E INSTRUMENTS by sauermann

E8500 PLUS

Portable Industrial Flue Gas & Emissions Analyzer For Boiler, Engine, Furnace, & Other Combustion Applications

MADE IN USA

Accurate / Reliable / Robust / Fast

- Up to **NINE** (9) Gas Sensors
- True NOx & Low NOx Measurements
- Stack Gas Velocity
- Built-In Thermoelectric Chiller
- Automatic Condensate Drain
- High Accuracy NDIR Sensors
- Upgraded Memory (2,000 Tests)

Bluetooth®

O_2, CO, CO_2, NO, NO_2, SO_2, CxHy (HC), H_2S, VOC

PID VOC Sensor Option

Easy Filter Replacement

Real-Time PC Software with Bluetooth®

US EPA CTM-30 & CTM-034 Compliant

Long Lasting Rechargeable Battery & AC Charger

E Instruments International
www.e-inst.com

P: 1+215-750-1212 - F: 1+ 215-750-1399
402 Middletown Blvd, Ste 216 Langhorne, PA, USA 19047

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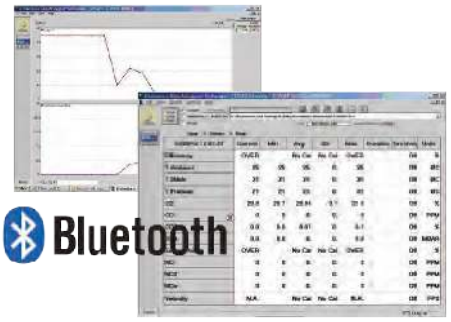
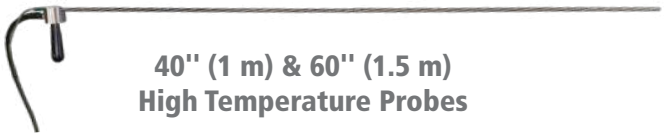
Real-Time Software with Data Logging

The updated EGAS software package includes the ability to save & graph data in real-time in the field with a laptop, or in a laboratory with a PC. It also allows the user to automatically log data for an exact number of tests for a specified time period. Communications between the E8500 PLUS & a computer are established either by wireless Bluetooth communications or USB cable. Data from the EGAS software can be exported to other spreadsheet programs for more user flexibility to create detailed emmissions reports.



EGAS Real-Time Data Logging Software



40'' (1 m) & 60'' (1.5 m) High Temperature Probes

Sintered Filter

Built-In Thermoelectric Chiller with Auto Condensate Drain

The internal thermoelectric chiller efficiently & quickly removes the water vapor from the flue gas sample to prevent combustion gases from bubbling from the gas phase into the condensate. The built-in condensate drain pump automatically pumps the accumulated water out through the bottom of the unit for greater convenience.

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Parameter	Sensor	Range	Resolution	Accuracy
O_2	Electrochemical	0 - 25 %	0.1 %	±0.1 % vol
CO (H_2 compensated w/ built-in NOx filter)	Electrochemical	0 - 8000 ppm	1 ppm	±8 ppm <300 ppm ±4 % rdg up to 2000 ppm ±10 % rdg for >2000 ppm
CO Auto range	Electrochemical	0 - 20,000 ppm	1 ppm	±10 % rdg
CO	NDIR	0 - 15.00%	0.01 %	±3 % rdg
CO_2	Calculated	0 - 99.9 %	0.1 %	
CO_2	NDIR	0 - 50.0 %	0.1 %	±3 % rdg <20 % ±5 % rdg >20 %
NO	Electrochemical	0 - 5000 ppm	1 ppm	±5 ppm <125 ppm ±4 % rdg for <5000 ppm
NO_2	Electrochemical	0 - 1000 ppm	1 ppm	±5 ppm <125 ppm ±4 % rdg for <1000 ppm
Low NO and/or Low NO_2	Electrochemical	0 - 100.0 ppm	0.1 ppm	±1.5 ppm <50.0 ppm ±4 % rdg for <100.0 ppm
NOx	Calculated	0 - 5000 ppm	1 ppm	
SO_2	Electrochemical	0 - 5000 ppm	1 ppm	±5 ppm <125 ppm ±4 % rdg for <5000 ppm
Low SO_2	Electrochemical	0 - 100.0 ppm	0.1 ppm	±1.5 ppm <50.0 ppm ±4 % rdg for <100.0 ppm
CxHy (HC)	NDIR	0 - 3.00 %	0.01 %	±3 % rdg + 0.01 %
H_2S	Electrochemical	0 - 500 ppm	1 ppm	±5 ppm <125 ppm ±4 % <500 ppm
VOC	PID	0 - 200 ppm	1 ppm	±10 % rdg + 1 ppm
Tair	Pt100	14.0 to 212.0 °F -10 to 99.9 °C	1 °F 1 °C	±3 °F ±2 °C
Tgas	Tc K	-4 to 1920 °F -20 to 1050 °C	1 °F 1 °C	±5 °F ±3 °C
ΔT	Calculated	-4 to 1920 °F -20 to 1050 °C	1 °F 1 °C	
Pressure / Draft	Bridge	±40.0 in H_2O ±100 mbar	0.1 in H_2O	±1 % rdg
Excess Air	Calculated	1.00 - infinity	0.01	
Gas Velocity	Calculated	0 - 330 ft/s 0 - 99.9 m/s	0.1 f/s 0.1 m/s	
Efficiency	Calculated	1 - 99.9 %	0.1 %	

Draft, Pressure, & Velocity

An internal pressure sensor allows the analyzer to measure both pressure & stack draft. With two (2) pressure inputs, differential pressure can also be measured. Gas velocity can be measured using the differential pressure & an optional pitot tube.

Sample Conditioning Unit

The Sample Conditioning Unit is mounted directly at the sampling probe exit, where excess moisture rapidly condenses & seperates from the gas sample. This minimizes contact of the gases with moisture, which could potentially affect NOx & SO_2 measurements.

Gas Sensors

The E8500 PLUS can have a maximum of NINE (9) total gas sensors: up to six (6) electrochemical type sensors, up to three (3) NDIR type sensors, & an optional PID sensor for measuring VOC.

Easy Filter Replacement

The E8500 PLUS has a newly designed user interface that includes an easily accessible filter compartment for quick and simple inspection & replacement of filters in the field.

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E8500 PLUS

Ordering Code
Part # 8500P - Table A - Table B - Table C

Example: 8500P - OCNDSH - ABC - 40
O_2, CO, NO, NO_2, SO_2, H_2S, CO_2 (NDIR), CxHy (NDIR), & High CO (NDIR) with 40'' (1 m) Probe with 10' (3 m) Hose

All E8500 PLUS Kits Include:

- Thermoelectric Chiller with Automatic Condensate Drain
- Rechargeable Battery Pack
- 110 - 240 VAC/50-60Hz Battery Charger
- Gas Sampling Probe with Hose
- Stack Gas & Air Temperature
- Draft & Differential Pressure
- Calculated Values for Efficiency, Excess Air, & CO_2%
- Internal Memory (2,000 Tests)
- Real-Time Software with Bluetooth & USB Interface
- Wireless Bluetooth Communications
- Protective Carrying Case
- Calibration Certificate
- Operation Manual

Table A: Electrochemical Sensors

O	O_2 Sensor (0-25%)
C	CO Sensor (0-8,000 ppm) with Dilution Auto-Range up to 20,000 ppm
N	NO_2 Sensor (0-5,000 ppm)
D	NO_2 Sensor (0-1,000 ppm)
S	SO_2 Sensor (0-5,000 ppm)
H	H_2S Sensor (0-500 ppm)*
V	VOC Sensor (0-200 ppm)**

* H_2S & VOC sensors cannot concurrently be installed on one E8500 PLUS
** Must include NDIR sensor option to include VOC sensor

Table B: NDIR Sensors

ABC	CO_2 Sensor (0-50%) CxHy Sensor (0-3%) High CO Sensor (0-15%)
0	No NDIR Sensors

Table C: Sampling Probes & Hoses

12	12'' (300 mm) Probe 1470° F (800° C) max 10' (3 m) Hose
30	30'' (750 mm) Probe 1470° F (800° C) max 10' (3 m) Hose
40	40'' (1 m) Probe 2190° F (1200° C) max 10' (3 m) Hose for High Temp. Combustion Applications
60	60'' (1.5 m) Probe 2190° F (1200° C) max 10' (3 m) Hose for High Temp. Combustion Applications

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