MES 1001 MARPOL - NO_x, SO_2 and NH_3 for maritime SCR applications

MES 1001 MARPOL is an innovative NO_x, SO_2 and NH_3 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).

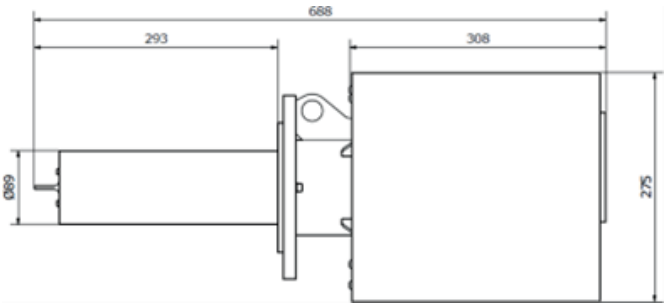
LOW COST OF OWNERSHIP: Efficient operation, extended lifespan and reduced maintenance expenses.

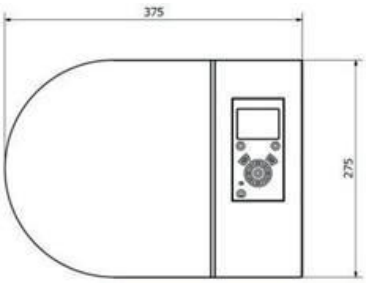
Analyzer standard delivered for NO_x and NH_3 measurement. SO_2 is optional.

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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
Certified under the EU Marine Equipment Directive (MED)	

* The analyzer can display the NO_x in the range 0 – 2000 ppm, which is calculated as NO + NO_2. Please note that the maximum level NO_x is defined by the maximum levels for NO and NO_2 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.