

MRU INSTRUMENTS, INC.



**PRODUCT PORTFOLIO
BIOGAS / RNG / BIOMETHANE**



400GD & 500GD

CH₄ C₃H₈ H₂ CO CO₂ °F IAQ FKW FCKW HFO AND OTHERS

Multifunction Detector for gas leak detection of / and ...

Main features:

- Super-fast reaction time
- Reliable gas leak detection (see gases above), AC refrigerant leak detection, stack humidity test, IR temperature measurement, IAQ test, with only one system
- Adjustable alarm thresholds
- Optical alarm at the sensor and on the display of the device
- Acoustic and vibration alarm by the device
- Strong Lithium-Ion battery, chargeable via Mini-USB socket
- TFT color display
- Handy device with dirt resistant keypad
- Adjustment factors are stored in the sensor, so they can be used with different devices
- Power supply for battery charging

ALSO AVAILABLE AS ADD ON PROBE FOR the DM 9600 / OPTIMAX and NOVA plus



DM 9600 - CHP

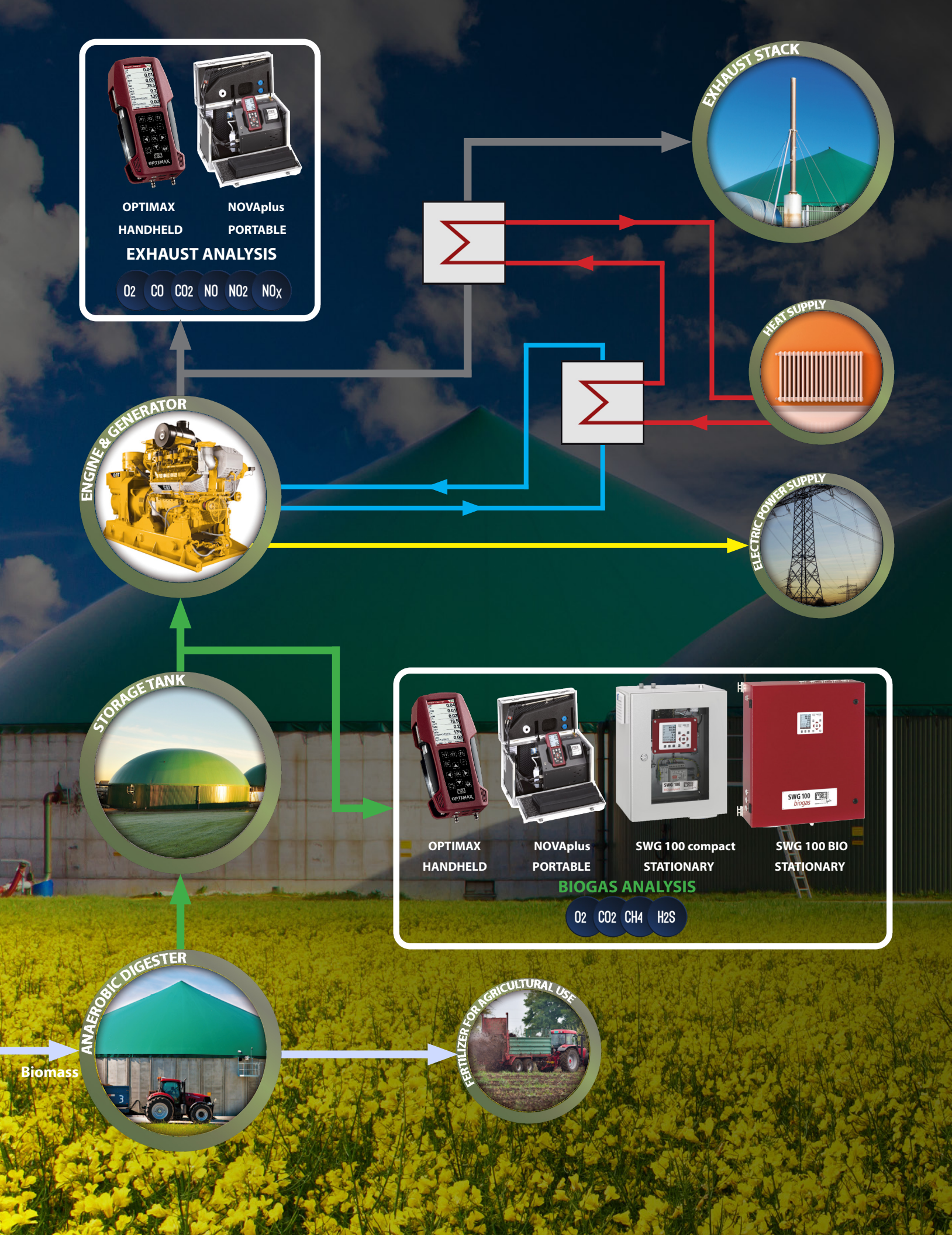
Pa hPa mbar psi inH₂O °F FLOW AND OTHERS

Precision Manometer for numerous pressure-, differential pressure- and temperature-measurements at CHP plants

Main features:

- same as above
- Electronic, long-term stable pressure sensor for up to 10 bar (145 psi)
- Engine inlet pressure
- Boost pressure
- Inter cooler differential pressure
- Exhaust back pressure
- Crankcase pressure
- Internal pressure





OPTIMAX BIOGAS

O₂ CO₂ CH₄ H₂S

CO NO NO₂ NO_x SO₂

VERSATILE BIOGAS ANALYZER

Ideally suited Landfills, Digesters, & even Energy to Waste Engine Tuning

Main features:

- Simultaneous measurement of up to 4 (max. 7) gases
Bio-gas measurement: O₂, H₂S, CH₄ and CO₂
Emissions: CO, NO, NO₂, SO₂ – low to high ranges
O₂ measurement 0 - 25.00%, using long-life sensor
- Bio-gas / differential pressure measurement
(0 ... +/- 300 mbar)
- Differential temperature measurement
- Flow velocity measurement
- Rear magnets for hands free operation
- Robust fiber re-enforced enclosure
- Stainless steel gas port and pressure ports
- Special LFG Probe is available

Available as:

Bio-gas analyzer

LFG analyzer

Bio-gas / Emission analyzer

- Fast and easy to use with intuitive menus and function buttons
- Large, color, back-lit display with ZOOM features for viewing in any condition
- Customizable screen settings
- Durable and dirt resistant keypad
- High energy Li-Ion battery operates up to 15 hours
- Large 32,000 measurements internal memory
- USB port for charging and PC software connection
- SD Card reader for firmware updates and easy data handling
- Bluetooth(*) interface for MRU app and PC connection
(*)Not available for landfill version
- IR interface for external MRU speed printer
- Sample preparation with condensate separator and with Teflon filter



NOVAplus BIOGAS

O2

CO2

CH4

H2S

CO

NO

NO2

NOx

SO2

**Advanced analyzer for bio-gas
and engine emissions tuning
and compliance reporting**

Main features:

- Simultaneous measurement of up to 4 (max. 7) gases
Bio-gas measurement: O2, H2S, CH4 and CO2
Emissions: CO, NO, NO2, SO2 – low to high ranges
O2 measurement 0 - 25.00%, using long-life sensor
- Bio-gas / differential pressure measurement
(0 ... +/- 300 mbar)
- Sample preparation via Peltier gas cooler and PTFE Filter, with automatic condensate draining pump, with condensate monitoring and alarm
- Automatic zeroing using 2/3-way solenoid valve
- Internal sample gas flow monitoring and alarm
- Active vent using separate purging pump
- Fan ventilated instrument to prevent accumulation of flammable gases
- Strong, high performance gas sampling pump for high suction sampling
- Bio-gas pressure measurement (-300 mbar ... +300 mbar)
- Wall-plug, universal grid power supply, 100-240Vac/50-60Hz, 12V DC
- Built-in high speed printer with easy paper loading
- Robust metal enclosure mounted inside aluminum framed case

- With convenient Remote Control unit (RCU)
- RCU Bluetooth to base connection (up to 100 feet)
- RCU with wireless charging
- RCU with up to 30 hours operation time
- Automatic measurement incl. data logging function
- Integrated SD card reader for additional data storage
- RCU also optional with
 - 2 x K-Type temperature ports
 - 2 x Pressure ports
 - 1 x Aux port
 - Flow velocity measurement



SWG 100 BIO compact

The gas analyzer SWG100-BIOcompact is dedicated for discontinuous sampling and measuring biogas mainly from:

- Cogeneration heat and power engines (CHP)
- CHP of municipal or industrial waste water treatment sites
- Small scale AD plant with dry fermentation
- CHP of landfill gas cogeneration site

Main features:

- Cost effective stationary biogas analyzer
- Discontinuous measurement - up to 24 per day
- Measuring CH₄ / CO₂ / O₂ / H₂S
- Suitable for harsh industrial environments
- Strong sample gas pump
- Up to three (time sharing) sample points monitoring

O₂ CO₂ CH₄ H₂S



- IP54 steel cabinet with anti-corrosive gray structural lacquer
- Integrated condensate trap with condensate draining pump
- Solenoid valve for auto-zero with clean ambient air and for manual calibration
- Sample gas supply cut-off in case of system alarm, using "fail-safe" solenoid valve (normally closed)
- All stainless-steel gas connectors 1/8"ID female threads, suitable for 6mm bulkhead compression fittings (also replaceable by user)
- Stainless steel adapter 1/8" female - 1/8" male, with flow restrictor orifice to be mounted at sample gas inlet in case of high-pressure sampling
- Human machine interface with color TFT display, keyboard and RS485 interface (Modbus RTU)
- All password protected, intuitive software guided menu, with diagnosis software
- Universal power supply 90-240Vac / 47-63Hz / 42W

SWG 100 BIOGAS

Landfill and Biogas analysis
For optimizing production, performance
and reporting

Main features:

- Measuring CH₄ / CO₂ / O₂ / H₂S / CO / H₂
- Continuous and Semi-continuous operation
- Efficient gas prep provides fast and reliable measurements
- Sampling from low suction to high pressure
- Up to 10 (time sharing) sites
- Fresh air auto zero
- Multiple inputs / outputs of (4) 4.20mA, (2) relays, RS485 Modbus, Ethernet even Profibus
- Safety: Monitored ventilation fan, gas flow restrictor, optional %LEL detector and flame arrester
- Fast & easy installation: Connect and go with no need for compressed air for dilution
- Auto Calibration
- OPTIONAL gas dilution system 50:1 for H₂S - highly recommended for landfills and high H₂S application sites

O₂ CO₂ CH₄ H₂S H₂ CO



- IP54 aluminum cabinet with anti-corrosive red structural lacquer and monitored fan ventilation
- Regulated sample gas pump with sample gas flow monitoring and adjustment
- Filtration of sample gas and of acid gases before internal sample flow sensor
- Solenoid valve for auto-zero (with clean ambient air) and for automatic calibration
- Sample gas supply cut-off in case of system alarm, using "fail-safe" solenoid valve (normally closed), including one sample gas sampling inlet port
- All stainless-steel gas connectors 1/8"ID threads, with 6mm bulkhead compression fittings (also replaceable by user)
- Stainless steel adapter 1/8" I - 1/8" O, with flow restrictor orifice, to be mounted at sample gas inlet from high pressure sampling
- Human machine interface with color TFT display, keyboard and RS485 interface (Modbus RTU)
- all password protected, intuitive software guided menu, with diagnosis software and logbook
- 230Vac / 47-63Hz / 90W power supply, 115Vac power supply on request



VARIOluxx SYNGAS

O₂ CO₂ CH₄ H₂S

Low to high range CH₄ / CO₂ capabilities
O₂ measurements via. electro-chemical or paramagnetic sensor
Optional low H₂S measurement Multiple data and networking choices
Ideal for short-term or long-term monitoring

- Linux operating system
- 7" high contrast, color touchscreen with graphical data display
- Integrated Peltier cooler with automatic condensate drain pump
- Gas flow restrictor orifice
- Internal sample flow monitoring
- Strong, regulated sample pump
- Data transfer over LAN Ethernet or USB
- AND MUCH MORE



SWG 100 BIOGAS

O₂ CO₂ CH₄ H₂S

Low to high range
CH₄ / CO₂ capabilities
O₂ measurements via. electro-chemical or paramagnetic sensor
Optional low H₂S measurement
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- Solenoid valve for auto-zero (with clean ambient air) and for automatic calibration
- Sample gas supply cut-off in case of system alarm, using "fail-safe" solenoid valve (normally closed), including one sample gas sampling inlet port
- All stainless-steel gas connectors 1/8" ID threads, with 6mm bulkhead compression fittings (also replaceable by user)
- ++ (see SWG 100 BIOGAS analyzer)





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