

MES 1001 MARPOL - NO_x, SO₂ and NH₃ for maritime SCR applications

MES 1001 MARPOL is an innovative NO_x, SO₂ and NH₃ CEMS designed for effortless regulatory MARPOL compliance.

Through simplified reporting and on-board calibration technology, MES 1001 MARPOL removes the need for costly on-board service technician visits, delivering operational savings.

KEY FEATURES



MARPOL COMPLIANCE: Compliant with MARPOL ANNEX VI and NO_x technical code 2008

ON-BOARD CALIBRATION TECHNOLOGY: No need for on board service technicians delivering operational savings.

EASY OPERATION: User-friendly interface simplifies operation and reduces training needs.

NO MORE SPOT CHECKS: Saves time and resources, eliminating costly spot checks.

FAST RESPONSE TIME: The In-Situ CEMS ensures real-time emission measurements.

EASY MAINTENANCE: Cost-effective solution with simple maintenance performed by crew; replacement of air filters and lamp, and optics cleaning.

EASY INSTALLATION: Single unit setup with minimal configuration and easy connection (only power, air, and data).

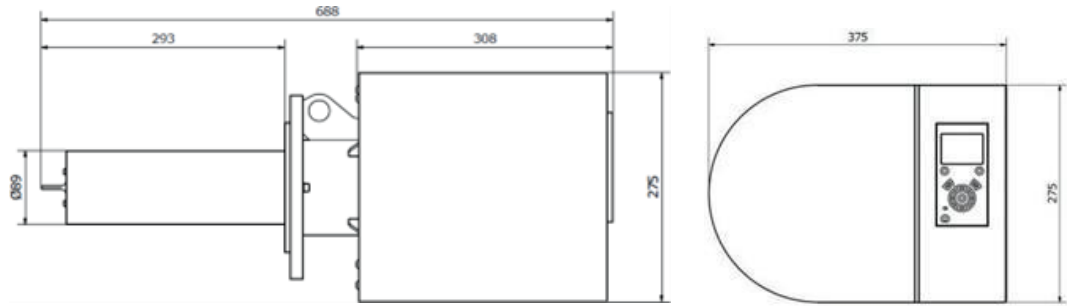
LOW COST OF OWNERSHIP: Efficient operation, extended lifespan and reduced maintenance expenses.

Analyzer standard delivered for NO_x and NH₃ measurement. SO₂ is optional.

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Technical drawing



All dimensions are in mm.

Side view

Front view

Technical specifications

| Parameter | Description |
|--|--|
| General | |
| Application | In Situ Emission Analyzer |
| Technology | UV absorption spectroscopy |
| Mounting flange | Circular, bolted connection DIN 2633, DN100, PN16 |
| Mounting location | Low pressure side of engine exhaust system |
| Supported gases | |
| NO _x * | 0 – 2000 ppm |
| SO ₂ (optional) | 0 – 1000 ppm |
| NH ₃ | 0 – 100 ppm |
| Performance | |
| Data update rate | 1 second |
| Output resolution | 1 ppm (digital) |
| Response time | < 10 seconds (T ₉₀) |
| Environmental | |
| Operating ambient temperature (Analyzer) | 0 – 55 °C |
| Exhaust gas temperature (Probe) | Max. 500 °C |
| Storage temperature | -25 – 85 °C |
| Ingress protection | IP65 |
| Humidity | 95% RH |
| Inputs and outputs | |
| Power | 24 VDC |
| Ethernet | 10 BASE-T/100 BASE-TX |

| | |
|-----------------------|---|
| RS-422 | Ship GPS input Supported protocol: NMEA 0183 |
| Analog output | 4 x 4 – 20 mA |
| Digital outputs | 2 (relay controlled) |
| Digital inputs | 2 (relay controlled) |
| Compressed Air | Service air from ship |
| Compressed Air | |
| Supply | 5,5 – 9 bar, max. 145 l/min @ 1 bar |
| Quality** | A filter must be installed before the analyzer to ensure that air delivered to the analyzer is compliant with ISO 8573-1:2010 [1:7:2] at all times. |
| Power | |
| Power supply | 24 VDC ± 25% |
| Power consumption | < 75 W |
| Dimensions | |
| Size (H x W x D) | 688 x 375 x 275 mm (incl. probe) |
| Weight | 33 kg |
| Approvals | |
| Marine type approval | DNV, KR |
| MARPOL approval | DNV, KR |

* The analyzer can display the NO_x in the range 0 – 2000 ppm, which is calculated as NO + NO₂. Please note that the maximum level NO_x is defined by the maximum levels for NO and NO₂ which are 1500 ppm and 500 ppm respectively.

** In case the compressed air system holds pockets of oil/water which may flush into the analyzer, please contact our sales team for further assistance.