

TYPE APPROVAL CERTIFICATE

DNV·GL

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the DNV GL Type Approval System.

Certificate No. **11 846 - 10 HH**

Company **MSS AG**
Marschallstraße 4
66606 St. Wendel, GERMANY

Product Description **Oil Mist Detection System**

Type **GDMS-OMDN09® and GDMS-OMD14®**

Environmental Category **D; EMC 2**

Technical Data /
Range of Application **GDMS-OMDN09® Gear and Diesel engine Monitoring System -
Oil Mist Detection Navy
GDMS-OMDN09® with GDMS-OMDN09®-Sensors and Remote Monitoring Unit for
HFO/Diesel and Gas/DF operation
GDMS-OMDN09® Evaluator: connected with up to 16 intelligent GDMSOMDN09®
Sensors / or OMDSE 0910EX/1001EX Sensors max. via the redundant serial bus
system
Remote Monitoring Unit: 1Unit can connect to up to 8 GDMS-OMDN09® systems**
**GDMS-OMD14®
Advanced Oil Mist Detection System for large engines
GDMS-OMDN14® Evaluator connected up to 16 OMD 14 sensors via the
redundant serial ring bus system**

**Power Supply: 24V DC
Operating Current: max. 1.5 A**

Test Standard **Guidelines for the Performance of Type Approvals VI-7-2 Edition 2012;
Guidelines for the Performance of Type Approvals VI-7-8 Edition 2010; IACS
M67 2007**

Documents **Test reports : Cetecom Test Report No.: 1-2411-1-2-10 dated 2010-08-23; EMC
Test Report 1-2411-01-03/10; Report on the GDMS-OMDN 09 M67
standardization dated 20-08-2010; EC-Type Examination Certificate Directive
94/9/EG Oil mist sensor type OMDSE-****EX BVS 10 ATEX E 136 X dated
22.11.2010**

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

Valid until **2021-09-05**

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File No. **I.A.04**

Hamburg, 2016-09-06

Type Approval Symbol



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Marco Rinkel

Andrea Grün

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GDMS-OMDN09® Gear and Diesel engine Monitoring System - Oil Mist Detection Navy
GDMS-OMDN09® with GDMS-OMDN09®-Sensors and Remote Monitoring Unit for HFO/Diesel and Gas/DF operation
GDMS-OMDN09® Evaluator: connected with up to 16 intelligent GDMSOMDN09® Sensors / or OMDSE 0910EX/1001EX Sensors max. via the redundant serial bus system
Remote Monitoring Unit: 1Unit can connect to up to 8 GDMS-OMDN09® systems
Power Supply: 24V DC
Operating Current: max. 1.5 A

OMDN014®

Software Versions:

Firmware OMDN09 Sensor Version 3.01 dated 15.12.2009
Firmware OMDN09 Evaluator Version V1.10 dated 10.12.2010
Firmware OMDN09 Evaluator Remote Monitoring Unit Version V1.11; 02.11.2010
OMD Logger Software V 2.21 dated 26.08.2010
Tests and Evidence according Requirement Class 3

GDMS-OMDN09® Evaluator:

Up to 16 GDMS-OMDN09 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 yellow "Prealarm"

Connection cable: DNV GL approved

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OMDN09/EV (Evaluator) Part No. 2 020 10 0000 for Diesel+HFO / Gas+DF
OMDN09/RCEV (Remote Monitoring Unit) Part No. 2 020 00 0000 for Diesel+HFO / Gas+DF
OMDN-Se-0910 (OMD Sensor20) Part No. 2 600 01 1000 for Diesel+HFO
OMDN-Se-0910EX (OMD Sensor 20EX) Part No. 2 600 02 1000 for Diesel+HFO / Gas+DF
OMDN-Se-1001 (OMD Sensor 16) Part No. 2 600 01 3000 for Diesel+HFO
OMDN-Se-1001EX (OMD Sensor 16EX) Part No. 2 600 02 3000 for Diesel+HFO / Gas+DF
SOPS 65 Part No. 2 600 01 2000 for Diesel+HFO
SOPS 65EX Part No. 2 600 02 2000 for Gas+DF
SOPS 53 Part No. 2 600 01 3000 for Diesel+HFO
SOPS 53EX Part No. 2 600 02 3000 for Gas+ DF
Diffusor 65 Part No. 2 600 01 4065 for Diesel+HFO / Gas+DF
Diffusor 53 Part No. 2 600 01 4053 for Diesel+HFO / Gas+DF

GDMS-OMDN09® Remote Monitoring Unit:

Remote Monitoring Unit : 1Remote Monitoring Unit can connect to up to 8 GDMS-OMDN09 systems
built-in alarm relays of the Remote Control: can 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 yellow "Alarm 2" (usually set up as pre-alarm)

Connection cable: DNV GL approved

Degree of Protection: IP65

Electronic Monitor: Ex II(2)G [Ex ia Gb] IIA

Probe: Ex 2G/- Ex ia IIA T4 Gb

Additional Documentation:

- Software Questionnaire Requirement Class 3 dated 09.07.2010;
- VA-001 -QS-Software dated 08-10-2009
- User Manual GDMS-OMDN09® Part No.: 2 900 00 0001 Release 100614 (revision 100614)
- GDMS-OMDN09® Remote Control Part No.: 2 900 02 0001 Release: 100614 (revision 100614)
- INSTALLATION MANUAL for GDMS-OMDN09 Part No.: 2 900 01 0001 Release: 100614 (revision 100614)
- OMD Logger User Manual Version 2.21 Release 100915
- OMDN09 Evaluator data transfer via RS485-interface Version 1.0 dated 2010_07_21
- Datentransfer über CAN Bus Transceiver OMDN09 Evaluator Version 1.1 dated 12.11.2010
- Test Report 64899_22022016_OMD dated 2016-03-24 and 1-0319/15-01-02
- User Manual GDMS-OMD14® Part No. 2 914 00 0000 Release 160623 Revision 160704 dated 23-06-2016

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