



Type Approval Certificate

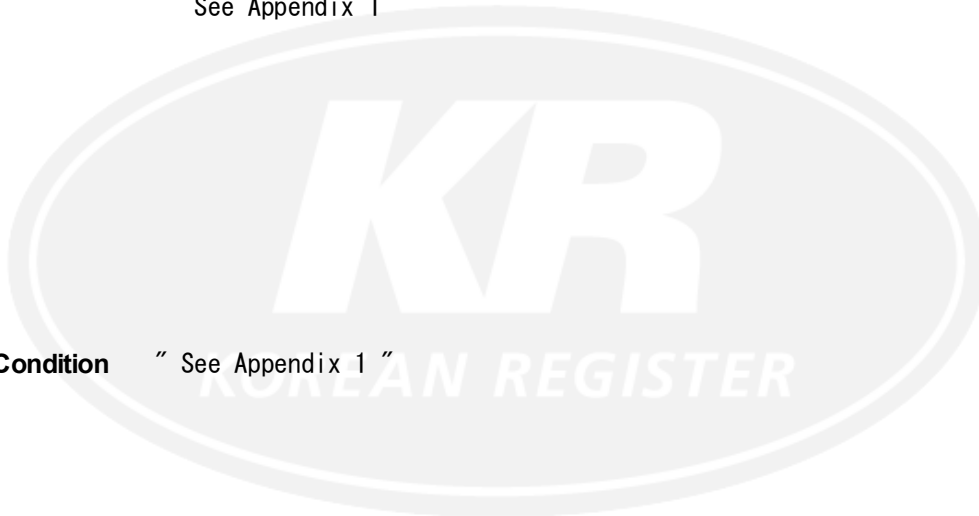
[Monitoring System]

Initial Approval 26 July 2023

Manufacturer VAF Instruments B.V.
 Vierlinghstraat 24, 3316 EL Dordrecht, The Netherlands

Product Description Type : ShaPoLi Data Logging Box SDB-3/ShaPoLi Bridge Panel PC SBP-3

“ See Appendix 1 ”



Approval Condition “ See Appendix 1 ”

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Sec.3, Art. 301 of the Rules for Classification, Steel Ships
 IMO Res.MEPC.335(76) - Resolution MEPC.335(76) - 2021 Guidelines on the Shaft / Engine Power Limitation System to Comply with the EEXI Requirements and Use of a Power Reserve

This Certificate is valid until 25 July 2028

Issued at Busan, Korea on 26 July 2023



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME23032779113) and certificate No.(RTD03790-AC006).



KOREAN REGISTER

*General Manager of
 Marine & Ocean Equipment Team*

- Note :**
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 26 July 2023

A. Product Description

1. Product Specification

1) Product Description (Type : ShaPoLi Data Logging Box SDB-3/ShaPoLi Bridge Panel PC SBP-3)

- VAF ShaPoLi solution is a data collection, calculation, and presentation box, intended to handle data from a ships shaft power meter. The SDB-3 can calculate torque, speed, and power output data. The Bridge Panel PC in combination with the SDB-3 can manage two torque sensors.
- The GPS and NMEA signals are required signals and are used for position and speed.
- The SDB-3 converts all these input signals to one RJ45 Ethernet signal for monitoring purposes through a Bridge Panel PC.
- The digital output signal is available for connection to an external system like an Alarm and Monitoring System.

2) System comprising

Type	Description	Type Approval Cert. No.
SDB-3	ShaPoLi Data Logging Box	-
SBP-3	ShaPoLi Bridge Panel PC	-
Torque Meter	VAF T-Sense torque meter	RTD03790-AC005
	VAF TT-Sense thrust and torque meter	RTD03790-AC005
	Optionally a third-party torque meter	-

3) Specification

A) SDB-3

- Supply Voltage : 115 ~ 230 VAC (50-60Hz)
- Power Consumption : MAX 24W
- Inputs :
 - a. 2x Modbus RS-485 for use with VAF T-Sense- or VAF TT-sense torque meter
 - b. 3x Analog 4-20 mA for use with third-party torque meter and rpm sensor
 - c. 1x NMEA 0183 RS-422
 - d. 1x Ethernet port for connection to SBP-3
- Output :
 - a. 1x Voltage-free contact for alarm
 - b. 1x Modbus RS-485 for SBP-3

B) SBP-3

- Supply Voltage : 115 ~ 230 VAC (50-60Hz)
- Connections : RJ45 Ethernet connection

4) Software Version

- ShaPoLi Data Logging Box : V 1.X.X
- ShaPoLi Bridge Panel PC : V 1.X

2. Approved Drawings and Documents

1) Approved Documents

- Technical Manual TIB-620-GB-0622

3. Test Reports, etc.

1) Reviewed Test Reports

- No. M22.002-P22.002 dated 22 February 2022
- No. M22.001-P22.001 dated 14 February 2022
- IP44 VAF test report dated 29 Jun 2022
- No. 2264237.0501-EMC dated 2022-03-14

Product Description and/or Approval Condition

Date of Issue : 26 July 2023

B. Approval Condition

1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and the approved documentation.
- 2) Degree of protection is to be complied with Rule Pt. 6 Ch.1 Sec.2 201.2. (5).
- 3) The manufacturer is to inform this Society of all kinds of revisions of the equipment including the major change of software. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 4) Type Approval for the Torque Meters is to be maintained separately from this Approval.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is not required.
- 2) In case where this system is installed on board, the Onboard Management Manual (OMM) for individual vessel are to be approved by this Society.

3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

4. Others

- 1) Test condition

Test	Condition	Remark
EMC	All locations excluding the bridge and deck zone All locations including the bridge and deck zone	Only SDB-3 Only SBP-3
Temperature	+5 ~ +70°C	-
Vibration	Acceleration $\pm 0.7g$	-
Degree of protection	IP44	-

< End of Certificate >