OPTIMA7 BIOGAS

VERSATILE BIOGAS ANALYZER

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

- **Simple, intuitive operation**
- **Compact, rugged & reliable**
- **Easy data handling**
- **Low cost of ownership**

MRU AIR fair since 1984 ®

EMISSION MONITORING SYSTEMS

Over 30 years of innovative gas analysis!

VERSATILITY & VALUE:

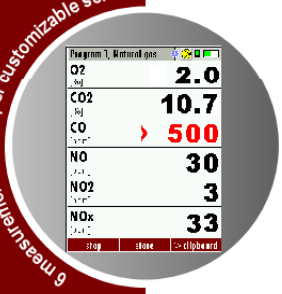
THE OPTIMA 7 BIOGAS PROVIDES EVERTHING YOU NEED IN ONE COMPACT PACKAGE.

For Landfills and anaerobic digesters, it measures methane, carbon dioxide, hydrogen sulfide, oxygen, plus pressure, flow and temperature.

The Optima 7 can also be outfitted for the tuning of WTE engines, whether on biogas or natural gas to measure O_2, CO, NO, NO_2 (NOx), CO_2, plus stack temperature.

Key features:

- 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 provides up to 8 hours operation
- Large 16,000 measurements internal memory
- Integrated SD card reader for additional data storage and easy data handling
- Sample preparation with condensate separator and with Teflon filter
- Gas pressure, flow, and temperature measurements

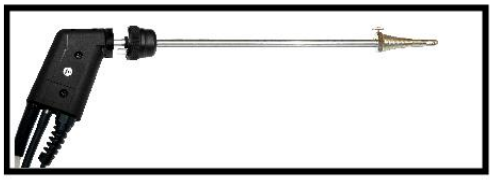


O_2 CH_4 CO_2 H_2S

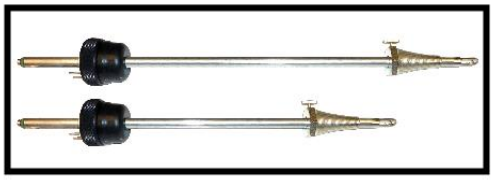
O_2 CO CO_2 NO NO_2 NO_x

Biogas / Combustion / Emissions

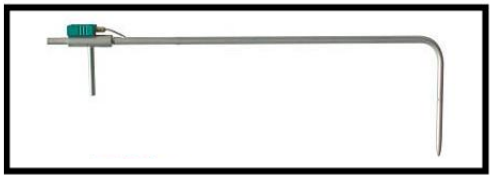
PROBES AND PROBE TUBES



Industrial probe for interchangeable probe tubes with 9' or 16' rugged, braided sheathed sampling line with K-Type t/c and Viton hose
For combustion and emission measurements

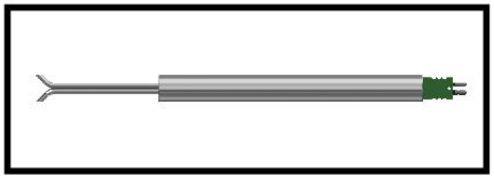


probe tubes (4" to 80" long)
in SS (1,200°F) or Inconel (2,000°F)
Also available with sintered metal filter

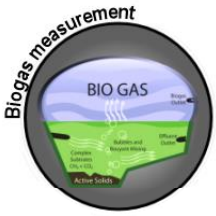


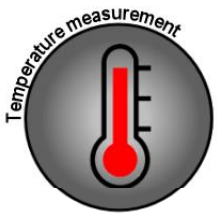
L-Type SS with or without K-Type t/c
in sizes from 4" (0.12Ø) to 79" (0.47 Ø)

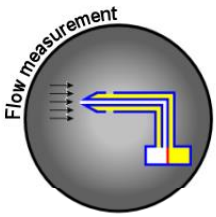
PITOT TUBES



S-Type SS with K-Type t/c (59" lead) and 1.1"Ø protection tube
available in 19" or 39" lengths (0.31"Ø)







IR-Printer interface

Blue-Tooth interface

High capacity, easy access
condensate separator

Rear magnets for
hands free operation

Durable, dirt resitant
keypad

AUX port for additional
parameters (OPTIONAL)

SD Card reader for data transfer
and additional storage

USB Ports for data transfer
and battery charging

3.5" color display
with zoom function

Intuitive, easy to navigate
menu structure

Secure grip side panels

Fiberglass reinforced
enclosure

K-Type temperature
sockets

Stainless steel
connectors

OPTIMA 7 BIOGAS

TECHNICAL SPECIFICATIONS

OPTIMA 7 analyzer	Handheld analyzer with up to 5 electrochemical sensors and a dual gas NDIR bench

BIOGAS components			Measuring range	Accuracy
CO_2	**Carbon dioxide**	**2 Gas NDIR**	0....100%	± 0.3 % or 5% reading
CH_4	**Methane**	**2 Gas NDIR**	0....100%	± 0.3 % or 5% reading
O_2	**Oxygen**		0 ... 25.0 Vol-%	± 0.2 Vol-% abs.
H_2S	**Hydrogen sulfide**		0 ... 2,000 ppm **overload 5,000ppm ***	± 5 ppm or 5 % reading up to 2,000 ppm 10 % reading up to 5,000 ppm

FLUE GAS components		Measuring range	Accuracy
CO	**Carbon monoxide (H2 compensated)**	0 ... 4,000 ppm **overload 10,000ppm ***	± 10 ppm or 5 % reading < 4,000 ppm / 10 % reading > 4,000 ppm
CO	**Carbon monoxide low**	0 ... 500 ppm **with 0.1 ppm resolution ****	± 2.0 ppm or** 5 % reading
NO	**Nitric oxide**	0 ... 1.000 ppm **overload 5,000ppm ***	± 5 ppm or 5 % reading < 1,000 ppm / 10 % reading > 1,000 ppm
NO	**Nitric oxide low**	0 ... 300 ppm **with 0.1 ppm resolution ****	± 2.0 ppm or** 5 % reading
NO_2	**Nitrogen dioxide**	0 ... 200 ppm **overload 1,000ppm ***	± 5 ppm or 5 % reading < 200 ppm / 10 % reading > 200 ppm
NO_2	**Nitrogen dioxide low**	0 ... 100 ppm **with 0.1 ppm resolution ****	± 2.0 ppm or** 5 % reading

***overload range recommend only for short time measurements**
****are not separate sensors; selected sensors are used with special calibration**

Stack / Gas temperature	0 ... 1,200°F / 2,012°F **(with stainless steel / Inconel steel tube)**	± 4°F ... < 392°F / 1 % reading > 392°F
Ambient temperature	0 ... 212°F	± 2°F
Differential temperature	up to 2,012°F **(with suitable material of sampling tube)**	± 4°F ... < 392°F / 1 % reading > 392°F
Stack / Differential pressure	+/- 120 inH2O (300hPa)	± 0.01 inH2O or 1% reading
Gas flow velocity measurement	1 ... 40 m/s (using Pitot tube)	

General specifications

Operation temperature	41°F .... 113°F, max. 95 % RH, non condensing
Storage temperature	-4°F ..... 122°F
Ambient conditions	not in aggressive, corrosive or high dust environments, not for use in hazardous areas
Power supply	Lithium-Ion battery, 6 to 8 hours operation
Grid power supply	100 - 240 V AC / 50 ... 60 Hz 1A
Protection class	IP42
Weight	approx. 2.2 lbs. (with 7 sensors)
Dimensions	(W x H x D) 4.3" x 8.8" x 2.04"

Data subject to change without notice

MRU Instruments, Inc.
Houston, Texas 77044
Tel.: (832) 230 - 0155
Fax: (832) 230 - 1553
info@mru-instruments.com
www.mru-instruments.com

Support and sales by:

MRU AIR fair since 1984 ®
EMISSION MONITORING SYSTEMS