COMBUSTION GAS ANALYZER IMR 1400

IMR 1400

Portable, continuous measuring flue gas analysis instrument housed in an aluminum case for measuring air temperature, flue gas temperature, Oxygen O2, Carbon monoxide CO (H2 comp.), Nitric oxide NO, Nitric dioxide NO2, Sulfur dioxide SO2, Hydrocarbon HC, losses, excess air, combustion efficiency, Carbon dioxide CO2, draft and soot.
Simultaneous display of eight measured variables on the illuminated LCD.
Integrated thermal printer and RS232 interface. Measurement printout or service printout, both include date, time and fuel type.
ppm, mg, mg/kWh, mg (ref.O2) units are selectable.
Automatic and manual CO-bypass.
Memory for 220 measurements.
Case has additional space for spare parts.

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*  IMR 1400 - USA  *
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      I M R  USA
 Env. Equip. Inc.
 5401 Central Ave.
 St. Petersburg
 FL , 33710
 Ph: 800-746-4467

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Natural gas
CO2max     11.7  %

Gastemp      66  °F
Roomtemp     64  °F
O2          8.5  %
CO2        11.4  %
CO          253  PPM
CO (8%O2)   259  PPM
NO          101  PPM
NO (8%O2)   103  PPM
SO2           0  PPM
SO2(8%O2)     0  PPM

Exc. air   2.2  %
Losses      --  %
Effic.      --  %

NO(x)-Corr.  -  %
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STANDARD INSTRUMENT

Gas analyzer in an aluminum case
Memory
Thermal printer
Gas sampling probe S, length 10.5" (270mm), flexible hose 11.5 ft. (3.5m)
Condensation trap with integrated filter
Soot filter paper, soot comparison table
Power cord
User manual

Model	Default Sensors	Number of Optional Sensors	Optional Sensors	Part-No.
1400 P	O_2, CO	0	None	14280
1400 PL	O_2, CO	1	NO, NO_2, SO_2, HC, H_2S	14290
1400 PS	O_2, CO	2	NO, NO_2, SO_2, HC, H_2S	14295

STANDARD EQUIPMENT

- Illuminated display with simultaneous display of 8 measured values
- Languages: D, GB, F, USA, E, TR, etc.
- 7 programmed and 5 programmable fuels
- Measurement display is switchable between ppm, mg, mg(O2) and mg/kwh
- Automatic zero calibration within 3 minutes. Re-calibration within 30 sec.
- Interface RS 232
- Printout of all measured and calculated parameters
- Electronic controlled soot measurement
- Automatic and manual CO overflow shut-off
- Battery status is shown on the measurement display
- After 1000 operating hours a "Service needed" note appears on the display.
- Integrated self-check program for all functions and parameters
- Gas sampling probe, length 10.5" (270mm),NiCr-Ni, flexible hose 11.5 ft. (3.5m)
- Air probe, length 5" (130mm), line 11.5 ft. (3.5m)
- Condensation trap with Integrated filter
- Operating temperature 50°F..104°F (10°C..40°C)
- Storing temperature -4°F..122°F (-2°C..50°C)
- Power supply 230V/50Hz, 110V/60Hz, 6VDC

TECHNICAL DATA

PARAMETER	*MEASUREMENT PRINCIPLE*	*RESOLUTION*	*ACCURACY*	*RANGE***	*STANDARD 1400 P*
O_2 Oxygen	Electrochem. sensor	0.1 Vol.%	± 0.2 Vol. %	0-20.9 Vol. %	✓
CO Carbon monoxide	Electrochem. sensor	1 ppm	Z	0-2000 ppm	✓
CO_p Carbon monoxide O_2 corrected	Calculation	1 ppm	Z		✓
NO Nitric oxide	Electrochem. sensor	1 ppm	Z	0-2000 ppm	1400PL 1400PS
NO_2 Nitric dioxide	Electrochem. sensor	1 ppm	Z	0- 100 ppm	1400PL 1400PS
SO_2 Sulfur dioxide	Electrochem. sensor	1 ppm	Z	0-4000 ppm	1400PL 1400PS
HC Hydrocarbons	Pellistor	0.1%	Z	0-100% LEL	1400PL 1400PS
H_2S Hydrogen Sulfide	Electrochem. sensor	1 ppm	Z	0-200 PPM	1400PL 1400PS
TG Gas temperature	NiCr-Ni thermocouple	1 K	± 2 %	-4°F..2192°F -20°C..1200°C	✓
TA Air temperature	Semiconductor	1 K	± 0.2 K	-4°F..248°F -20°C..120°C	✓
P Draft	Solid state	0.01 hPa	± 2 %	±40hPa	✓
CO_2 Carbon dioxide	Calculation	0.1 Vol. %	± 0.2 Vol. %	0- CO_2 max	✓
Combustion Efficiency	Calculation	0.1 %	± 0.1 %	0-99.9 %	✓
Losses	Calculation	0.1 %	± 0.1 %	0-99.9 %	✓
Excess air	Calculation	0.1 %	± 0.1 %	1.0-9.99	✓
Soot	Filter paper			0-9	✓
Dimensions w x d x h				16.7 x 7.3 x 11.4 in. (425 x 185 x 290 mm)	
Weight				13 lb. (5.8 kg)	

*** Different/customized ranges available.*
Maximum of 3 sensors for IMR 1400 PL (3rd sensor is customer specified)
Maximum of 4 sensors for IMR 1400 PS (3rd sensor and 4th sensor are customer specified)

Z = 0 - 20 % of whole measurement range ± 5 % of maximum measurement
21 - 100 % of whole measurement range ± 1 % of displayed measurement