iTOS MESURE
À LA MESURE DE VOTRE EXIGENCE

MRU AIR fair since 1984 ®
EMISSION MONITORING SYSTEMS

O_2 | CO | CO_{high} | NO | NO_2 | $NO_{(x)}$ | SO_2 | H_2S | CO_2 | HC

OPTIMA

Powerful handheld multigas analyzer

OPTIMA
the advantages of the new generation

Further development of a proven concept:

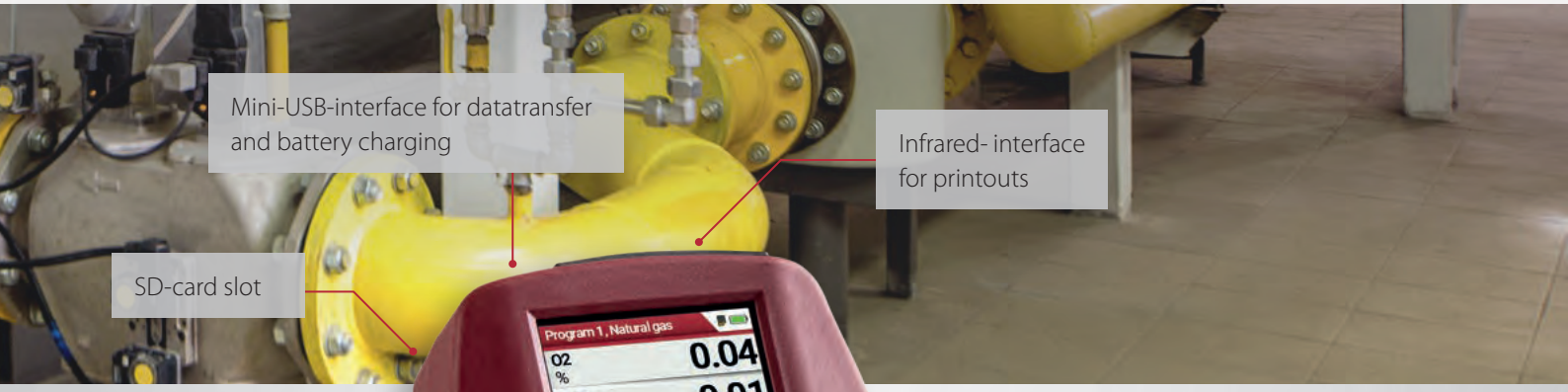
- new, high resolution 4" display for better readability and more informationen
- new menue design with many graphical displays
- illuminated condensate separator with optional water stop
- easy connection of Bluetooth™ printer and MRU4u App

OPTIMA

The slim multi talent handheld flue gas analyzer 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-interface for datatransfer and battery charging

Infrared- interface for printouts

SD-card slot

Bluetooth™ for datatransfer resp. remote control

Illuminated, large volume condensate separator

Compact enclosure: 110 x 225 x 52 mm (W x H x D), appr. 750 g

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

4" colour TFT display with backlight and zoom function

Logical and intuitive software menu

User- friendly, dirt resistant key pad

Soft, anti-skid side panels

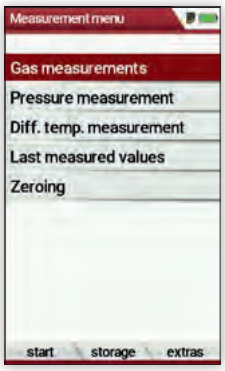
Rugged, fibreglas reinforced enclosure

K-type temperature sockets

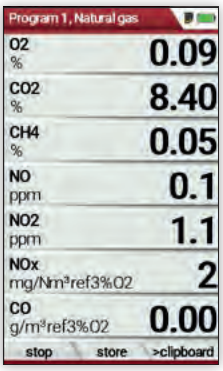
Robust stainless steel gas connectors

Unit details

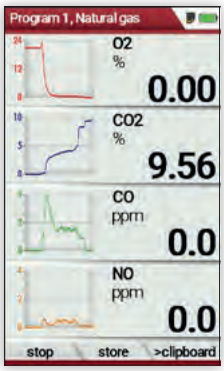
Important Highlights



Clearly structured basic menue

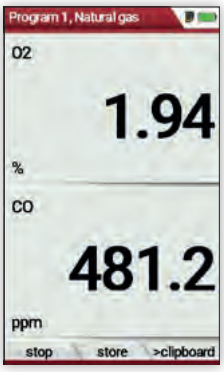


7, optionally 8 measuring results

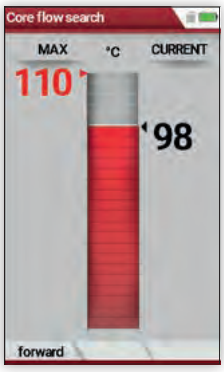


Measuring values, incl. graphical progression curve

Optional gas flow monitoring (e. g. clogged filter)



Display zoom-function



Graphical core flow search

Detector probe for leak detection (with exchangable sensors)

Large selection of probes and hoses for flue gas temperatures up to 1.100°C

Gas flow velocity measurement (m/s) by means of pitot tubes

Unit details

Special features at a glance

without waterstop

with waterstop

Large, illuminated condensate separator

now available with optional waterstop

VA

Robust stainless steel gas connectors

for gas- and pressure hoses

Hands free operation

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

AUX-socket for other transmitters

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

Bluetooth IRDA USB

All important interfaces

for data transfer and printing as well as wireless connection to MRU4u app.

Various cases for transportation

OPTIMA

Technical specifications

Measurement components	Range	Resolution	Accuracy
Oxygen O_2	0 ... 25,00 Vol.-%	0,01 %	±0,2 Vol.-% abs.
Carbon dioxide CO_2 NDIR	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**
Carbonmonoxide CO	0 ... 10.000 / 20.000 ppm*	1 ppm	±10 ppm or 5 % reading up to 4.000 ppm** or 10 % reading up to 10.000 ppm**
Carbonmonoxide CO low* **	0 ... 500 ppm	0,1 ppm	±2 ppm or 5 % reading**
Carbonmonoxide 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 %**
Nitricmonoxide 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**
Nitricmonoxide NO low* **	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* **	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**
Sulfur dioxide SO_2 low* **	0 ... 300 ppm	0,1 ppm	±2 ppm or 4 % reading**
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**
Hydrogen sulfide H_2S low* **	0 ... 100 ppm	1 ppm	±2 ppm or 4 % reading**
Methane (CH_4) NDIR	100 ... 40.000 ppm	10 ppm	±400 ppm or 5% reading*
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	
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 Nox = NO + NO_2 including O_2 referencing (normalisation) to user settable value

General specifications	
Operation temperature	+5 ... +45 °C, max. 95 % RF, non condensing
Storage temperature	–20 ... +50 °C
Data storage	dynamic, up to 16.000 measurements
Interfaces	mini-USB, SD, Infrared, Bluetooth™ (data transfer to smartphone, tablet or PC)
CO-sensor purge (option)	using second pump, for sensor protection
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 (W x H x D)	110 x 244 x 54 mm

MRU AIRfair since 1984 ®
EMISSION MONITORING SYSTEMS

MRU · Messgeraete fuer Rauchgase und Umweltschutz GmbH
Fuchshalde 8 + 12
74172 Neckarsulm-Obereisesheim
Phone +49 7132 99620 · Fax +49 7132 996220
info@mru.de · www.mru.eu

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