

G4100 NO_x/Oxygen Analyzer

Cost-Effective Emission Control

For Green Image & Fuel Efficiency



Perfecting Sensible Technology

The G4100 NO_x/O₂ Analyzer is a practical and direct in-situ gas analyzer for onboard monitoring of NO_x concentrations. The G4100 NO_x/O₂ Analyzer uses a new zirconia sensor technology, which provides a cost-effective solution to fulfill tightening emission regulations as well as to support the most effective operation for both diesel engines and boilers.



Strengthen Your Green Credentials



Green View Analyzer — the heart of the G4100

Two factors drive the current development towards on-board emission monitoring: On the one hand, environmental regulations by both regional and international authorities are tightening. On the other hand, corporations are concerned with their responsibility for sustainable development including their suppliers throughout the value chain.

The G₄₁₀₀ NO_x/O₂ Analyzer will help you not only to comply with environmental standards, but also to support your corporate image underlining environmental responsibility. But on top of that, continuously monitoring NO_x emissions as well as excess oxygen in flue gas can be utilized to adjust fuel and airflow and with that to optimize fuel consumption. This is also a good indicator for engine or boiler performance, so that faulty operation can be detected at an early stage.

Green Instruments A/S – founded in 1999 under the name SBS Technology A/S – has years of experience in monitoring and analyzing exhaust gases on ocean going vessels.

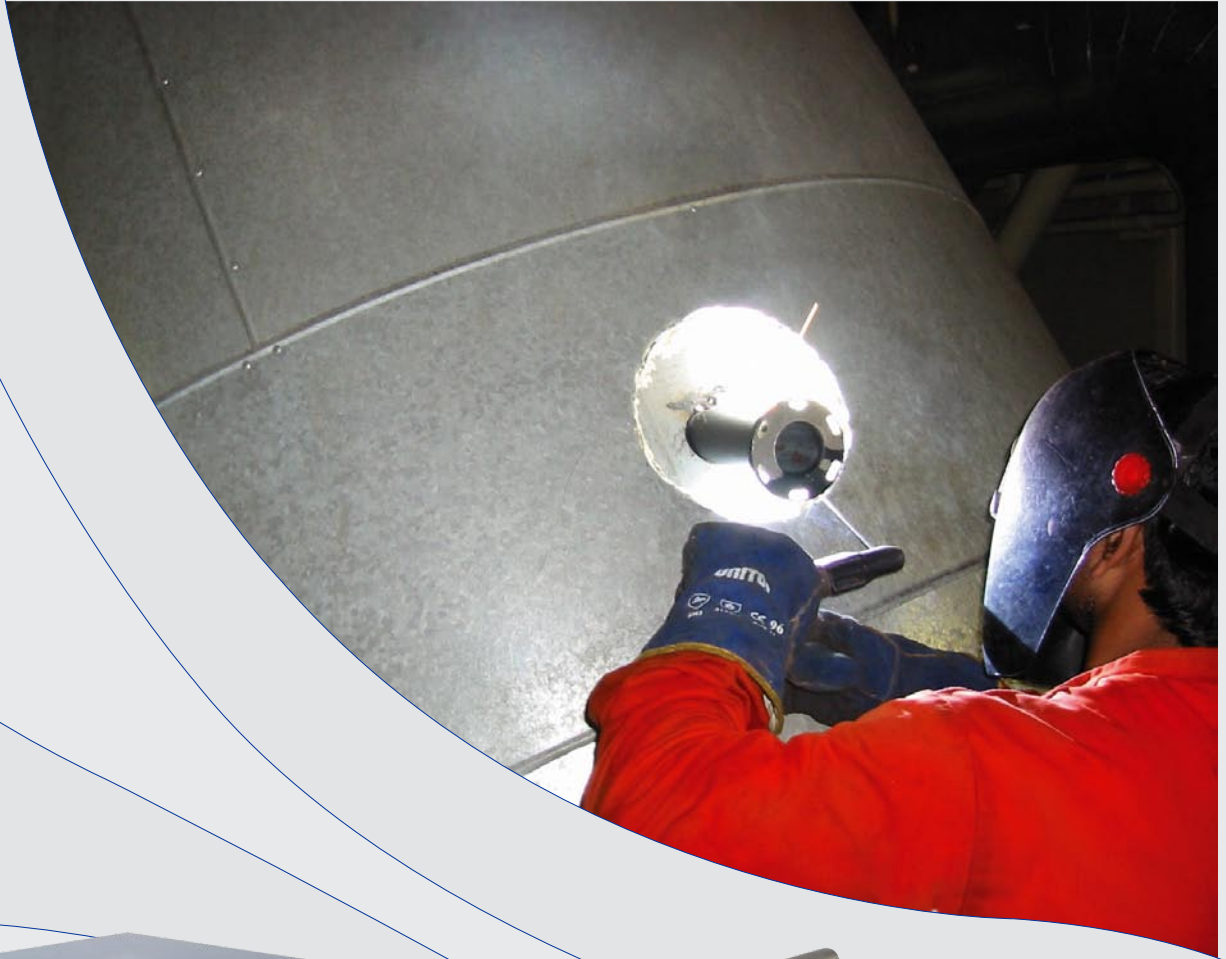
Key Features

- **Strengthen your environmental responsibility**
- **Support your green image**
- **Comply with tightening emission regulations**
- **Check engine performance**
- **Provide data for combustion optimization**

- **In-situ & direct monitoring based on latest zirconia sensor technology**
- **High reliable with true wet measurement of NO_x and oxygen in flue gas**
- **No sample lines, sample system, or converters**
- **Plug'n'play — Easy installation and integration**
- **Easy operation with LCD touch screen**
- **Automatic back flushing and purging of the probe**
- **Analog outputs & data transmission via CAN-Bus / Ethernet**
- **Low total cost of ownership**

- **Worldwide customer support via service partners**

Plug'N'Play = Low Total Cost of Ownership



Stack Probe of the
G4100 NO_x/O₂ Analyzer

The G4100 NO_x/O₂ Analyzer was recently developed based on our long experience working with zirconia oxygen sensors and NO_x monitoring solutions. We know that marine instruments have to be very robust and simple in order to be operated by a crew that is met by many and diverse challenges each day.

The G4100 NO_x/O₂ Analyzer makes use of a new zirconium oxide (ZrO₂) sensor with multiple diffusion cells specifically for NO_x measurement. This sensor is small and robust and can be installed directly on the stack without special protection. This technology allows real-time measurement of NO_x/O₂ on wet basis at high temperatures. It avoids sampling lines and sampling systems, coolers and converters with all their disadvantages.

The simple plug'n'play design makes it easy and cost-effective to install, operate, and maintain the analyzing system. A complete system includes an automatic back-flushing ejector probe connected to an analyzing board with analyzer and air supply and calibration gas reduction station.

Specifications

Analyzer:

Measurement range	NO _x : 0 to 2000 ppm (Full Scale = F.S.) – O ₂ : 0 to 21% (F.S.)
Repeatability	NO _x : +/- 1.0% of F.S. – O ₂ : +/- 1.0% of F.S.
Linearity	NO _x : +/- 1.0% of F.S. – O ₂ : +/- 2.0% of F.S.
Power supply	90-260 V AC – 50-60 Hz (47-63Hz) – 50 VA max.
Ambient temperature	-15°C to 60°C
Display	LCD touch screen
Analog output signal	2 x 4...20 mA range selectable (for NO _x and O ₂) — Load output (max.): 20 mA / 600 Ω / 24 VDC
System interface	Analog 4...20 mA / CAN Bus / Ethernet
Relays	4 relays – volt free – max. 260 V AC / 8A
Analyzer casing	Aluminum casing – IP55

Analyzer board with connections:

Dimensions / Weight	H×W×D: 300×200×160 (wall mounted) / ca. 6 kg (without umbilical cord)
Test gas reduction regulator	max. 8 bar – 1/8" BSP connection
Air supply reduction regulator	incl. filter – max. 8 bar – 1/8" BSP connection
Filter retention	95% of 1 μm particles
Air supply	Instrument air quality according to ISO 8573-1.3.3.2 — consumption up to 5 l/min

Ejector Probe:

Sensor technology	Zirconium-Dioxide (ZrO ₂) based multi-layer sensor
Sample temperature	-15°C to 60°C
Probe length/socket	Insert length: app. 130-380 mm depending on probe length and socket insertion
Calibration air flow	App. 2 l/min
Ejector air flow at 1 bar	App. 2 l/min ≈ Vacuum 80 mm H ₂ O – adjustable if more suction is needed
Dimensions / Weight	H×W×D: 285×180×650/475 mm / ca. 5kg (without umbilical cord)
Umbilical cord	3.0 m length in 28 mm nylon conduit

Optional Equipment:

Data logging and report module complying with Annex VI of MARPOL 73/78 and NO_x Technical Code

Specifications subject to changes without notice



GREEN INSTRUMENTS A/S • www.GreenInstruments.com
Erhvervsparken 29 • DK-9700 Brønderslev • Denmark
Tel.: +45 96 45 45 00 • Fax: +45 96 45 01

ISO 9001
BUREAU VERITAS
Certification
N° 218511A

