

MES 1001 – NO_x, SO₂ and NH₃ for maritime SCR applications

MES 1001 is an innovative NO_x, SO₂ and NH₃ CEMS designed with the purpose of enabling the maritime industry to create transparency of their emissions and turn this information into competitive advantages, through favorable total cost of ownership.

KEY FEATURES



AUTOMATIC REFERENCE CALIBRATION: Preventing zero- and span-drift with Danfoss IXA patented probe system.

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

HIGH ACCURACY: Advanced sensor technology ensures accurate and reliable performance, reducing downtime and replacement costs.

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).

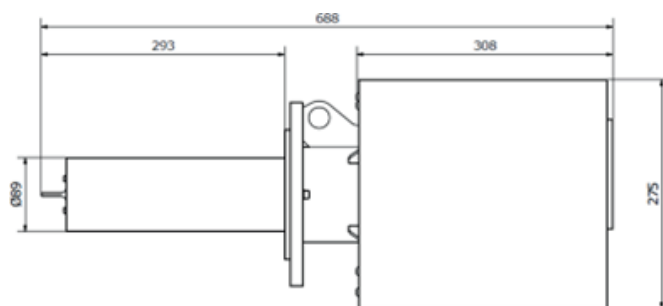
LOW COST OF OWNERSHIP: Efficient operation, extended lifespan, and reduced maintenance overall expenses.

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

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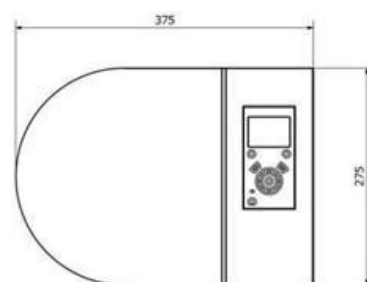
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Technical drawing



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 (optional)	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, RINA

* 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.