Data Sheet

Marine Emission Sensor (NOx, SO$_2$, NH$_3$ In Situ Sensor) – Prod. no. 100100

Key benefits
- Easy installation – directly into the exhaust
- Easy use – no special crew training required
- Easy maintenance
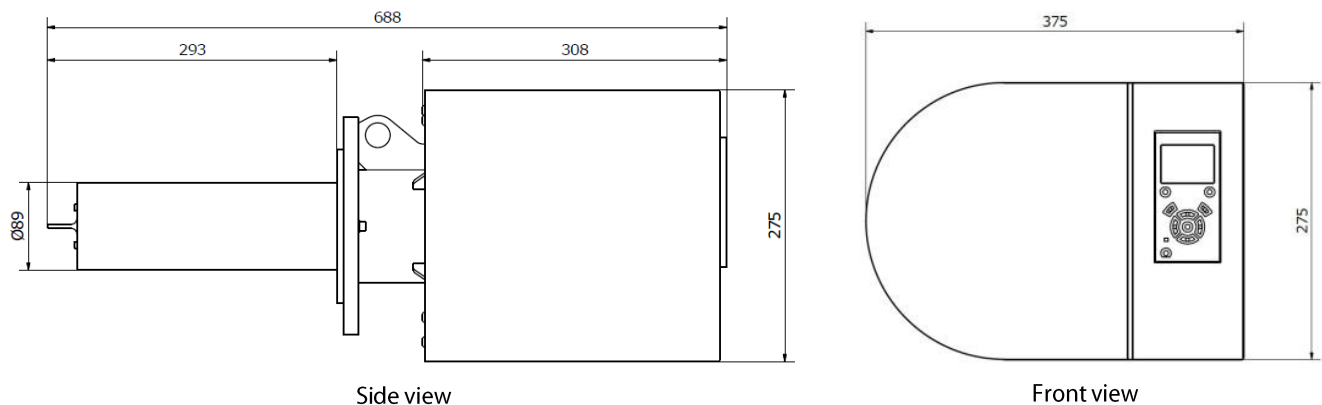- Easy connection to ship management systems

Functionality
- Automatic Zero Calibration using compressed air
- Maintenance prediction (e.g. lamp exchange)
- Log functionality that logs various events like warnings, errors, system status (temperature, compressed air input pressure, UV light source condition, etc.), measured gas concentration

- Remote access through software-based Service Tool
- Display for local access
- Tamper-proof

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

Side view   Front view

Illustration 1: Dimensions
All dimensions are in mm.

Specification

Prod. no. 100100

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 (after turbo charger or SCR)
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	Yes, for ship GPS Supported protocol: NMEA 0183
Analog output	4 x 4 – 20 mA
Digital inputs	2 (relay controlled)
Digital outputs	2 (relay controlled)
Compressed Air	

Parameter	Description
Supply	6 – 10 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 [1:3:1] at all times.
Power	
Power supply	24 VDC ± 25%
Power consumption	< 75 W
Dimensions	
Size (H x W x D)	275 x 375 x 395 mm (sensor only)
Weight	33 kg
Approvals	
CE marking	EMC Directive – 2014/30/EU EN61000-6-2:2005 EN61000-6-3:2011
Marine type approval	DNV-GL, cert. no. 42238-15 HH
	Other class societies pending
Certificates	MARPOL Annex VI expected 2018

*) The sensor can display the NOx in the range 0 – 2000 ppm, which is calculated as NO + NO$_2$. Please note that the maximum level NOx 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 sensor, please contact our sales team for further assistance.