EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB0000AW5
Revision no.:
0

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as “Forskrift om Skipsutstyr” by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

that the **Ship Earth station for use in the GMDSS**

with type designation(s)
LT-4100S

issued to
Lars Thrane A/S
Holte, **Denmark**

is found to comply with the Implementing Regulation **(EU) 2024/1975** for
Item no. **MED/5.22** (Row **3 of 3**)
according to the following requirements:
SOLAS 74 Reg. IV/10, IMO Res. A694(17), IMO Res. MSC.36(63)-(1994 HSC Code) 14, IMO Res. MSC.97(73)-(2000 HSC Code) 14, IMO Res. MSC.302(87), IMO Res. MSC.434(98), IMO MSC/Circ.862, IMO COMSAR/Circ.32, IMO Res. MSC.147(77), IMO Res. MSC.263(84), SOLAS 74 Reg. IV/14, SOLAS 74 Reg. X/3

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

Date of issue: **2025-08-28**

Expiry date: **2030-08-27**

DNV local unit:
Denmark CMC

Approval Engineer:
Steinar Kristensen

Notified Body
no.: **0575**

for **DNV AS**

Christine Mydlak-Röder
Head of Notified Body

NORWEGIAN ACCREDITATION PROD 019

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-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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 USD 300 000.

Product description

Please see Appendix: Product Description

Application/Limitation

The LT-4100S GMDSS system:
- shall be installed according to manufacturer's User & Installation Manual.
- includes an integrated Global Navigation Satellite System (GNSS) receiver for position fixing.
- is type approved as Ship Security Alert System, as an option, in accordance with the requirements specified in IMO Res. MSC.147(77)- Revised performance standards for Ship Security Alert System (SSAS).
- is type approved for Long-Range Identification and Tracking (LRIT), as an option, in accordance with the relevant requirements for shipborne equipment in IMO Res. MSC.263(84)- Revised performance standards and functional requirements for the Long-Range Identification and Tracking of ships, using the Iridium as Communication Service Provider (CSP).
- supports 2 individual voice lines and IP Data connectivity.
- supports combined operation of GMDSS, SSAS and LRIT services.
- supports SSAS and LRIT services in Sea Areas A1, A2, A3 or A4.
- complies with the requirements for Other Network Function (ONF) as specified in IEC 61162-450 (2018)
- can be used for GMDSS services in Sea Areas A1, or A2 or A3 defined by SOLAS 1974 as amended, where Flag states have recognized Iridium as a mobile satellite service for use in the GMDSS.
- complies with the requirements for reception of MSI through the Iridium SafetyCast service and can be used for compliance with the carriage requirements for EGC when such services are made available through the Iridium satellite system.

Type Examination documentation

Tests carried out

• Performance tests:	IEC 61097-16 (2019)
• Environmental tests:	IEC 60945 (2002) incl. Corr.1 (2008)
• Radio test:	ETSI EN 301 441 V2.1.1 (2016)
• Serial interface tests:	IEC 61162-1 (2016), IEC 61162-1 (2024), IEC 61162-2 (1998) and IEC 61162-2 (2024)
• Presentation of information:	IEC 62288 (2021)
• Bridge Alert Management:	IEC 62923-1 (2018) and IEC 62923-2 (2018)
• Ship Security Alert (SSAS):	DNV TA programme 849.01
• Long-Range Identification and Tracking (LRIT):	IEC 62729 (2012)

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.

APPENDIX
Product Description

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The LT-4100S GMDSS system provides Global Maritime Distress and Safety System (GMDSS) services through the Iridium Satellite System, and consists of the following units:

Unit	Type/Part no.	Comment/ Description	Location
Control Unit	LT-4110S	Master unit with external interfaces and operational user interface and bracket mount. Interfaces: 1 x 12 or 24V DC input power 1 x Antenna Unit 1 x Power 1 x LAN 1 x Handset 1 x AUX connector for • 1x Digital input, • 1x Digital output and • 1 x RS422 NMEA in/out	Protected
Handset	LT-3120	Handset for voice interface, on/off hook detection with LT-3121 cradle	Protected
Cradle	LT-3121	Cradle for LT-3120 Handset	Protected
Antenna Unit	LT-4130	Antenna for Iridium Satellite System and Global Navigation Satellite System (GNSS)	Exposed
Options			
Interface Unit *)	LT-3140S	Interfaces: 4 x LAN (RJ-45 connector) 2 x RS422 NMEA in/out 4 x GPIO for SSAS 4 x CAN for Alarm panels and Printer adapter 1 x 12 or 24V DC input power	Protected
Alarm Panel	LT-3150S	Remote alarm panel with Distress button, DIM-button and sounder	Protected
Alert buttons	91-102073 91-102074	SSAS Alert Button (incl. 50m cable) SSAS Test Button (incl. 50m cable)	Protected
Printer Adapter	LT-3160S	Adapter for connection to GMDSS printer, 36 pin connector	Protected

*) Interface Unit is required for installations that includes Alarm Panel or Printer Adapter or SSAS functionality.

Location specifies the location for the units according to IEC 60945 (2002).

Software modules	**Version**
LT-4100S GMDSS SW	v1.00R-xxxx