DNV·GL

Certificate No:
MEDB000043D

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 Speed and distance measuring equipment (SDME)

with type designation(s)
SATLOG SLS 4120

Issued to
Wärtsilä SAM Electronics GmbH
Hamburg, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773,**
item No. MED/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 **2023-06-25**.

Issued at **Hamburg** on **2018-06-26**

DNV GL local station:
Hamburg

Approval Engineer:
Jörg Rebel

Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
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.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

Job Id: **344.1-008177-1**
Certificate No: **MEDB000043D**

Product description

The speed and distance measuring equipment SATLOG SLS 4120 consists of following components:

Necessary for operation:

Component	*Type*	*Software version no.*	
Main electronic unit	SATLOG SLS 4120	1.1x	
DGPS Sensor	R4 DGPS Navigation Sensor		OR
DGNSS Sensor	R4 DGNSS Navigation Sensor		OR
DGNSS Sensor	R5 Nav DGNSS Sensor		
DGPS Antenna	MGL4, MXB5		OR
DGNSS Antenna	MGL5		
Universal Digital Display	UDD SAM 4900	1.70	

Necessary for applications with optional speed-through-water extension:

Component	*Type*	*Software version no.*	
Universal Digital Display	UDD SAM 4900	1.70	OR
Digital Speed Display	Consilium SD 1-6		OR
Digital Speed Display	Consilium SD 1-7		OR
Digital Speed Display	Consilium SD 4-2		OR
Digital Speed Display	Consilium SD 4-3		
BEN marine EM-Log	DEBEG 4671		OR
Water track log	Consilium R1		OR
Water track log	Consilium R1a		OR
Water track log	SAM 4642		

Components which may be carried additionally:

Component	*Type*	*Software version no.*
Universal Digital Display	UDD SAM 4900	1.70
Digital Docking Display	Consilium SD 2-1	
Digital Docking Display	Consilium SD 2-11	
Digital Docking Display	Consilium SD 4-5	
Universal Digital Repeater	Plath UDR	

Application/Limitation

None

Type Examination documentation

DNV GL No	Document ID	Rev.	Description
26	271.259 831 PV	00, 2018-05-17	Report: SLS 4120 – R5 configuration and integration test
25	BSH/4543/001/4072791/14	2014-07-03	Report: SLS 4120 acc. to IEC 61023, IEC 61162 and IEC 62288
24	BSH/4612/4071989/11	2011-06-20	Report: SAM 4642 acc. to IEC 61023, IEC 61162 and IEC 62288
17	7000 118-383	A1, 2017-03-20	Manual: R5 GNSS - Operation and Installation
16	701810 E2	2002-08-20	Manual: SAL R1 - Technical
15	271259651	2016-03-14	Manual: SAM 4642 - Technical
14	04MU005	2004-05-25	Manual: DEBEG 4671 - Operation and Installation

13	-	2015-11-26	Manual: UDD SAM 4900 - Technical
12	271.259.831	A, 2018-06-25	Manual: SLS 4120 - Technical
11	959	2016-12-08	Certificate: R5 DGNSS Compass Safe Distance (IEC 60945, 11.2)
10	F161552E1	2016-10-26	Report: R5 DGNSS acc. to IEC 60945, 9 and 10
9	U161552E1	2016-09-16	Report: R5 DGNSS acc. to IEC 60945, 8
8	BSH_4542-001-4143072-16	2017-03-16	Report: R5 DGNSS acc. to IEC 61108-1 and IEC 61162-1
7	BSH/4615/4120131/05	2006-07-12	Report: SBX4 DGPS acc. to IEC 61108-4
6	BSH/4543/001/4072857/15	2015-01-06	Report: SAM 4642 acc. to IEC 62288 Ed.2
5	BSH/4612/4070262/06	2006-09-08	Report: SAM 4642 acc. to IEC 61023 and IEC 61162-1
4	BSH/4543/001/4072858/15	2015-01-06	Report: SLS 4120 acc. to IEC 62288 Ed.2
3	BSH/4543/001/4072768/14	2014-05-06	Report: SLS 4120 acc. to IEC 61023 and IEC 61162-1
2	BSH 4612/4071990/12	2012-11-09	Report: SLS 4120 acc. to IEC 61162-1
1	BSH/4612/4070614/07	2007-10-24	Report: SLS 4120 acc. to IEC 61023 and IEC 61162-1

Tests carried out

- Performance testing: IEC 61023 (2007)
- Environmental testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Serial interface testing: IEC 61162-1 (2010 and 2016), IEC 61162-2 (1998)
- Presentation of navigational information: IEC 62288 (2014)

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