



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	Jotron AS Ringdalskogen 8 3270 Larvik Norway
Product(s)	Tron SART20
Product Sector	Navigation equipment
Product Type	MED/4.18 Search and rescue locating devices (SRLD): 9 GHz SAR transponder (SART)

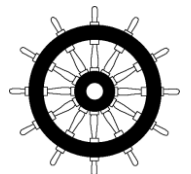
and on the basis of the Technical Data and information detailed in the Annex to this certificate.

Valid from: 10 October 2023

M Hardy
(M.J.Hardy)

Expiry Date: 27 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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Annex to Marine Equipment Directive Module B Type Examination Certificate



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1 Equipment Description

9 GHz SAR transponder (SART)

1.1 Models

Model
Tron SART20

1.1.1 System Components

Model	Description
83010	Tron SART20 Radar Transponder w/Bulkhead Bracket
82615	LSH 14 Light 3v6 Battery SART20/AIS-SART 5 Year maint.kit
82746	Bulkhead Bracket for SART20/AIS-SART/SA70

1.2 Software ^{Note 1}

Identity	Description
Version: 1.08	Tron SART 20

2 Assessed Requirements

2.1 Implementing Regulation (EU)2023/1667

2.2 Compliance Requirements for MED/4.18

IMO Resolutions	International Testing Standards	
IMO Res.A.694(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.530(13) IMO Res.A.802(19) IMO Res.MSC.510(105) ITU-R M.628-5	IEC 61097-1:2007	Global maritime distress and safety system (GMDSS) — Part 1: Radar transponder — Marine search and rescue (SART) — Operational and performance requirements, methods of testing and required test results

3 Technical Documentation

3.1 Declaration of Conformity

12.04.2023_v.28_TronSART20_DoC Modified 2023-04-12

3.2 User Guide

Tron SART20 Radar Transponder User manual, 84145 Rev. L Dated 2021-12-21

3.3 Test Reports

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

93193	Dated	2008-03-05
93193/12	Dated	2008-03-11
93193/11	Dated	2008-03-11
waiver_Trone SART20	Dated	2022-10-26
Waiver Corrosion Test Tron SART20	Dated	2022-10-26
Statement_TroneSART20_6.3 Software	Dated	2022-11-07



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3.3.2 IEC 61097-1 (2007)

93193/10,	Dated	2008-03-12
Amendment to Test Report 93193/12	Dated	2011-03-10
93193/12	Dated	2008-03-11
sart20rangeperformance	Modified	2022-11-25
SART20_SART_MK2_200502	Dated	2008-02-06
waiver_Trone SART20	Dated	2022-10-26
Waiver Corrosion Test Trone SART20	Dated	2022-10-26

3.4 Build Status

3.4.1 Hardware

82615_Battery 5 years maint.kit	Dated	2016-03-30
82616_Transceiver Module	Dated	2016-03-30
82617_Transceiver Board	Dated	2016-03-30
84104_Antenna Waveguide Module	Dated	2016-03-30
84591_Trone SART	Dated	2016-03-30
Circuit Diagram E-82617	Dated	2007-05-07
Block Diagram E-82617	Dated	2007-05-07
KP-82617-top_X-82617-bottom	Dated	2007-05-07

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.

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:		Date:	2023-10-10
	(M.J.Hardy)		
On behalf of TÜV SÜD DANMARK ApS			