



O₂ | CO | CO_{high} | NO | NO₂ | NO_(x) | SO₂ | H₂S | CO₂ | 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 gas components

Suitable for emission monitoring of combustions and industrial processes

Intuitive software menu and bright colour display will guide you through all measuring programs. Store more than 20.000 data sets directly in the analyser's internal data storage or on 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

4" colour TFT display with backlight and zoom function

Illuminated, large volume condensate separator

Logical and intuitive software menu

User- friendly, dirt resistant key pad

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

Soft, anti-skid side panels

Rugged, fibreglas reinforced enclosure

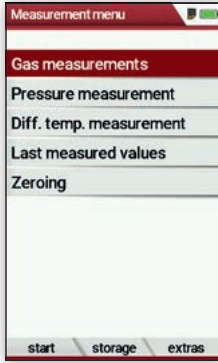
AUX universal auxiliary socket, for connection of HC gas detector, other pressure, temperature external sensors

K-type temperature sockets

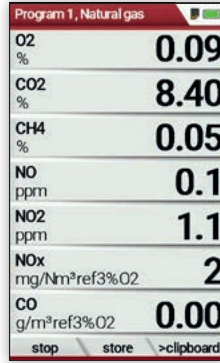
Robust stainless steel gas connectors

Unit details

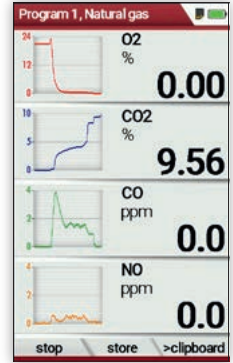
Important Highlights



Clearly structured basic menu



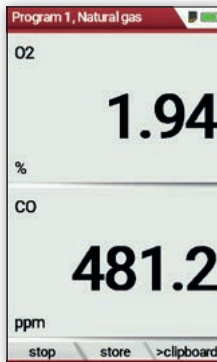
7, optionally 8 measuring results



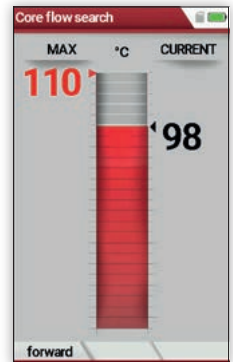
Measuring values, incl. graphical progression curve



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



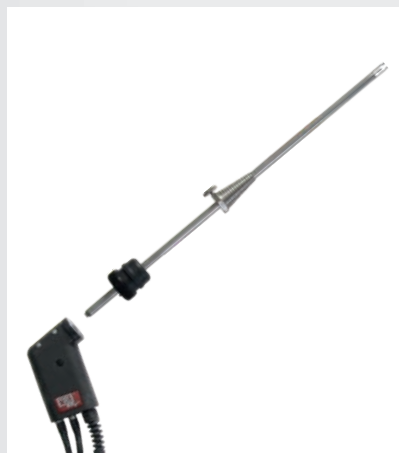
Display zoom-function



Graphical core flow search



Detector probe for leak detection (with interchangeable sensors)



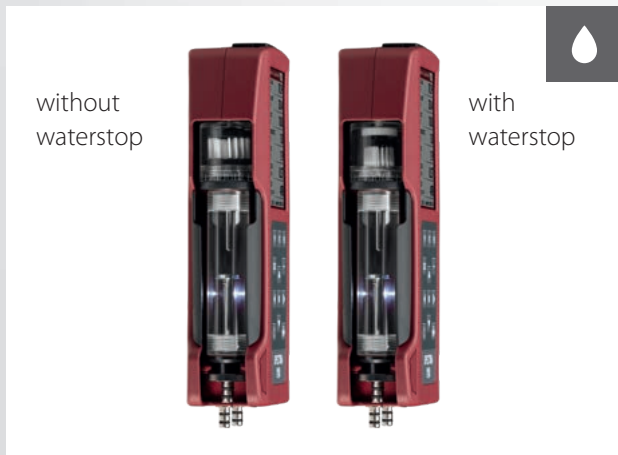
Large selection of probes and hoses for flue gas temperatures up to 1.100°C



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

Unit details

Special features at a glance



Large, illuminated condensate separator

now available with optional waterstop



Robust stainless steel gas connectors

for gas- and pressure hoses



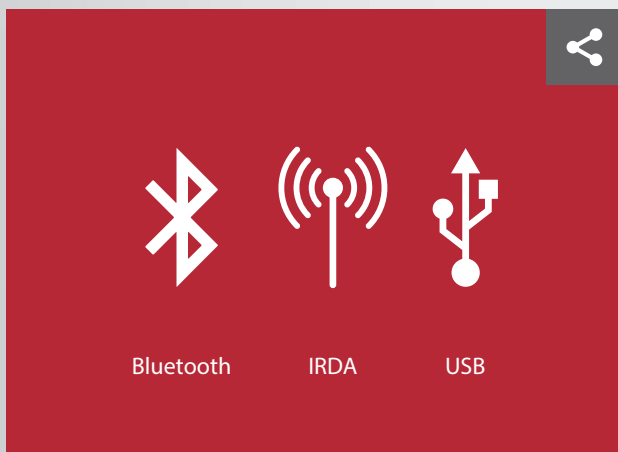
Hands free operation

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



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*	0,01 ppm	±10 ppm or 5 % reading up to 4.000 ppm** or 10 % reading up to 10.000 ppm**
Carbonmonoxide CO low (special software and calibration)	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 (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	-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: CO₂, excess air, heat losses, combustion efficiency, flue gas dew point, CO/CO₂ ratio

Emission calculations

mg/Nm³, NO_x as mg/m³ NO₂ true measurement of Nox = NO + NO₂ including O₂ 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, more than 20.000 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 225 x 52 mm

MRU – Competence in gas analysis. For over 35 years.

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

MRU representative:

