



中國驗船中心  
CR Classification Society

Certificate No. 869-24-038

Date 05 August 2024

型式認可證書  
TYPE APPROVAL CERTIFICATE

*This is to certify that the undernoted product(s) has/have been approved by CR Classification Society in accordance with the requirements given in CR Rules for the construction and classification of steel ships 2023 and IACS UR M67 Rev.2, Feb. 2015 as an approved type for use in ships classed or intended to be classed with the Society.*

Manufacturer : Schaller Automation Industrielle  
Automationstechnik GmbH & Co. KG

Approved Product(s) : Oil Mist Detectors

Model Name : Oil Mist Detector for Diesel and Gas Engines:  
VISATRON VN2020  
VISATRON VN2020 EX

*This certificate is valid until 15 July 2029*

CHIEN-HUA HUANG

中國驗船中心 總驗船師  
Chief Surveyor  
CR Classification Society

*(See next page for further details regarding the approval.)*



This certificate evidences that the type of the products of the Manufacturer has been assessed to be in compliance with the specified CR Rules or Guidelines and to be capable of providing the listed products. This Certificate may be cancelled by CR Classification Society if the applicant makes any changes or modifications relevant to the approval, which have not been notified to, and agreed in writing with the Society. Any person not a party to the contract pursuant to which this document is delivered may not assert a claim against CR Classification Society for any liability arising out of errors or omissions which may be contained in said documents, or for errors of judgment, fault or negligence committed by personnel of the Society.

Please refer to the CR website for the latest status of this approval: [www.crclass.org/aw0/aw0.htm](http://www.crclass.org/aw0/aw0.htm)

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**Name of Manufacturer:**

Schaller Automation Industrielle Automationstechnik GmbH &amp; Co. KG

**Address of Manufacturer:**

Industriering 14, D-66440 Blieskastel, Germany

**Product Specification:**

## 1. VISATRON VN2020/VISATRON 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 to monitoring device	3 wire RS485, galvanically isolated (CAN-open, galvanically isolated)
Operating temperature	+5 - +70 °C
Storage temperature	-25 - +80 °C
Max. vibrations	5Hz – 25Hz: 1,6mm peak 25Hz – 300Hz: 40m/s <sup>2</sup> peak
Relative humidity	up to 95%
Protection class	IP54

## 2. Additional specification for VISATRON 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

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**Related Documents & Remarks:****1. Documents:**

- i. IACS UR M67 test report VN2020 Asien Klassen CCS-KR-CCR
- ii. Dimension drawing
- iii. Characteristics
- iv. Manual:
  - a. Operating manual VISATRON® Oil Mist Detector VN2020 / VN2020 EX, version 3.0\_2024/01/24
- v. Data sheet:
  - a. Infrared Emitter - SFH 4855\_EN
  - b. Photodiode - BPW20RF
  - c. Pressure Sensor - MPX5100
  - d. Thermal Link XG Series
- vi. Circuit diagram:
  - a. 260064\_01 - VN2020 IR TransmitterSchalt-Bestueckungsplan
  - b. 1000198\_04 - Visatron VN2020 Display PCB - Schalt-Bestueckungsplan-none3d
  - c. 1000194\_05 - Visatron VN2020 CPU Board - Schalt-Bestueckungsplan-none3d
  - d. 1000196\_04c - Visatron VN2020 Terminal Box PCB- Schalt-Bestueckungsplan-none3d
- vii. Release notes:
  - a. 20240412\_FB\_8\_2\_027\_V02\_Release\_Notes, firmware version V2.03\_2023/12/06
  - b. VA\_7.3\_004e\_Quality Assurance Measures for the Generation of Software
- viii. EMC Vibration Test IP-Code
  - a. 1-7830\_19-01-04
  - b. 1-7830\_19-01-05
- ix. ATEX and IECEx
  - a. ATEX191048\_engl\_pc
  - b. IECEx\_IBE\_19 0010\_0
- x. Inspection plan
  - a. inspection plan\_V02

**2. Photographic records:**

- i. Calibration and measuring equipment:
  - a. 660127-633 scale - gravimetric method
  - b. 660127-633
  - c. 660360-250 pump 1000ml
  - d. 660360-250
  - e. 660360-449 pump 1000ml
  - f. 660360-449
- ii. Exposed to water vapour:
  - a. 1 exposed to water vapour
  - b. 2 exposed to water vapour
  - c. 3 exposed to water vapour
- iii. Humidity and temperature:
  - a. 660208-719(JPG)
  - b. 660208-719(PDF)
- iv. Static and dynamic inclinations
  - a. 1 static and dynamic inclinations
  - b. 2 static and dynamic inclinations
- v. 01 clogging of suction pipe
- vi. 01 Splash oil 55 degree
- vii. 03 Splash Oil
- viii. filters - gravimetric method
- ix. filters 2 - gravimetric method
- x. Kracht Zahnrad Pumpen KF25RF2D15
- xi. Lable pump KF25RF2D15
- xii. Manual VN2020-EX-V1.0 Page 29
- xiii. Pressure 8bar
- xiv. pump 1000ml 660360-250
- xv. pump 1000ml 660360-449
- xvi. scale - gravimetric method-660127-633
- xvii. Shell Mysella S5 N40 SAE40
- xviii. test chamber volume
- xix. VA\_7.6\_001e\_Calibration and measuring equipment
- xx. Versuchsbericht\_MALVERN\_13102016\_Dr. Horst Br nnet

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***Periodical assessment:***

The intermediate audit is to be carried out within 3 months before or after the second anniversary date or within 3 months before or after the third anniversary date of the certificate. The intermediate audit will include, but not be limited to, confirmation of operation of the manufacturer's quality system, compliance of production procedures with the technical documents accepted at the time of type approval, purchase control of raw materials, components and parts, use of survey marks and approved product logos, languages required to be used in nameplates and operation instructions, product quality feedback. In case where the intermediate audit items mentioned above are not practical, considerations will be given by the Society on a case-by-case basis.

- The End -