



UK Approved Body Authorised
by the MCA



Marine Equipment UK Assessment Module B Type Examination Certificate

This is to certify that TUV SUD BABT UNLIMITED did undertake the relevant type approval procedures for the equipment identified below, which was found to be in compliance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended, under Annex 1 of the listed Amendment of MSN 1874 for the types of equipment identified.

MSN 1874 Amendment	Amendment 6
Certificate Holder and Manufacturer	Jotron AS Ringdalskogen 8 3270 Larvik Norway
Product(s)	Tron SART20
Product Sector	Navigation equipment
Product Type	UK/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: 28 November 2022

(Signature) *M 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



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Annex to Marine Equipment UK Conformity Assessment Module B Type Examination Certificate

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

Identity	Description
Version: 1.08	Tron SART 20

2 Assessed Requirements

2.1 MSN 1874 Amendment 6 Annex 1

2.2 Compliance Requirements for UK/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.A530(13) IMO Res.A.802(19) ITU-R.M.626-5	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

08.06.2022_v.20_TroneSART20_DoC Modified 2022-06-08

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 Trone 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.

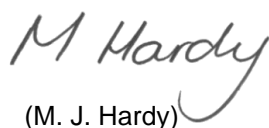
4 Conditions of Validity

This certificate ceases to be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with TÜV SÜD BABT or a person appointed by TÜV SÜD BABT to perform that role.

Should the specified regulations (international conventions and the relevant resolutions and circulars of the IMO) or standards be amended and enforced through MSN 1874 during the validity of this certificate, the product(s) is/are to be reapproved prior to it/them being placed on the market or onboard vessels to which the amended regulations or standards apply.

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 Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body.

Signature:


(M. J. Hardy)

Date:

28/11/2022

On behalf of TÜV SÜD BABT UNLIMITED