

# AMPRO 1000

## COMBUSTION ANALYSIS MADE EASY!

AMPRO 1000 - Discover the smart difference!  
for residential and light commercial combustion analysis.



since 1984

**AIR** fair

EMISSION MONITORING SYSTEMS

Over 30 years of innovative gas analysis!

- Big and bright color touch screen
- Light, small and rugged
- Powerful Lithium-Ion battery
- Field replaceable, pre-calibrated sensors

# Discover the smart difference!

MRU Online View Software for trending and data export



Bright 2.8" touch screen



Download the MRU4U app for Android / iOS



Perfect analyzer for combustion analysis



IR - wireless speed printer



## THE ALL IN ONE, HIGH-TECH, MULTI TOOL:

- Flue gas analyzer with real-time combustion calculation
- Digital manometer for stack draft and differential pressure
- Digital dual channel temperature
- Ambient air CO tester

## SMART POWER AND HIGH ACCURACY WITH:

- O<sub>2</sub>, CO and calculated CO<sub>2</sub>
- MSM sensor technology - field replaceable, pre-calibrated sensors
- Backlit, color touch screen
- Intuitive and easy to use operation
- Combustion and efficiency analyzer in one with integrated ambient air tester
- Differential manometer and dual channel digital thermometer
- Large fuel type list for multiple applications
- High capacity lithium-ion battery
- Internal data storage of up to 1,000 complete measurement data sets
- Easy data collection features include
  - USB and SD card (and optional Blue-tooth)
- IRDA printer interface for MRU high speed thermal printer

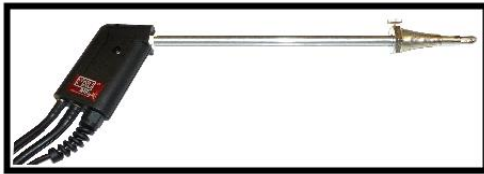
### Also measures...

- Combustion air temperature
- Stack gas temperature
- Stack draft
- Differential pressure
- Differential temperature

### And calculates...

- CO<sub>2</sub>
- CO/CO<sub>2</sub> ratio
- Dew point
- Excess air and air ratio (Lambda)
- Combustion efficiency
- Heat losses

# Combustion Analyzer



Standard probe: 10" insertion;  
5' sampling line with integrated  
condensate separator  
K-Type t/c (1,200°F max)

Using electrochemical cells for O<sub>2</sub> and CO this low-cost analyzer is suitable for control and setup of all kinds of gas burners, condensing boilers, oil, biomass burners and more!

Select the Bluetooth option to transmit real-time data to your PC, or use the MRU4u App for Android and iOS to conveniently collect data on your smartphone or tablet.

Intuitive software menu and modern, bright, color touch screen guides you through all measuring programs.

Store up to 1,000 test data sets directly in the internal data storage or on the micro-SD card.

"MSM" (MRU Sensor Management) technology  
Need to change a sensor in the field?  
Not a problem!  
We offer pre-calibrated cells to avoid analyzer service downtime.  
**EASY - SIMPLE - FAST**

Printing is fast and simple with the MRU high speed IR thermal printer at your fingertips.

IR-Printer interface

Blue-Tooth interface

SD Card reader for data transfer and additional storage

USB Ports for data transfer and battery charging

Rear magnets for hands free operation

Color touch screen

Secure grip side panels

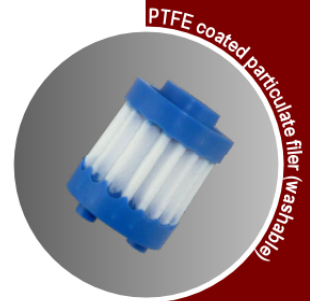
Fiberglass reinforced enclosure

Rugged connectors for gas, draft and differential pressure

K-Type temperature sockets



Large in-line condensate separator



PTFE coated particulate filter (washable)



Pre-calibrated filed replaceable sensors



Rear magnets for hands free operation



Compact transport case for analyzer and accessories



## TECHNICAL SPECIFICATIONS

<b>AMPRO 1000 analyzer</b>	Handheld gas analyzer		
<b>Fuel types</b>	Natural gas, propane, butane, #2 & #6 light oils, coal, wood dry, pellets and four user defined fuel types		
<b>Measurement components</b>	<b>Measuring range</b>	<b>Resolution</b>	<b>Accuracy</b>
O <sub>2</sub> Oxygen	0 ... 21.0 Vol-%	0,1%	± 0.2 Vol-% abs.
CO Carbon monoxide (H <sub>2</sub> compensated)	0 ... 4,000 ppm overload 10,000ppm *	1 ppm	± 10 ppm or ** 5 % reading < 4,000 ppm / 10 % reading > 4,000 ppm
CO Carbon monoxide (NOT H <sub>2</sub> compensated)	0 ... 2,000 ppm overload 4,000ppm *	1 ppm	± 20 ppm or ** 5 % reading < 2,000 ppm / 10 % reading > 2,000 ppm
NO Nitric oxide	0 ... 1,000 ppm overload 5,000ppm *	1 ppm	± 5 ppm or ** 5 % reading < 1,000 ppm / 10 % reading > 1,000 ppm
Stack / Flue gas temperature	-40 ... 2,100°F (with stainless steel / Inconel steel tube)		± 1°F ... < 392°F / 1 % reading > 392°F
Primary-air / Ambient temperature	-40 ... 212°F		± 1°F
Differential temperature	up to 2,100°F (with suitable material of sampling tube)		± 1°F or 0.5 %
Draft	+/- 20 inH <sub>2</sub> O (50hPa)		± 0.01 inH <sub>2</sub> O or 1% reading
Differential pressure	+/- 40 inH <sub>2</sub> O (100hPa)		± 0.01 inH <sub>2</sub> O or 1% reading

\*overload range recommend only for short time measurements

\*\*which ever is larger

### Calculated values (fuel type dependent)

Carbon dioxide	0 ... CO <sub>2</sub> max.	Air Ratio (Lambda)	1 ... 9.99
Heat losses qA	0 ... 99.9 %	Excess Air	0 ... 99.9
Efficiency	0 ... 100 % / 120 %	CO/CO <sub>2</sub> ratio	0 ... 10

### General specifications

Operation temperature	41°F .... 113°F, max. 95 % RH, non condensing
Storage temperature	-4°F .... 122°F
Ambient conditions	not in aggressive, corrosive or high dust environments, not for use in hazardous areas
Power supply	Lithium-Ion battery, 2250 mAh
Grid power supply	100 - 240 V AC / 50 ... 60 Hz 500mA
Protection class	IP40
Weight	approx. 1.0 lbs. (with 2 sensors)
Dimensions	( W x H x D ) 3.23" x 6.65" x 1.73"

Data subject to change without notice

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