

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00004U1
Revision No:
1

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

This is to certify:

That the GPS equipment

with type designation(s)
KGP-922

Issued to
Koden Electronics Co., Ltd.
Uenohara, Yamanashi, Japan

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170**,
item No. MED/4.14. 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.112(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87)

Manufacturers authorised representative
Koden Elektronik Gesellschaft mit beschränkter Haftung
Groß-Umstadt, Germany

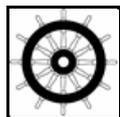
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-07-09**.

Issued at **Hamburg** on **2021-08-06**

DNV local station:
Augsburg

Approval Engineer:
Jörg Rebel



Notified Body
No.: **0098**

for **DNV 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) 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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 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.



The KGP-922 is a GNSS navigator able to work with the GPS satellite system. KGP-922 consists of following components:

Necessary components:

No.	Component	Type designation
1	Display Unit ¹	KGP-922
2	Antenna Unit	GA-09(IMO) with 15m cable and BNC connector OR GA-09(IMO) with 0.5m cable with N-P connector
3	DC power cable	CW-276-2M with 5-pin connector and plain end

¹ The Display Unit contains processor, receiver and LCD display.

Optional components:

No.	Component	Type designation
4	Antenna cable extensions	CW-839-30M KIT
		CW-394-60M KIT
5	Conversion cable	CW-826-0.5M with BNC connector/N-P connector
6	Power rectifier	PS-010
7	Junction Box	JB-35

Interfaces:

- 2 serial ports according to IEC 61162-1
- 1 Ethernet port according to IEC 61162-450

Power supply:

Input voltage: 10.8...31.2 VDC or
115...230 VAC (AC/DC rectifier PS-010 required)

Power consumption: < 6 W (at 24 VDC)

Application software:

Software version: KM-F81Bx with x ≥ 3

Application/Limitation

The KGP-922 supports also DGPS with an external beacon receiver as well as Satellite Based Augmentation System (SBAS).

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016) and IEC 61162-2 (1998)
- Presentation testing: IEC 62288 (2014)
- Bridge alert management testing: IEC 62923-1 (2018) and IEC 62923-2 (2018)
- Performance testing: IEC 61108-1 (2003)

Type Examination documentation

DNV No	Document ID	Rev.	Description
11	BSH/454.GNSS/Koden KGP-922	2021-08-04	Report: BSH, Tests according to IEC 62923-1/-2 (2018)
10	2019-OC-KGP922-001	2019-07-10	Report: OstroConsult – Validity of NMEA sentences according to IEC 61162-1:2016
8	0093130022-01	2021-06-15	Manual: Operation Manual for GPS Navigator KGP-922
7	BSH/4542/001/4143262/19-1	2019-07-08	Report: BSH - Tests according to IEC 61108-1, IEC 61162-1 Ed.5 and IEC 61162-450 Ed.2
6	BSH/4542/001/4143262/19-2	2019-03-14	Report: BSH - Tests acc. to MSC.302(87) and IEC61924-2, Annexes J and K
5	BSH/4542/001/4143106/18-2	2018-02-08	Report: BSH - Display tests acc. to IEC 62288 (2014)
4	1-7447/18-01-04	2019-06-26	Report: CTC advanced - Acoustic tests according to IEC 60945, Clause 11.1

DNV No	Document ID	Rev.	Description
3	1026	2019-02-08	Certificate: BSH - Compass Safe Distance
2	1-7447/18-01-03	2019-04-18	Report: CTC advanced - Environmental test according to IEC 60945 Clauses 8.2 to 8.4 and 8.7
1	1-7447/18-01-02	2019-02-01	Report: CTC advanced - EMC tests according to IEC 60945 Clauses 9 and 10

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.

END OF CERTIFICATE