



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	Jotron AS Ringdalskogen 8 3270 Larvik Norway
Product(s)	Tron AIS TR-8000 MkII
Product Sector	Navigation equipment
Product Type	MED/4.32 Universal automatic identification system equipment (AIS)

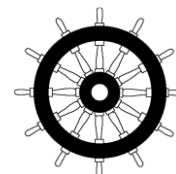
and on the basis of the Technical Data and information detailed in the Annex to this certificate.

Valid from: 22 September 2025 (M J Hardy) *M Hardy* Expiry Date: 04 December 2027

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



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Annex to Marine Equipment Directive Module B Type Examination Certificate

1 Equipment Description

Universal automatic identification system equipment (AIS)

1.1 Models

Model
103650 Tron AIS TR-8000 MkII Transponder Unit ^{Note 1}
103660 Tron AIS TR-8000 MkII Class A complete with GPS antenna
103670 Tron AIS TR-8000 MkII complete IMO package

1.1.1 System Components

Model	Description
103708	TR-8000 Transponder Unit
85400	TR-8000 Display Unit
86853	GPS Antenna, std
86581	Power cable, Display unit

2 Specified Requirements

2.1 Implementing Regulation (EU)2024/1975 MED/4.32 Row 2 of 2 ^{Notes 2&3}

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.74(69) IMO Res. MSC.191(79) IMO Res. MSC.302(87) ITU-RM-1371-5 (02-2014) Note: ITU-RM 1371-5 (02-2014) shall only be applicable in accordance with requirements of IMO Res. MSC.74(69).
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 61993-2:2018
IEC 62288 Ed. 3.0:2021	IEC 62923-1:2018
IEC 62923-2:2018.	

3 Technical Documentation

3.1 Declaration of Conformity

10.09.2025_v.44 Tron AIS TR8000MkII DoC

Modified

2025-09-10

3.2 User Guide

103836 Rev.A TR8000 MkII - Quick Reference Guide

Dated

2021-08-26

103839 Rev.B TR8000 MkII - Operation and Installation Manual

Dated

2025-09-10

103840 Rev.6 TR8000 Technical Manual

Dated

2020-12-17



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3.3 Test Reports

3.3.1 IEC 60945:2002 inc. Corr.1:2008

161140/2	Dated	2011-12-28
BSH/46121/4321890/12-6	Dated	2012-04-18
BSH/46121/4321890/12-4	Dated	2012-04-20

3.3.2 IEC 61993-2:2018

BSH/454.AIS-A/Jotron Tron TR-8000/4	Dated	2021-06-18
BSH/46121/4321890/12-1	Dated	2012-04-19
BSH/4543/001/4322981/15-1	Dated	2015-12-02
BSH/46121/4321890/12-4	Dated	2012-04-20
150521	Dated	2012-04-18
BSH/454.AIS-A/Jotron Tron TR-8000/5	Dated	2022-11-18

3.3.3 IEC 62288 Ed. 3.0:2021

BSH/46121/4321890/12-3	Dated	2019-04-12
BSH/4543/001/4322981/15-3	Dated	2015-12-02
BSH/454.AIS-A/Jotron Tron TR-8000/5	Dated	2022-11-18
Delta-IEC-62288-ED2-ED3	Modified	2025-09-10

3.3.4 IEC 61162-1:2016 and IEC 61162-2 Ed.1.0:1998-09

BSH/4543/001/4322725/14-1	Dated	2014-07-09
BSH/46121/4321890/12-1	Dated	2012-04-19
BSH/4543/001/4142941/15	Dated	2015-12-07
BSH/454.AIS-A/Jotron Tron TR-8000/5	Dated	2022-11-18

3.3.5 IEC62923-1:2018 and IEC62923-2:2018

BSH/454.AIS-A/Jotron Tron TR-8000/4	Dated	2021-06-18
Statement BAM - TR-8000MkII	Dated	2022-11-21

3.4 Build Status

3.4.1 Hardware

Schematics_TR8000 MkII Controller Drawing 85301	Dated	2009-10-16
BOM TR8000 MkII rev 2036	Dated	2021-06-14
EngineeringPartRevision85400TR8000DisplayUnit 221018-125151	Dated	2022-10-18

3.4.2 Software Note 4

Software display	01.02
Software transponder	01.02



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3.5 Notes

- Note 1 An additional minimum keyboard and display (MKD) is required to meet the requirements of (EU)2024/1975 item MED/4.32.
- Note 2 Ethernet port is only for connection between TR8000 transceiver and TR8000 display(s).
- Note 3 The products listed meet the requirements of IEC 62923-1 for EUT function type P.
- Note 4 This approval remains valid for equipment including subsequent minor software amendments which have been formally accepted in accordance with the TÜV SÜD Testing, Certification, Validation and Verification Regulations.

4 U.S. Coast Guard Number

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

165.155/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:

22/09/2025

On behalf of TÜV SÜD DANMARK ApS