

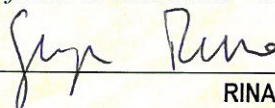


**TYPE APPROVAL CERTIFICATE**  
**No. ELE102112XG**

**This is to certify** that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	<b>Gear and Diesel Engine Monitoring System</b>
<i>Type</i>	<b>ProBeCon - Propulsion Bearing Condition</b>
<i>Applicant</i>	<b>GDMS-PCN09</b>
	<b>MSS AG</b>
	<b>WASSTURMSTRASSE 32</b>
	<b>66954 PIRMASENS-WINZELN</b>
	<b>GERMANY</b>
<i>Manufacturer</i>	<b>MSS AG</b>
<i>Place of manufacture</i>	<b>WASSTURMSTRASSE 32</b>
	<b>66954 PIRMASENS-WINZELN</b>
	<b>GERMANY</b>
<i>Reference standards</i>	<b>Rules for the Classification of Ships-Part C - Machinery, Systems and Fire Protection - Ch.3, Sec.6, Table 1; EN 55011; EN 55022, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6</b>

Issued in **HAMBURG** on **September 4, 2012**. This Certificate is valid until **September 3, 2017**

  
RINA

**Giuseppe Russo**

This certificate consists of this page and 1 enclosure





## TYPE APPROVAL CERTIFICATE

No. ELE102112XG

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GDMS-PCN09

The GDMS-PCN09 Gear and Diesel Engine Monitoring System is an online condition monitoring system which measures and analyses the thermo voltage.

The main parts of the system are:

**Slip Ring Transmitter (SRT):**

The SRT contains a special slip ring with redundant carbon brushes which receives the thermo voltage signal from the crankshaft-engine system. The SRT is also equipped with an incremental encoder to bring the measured signal in relation to the rotation of the crankshaft.

**Evaluator:**

The Evaluator consist of a metallic case, a liquid crystal display (LCD), three LEDs for system status indication, buttons for user interactions and a powerful processor inside the Evaluator.

**Logger Software:**

The Logger software is capable of receiving measurement data of up to six connected PCN09 systems simultaneously. The Logger software also supports the localization of the damage inside the engine

**Technical Data:**

Power Supply:

24V DC +30% / -25%

Operating Current:

Max. 1,5A

Sensitivity:

Adjustable in 5 steps

Outputs:

3 isolated relay contacts:

- System relay
- Alarm 1 (usually main alarm)
- Alarm 2 (usually pre alarm)

Data interface:

- RS485 to PC
- Modbus (RS422 or RS485)
- CAN Bus (optional)

Ambient temperature:

0 - 70°C for Evaluator and SRT

Connection cable:

e.g. Huber + Suter Radox MFHS-EMC

Protection:

IP 65

**Reference document:**

- Data Sheets and User Manual / Benutzerhandbuch Art.Nr. 1 900 00 2000; Release: 100412 (Revision 110901)
- MSS Diagrams and Assembly Layouts,
- MSS Firmware and Software Documentation

**Test Reports:**

- CETECOM EMV Test Report No. 1-3965/11-01-03
- CETECOM Environmental Test Report No. 1-3965/11-01-02A

HAMBURG September 4, 2012

