

SWG-100
BIOGAS

**THE UNIQUE ANALYZER
FOR BIOGAS, BIO METHANE,
LANDFILL GAS AND OTHERS...**



Complete, ready to use
SWG 100 - BIOGAS analyzer



www.DiamondSci.com



SWG-100

BIOGAS

The complete, ready to use biogas analyzer SWG 100 - BIOGAS is the industrial solution to be used in:

- >> biogas (anaerobic digestion) plants
- >> cogeneration heat and power engines (CHP)
- >> municipal or industrial waste water treatment sites
- >> coal seam gas sites (coal bed methane)
- >> food and animal waste processing plants
- >> bio methane (gas to grid) plants
- >> landfill sites

SWG 100 - BIOGAS - Instrument main features are:

- >> industry compatible rugged design for harsh industrial environments
- >> standard system safety includes with continuously monitored ventilation fan and gas flow restrictor orifice at gas inlet
- >> efficient sample gas preparation for fast and reliable measurements
- >> sampling from low suction up to high pressure gas
- >> no dilution of the sample gas is needed, compressed air not required
- >> direct and continuous/discontinuous measurement, with pressure and temperature compensation and event data logging
- >> up to 10 sites monitoring (time sharing technique) with only one analyzer
- >> ready to run delivery, minimum installation work



STANDARD

- Basic analyzer for wall (rack) mounting, IP54 aluminum cabinet with anti-corrosive red structural lacquer
- Monitored ambient air ventilation with display and system alarm, including flow restrictor orifice and cutoff gas supply solenoid valve
- Sample gas pump and internal sample flow monitoring with display and system alarm
- Solenoid valve for auto-zero with ambient air
- 1/8" threads for all sample gas, zero gas and calibration gas inlets, fittings for DN6/4 mm tube
- 3.5" TFT color, backlit display and keyboard, password protected operation
- RS485 digital data transfer (Modbus RTU)
- Universal 90 - 240 Vac / 47 - 63 Hz / 90 W power supply

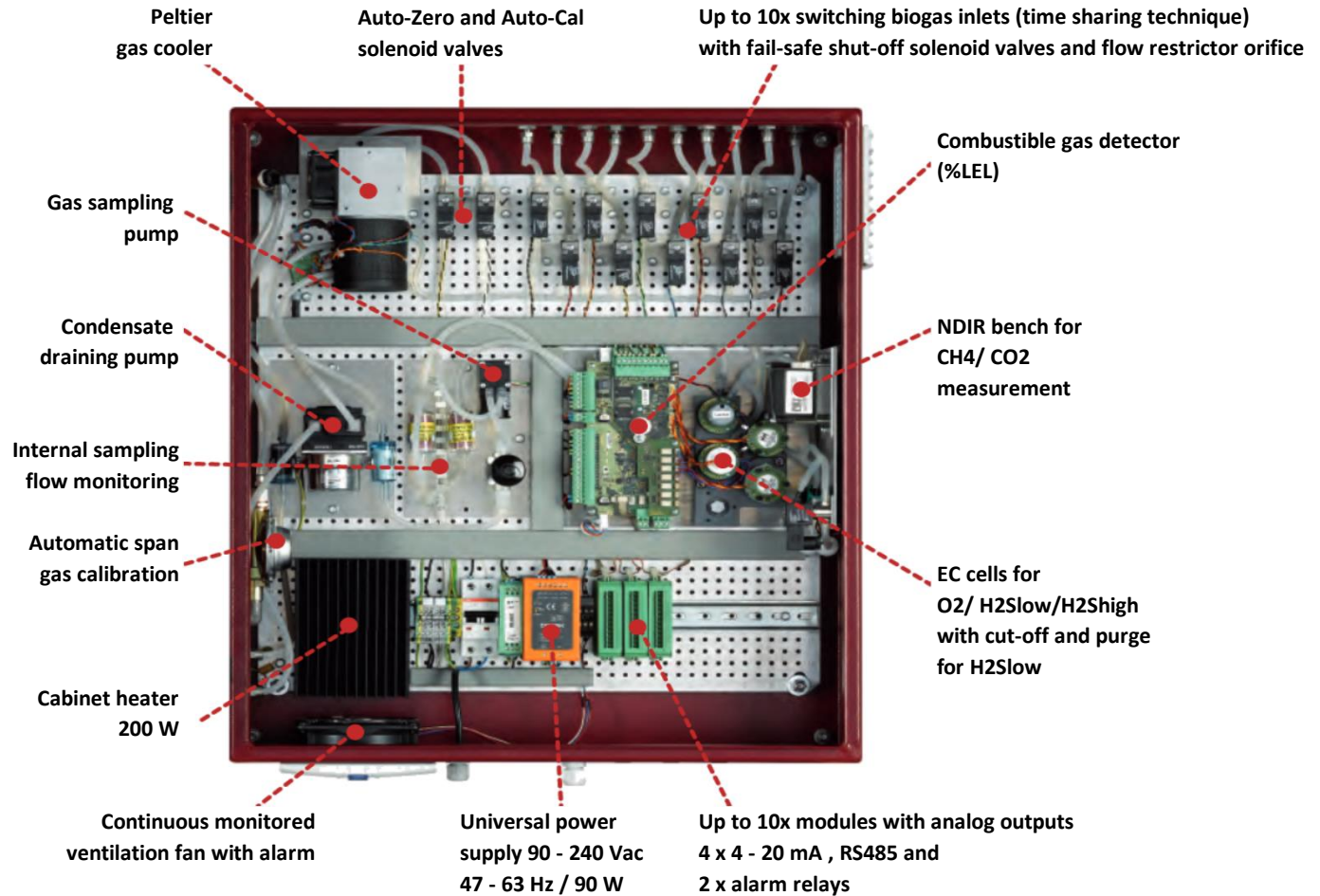


THE UNIQUE ANALYZER

for Biogas, Bio Methane, Landfill Gas, Coalbed Methane

AVAILABLE OPTIONS

- CH4 and CO2 NDIR measurement
- H2S low measurement with EC cell protection (cut-off and purge)
- H2 or CO measurement with EC cell
- Combustible gas detector (%LEL) mounted inside analyzer cabinet
- Auto-calibration using span gas mixture cylinder
- Module with 4 channel analog outputs/inputs 4 - 20 mA and 2x alarm relays
- Converter module of RS485 into Profibus
- Cabinet heater for freeze protection
- O2 measurement with long-life EC cell
- H2S high measurement with EC cell
- Electric gas cooler (Peltier) with automatic condensate draining pump
- Multiple sampling point switchover from 2x up to maximum 10x sites
- Analyzer remote control using 4x external relay contacts



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TECHNICAL SPECIFICATIONS

DATA SUBJECT TO CHANGE WITHOUT NOTICE

| Measurement components | Measuring range | Measuring method |
|-----------------------------|--|--------------------------------|
| CH4 Methane | 0 – 100 % | NDIR |
| CO2 Carbon dioxide | 0 – 100 % | NDIR |
| O2 Oxygen | 0 – 25 % | electrochemical, continuous |
| H2S Hydrogen sulfide LOW | 0 - 1,000ppm | electrochemical, discontinuous |
| H2S Hydrogen sulfide HIGH | 0 - 10,000ppm | electrochemical, continuous |
| H2 Hydrogen | 0 - 1,000ppm | electrochemical, discontinuous |
| Calculated component | Calorific value: 0 – 50 MJ/m3; MJ/kg | |
| HMI human machine interface | 3.5" TFT color display Backlit keyboard, password protected operation 4x analog output 4-20 mA, floating, max. load 500R 2 alarm relays, potential free contacts 24 Vdc/5 A RS485 digital interface (Modbus RTU) DIN-rail RS485 / Profibus converter | |
| System safety components | Monitored cabinet ventilation fan Stainless steel flow restrictor orifice Sample gas shut-down solenoid valve LEL (CH4) monitoring inside cabinet | |
| Sample preparation | Stainless steel gas fittings with 1/8" ID threads Electric gas cooler Teflon particulate filter, internal Viton hosing Monitored and regulated sample flow 40...60 l/h Sample inlet pressure: -40 inH2O to +120 inH2O (-100 mbar to +300 mbar) Sample venting: atmosphere pressure | |
| Cabinet dimensions | Aluminum with anti-corrosive structural painting 27.55" x 23.61" x 8.26" (700 x 600 x 210 mm) (H x W x D) for wall or rack mounting | |
| Weight / Protection | 55lbs (25kg) / IP54 | |
| Ambient temperature | 41°F ...113°F (+5°C...+45°C) or -4°F ...113°F (-20°C...+45°C) with cabinet heater | |
| Installation site | Indoor or outdoor (rain and sun shade is mandatory user scope of supply) | |
| Cabinet conditioning | Continuous, monitored fan ventilation Cabinet heater 200 W (option) | |
| Power supply | Universal 90 - 240 Vac / 47 - 63 Hz / 90 W (300 W with cabinet heater) | |

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