

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007B0

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 Transmitting heading device THD (magnetic method)

with type designation(s)
Fluxgate Compass

Issued to

AVANTIX SASU
Aix en Provence, France

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

Regulation (EU) 2021/1158,

item No. MED/4.2. 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.116(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 **2027-01-24**.

Issued at **Høvik** on **2022-01-25**

DNV local station:
France CMC

Approval Engineer:
Tommi Juhani Rifaat



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
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 United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2019 dated February 22nd, 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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 300,000 USD.



Product description

The Fluxgate Compass consists of the following components:

Unit	Item	Reference
Measuring cabinet	Cabinet	111311
	Processing Board	110802
Repeater Unit	Repeater	111450
	Power supply board	110799
	Fluxgate screen interface board	114894
	SMARC IMX6 Board	105116
Charger	Charger with mains adapter and housing	110796

Application/Limitation

- The Fluxgate Compass is to be installed in accordance with manufacturers documentation.
- The Fluxgate Compass is not to be installed on HSC (High Speed Craft).

Type Examination documentation

DNV No	Drw No	Rev	Title
28	DP072607CRT022	00	Report: Avantix, ISO 22090-2, Dynamic Pitch Test Report
27	DP072607CRT019	00	Report: Avantix, ISO 22090-2, Dynamic Roll Test Report
23	DP072607CRT016	00	Report: Avantix, ISO-22090-2 Follow up error test
21	DP072607DJD002	00	Report: Avantix, IEC 62288 Navigation Display Justifications
20	DP072607CRT013	00	Report: Avantix, ISO 22090 Dynamic Accuracy test
19	DP072607CRT007	00	Report: Avantix, Fluxgate ISO 22090-2 static error test
18	DP072607CRT004	00	Report: Avantix, Test Sheet IEC 61162
17	DP072607CRT005	00	Report: Avantix, Test Sheet IEC 62923 BAM
15	DP072607PVL004	00	Report: Avantix, IEC 62923 BAM test procedure
14	DP072607PVL003	00	Report: Avantix, IEC 61162 Interface test procedure
13	RCE-100-21-100785-1-A	00	Report: Emitech, IEC 60945 Partial EMC Test Report
12	R-ADE-BNN-20-300524-2A	00	Report: Adetests, IEC 60945 Temperature tests
11	R-ADE-BMN-20-300524-1A	01	Report: Adetests, IEC 60945 Vibration test
10	DP072607CRT001	00	Report: IEC 60945 noise level measurement
9	DP072607CRT003	00	Report: Performance test ISO 22090
5	D050304- CQPE	3	Report: LNE, IEC 60945 rain & spray test (translated)
4	D050304- CLE	1	Report: LNE, IEC 60945 tests (translated)
2	DP072607MUL005	01	Manual: Ben Marine, User & Maintenance Manual

Tests carried out

- Environmental testing: IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008),
- Presentation testing: IEC 62288 (2014)
- Interface testing: IEC 61162-1 (2016)
- Performance testing: ISO 22090-2 (2014)
- Bridge Alert Management testing: IEC 62923-1/ 62923-2 (2018)



Job Id: **344.1-011348-1**
Certificate No: **MEDB00007B0**

Marking of product

The name and contact address of the manufacturer and type designation of the product is to be affixed to the equipment in a clearly visible location. In addition, the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.