DNV·GL

Certificate No:
MEDB00006XG

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Universal automatic identification system (AIS)

with type designation(s)
SAAB R5 Supreme AIS with MKD ECPINS, Trade Name: SAAB R5 Supreme AIS, ECPINS W-AIS

Issued to
OSI Maritime Systems Ltd.
Burnaby, BC, Canada

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170,**
item No. MED/4.32. SOLAS 74 as amended, Regulations V/18, V/19 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73),IMO Res.MSC.302(87), IMO Res. MSC.191(79), ITU-RM-1371-5 (02-2014),IMO Res.MSC.74(69)

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

This Certificate is valid until **2021-08-28**.
Issued at **Hamburg** on **2021-03-18**

DNV GL local station:
Vancouver

Approval Engineer:
Harald Bluhm

Notified Body
No.: **0098**

for **DNV GL SE**

Christine Mydlak-Roeder
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), 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", signed February 27th, 2004, and amended by Decision No 1/2018 dated February 18th, 2019.

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 GL SE 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.

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Product description

The OSI universal automatic identification system (AIS) comprises of the following equipment necessary for functioning:

No.	Designation	Type Designation
1	**Transceiver units** Radar Equipment AIS Equipment	**One or more units** As defined in separate certificate *)
2	**Main Processing Unit** Computer	As defined in separate certificate *)
3	**Display Units CAT 1, CAT 1H, CAT 1C, CAT 1HC** PPI diameter min. 320mm, may be also used for CAT 2 and CAT 3, ECDIS, INS	As defined in separate certificate *)
4	**Display Units CAT 2, CAT 2H, CAT 2C, CAT 2HC** PPI diameter min. 250mm, may be also used for CAT 3, ECDIS, INS	As defined in separate certificate *)
5	**User Interface** Operator Units	As defined in separate certificate *)
6	**Interfaces** Serial to ethernet converter	As defined in separate certificate *)
7	**Network switches** Ethernet switches / Fiber LAN converter	As defined in separate certificate *)
8	**Optional components**	As defined in separate certificate *)

*) The Type Approval certificate TAA00002US for OSI system platforms in its latest revision at the date of placing the system on the market is part of this certificate, for the relevant revision see also https://approvalfinder.dnvgl.com/.

The following Software is necessary for the OSI AIS:

No.	Designation	Type Designation
1	Operating System	MS Windows 7 Embedded, or MS Windows 10 Pro, or MS Windows 10 IoT, or MS Windows Enterprise LTSB / LTSC
2	ECPINS R5 Supreme AIS transponder	6.2.x R5 1.1.x

Tests carried out

Test Type	Test Standard
Environmental and EMC	IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008)
Presentation	IEC 62288 (2014)
Interface	IEC 61162-1 (2016)
Interface	IEC 61162-2 (1998)
Interface	IEC 61162-450 (2011) incl. am1 (2016)
Performance	IEC 61924-2 (2012)
Performance	IEC 61993-2 (2012)

Type Examination documentation

Manual ID	Document Source	Description
TAA00002US	DNV	Type approval certificate
1000424-RPRT	OSI	List of test reports and type approvals for OSI Integrated Navigation & Tactical (INTS) platform
7000 118-300	Saab	R5 Supreme AIS Transponder Operation and Installation Manual

Marking of product

According to IEC 60945, Sect.4.9:
The product to be marked with following information, where practicable:
• Identification of the manufacturer,
• Equipment type number or model identification under which it was type tested,
• Serial number of the unit,
• Compass safe distance.
Alternatively, the marking may be presented on a display at equipment start-up, and in case of fixed equipment compass safe distance may be given in the equipment manual. According to Article 10 of the Council Directive (MED):
• Wheel mark to be affixed visibly, legibly and indelibly to the product or to its data plate and, where relevant, embedded in its software. Where that is not possible or not warranted on account of the nature of the product, it shall be affixed to the packaging and to the accompanying documents.
• Wheel mark to be affixed at the end of the production phase. For specific products, manufacturers may use an appropriate and reliable form of electronic tag instead of, or in addition to, the wheel mark.
END OF CERTIFICATE