval.
Note 3	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 4	The JLR-8600 and JLR-8600-D meet the requirements of IEC 62923-1 for EUT function type P.

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4 U.S. Coast Guard Number

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

165.130/EC2443

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 26th, 2023.

5 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
(M J Hardy)

Date:

17/04/2024

On behalf of TÜV SÜD DANMARK ApS