DNV·GL

Certificate No:
TAA000013W

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Safety Control Unit for Rotating Machinery

with type designation(s)
Oil Mist Detector Triton I OMD

Issued to
Heinzmann GmbH & Co. KG
Schönau/Schwarzwald, Germany

is found to comply with
DNV GL rules for classification – Ships

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	**B**

Issued at **Hamburg** on **2017-04-21**
This Certificate is valid until **2021-09-05**.
DNV GL local station: **Augsburg**

Approval Engineer: **Andrea Grün**

for **DNV GL**

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.

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Product description

Triton I OMD Gear and Diesel engine Monitoring System - Oil Mist Detection Navy connected with up to 16 intelligent OMD Sensors max. via the redundant serial bus system
Remote Monitoring Unit : 1 RMU can connect to up to 8 OMD systems

Power Supply: 24V DC
Operating Current: max. 1.5 A
OMD CU: OMD Control Unit (Z09170-00-00)
OMD CU-CANBUS: OMD Control Unit CANBUS (Z09171-00-00)
OMD RMU: OMD Remote Monitoring Unit (Z09172-00-00)

Software Versions:

• Firmware OMD CU	Version HZMV5.10 B 1002	dated 10.12.2010
• Firmware OMD CU-CANBUS	Version HZMV5.10 B 1002	dated 10.12.2010
• Firmware OMD RMU	Version HZMV5.11 B 1000	dated 02.11.2010
• OMD Sensor	Version HZMV5.01	dated 10.12.2010

OMD CU (Control Unit):
Up to 16 OMD Sensors can be connected
Sensitivity: Alarm level adjustable in 10 steps from 0,2mg/l to 10 mg/l
Relay-Outputs: Contact load for all relays max. 60V AC, 1A, 60VA / max. 60V DC, 1A, 60W
1. Relay with 2 ground-free switch-over contacts : Main Alarm
2. Relay normally closed, opens if pre-alarm condition arises : Pre-Alarm
3. Relay normally open, closes if system recognizes no fault conditions : System ready

Wire break protection with 33 kOhm resistors (standard)
Serial Interface:
RS485 for standardized industrial, bidirectional communication
RS232 for setup and configuration
Communication Protocol:
Modbus
CAN Bus (optional)
User interface: LCD Display 240*128 dots
1 LED green "System Ready"
1 LED red "Alarm"
1 LED red "Prealarm"
Connection cable: DNV GL approved

Sensors:
OMD Sensor Basic (Z10106-20-00): OMD-SE-B HZMV5.01 / 10.12.2010
OMD Sensor Basic Ex (Z10107-20-00): OMD-SE-B-EX HZMV5.01 / 10.12.2010
OMD Sensor Extended (Z10112-20-00): OMD-SE-E HZMV5.01 / 10.12.20
OMD Sensor Extended Ex (Z10219-20-00): OMD-SE-E-EX HZMV5.01 / 10.12.2010
OMD Sensor Small (Z10109-20-00): OMD-SE-S HZMV5.01 / 10.12.2010
OMD Sensor Small Ex (Z10108-20-00): OMD-SE-S-EX HZMV5.01 / 10.12.2010
SOPS 65 Basic (Z10106-20-01); SOPS 65 Basic EX (Z10107-20-01)
SOPS 65 Extended (Z10112-20-01); SOPS 65 Extended EX (Z10219-20-01)
SOPS 53 Small (Z10109-20-01); SOPS 53 Small EX (Z10108-20-01)
Diffusor 65 (Z10114-01-01); Diffusor 53 (Z10113-01-01)

OMD Remote Monitoring Unit:
OMD RMU : 1Remote Control can connect to up to 8 OMD systems
built-in alarm relays of the Remote Monitoring Unit: can be be trigger an additional alarm system
Relay-Outputs: Contact load for all relays max. 60V AC, 1A, 60VA / max. 60V DC, 1A, 60W
1. Relay with 2 ground-free switch-over contacts, usually configured as main alarm : Alarm 1
2. Relay closes if system is fault-free, opens otherwise : System ready
Wire break protection with 33 kOhm resistors (standard)
Serial Interface:
RS485 for standardized industrial, bidirectional communication
RS232 for setup and configuration
Communication Protocols:
Modbus
CAN Bus
User interface: LCD Display 240*128 dots
1 LED green "Ready"
1 LED red "Alarm 1" (usually set up as main alarm)
1 LED orange "Alarm 2" (usually set up as pre-alarm)
Connection cable: DNV GL approved
Degree of Protection: IP65

Application/Limitation

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.

Clause for application software control
All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV GL for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

The following documentation of the actual application is to be submitted for approval in each case:
- Reference to this Type Approval Certificate
- System block diagram
- Power supply arrangement (may be part of the System block diagram)
- Confirmation that List of control & monitored points

Type Approval documentation

Test reports :
- Cetecom Test Report No.: 1-2411-1-2-10 dated 2010-08-23
- EMC Test Report 1-2411-01-03/10 dated 2010-07-28

Manuals:
User Manual Triton I OMD SF 11 001-e dated 04-11
Triton I OMD Installation Manual SF 11 002-e dated 06-11

Report on the GDMS-OMDN 09 M67 standardization dated 20-08-2010 Revision 15-06-2011
Instrument Equipment List dated 07-09-2012
Ex Certificate: BVS 11 ATEX E 094 X dated 26-07-2011
II (2)G [Ex ia Gb] IIA for Electronics
II 2G/-Ex ia IIA T4 Gb for Sensor

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.
Functional test required by IACS UR M67.

Marking of product

The products to be marked with:

- Manufacturer name
- Model name
- Serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

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.

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE