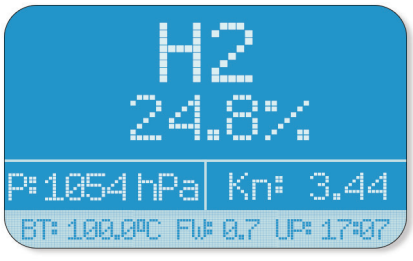
SGS™ SINGLE-GAS SENSOR

United PROCESS CONTROLS

New



LCD display provides easy-to-read indication of operation values, parameters and faults.

The **SGS™ Single-Gas Sensor** is an integrated thermal conductivity sampling system designed to measure the concentration of a gas sample in binary or quasi-binary mixtures.

Ideal for measuring hydrogen content or dissociation level with high accuracy in nitriding and nitrocarburizing atmospheres, the SGS™ is also capable of calculating K_N and K_C for controlled nitriding and nitrocarburizing.

The integral sampling system of the SGS™ eliminates the need for a separate external sampling system. This one-piece sensor is mounted directly to the furnace exhaust line or to the furnace's sample port, and uses the Venturi effect to draw atmosphere from the exhaust line or sample port. The real advantages of the SGS™ are its low-maintenance and long service life, while eliminating the need for heated sample lines, filters, etc.

FEATURES & BENEFITS

- Integral sampling eliminates need for a separate sampling system
- Sampling flow is generated by Venturi effect using either process atmosphere or exhaust gasses, depending on the installation location of the sensor
- Sensing block with KF25 flange for direct exhaust or furnace installation
- Sensing block and electronics embedded in the same enclosure
- Integrated web server with access to diagnostics and maintenance
- Optional calculation of nitriding and carbon potential for nitriding and nitrocarburizing
- Modbus TCP standard
- Two analog OUT: Programmable
- Optional communication protocol:
  - CAN bus, Profibus, Modbus RTU
- Optional O_2 sensor and O_2 sensor temperature inputs

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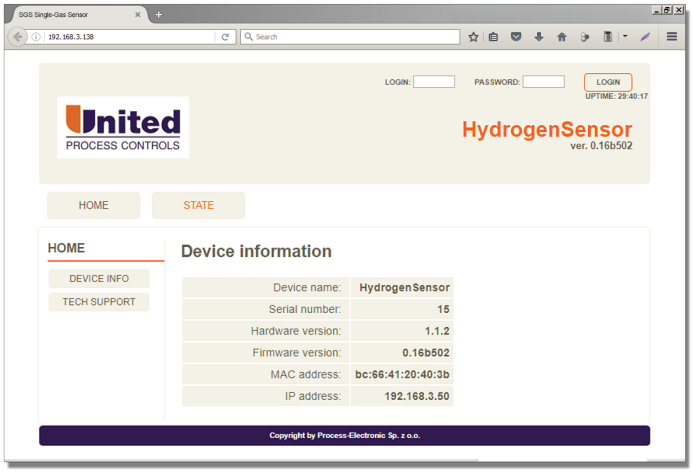
WEB SERVER FEATURES

- Remote access to the device via web browser, no special software required
- Intuitive web interface
- Two levels of accessd:
  - level 1 is open access with restricted capabilities
  - level 2 for an administrator with password protection
- Access real-time information on the current measured values, calculated values such as K_N and K_C as well as diagnostic information
- Easy setup of parameters
- Built-in alarm viewer for troubleshooting
- Remote firmware update capability



CONTROL DIAGRAM

2 x A/O

2 x D/I or D/O

POWER SUPPLY
24 VDC

COMMUNICATIONS
Modbus TCP
Standard

Optional
Modbus RTU
CAN bus
Profibus

SPECIFICATIONS

Accuracy:	+/- 0.6% of reading plus +/- 0.4% of full scale
Linearity:	< 0.5% of full scale
Repeatability:	< 0.5% of full scale
Zero Drift:	< 0.5% of full scale per month
Sampling Flow:	0.05 to 0.5 lpm / (0.1 to 1 cfh) not controlled
Atm. Flow Speed:	0.1 – 60 m/sec (0.3 to 200 ft/sec)
Response Time:	95% in 60 sec @ 0.2 lpm / (0.4 cfh)
Power Requirements:	24VDC, 1.5 Amps max.
Input/Outputs:	2 x analog OUT, sourcing, isolated; 4 – 20 mA (R<500 Ohm) 2 x digital IN or OUT, 24 VDC, 700 mA max. (alarms)
Working Pressure:	ambient +/- 35 mbar (0.5PSI) Can be used in equipment with vacuum purge (no measurement in vacuum)
Ambient Temperature (operating):	0°C to 65°C (32°F to 140°F)
Ambient Storage (operating):	-20°C to 80°C (-4°F to 176°F)
Relative Humidity:	20% to 95% (non-condensing)

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