optima7

Powerful handheld multigas analyser

for industrial combustion monitoring and emission measurements

- With up to 7 true gas measurements
- Application specific analyser configurations

O_2 | CO | CO LOW | CO HIGH | NO | NO LOW | NO_2 | NO_x | SO_2 | H_2S | CO_2 NDIR | HC NDIR

MRU – over 30 years of innovative gas analysis.

MRU AIRfair since 1984®
EMISSION MONITORING SYSTEMS

The slim multi talent handheld flue gas analyser using up to 7 sensors

Suitable for emission monitoring of combustions and industrial processes.

Intuitive software menu and bright colour display will guide you through all measuring programs. Store up to 16.000 data sets directly in the analyser's internal data storage or on micro-SD card, or even use Bluetooth™ for wireless data transfer to notebook or MRU4u data app for smartphone or tablet. Printing via infrared, high speed thermal printer is at the tip of your fingers.

Robust, low weight case

Shoulder strap

Convenient nylon bag

Main features:

- exhaust gas measurement for all current combustibles
- (differential-)pressure measurement up to ± 100 mbar
- temperature measurement
- leakage testing on gas pipes
- gas flow velocity
- automatic measurement incl. CO-average calculating
- high-range CO measurement
- NO_x measurement, e. g. for CHPs
- HC „sniffer“ for leak detection
- rechargeable Lithium-Ion battery for approx. 15 hours operation

Hands free operation

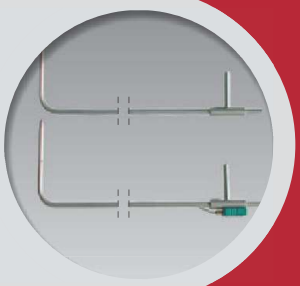
with magnetic power using the 3 magnets from the analyser's rear side, this one will firmly stick on ferrous surfaces.

Storage, transfer or print measured data

using the multiple choices among micro-SD card, mini-USB, Bluetooth™ for wireless transfer to smart

Condensate and dirt are kept away

using the large condensate trap with Teflon coated particulate filter.



Gas flow velocity

measurement with m/s, absolute pressure sensor and different pitot tubes.

Probes and hoses

MRU offers a wide range of standard (up to 800 °C) and industrial probes (up to 1.100 °C) with various lengths.

OPTIMA7

Technical specifications

Measurement components	Range	Resolution	Accuracy
Oxygen O_2	0 ... 25,00 Vol.-%	0,01 %	± 0,2 Vol.-% abs.
Carbon dioxide CO_2 IR bench	0 ... 40,00 Vol.-%	0,01 %	± 0,3 % or 5 % of the measured value **
Hydrocarbon HC NDIR	100 ... 40.000 ppm	10 ppm	± 400 ppm or 5 % reading **
Carbon monoxide CO (H2-comp.)	0 ... 4.000 / 10.000 ppm *	0,01 %	± 10 ppm or 5 % reading up to 4.000 ppm ** or 10 % reading up to 10.000 ppm **
Carbon monoxide CO low (special software and calibration)	0 ... 500 ppm	0,1 ppm	± 2 ppm or 5 % reading **
Carbon monoxide CO very high	0 ... 40.000 / 100.000 ppm *	≤ 9.999 ppm: 1 ppm ≥10.000 ppm:10 ppm	± 0,02 % or 5 % reading up to 4,00 % ** or 10 % reading up to 10,00 %
Nitric monoxide NO	0 ... 1.000 / 5.000 ppm *	1 ppm	± 5 ppm or 5 % reading up to 1.000 ppm ** or 10 % reading up to 5.000 ppm **
Nitric monoxide NO low (special software and calibration)	0 ... 300 ppm	0,1 ppm	± 2 ppm or 5 % reading **
Nitric dioxide NO_2	0 ... 200 / 1.000 ppm *	1 ppm	± 5 ppm or 5 % reading up to 200 ppm ** or 10 % reading up to 1.000 ppm **
Nitric dioxide NO_2 low (special software and calibration)	0 ... 100 ppm	0,1 ppm	± 2 ppm or 5 % reading **
Sulfur dioxide SO_2	0 ... 2.000 / 5.000 ppm *	1 ppm	± 10 ppm or 5 % reading up to 2.000 ppm ** or 10 % reading up to 5.000 ppm **
Hydrogen sulfide H_2S	0 ... 500 / 2.000 ppm *	1 ppm	± 5 ppm or 5 % reading up to 500 ppm ** or 10 % reading up to 5.000 ppm **
Stack gas temperature T.Gas	0 ... 1.200 °C	0,1 °C	± 2 °C ... < 200 °C or 1 % reading up to 200 °C **
Combustion air temperature T.Air	0 ... 100 °C	0,1 °C	± 1 °C
Temperature / Differential temperature T1 / T2	– 40 °C ... 1.200 °C (with thermocouple type K)	0,1 °C	± 2 °C or 1 % reading **
Draught / Differential pressure	– 300 ... + 300 hPa	0,01 hPa	± 0,02 hPa

Calculated values (fuel type depending)	
Carbon dioxide CO_2	0 ... 20 % ± 0,3 Vol.-% abs.
Heat losses qA	0 ... 99,9 %
Efficiency	0 ... 120 %
Air Ratio	1 ... 9,99 %
Excess Air	0 ... 99,9 %
Combustion calculations	based on the large fuel type list like: CO_2, excess air, heat losses, combustion efficiency, flue gas dew point, CO / CO_2 ratio
Emission calculations	mg/Nm³, NO_X as mg/m³ NO_2 true measurement of $NO_X = NO + NO_2$, including O_2 referencing (normalisation) to user settable value
CO-sensor purge (option)	using second pump, for sensor protection

General specifications	
Operation temperature	+ 5 ... + 45 °C, max. 95 % RH, non condensing
Storage temperature	0 ... + 50 °C
Data storage	dynamic, up to 16.000 measurements
Interfaces	mini-USB, SD, Infrared, Bluetooth™ (data transfer to smartphone, tablet or PC)
Power supply	high energy Lithium-Ion battery (approx. 15 h operation)
Mains	wall-plug grid power supply, 100 - 240 Vac / 50 ... 60 Hz
Protection class	IP 30
Certification	TÜV ByRgG 280, VDI 4206-1, EN 50379
Weight	approx. 750 g
Dimensions	110 x 225 x 52 mm (W x H x D)

* only for short time measurements ** the higher value applies

Data subject to change without notice.

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