



Marine & Offshore

Certificate number: 21222/C0 BV

File number: AP 3963

Product code: 3946H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

SCHALLER AUTOMATION GmbH & Co. KG
Blieskastel/Saar - GERMANY

for the type of product

OIL MIST DETECTION SYSTEMS

VISATRON Series

VN115/87plus, VN116/87plus, VN215/87plus & VN115/87plus EX.

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.

EC Code: 33

IACS UR-M67 Rev.2.

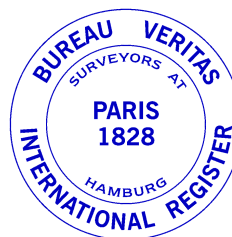
This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 28 Mar 2023

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 28 Mar 2018,

Dirk Hoepfner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=wtbt4vxi7f>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

VISATRON® Series (VNxxx/87plus) is based on an Oil Mist Detector connected to a suction-tube system to extract the atmosphere of the crankcase compartments.

Four versions are available:

- VN115/87plus** is connected to a common Connecting Box - No identification of oil mist source
- VN116/87plus** is connected to a 2-way Valve Box - Right or Left identification of oil mist source
- VN215/87plus** is connected to a 10-way Valve Box - Individual identification of oil mist source.
- VN115/87plus EX** is connected to a common Connecting Box - No identification of oil mist source.

1.1 - Common Characteristics:

Power Supply	: 24 VDC, 2 A Max
Air Pressure supply	: 2 to 15 Bar
Operating Temperature	: 0°C ... +70°C
Environmental	: Mounting on internal combustion engines, in power distribution zone
Protection index	: IP 54
Sensitivity	: Adjustable by switch
Relay Outputs	: 2 x Main Alarms, 1 x Pre-Alarm, 1x System Ready (Max. 60 VDC, 1 A)
Serial Interface	: RS485 bidirectional communication, alternative 4-20 mA
Software Version	: 5.xx
Flameproof	: II (2G) [Ex op is IIB T4 Gb]
(only VN115/87plus EX)	: +5 ≤ Ta ≤ +70 °C

2. DOCUMENTS AND DRAWINGS :

Schaller Automation:

According to Schaller Automation documentation filed in AP 3963.

Technical description of VN 115/87plus, VN116/87plus and VN215/87plus

Dimension Drawings: VN115/87plus - DC050073, Ver. 1 dated 12.03.2008; VN116/87plus - DC070056, Ver. 2 dated 12.03.2008 and VN215/87plus - DC070023, Ver. 2 dated 10.12.2011.

Electronic Circuit Diagrams Rev.2, dated 12.05.2014

IBExU Institut:

Ex Certificate No.IBExU14ATEX1153, dated 19 Jan 2015.

For revision C0:

Schaller Automation:

Operation Manual Part No. 11078, Ver. 2.5 dated 08/2017.

Operation Manual VISATRON® VN115/87plus EX Part-No. 180081, Version 1.4, dated 02/2017.

3. TEST REPORTS :

- CETECOM:

EMC Test report No. 4-2912-01-01/07 dated 2008-01-28

EMC Test report No. 4-3243-01-01/09 dated 2009-04-07

Climatic Test Report No. 4-2018-1-2/06 dated 2006-05-18

Vibration Test Report No. 3-5679-1-1/08 dated 2008-10-01

Environmental Test Report Nr. 022a/94 dated 26.4.1994.

Environmental Test Report No.1-8082/14-01-03, dated 2014-07-28

Environmental Test Report No.1-8082/14-01-04, dated 2014-10-06

EMC Test Report No. 1-8082/14-01-05-A, dated 2014-09-24

Vibration Test Report No. 1-8082/14-01-06, dated 2014-09-10

- GSSO: Unreferenced Test Report according to IACS UR M67 dated 2007, February.

- OMD Function Test IACS UR-M67 Rev.2, dated 22/03/2017.

4. APPLICATION / LIMITATION :

4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - BUREAU VERITAS Environmental Category, **EC Code: 33**

4.4 - The equipment fulfils the EMC requirements for installation in General power Distribution Zones.

4.5 - Only Hardware and Firmware / Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above products are to be supplied by **SCHALLER AUTOMATION GmbH & Co. KG** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **SCHALLER AUTOMATION GmbH & Co. KG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **SCHALLER AUTOMATION GmbH & Co. KG** has declared to Bureau Veritas the following production site(s):

SCHALLER AUTOMATION GmbH & Co. KG
Industriering 14
D-66440 Blieskastel/Saar

6. MARKING OF PRODUCT :

- Trade name.
- Date of manufacture and serial number.
- Equipment type or model identification under which it was type-tested.

7. OTHERS :

7.1 - It is **SCHALLER AUTOMATION GmbH & Co. KG** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 21222/B1 BV issued on 02/03/2015 by the Society.

*** END OF CERTIFICATE ***