

TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB00009AN
Revision No:
0

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

That the Speed and distance measuring equipment (SDME)

with type designation(s)
SAL T200

Issued to

SAL Navigation AB
Hägersten, Sweden

is found to comply with the requirements in the following Regulations/Standards:

Regulation **MSN 1874 Amendment 10**,

item No. UK/4.7. SOLAS 74 as amended, Regulations V/18, V/19 & X/3, IMO Res. A.694(17), IMO Res. A.824(19), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87)

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2030-03-27**.

Issued at **London** on **2025-03-28**

DNV local unit:
Finland CMC



for **DNV UK Ltd.**

Approval Engineer:
Steinar Kristensen

Approved Body No.: **0097**

Christine Mydlak-Röder
MER Service Responsible



**Maritime &
Coastguard
Agency**

UK Approved Body Authorised
by the MCA

This certificate will not 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 the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

"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. In case limitations of use apply, these should be indicated in the Annex.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

SAL T200 is a Speed Logs for measurement of Speed- and distance Through the Water and dual-axis Speed Over the Ground, consisting of the following units:

Unit	Description	Type/part no.	SW ver.	Comment	Location
Main unit	SAL T200 ELC	80.11.02	Axx (STW) Dxx (SOG)	Power: In:100-115VAC/ 220-230VAC, 50-60Hz, Out: 20VDC Interfaces: 1x LogFailAlarm Relay for STW 1x opto input and 1x opto output for control of SOG transmitting	Protected
Transducer	SAL T TRU 2-2 30M or SAL T TRU 2-2 40M or SAL T TRU 2-2 50M	704400 704401 704404	NA		Submerged
Master Display	SAL SD4-2	80.12.02	Cxx	Power, input: 10-32VDC Interfaces: 1x NMEA In 10x NMEA Out 3x Digital In (+5V) 1x Digital Out (+5V)	Exposed
Display Unit	SAL SD4-2 or SAL SD4-3 or SAL SD4-4	80.12.02 80.12.03 80.12.04	Cxx Cxx Cxx	Same specifications as SAL SD4-2	Exposed
Options					
Processing Unit	SAL LPU2	80.11.03	Bxx	Power In: 100-115VAC / 220-230VAC, freq 50-60Hz. Interface: Inputs: 9x NMEA, 1x RS232, 1x Analog 4x Opto Outputs: 23x NMEA, 1x RS232 4x Relay 8x Opto, 4x ToggleRelay, 2x Analog 9x 12-28VDC Power supply 3x 18-32VDC Power supply	Protected
NMEA Buffer	1N4B	704160	N/A	Power, input: 10-40 VDC Interfaces: 4x NMEA Out 1xNMEA In	Protected

Unit	Description	Type/part no.	SW ver.	Comment	Location
Displays	SAL SD4-2 SAL SD4-3 SAL SD4-4 SAL SD4-5 SIA-3-8	80.12.02 80.12.03 80.12.04 80.12.05 701692	Cxx Cxx Cxx Axx N/A	Same specifications as SAL SD4-2	Exposed
Mounting Box	SD4 BMB	704080	N/A	Bulkhead mounting box for SD4 display	Exposed

Application/Limitation

- SAL T200 is measuring and indicating the speed- and distance through the water and over the ground as required by SOLAS Ch.V.19/2.3.4 and Ch.V.19/2.9.2
- The equipment complies with the requirements for measuring speed through the water and speed over ground and can be operated as two independent devices for measuring speed through the water and speed over the ground as required by IMO Res. MSC.334(90).
- SAL T200 shall be installed and set up according to the SAL T200 Manual, doc. No 80.16.02, Rev A05 (or later version)
- SAL T200 does not issue alerts, hence testing according to IEC 62923-1 and IEC 62923-2 is deemed as not being applicable for this product.

Type Examination documentation

DNV No	Document ID	Rev.	Description
2	1209547-2	2012-03-30	Report: Intertek, Test report SAL T ELC (WTU-Assy) EN 60945 (SAL doc. no AA12028)
3	1209547-3	2012-04-02	Report: Intertek, Storage temperature tests for SAL T2 ELC (WTU-Assy) (SAL doc. no AA12030)
4	273 152 A	1	Report: Innventia, Vibration test report for SAL T2 (SAL doc. no AA12031)
5	BSH/4612/4061984/11	2011-09-30	Report: BSH, IEC 61023 (2007) test report for SAL T3+ ELC (SAL doc. no AA13034)
6	BSH/46122/4072359/13	2013-04-23	Report: BSH, IEC 61023 (2007) and MSC.334(90) test report for SAL T2+ (SAL doc. no AA13036)
7	BSH 4612/4071593/10	2010-03-17	Report: BSH, IEC 62288 (2008) test report for SD4-X display unit (SAL doc. no AA17030)
9	1811910STO-001	2018-09-18	Report: Intertek, Power supply test report for SAL T2+, 100-115V (SAL doc. no AA18093)
10	BSH 4612/4071842/11	2011-01-12	Report: BSH, Assessment report for IEC 61023 (2007), IEC61162 (2010) and IEC62288 (2008) test report for SAL T2 (SAL doc. no AA19077)
20	445	2005-07-04	Report: BSH, SD4 Compass safe distance (SAL doc. no AA0507)
21	BSH/4612/40070407/06	2006-11-28	Report: BSH, IEC 61023 (1999), IMO Res. A.824 (19)(1995), IEC 61162-1 and IMO Res.MSC.96(72) test report for SAL T2/T2S/T3/T3+/T1 (SAL doc. no AA06081)
22	BSH/46162/0041158/09	2010-03-22	Report: BSH, IEC 61162-1 (2007) and IEC 61162-2 (1998) test report for splitter/buffer interface converter 1N4B (SAL doc. no AA10049)
23	913128	2009-10-19	Report: Intertek, Environmental test report for Qwerty interface units incl. 1N4B (SAL doc. no AA10053)
24	F917800-A	2009-12-14	Report: SP, EMC test report for interface units incl. 1N4B (SAL doc. no AA10054)
25	BSH 4612/4071896/11	2011-02-16	Report: BSH, IEC 61023 (2007), IEC 61162-1 (2010) and IEC 62288 (2008) test report for SAL T2+ (SAL doc. no AA11054)
26	1122354-1	Ed.2	Report: Intertek, EMC test report for SAL T2 with WTU-Assy (SAL doc. no AA12025)
28	80.16.02	A05	Manual: SAL Navigation, Manual for SAL T200 STW and SOG Speed Log

Tests carried out

- Environmental Tests: IEC 60945 (2002) incl. Corr.1 (2008)
- Performance Tests: IEC 61023 (2007)
- Serial Interface Tests: IEC 61162-1 (2016)
- Presentation of information: IEC 62288 (2021)

Marking of product

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to the product. In addition the product shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.