

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 ₂ S	CO ₂ NDIR	HC NDIR
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MRU since 1984
AIR fair
EMISSION MONITORING SYSTEMS

MRU – over 30 years of innovative gas analysis.

1.888.610.7664



www.calcert.com

sales@calcert.com

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.

Mini-USB for cable data transfer and power supply or battery charging

Infrared printer interface

SD-card slot for data storage

Bluetooth™ for data transfer or analyser remote control

3,5" colour TFT display with backlight and zoom function

Logical and intuitive software menu

Effective, backlit condensate separator

Soft, anti-skid side panels

3 fixing magnets on the back for secure grip

Rugged, fibreglass reinforced enclosure

Compact enclosure, 110x225x52 mm (WxHxD), low weight (approx. 750 g)

K-type temperature sockets

AUX universal auxiliary socket, for connection of HC gas detector, other pressure, temperature external sensors

Robust stainless steel gas connectors





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.



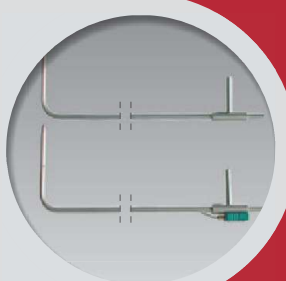
Storage, transfer or print measured data

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.

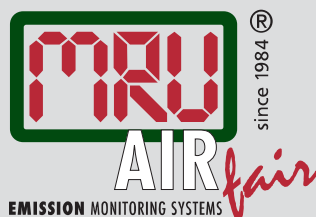
OPTIMA7

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 ₂ S	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 (with thermocouple type K)	-40 °C ... 1.200 °C	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/Nm ³ , NO _x as mg/m ³ 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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