

# Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>motcom GmbH</b>
<b>Address</b>	Kurt-Schumacher-Str. 28-30, Saarbrücken, 66130, Germany
<b>Type</b>	Control Units
<b>Description</b>	Oil Mist Concentration Monitoring SiCOMS® /OCom consisting of OCom Evaluator OCMEV and up to 16 sensors (Components marked with * are available as EX- variants) see Appendix for further details.
<b>Trade Name</b>	SISE/OC with Splash Oil Guard (SOG)
<b>Application</b>	Marine applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4 (applicable for sensors and evaluation unit) as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2018.
<b>Specified Standard</b>	Manufacturer's Specification. IACS UR M67 2005 / Rev.1 2006 / Corr.1 2007 / Rev.2 Feb. 2015 "Type Testing Procedure for Crankcase Oil Mist Detection and Alarm Equipment"
<b>Ratings</b>	Refer to Appendix of the Certificate.
<b>Additional Tests</b>	Degrees of Protection by enclosure: IP65 (Evaluator and Connectors) Safe Type Equipment: Oil Mist Sensor with SOG type SiSe/OC **EX Certificate No. "BVS 13 ATEX E 116 X" (issued by DEKRA)



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Radiated Emissions and Radiated Radio Frequency Fields up to 6 GHz (for equipment marked with \*\*)

## Other Conditions

Final functional arrangements are to comply with appropriate Lloyd's Register Rules and will be subject of the Plan Approval process, if applicable. The suitability of the installation of the Oil Mist Detector is to be demonstrated for each type of engine. According to the requirements of IACS UR M67 an alarm shall be raised for an oil mist concentration of 2.5 mg/l. Therefore, the alarm level should be adjusted between level 1...7 only.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. HTS/ETS 39933-20/ML and its supplementary Type Approval Terms and Conditions form part of this Certificate.

## Appendix

**DESCRIPTION** Oil Mist Concentration Monitoring SiCOMS® /OCom consisting of OCom Evaluator OCMEV and up to 16 sensors  
 (Components marked with \* are available as EX- variants)  
 (Components marked with \*\* are tested up to 6 GHz)

**TYPES**

Components:	Description:
OCom Evaluator (OCMEV) (**) <i>Firmware: V2.01 B1007 / 24.04.2018</i>	<ul style="list-style-type: none"> <li>- Connect up to 16 sensors via redundant serial bus system</li> <li>- 24 VDC (+30/-25%); max. 1,5A</li> <li>- 3 isolated relay contacts with wire-break protection 33kOhm                (“System Ready”, “Main Alarm”, “Pre-Alarm”)</li> <li>- RS485, Modbus, CAN Bus (optional)</li> <li>- Sensitivity Level 1...10 adjustable</li> </ul>
OCom Remote Monitoring Unit <i>Firmware: V2.00 B1001 / 07.02.2017</i>	<ul style="list-style-type: none"> <li>- Interface RS485, Modbus, CAN Bus</li> </ul>
OCom Sensor: SiSe/OC 20(*) (**) SiSe/OC 16(*) (**) SiSe/OC 14(*) (**) <i>Firmware: V3.53 / 08.03.2018</i>	<ul style="list-style-type: none"> <li>- Finger-shaped optical sensor with system redundancy for HFO + Diesel and for Gas + Dual Fuel Engines</li> <li>- Reaction time &lt;1s</li> </ul>
OCom SOG 65 for SiSe/OC 20(*) OCom SOG 53 for SiSe/OC 16(*) OCom SOG 24 for SiSe/OC 14(*)	<ul style="list-style-type: none"> <li>- Splash-Oil-Guard prevents the sensor from being soiled with splash oil, but allows oil mist and water vapour to enter</li> </ul>
OCom Diffusor for SOG 24, 53 or 65	<ul style="list-style-type: none"> <li>- Add-on for SOG sensors which are installed near or in a section with high splash oil concentration</li> </ul>