

**TYPE APPROVAL CERTIFICATE****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 GL 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 GL.****Temperature B**  
**Humidity B**  
**Vibration B**  
**EMC A**  
**Enclosure IP54**Issued at **Hamburg** on **2019-06-26**for **DNV GL**This Certificate is valid until **2024-06-25**.DNV GL local station: **Essen**Approval Engineer: **Marco Rinkel****Joannis Papanuskas**  
**Head of Section**

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.



Job Id: **262.1-030636-1**  
Certificate No: **TAA00002D0**

## Product description

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 Excertificate issued by a notified/recognized Certification Body.

## Type Approval documentation

See ANNEX.

## Tests carried out

Applicable tests according to Class Guidelines DNVGL-CG-0339, November 2016.  
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

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### **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