TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA00002D0
Revision No:
1

This is to certify:

that the Safety Unit for Rotating Machinery

with type designation(s)
Oil Mist Detection System VISATRON VN2020 / VN2020 EX

issued to
Schaller Automation Industrielle Automationstechnik GmbH & Co KG
Blieskastel, Saarland, Germany

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Temperature	**B**
Humidity	**B**
Vibration	**B**
EMC	**A**
Enclosure	**B/IP54**

Issued at **Hamburg** on **2024-06-27**

This Certificate is valid until **2029-06-26**.
DNV local unit: **Augsburg**

Approval Engineer: **Torsten Dzillak**

for **DNV**

Digitally Signed By: Papanuskas, Joannis
Location: DNV SE Hamburg, Germany

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Visatron Oil Mist Detector for diesel engine crankcase monitoring, types:
VN2020 / VN2020 EX

Power supply	18 Volts – 31.2 Volts DC, max. 2A
Nominal voltage	24 Volts DC
Relay Outputs	2 x 'High Oil Mist Alarm' 1 x 'Ready' 1 x 'Oil Mist Pre-Alarm' (max. 60 Volts AC/DC, 1A)
Cable entry	2 x M25 (8-16mm), 1x M20 (5-13mm)
Communication interface	3 wire RS485, galvanically isolated (CAN-open, galvanically isolated)

For VN2020 EX:

ATEX: II (2G) [Ex op is IIB T4 Gb] +5° C ⩽ Ta ⩽ +70° C
IECEx: [Ex op is IIB T4 Gb] +5° C ⩽ Ta ⩽ +70° C

Application/Limitation

Spare parts are to be supplied in accordance with recommendation in manual.

Product certificate
As long as the units are covered by the Type Approval, a product certificate will not be required. Correct configuration and set up for each delivery to be tested as part of switchboard functional testing and during commissioning after installation.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

See ANNEX.

Tests carried out

Applicable tests according to Class Guidelines DNV-CG-0339, August 2021.
IACS UR M67 Rev. 2, Feb 2015

Marking of product

Manufacturer: Schaller Automation Industrielle Automationstechnik GmbH & Co KG
Model name: As listed under Product description
Serial number: Unique for each delivered item

Periodical assessment

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE

ANNEX
Type Approval documentation
(hidden)

VN2020 EU Klassen BV-ABS-RS-LR-DNV-GL.PDF

01 dimension drawing	dimension drawing.pdf	
02 characteristics	characteristics.pdf	
03 Manual	183000 Manual VN2020-EX-V1.0.pdf	
04 data sheets	Infrared Emitter - SFH 4855_EN.pdf	
04 data sheets	Photodiode - BPW20RF.pdf	
04 data sheets	Pressure Sensor - MPX5100.pdf	
04 data sheets	Thermal Link XG Series.pdf	
05 circuit diagram	1000194_04 - VN2020 CPU Platine - Schalt-Bestueckungsplan-none3d.PDF	
05 circuit diagram	1000196_03 - VN2020 Terminal Box - Schalt-Bestueckungsplan.PDF	
05 circuit diagram	1000198_03 - Visatron-VN2020 Display - Schalt-Bestueckungsplan.PDF	
05 circuit diagram	260064_01 - VN2020 IR TransmitterSchalt-Bestueckungsplan.PDF	
06 release notes	20190204_FB_8.2_027_Release_Notes_FW_VN2020.pdf	
06 release notes	VA_7.3_004e_Quality Assurance Measures for the Generation of Software.pdf	
07 EMC Vibration Test IP-Code	E10 Rev-7 ELECTRICAL AND ELECTRONIC INSTALLATIONS	
07 EMC Vibration Test IP-Code	Environmental testing --- Vibration--Cold---Try heat	
07 EMC Vibration Test IP-Code	E10 Rev-7	1-7830_19-01-04.pdf
07 EMC Vibration Test IP-Code	Environmental testing --- Vibration--Cold---Dry heat	1-7830_19-01-05.pdf
09 ATEX and IECEx	ATEX191048_engl_pc.pdf	
09 ATEX and IECEx	CoC_draft_IECEx_IBE_19.0010_0.pdf	
10 inspection plan	inspection plan_V02.pdf	
photographic records	01 clogging of suction pipe.png	
photographic records	01 Splash oil 55 degree.JPG	
photographic records	03 Splash Oil.JPG	
photographic records	Calibration and measuring equipment	
photographic records	exposed to water vapour	
photographic records	filters - gravimetric method.JPG	
photographic records	filters 2 - gravimetric method.JPG	
photographic records	humidity and temperature	
photographic records	Kracht Zahnrad Pumpen KF25RF2D15.pdf	
photographic records	Lable pump KF25RF2D15.JPG	
photographic records	Manual VN2020-EX-V1.0 Page 29 .pdf	
photographic records	Overview Pressure Pump.JPG	
photographic records	Pressure 8bar.JPG	
photographic records	pump 1000ml 660360-250.JPG	
photographic records	pump 1000ml 660360-449.JPG	
photographic records	scale - gravimetric method-660127-633.JPG	
photographic records	Shell Mysella S5 N40 SAE40.pdf	
photographic records	static and dynamic inclinations	
photographic records	test chamber volume.pdf	
photographic records	VA_7.6_001e_Calibration and measuring equipment.pdf	
photographic records	Versuchsbericht_MALVERN_13102016_Dr. Horst Br nnet.pdf	
photographic records	Calibration and measuring equipment	660127-633 scale - gravimetric method.JPG
photographic records	Calibration and measuring equipment	660127-633.pdf
photographic records	Calibration and measuring equipment	660360-250 pump 1000ml.JPG
photographic records	Calibration and measuring equipment	660360-250.pdf
photographic records	Calibration and measuring equipment	660360-449 pump 1000ml.JPG
photographic records	Calibration and measuring equipment	660360-449.pdf
photographic records	exposed to water vapour	1 exposed to water vapour.jpg
photographic records	exposed to water vapour	2 exposed to water vapour.jpg
photographic records	exposed to water vapour	3 exposed to water vapour.jpg
photographic records	humidity and temperature	660208-719.JPG
photographic records	humidity and temperature	660208-719.pdf
photographic records	static and dynamic inclinations	1 static and dynamic inclinations.jpg
photographic records	static and dynamic inclinations	2 static and dynamic inclinations.jpg

renewal audit report	2024-06-20
Operating Manual	183001 Manual VN2020/ VN2020EX-V3.0.pdf dated 2024-01-24
circuit diagram	1000194_05 - VN2020 CPU Platine - Schalt-Bestueckungsplan-none3d.PDF
circuit diagram	1000196_04c - VN2020 Terminal Box - Schalt-Bestueckungsplan.PDF
Release Notes V2.03	FB_8.2_027_V02 (03.07.2018) approved 2024-04-12
EMC test report 6 GHz	CTC advanced GmbH Test Report No.:1-7830/19-01-04 dated 2019-02-20