

MRU Instruments, Inc.
Productline



THE BLUE PLANET FOREVER



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**HANDHELD DIGITAL MANOMETER**

- ▶ Digital Manometers with multiple ranges and multiple functions.
- ▶ Temperature compensated for longtime stable measurements.
- ▶ AA Battery operated
- ▶ Big and bright display
- ▶ Interface for external printer

RANGES:

75 hPa (75mbar) (30 inH₂O)
 130 hPa (130mbar) (52 inH₂O)
 350 hPa (350mbar) (140 inH₂O)
 1000 hPa (1000mbar) (400 inH₂O)

DIGITAL GAS DETECTORS

300HC

**HANDHELD DIGITAL GAS DETECTOR**

Handheld for Portable Gas Detection

Hydrocarbons

(Other gases upon request)

- ▶ AA Battery operated
- ▶ Big and bright LCD display
- ▶ Interface for external printer

MEASURING RANGE:

5 – 20.000ppm/0 – 40 % LEL CH₄

Overload

100.000 ppm

Resolution

1 ppm

Response time (T 90)

< 5 s

DIGITAL GAS DETECTORS

300CO

**HANDHELD DIGITAL GAS DETECTOR**

Handheld for Portable Gas Detection

Carbon Monoxide

(Other gases upon request)

- ▶ AA Battery operated
- ▶ Big and bright LCD display
- ▶ Interface for external printer

MEASURING RANGE:

0- 300 ppm

Overload

1.000 ppm

Resolution

1 ppm

Response time (T 90)

< 45 s

2 or 3 Gas HANDHELD*O₂ - CO and NO_x*

THIS IS THE IDEAL COMBUSTION ANALYZER FOR INSTALLATION AND MAINTENANCE - ALWAYS DEPENDABLE

Main features:

- ▶ Smallest instrument with ergonomic and modern design
- ▶ Rugged rubber protection case with fixing magnet
- ▶ Optimized condensate trap with reusable star filter (PTFE)
- ▶ Well legible, backlit LCD display
- ▶ Mini USB interface for cable data transfer to PC and internal battery charging
- ▶ Data storage for up to 100 measurements
- ▶ Integrated rechargeable batteries (NiMH) for min. 8 hours operation
- ▶ Universal USB battery charger
- ▶ Infrared interface for high speed printer
- ▶ Large fuel type list: natural gas, liquid gas, oil heavy, oil light, pellets, wood, bio diesel and others



COMBUSTION GAS ANALYZERS

PORTABLE INDUSTRIAL GAS ANALYZERS

AMPRO 2000

2 to 7 Gas HANDHELD*O₂ - CO - CO₂ - NO - NO₂ - NO_x - SO₂ - H₂S - CH₄ and HIGH CO*

THE MOST POWERFUL HANDHELD MULTIGAS ANALYZER FOR INDUSTRIAL COMBUSTION, EMISSION AND PROCESS MONITORING MEASUREMENTS.

Main features:

- ▶ Modern, slim line enclosure
- ▶ Super bright, backlit colour 3,5" TFT- Display
- ▶ Mini-USB interface for data transfer and battery charging
- ▶ IR Interface for external printer
- ▶ Integrated, backlit condensate trap with PTFE Filter
- ▶ Rechargeable Battery for up to 10 hours (optional) 15 hours operation time
- ▶ Robust stainless steel gas
- ▶ SD Card for easy data transfer and additional memory
- ▶ many available options



COMBUSTION GAS ANALYZERS

PORTABLE INDUSTRIAL GAS ANALYZERS

NOVAplus

2 to 9 Gas PORTABLE*O₂ - CO - CO₂ - NO - NO₂ - NO_x - SO₂ - H₂S - CH₄ (C₃H₈) and HIGH CO*

**COMPACT, ROBUST AND PORTABLE
BUILT TO MEET THE MOST STRINGENT REQUIREMENTS.**

Main features:

- ▶ Complete basic instrument, ready to take measurements.
- ▶ Using up to 6 electrochemical sensors
- ▶ and optional CO₂ IR-bench (sensor)
- ▶ or optional tripple IR-bench CO-CO₂-CH₄ (C₃H₈)
- ▶ Upgradable to top-of-the-line capabilities using versatile hardware and software.
- ▶ Built in speed printer
- ▶ Remote control unit with Differential temperature and Differential Pressure measurement (optional)
- ▶ Rugged and light
- ▶ SD Card for easy data transfer and additional memory
- ▶ Heavy duty condensate separator or optional gas cooler
- ▶ many available options



3 to 6 Gas MOBILE**Hydrocarbons - CO - CO₂ / O₂ - NO - NO₂ - SO₂****Main features:**

- ▶ Precise measuring results with MRU exhaust gas measuring instruments for motor-vehicles
- ▶ Automatic internal test and control of soft- and hardware functions
- ▶ Integrated, electrical gas cooler and automatic condensate pump
- ▶ Automatic zeroing using a 3-way solenoid valve and activated carbon filter
- ▶ PC Data-visualization and evaluation software
- ▶ Data logging of external RPM meter
- ▶ Built-in, high speed, easy-load printer
- ▶ Universal power supply: mains 90-264 Vac / 100W, alternatively external 12 Vdc power supply



PORTABLE INDUSTRIAL GAS ANALYZERS

VARIO PLUS IND.

up to 9 GAS MOBILE**O₂ - CO - CO₂ - NO - NO₂ - NO_x - SO₂ - H₂S - H₂ - CH₄ (C₃H₈) and HIGH CO****Suitable for industrial applications using infrared technology.****Combined infrared technology and electrochemical sensors for maximum versatility.****Main features:**

- ▶ Virtually a mobile CEMS
- ▶ Modern, rugged metal enclosure designed for the toughest applications
- ▶ Effective, integrated flue gas conditioner with gas cooler & condensate pump
- ▶ Auto zero
- ▶ Optimized filter elements for protection against particulates
- ▶ Built-in, high speed, easy-load printer
- ▶ Large, high-contrast and backlit display with zoom function
- ▶ Integrated, electric gas cooler unit
- ▶ Differential pressure measurement ± 100 hPa
- ▶ RS 232 interface and internal data storage for 8,500 measurements (data sets)
- ▶ Universal analog input 0 ... 10 V / 4-20mA output
- ▶ many available options



PORTABLE INDUSTRIAL GAS ANALYZERS

MGA5

PORTABLE PROCESS GAS ANALYZER**Monitoring of Process gases, Combustion emissions****Heat efficiency at large boilers****High quality combustion analysis****O₂ - CO - CO₂ - NO - NO₂ - NO_x - SO₂ - H₂ - CH₄ (C₃H₈)****Main features:**

- ▶ Double stage gas cooler with automatic condensate draining pump
- ▶ Heated gas sampling line (120" or 200") with 12" ... 80" sample tube
- ▶ Large, high contrast and backlit graphical display with zoom function
- ▶ RS 232 interface and internal data memory for approx. 8,500 measurements
- ▶ RS 485 interface for external MRU smart sensor (transmitter) connection
- ▶ Automatic interval measurement
- ▶ Data visualization and evaluation software for PC
- ▶ Solenoid valve for automatic zeroing and for calibration
- ▶ 8 channel analog output 4 ... 20 mA with user definable output
- ▶ Solenoid valve for automatic zeroing and calibration
- ▶ Universal analog input (4 ... 20 mA or 0 ... 10 V)
- ▶ Large fuel type list including user definable fuels and parameters
- ▶ Robust aluminium framed transport case



PROCESS GAS ANALYZER

Gas analysis of combustion processes and special gases

O₂ - CO - CO₂ - NO - NO₂ - NO_x - SO₂ - H₂S - H₂ - CH₄ - C_xH_y

Individual applications

- ▶ Standard extractive analyzer for process and environmental measurements
- ▶ Complete sample gas conditioning system
- ▶ NDIR & long-life EC sensors
- ▶ Backlit LCD display and menu-guided operation
- ▶ 4 – 20 mA and RS485 outputs
- ▶ Wide range of probes available
- ▶ Flue and air gas temperature measurements
- ▶ PC based software
- ▶ Auto zero

**CEM SYSTEMS**

Customized compact analysis systems

O₂ - CO - CO₂ - NO - NO₂ - NO_x - SO₂ - CH₄

Individual applications

- ▶ Ex-zone2 (special model)
- ▶ Up to simultaneous 7 gas components
- ▶ Up to 5 automatic sampling point switching
- ▶ Weather proof enclosure IP 65
- ▶ Complete / partial air conditioning
- ▶ Automatic calibration with test gases
- ▶ Sample gas conditioning, also directly after the sampling point
- ▶ Easy to service and maintain
- ▶ Customized solutions on request

**IN-SITU
COMBUSTION ANALYZERS**

REAL TIME COMBUSTION ANALYSIS

O₂ and CO_e

Details

- ▶ Modern, field-proven "hollow probe" design
- ▶ A single technician can access sensors in minutes for maintenance or service.
- ▶ Auto calibration available
- ▶ Electronics can be located on the probe, or up to 33' away
- ▶ High pressure blow-back keeps probe clean even in a difficult application like a coal-fired power plant
- ▶ Available for temperatures up to 3000°F

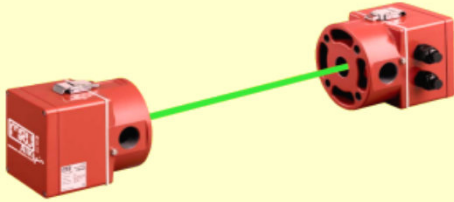


**IN-SITU
DUST OPACITY MONITOR**

Double Pass Opacity Monitor

Dust or Opacity

Dust Monitoring System
 Double pass transmission measurement
 Measures 0 ... 100 % opacity
 or 10 ... 1,000 mg/m³ dust (*)
 (*) after on site calibration according to VDI 2066



BIOGAS ANALYZER

AMPRO 2000 ^{BIOGAS}**PORTABLE BIOGAS- AND COMBUSTION Analyzer***O₂ - CO₂ - CH₄ - H₂S for BIOGAS (optional biogas pressure measurement)**Optional - CO - NO - NO₂ for combustion measurements***DESIGNED FOR BIOGAS - AS WELL FOR COMBUSTION ANALYSIS OF ENGINES****Main features:**

- ▶ Modern, slim line enclosure
- ▶ Super bright, backlit colour 3,5" TFT- Display
- ▶ Mini-USB interface for data transfer and battery charging
- ▶ IR Interface for external printer
- ▶ Integrated, backlit condensate trap with PTFE Filter
- ▶ Rechargeable Battery for up to 6 hours operation time
- ▶ Robust stainless steel gas
- ▶ SD Card for easy data transfer and additional memory
- ▶ many available options



BIOGAS ANALYZER

SWG 200-1 ^{BIOGAS}**STATIONARY BIOGAS / COMBUSTION ANALYZER***O₂ - CO₂ - CH₄ - H₂S for BIOGAS (optional biogas pressure measurement)**Optional - CO - NO - NO₂ for combustion measurements***With up to 4 measuring gas inlets (automatically or manually switchable)****Individual applications**

- ▶ Standard extractive analyzer for process and environmental measurements
- ▶ Complete sample gas conditioning system
- ▶ NDIR & long-life EC sensors
- ▶ Backlit LCD display and menu-guided operation
- ▶ 4 – 20 mA and RS485 outputs
- ▶ Wide range of probes available
- ▶ Flue and air gas temperature measurements
- ▶ PC based software
- ▶ Auto zero





The MRU Production Plant #2 in Neckarsulm, Germany.

CONTACT INFORMATION

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