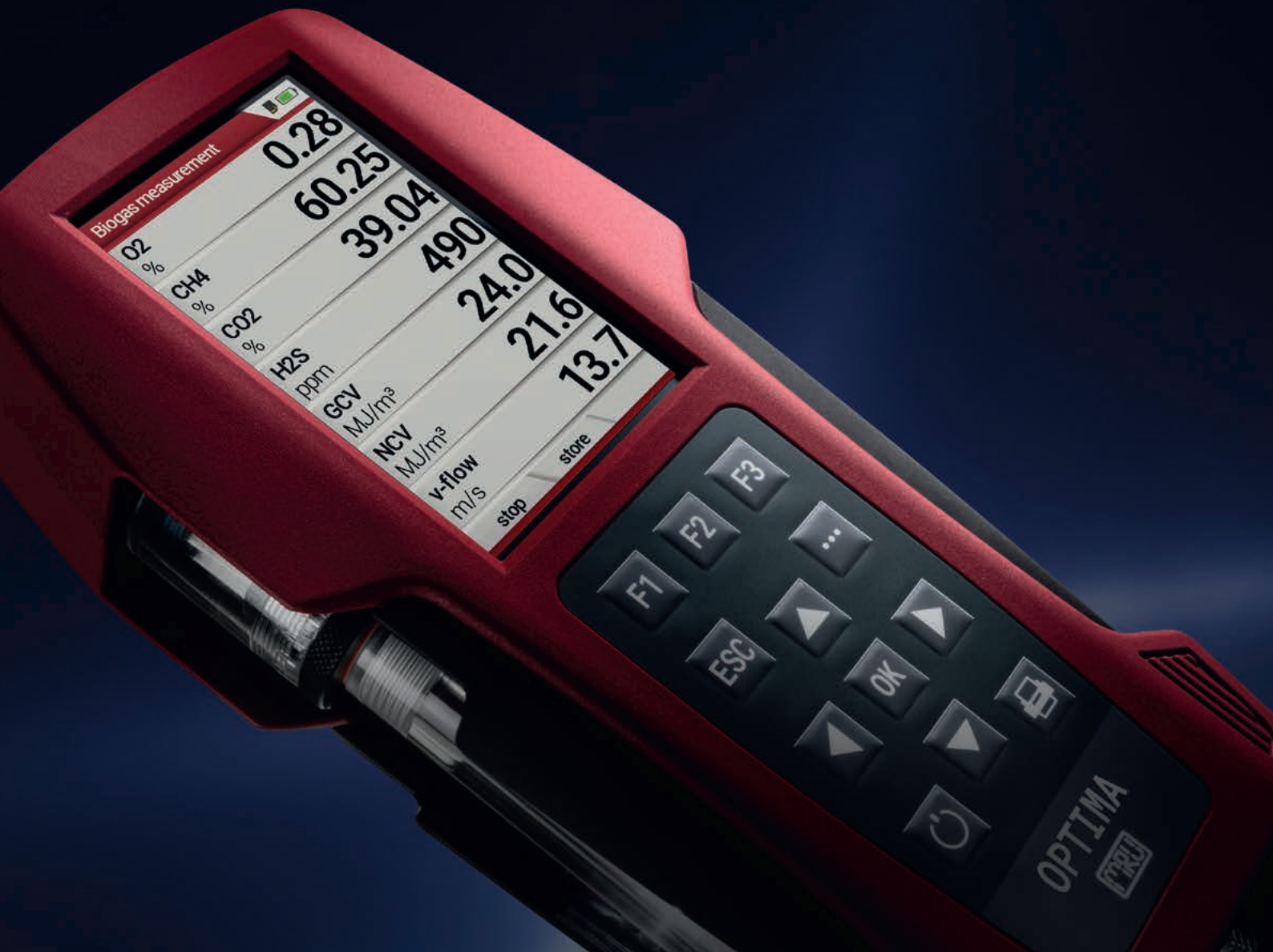
MRU AIRfair since 1984 ®
EMISSION MONITORING SYSTEMS

CH_4 | CO_2 | H_2S | O_2 | H_2 | N_2 | CO | NO | NO_2 | NO_x

OPTIMA Biogas

Professional rugged handheld biogas analyzer.

For fast gas analysis at biogas, biomethane and landfill plants.

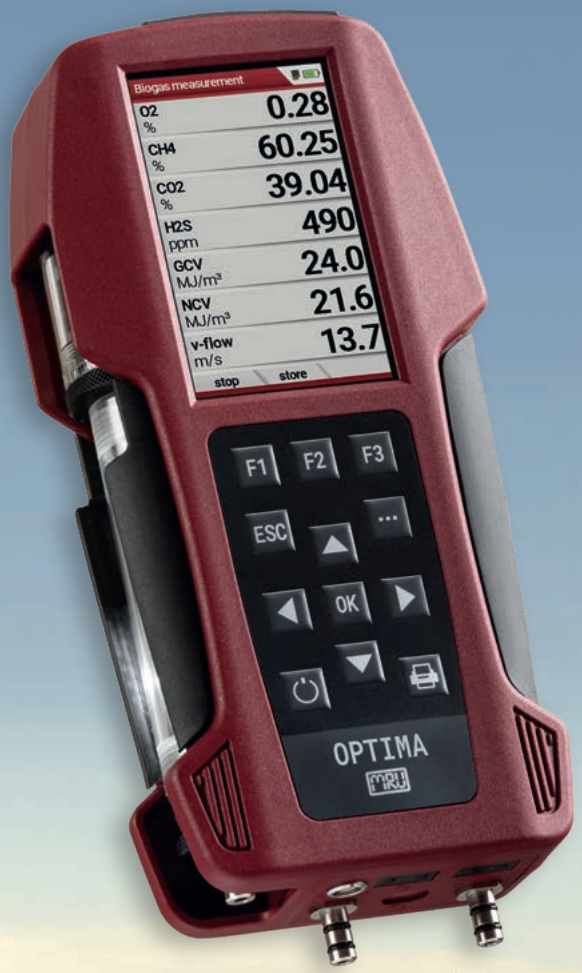


OPTIMA Biogas

Multi-use handheld device for fast control measurements

With OPTIMA Biogas we offer you additionally measurement of biogas pressure and temperature, gas flow velocity, with normalized flow rate calculation.

OPTIMA Biogas may measure, given an appropriate sensor configuration, CHP engine exhaust gases as well.

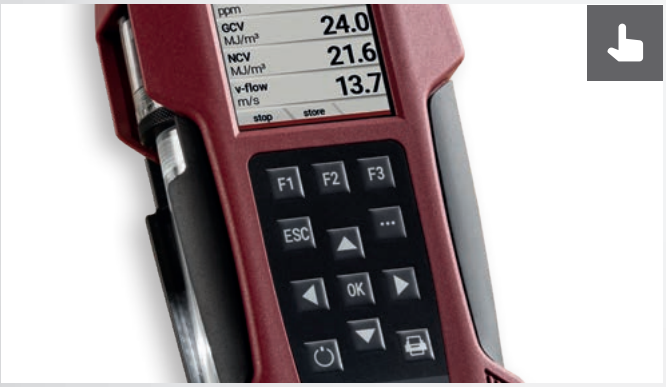


These are your special advantages:

- Biogas measurement: CH_4, CO_2, O_2, H_2S
- Exhaust gas measurement: O_2, CO_2, CO, NO, NO_2
- Ambient air measurement: CH_4 (LEL), H_2S
- Different measuring units settable by user
- Intuitive menu navigation with function keys
- Glass fiber reinforced enclosure with fixing magnets
- High volume data memory with interface to App and PC software
- Strong Lithium-Ion battery for at least 15 h continuous operation

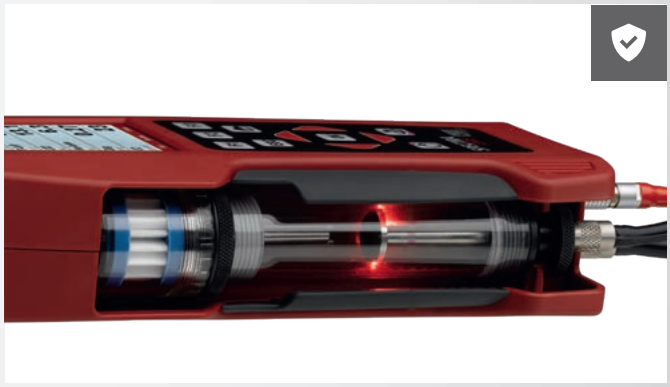
The device in detail

An overview of the special features



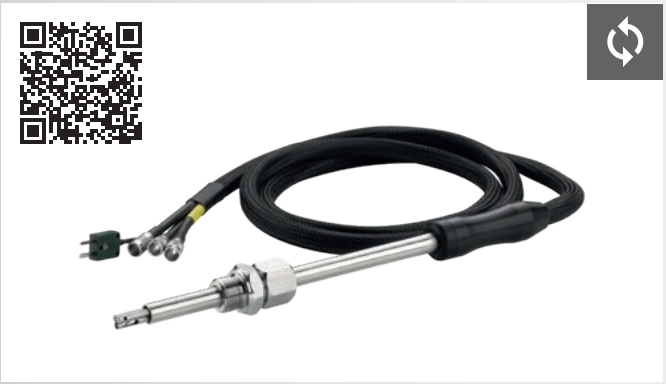
Operation and colour display

Intuitive guidance through the measuring programs, thanks to simple display and keypad interaction



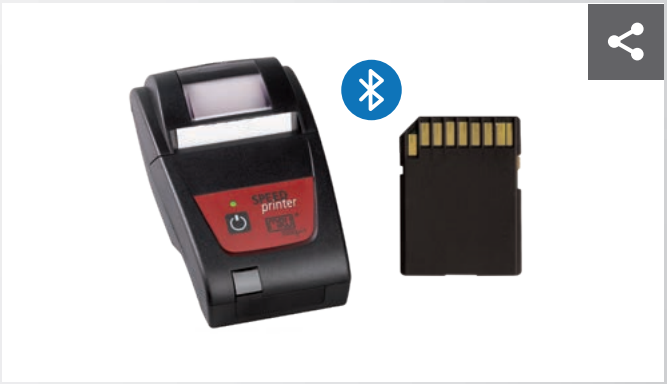
Condensate and dirt are kept out

Large-volume condensate separator with proven star filter including water stop function



Combination probe

For simultaneous measurement of flow velocity and biogas sampling, with temperature and pressure measurement for normalized flow rate calculation

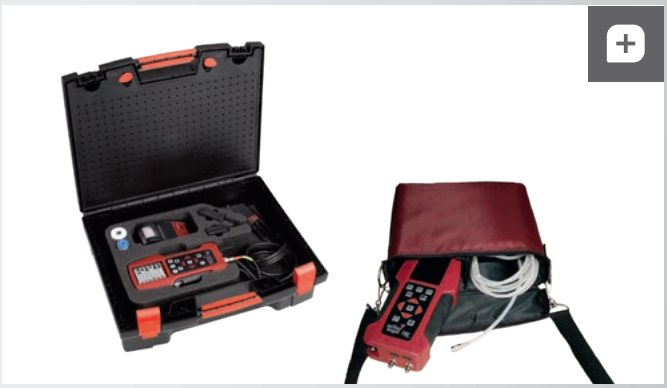


Store, transfer and print measurement data

SD card, Mini-USB and Bluetooth for data transfer to Smartphone, Tablet or PC – or infrared speed printer

Simultanous measurement of biogas and flow velocity

Measurement of bio- or landfill gas, using special S-type probe, with 2 ... 100 m/s and calculation of the flow rate in m^3/h



Practical accessories to carry along

Optionally: transport case, gas sampling probe, MRU speed printer and nylon transport bag

OPTIMA Biogas

Technical data

Biogas/-methane	Measuring method	Measuring range min./max.	Resolution	Accuracy
Methane (CH_4)	NDIR	0 ... 100 %	0.01 %	± 0.3 % or 3 % reading* or 0,5 % reading after calibration*
Carbon dioxide (CO_2)	NDIR	0 ... 100 %	0.01 %	± 0.3 % or 3 % reading* or 0,5 % reading after calibration*
Hydrogen sulphide (H_2S)	electrochemical	0 ... 50/200 ppm	0,1 ppm	± 2 ppm or 5 % reading* up to 50 ppm / 10 % reading* up to 100 ppm
Hydrogen sulphide (H_2S)	electrochemical	0 ... 2,000/5,000 ppm	1 ppm	± 5 ppm or 5 % reading* up to 2,000 ppm / 10 % reading* up to 2,000 ppm
Hydrogen sulphide (H_2S)	electrochemical	0 ... 5,000/10,000 ppm	1 ppm	± 10 ppm or 5 % reading* up to 2,000 ppm / 10 % reading* up to 2,000 ppm
Oxygen (O_2)	electrochemical	0 ... 25 %	0.01 %	± 0.2 % absolute
Hydrogen (H_2)	electrochemical	0 ... 1,000/2,000 ppm	1 ppm	± 5 ppm or 5 % (0 ... 500 ppm), 10 % (> 500 ppm) reading
Nitrogen (N_2)	calculated	0 ... 100 %	0.1 %	
Calorific value (Hu)	calculated	0 ... 50 MJ/m^3	0.1 MJ/m^3	

Engine exhaust gas (CHP)	Measuring method	Measuring range min./max.	Resolution	Accuracy
Oxygen (O_2)	electrochemical	0 ... 25 %	0.01 %	± 0.2 % absolute
Carbon dioxide (CO_2)	NDIR	0 ... 100 %	0.01 %	± 0.3 % or 3 % reading*
Carbon monoxide (CO)	electrochemical	0 ... 10,000/20,000 ppm	1 ppm	± 10 ppm or 5 % (0 ... 4,000 ppm), 10 % (> 4,000 ppm) reading
Nitric monoxide (NO)	electrochemical	0 ... 1,000/5,000 ppm	1 ppm	± 5 ppm or 5 % (0 ... 1,000 ppm), 10 % (> 1,000 ppm) reading
Nitric dioxide (NO_2)	electrochemical	0 ... 200/1,000 ppm	1 ppm	± 5 ppm or 5 % (0 ... 200 ppm), 10 % (> 200 ppm) reading
Nitric dioxide (NO_x)	calculated	0 ... 5,000 ppm	1 ppm	± 5 ppm or 5 % (0 ... 1,000 ppm), 10 % (> 1,000 ppm) reading
Methane (CH_4)	NDIR	100 ... 40.000 ppm	10 ppm	± 400 ppm or 5 % reading*

Landfill gas	Measuring method	Measuring range min./max.	Resolution	Accuracy
Methane (CH_4)	NDIR	0 ... 100 %	0.01 %	± 0.3 % or 3 % reading*
Carbon dioxide (CO_2)	NDIR	0 ... 100 %	0.01 %	± 0.3 % or 3 % reading*
Hydrogen sulphide (H_2S)	electrochemical	0 ... 2,000/5,000 ppm	1 ppm	± 5 ppm or 5 % (0 ... 500 ppm), 10 % (> 500 ppm) reading
Oxygen (O_2)	electrochemical	0 ... 25 %	0.01 %	± 0.2 % absolute
Hydrogen (H_2)	electrochemical	0 ... 1,000/2,000 ppm	1 ppm	± 5 ppm or 5 % (0 ... 500 ppm), 10 % (> 500 ppm) reading
Nitrogen (N_2)	calculated	0 ... 100 %	0.1 %	
Calorific value (Hu)	calculated	0 ... 50 MJ/m^3	0.1 MJ/m^3	
Gas flow velocity	S-type probe	1 ... 100 m/s	0.1 m/s	± 0.2 m/s (2 ... 10 m/s), ± 0.5 % (> 10 m/s)
Flow rate	calculated	0.1 ... 6,000 m^3/s	0.1 m^3/s	user settable cross section area
Differential temperature	NiCrNi	-40 ... +1,200 °C	1 °C	± 2 °C, 0.5 % reading*
Differential pressure		± 300 hPa	0.01 hPa	0.03 hPa, 1 % reading*

General technical data	
Operating conditions	+5 ... +45 °C; RH up to 95 % non condensing
Storage conditions	-20 ... +50 °C
Data storage	>20,000 data sets
Interface	Mini-USB, SD, IRDA, Bluetooth (data transfer to Smartphone, Tablet or PC)
Internal power supply	Li-Ion battery
Mains power supply	wall plug unit 100 ... 240 Vac, 50 ... 60 Hz, 5 V DC, 1.2 A
Protection class	IP30
Dimensions (W x H x D)	113 x 244 x 54 mm
Weight	approx. 750 g

MRU – Competence in gas analysis. Since 1984.

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