

# G3600/G3601 Inert Gas Oxygen Analyzing System

With Durable Zirconia Sensors

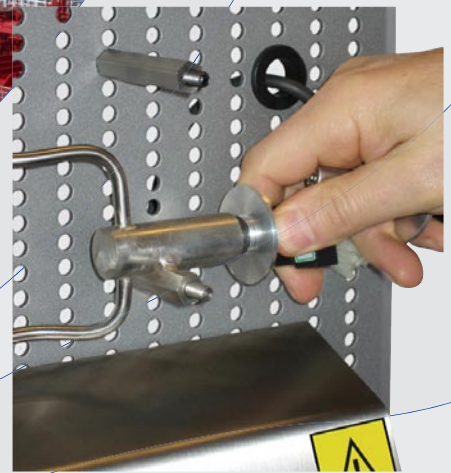


Perfecting Sensible Technology

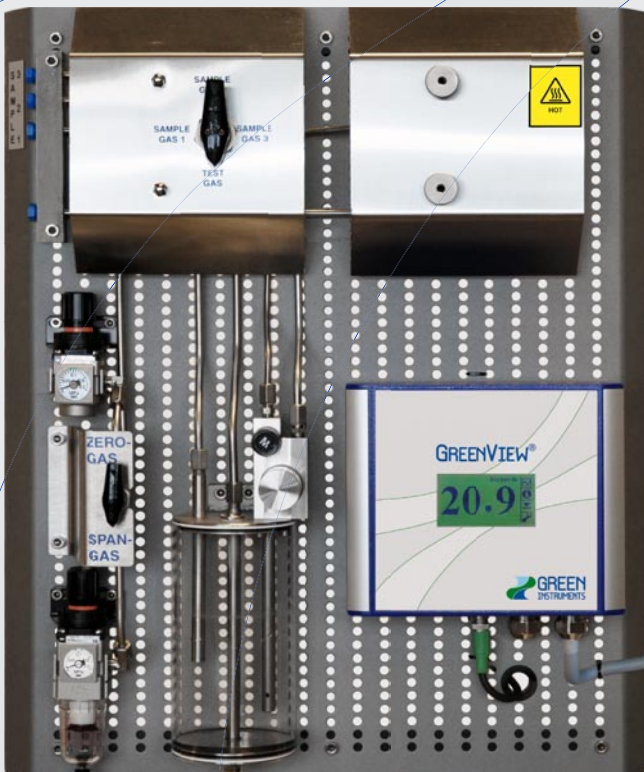




# Highest Quality at Lowest Maintenance



Easy replacement of the zirconia cell



G3600 Inert Gas Oxygen Analyzing System—single board

## The G3600/G3601 Measure Oxygen in Inert Gas

The G3600/G3601 Inert Gas Oxygen Analyzing System is a user-friendly and robust system for accurate and reliable oxygen measurements in safety critical applications.

## New Oxygen Analyzers are MED Approved

The core of the system is the G36 Oxygen Analyzer. The G36 is approved under the European Marine Equipment Directive (MED), becoming the first system to be certified under the new heading A 1/3.54 for fixed oxygen analyzers.

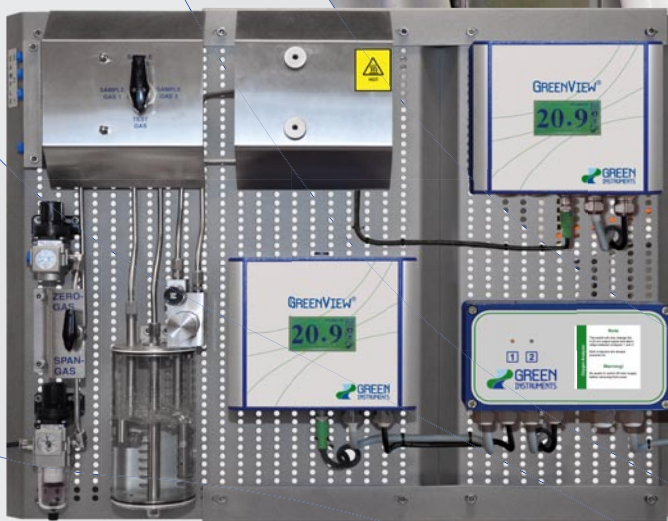
Since the end of July 2009, fixed oxygen analyzers have to have MED type approval on European flagged ships – this includes most EU flags plus Norway.

## Obtain Redundancy with a Double Board

The G3600 is a single boarded system (see picture to the left) that fulfills all requirements and tasks at minimum cost.

The G3601 is the double boarded version of the system (see picture to the upper right). This system offers redundancy for uninterrupted operation. If one sensor or analyzer fails, just switch to the other within seconds.

# Cost-Effective Redundancy with Double Board



G3601 Inert Gas Oxygen Analyzing System—double board

## Key Features

- Certified under the M.E.D.
- Type Approved by DNV, BV, and Lloyd's Register



- Avoid delays
- Protect cargo, ship, and crew
- Easy to install, easy to maintain, easy to use
- Easy calibration by crew
- Option for simplified artificial calibration
- Configurable measuring range and signal outputs
- Configurable alarms
- Long time sensor stability – easy replacement
- Inexpensive spare parts
- Graphic display – interface via touch screen
- Worldwide customer support via service partners

### Durable and User-Friendly Zirconia Sensor

The G36 Oxygen Analyzers provide accurate, real-time measurements based on a new type of zirconia cell suitable for the harsh and stressful marine environment. The zirconia sensors are cost-effective and reliable. They are easily stored and have unlimited shelf-life.

### Easy Configuration

The G36 Oxygen Analyzers are easily set up to work seamlessly together with the inert gas generator. The interface allows you to freely configure both the analog output signal as well as the alarm levels via the touch screen.

### Optional Sample Flow Control

The G36 Oxygen Analyzers allow the integration of additional sensors for customizing the G3600 Oxygen Analyzing System to your needs. For example, it is possible to add a flow sensor to monitor the flow of the inert gas sample.

### Panel Mounted Oxygen Analyzer

Both the G3600 single board and the G3601 double board can be delivered with the G36p Oxygen Analyzer that is designed for panel mounting. This is especially useful where an existing panel-mounted oxygen analyzer is replaced.



# Specifications - G3600/G3601 IGOA System

## G3600/G3601 Board Specifications

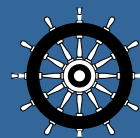
G3600 single board	H×W×D: 600 × 500 × 134 mm - Weight: approx. 12 kg without water and packaging
G3601 double board	H×W×D: 610 × 790 × 134 mm - Weight: approx. 20 kg without water and packaging
Sample quality	Pressure: 0.05 to 1 bar - Flow: 2 to 8 l/min - Temperature: 0°C to 70°C
Sample manifold	3 ports - 1/8" BSP connection
Zero test gas	E.g. 2% O <sub>2</sub> in N <sub>2</sub> supplied by owner - max. 10 bar - Reduction station - 1/8" BSP connection
Span test gas	Instrument air according to ISO 8573-1.3.3.2 - max. 10 bar - Reduction station incl. filter - 1/8" BSP connection
Filter retention	95% of 1 µm particles

## G36 Oxygen Analyzer + Sensor Specifications

Certificates & approvals	MED by DNV - DNV Type Approval - Lloyd's Register Type Approval - Bureau Veritas Type Approval - CE
Sensor technology	Heated zirconia type sensor
Measurement range	0.0 ... 21.0%
Repeatability	+/- 0.1 % of the measurement range
Accuracy	+/- 0.5 % of the measurement range
Response time	90% of F.S. in less than 10 sec. at sample flow 2 l/min
Power supply	G36a: 100...230 VAC / 50...60 Hz.
Output signal	2 × 4...20 mA - range selectable. Default: A-out1: 0.0...25.0 % O <sub>2</sub> / A-out2 not in use
Max. load	600 Ω / 24 VDC
Alarm functions	O <sub>2</sub> low or high - O <sub>2</sub> high-high - System Fail
Alarm relays	4 relays, volt free, 5A 24 VAC/VAC
Interface	Touch screen 71 × 39 mm with trend graph display
Alarm log	History and alarm logs on SD cards
Ambient temperature	0°C to 55°C
Location	Safe area e.g. engine room
Analyzer casing	Aluminum casing IP67



BUREAU  
VERITAS



DNV

## Optional Equipment

Extension board for additional analyzer	Analyzer as specified above Dimension: H×W×D: 610 × 290 × 130 mm - Weight: Approx. 7 kg without packaging
Sample flow control	Additional flow transmitter mounted on the board and integrated into the G36
Remote digital display G36p instead of G36a	22...250 VAC/DC with 2 configurable alarm relays - Ambient temp.: -20°C to 60°C - Panel cut-out: 44.5 × 91.5 mm Power: 24 VDC - Ambient Temperature 0°C to 70°C - Enclosure IP55 if panel mounted Panel cut: 154 × 73 mm (W×H) - Front: 178 × 95 mm (W×H) - Depth: 71 mm + cables other specifications as above
Other optional equipment	Pre-filter for sample gas, signal amplifier, and signal amplifier for logarithmic output

Specifications subject to change without notice