



Data Sheet

MES1001 MARPOL - MARPOL Approved NOx CEMS for Maritime Applications – Prod. no. 100101

Key benefits

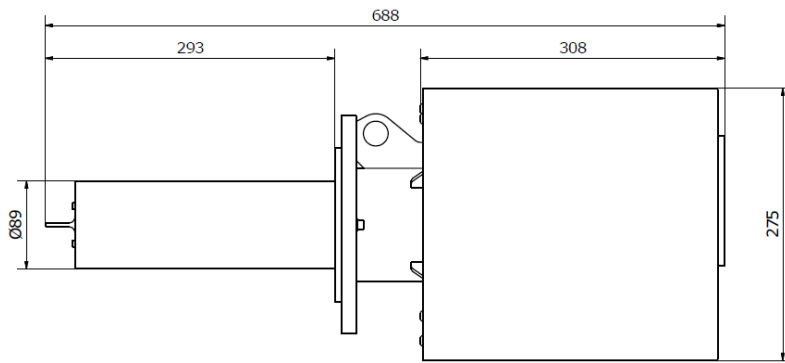
- Compliant with MARPOL Annex VI and NOx Technical Code 2008
- Optional SO₂ and NH₃ measurements
- Easy installation
- Easy operation
- Easy maintenance
- Easy connection to ship management systems

Maintenance

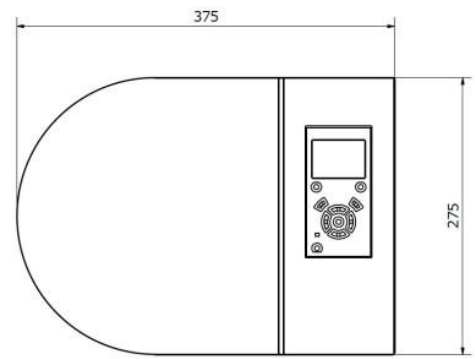
- UV lamp exchange approx. every 12-14 months depending on use and environment.
- Low cost of ownership

Functionality

- Automatic Zero Calibration
- Log functionality which logs various events like warnings, errors, system status, measured gas concentration
- Display for local access
- On-site gas calibration
- Tamper-proof



Side view



Front view

All dimensions are in mm.

Specification

Prod. no. 100101

Parameter	Description
General	
Application	In Situ Emission Sensor
Technology	UV absorption spectroscopy
Mounting flange	Circular, bolted connection DIN 2633, DN100, PN16
Location	Low pressure side of engine exhaust system
Supported gases	
NOx *	0 – 2000 ppm
SO ₂	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 (Sensor)	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	Instrument air from ship
Calibration Gas	Use NO span gas according to Danfoss IXA specification

Parameter	Description
Compressed Air	
Supply	5,5 – 9 bar, max. 145 l/min @ 1 bar
Quality **	A filter must be installed before the sensor to ensure that air delivered to the sensor 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-GL
MARPOL approval	DNV-GL

*) The sensor can display the NOx in the range 0 – 2000 ppm, which is calculated as NO + NO₂. Please note that the maximum level NOx 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 sensor, please contact our sales team for further assistance.



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