

UNIGAS 3000

Hand-held combustion gas analyzer with 4 sensors

Unigas 3000+ is an advanced flue gas analyzer for up to 4 gases: O2, CO, NO & NO2 or SO2 with electrochemical sensors, plus CO2 and NOx calculated.

Description

Unigas 3000+ is an advanced flue gas analyzer for up to 4 gases: O_2, CO, NO & NO_2 or SO_2 with electrochemical sensors, plus CO_2 and NO_x calculated.

This gas analyzer provides data for up to 10 fuels for the calculating combustion values. It is equipped with audible alarms on gas measurements.

Flue gas sampling probes with different lengths and shapes are available to meet all the requirements of the application. The sampling probe is connected to the instrument with a single or dual hose, a water trap and a suspended particle filter.

The instrument is delivered with a built-in rugged impact printer. The analyzer and its internal printer are powered by the same internal battery. Charger is supplied as standard.

A remote Pt100 probe (option 5 in table G) is available for remote combustion air temperature measurement. This probe is strongly recommended to obtain a high accurate measurement in forced air boilers.

Smoke index measurement is performed by using the optional external hand pump (ref: F7828000). The results can be stored in the internal memory and printed on the report.

A procedure can be selected to monitor the CO in ambient air using the internal sensors. An internal program allows CO max measurement in atmospheric boiler room test with 15 logged values.

Specifications

Measured parameter	Range	Resolution	UniGas 3000
O2	From 0 to 25% vol.	0.1%	EC
CO	From 0 to 8000 ppm	1 ppm	EC
CO	From 0 to 20000 ppm	1 ppm	EC
CO2	From 0 to 99.9%	0.1%	Calc
NO	From 0 to 4000 ppm	1 ppm	EC
NO LOW	From 0 to 500 ppm	0.1 ppm	EC
NOx	From 0 to 4000 ppm	1 ppm	Calc
NO2	From 0 to 1000 ppm	1 ppm	EC
SO2	From 0 to 4000 ppm	1 ppm	EC
Efficiency	From 1 to 99.9%	0.1%	Calc
Excess air	From 1 to infinite	0.01%	Calc
Delta P	±100 hPa	0.01 hPa	✓
Tair/Tgas	-10...100°C/ 0...1000°C	0.1°C	Pt100 / Tc K Calc

Further features

Zero calibration	Automatic calibration procedure at instrument power-on. Fresh air inlet with electrovalve and separate pneumatic circuit
Self-diagnosis	Sensor efficiency test with diagnostic page
Ambiant CO monitoring	With an external probe
Gas level alarms	Programmable from PC with GasConfig software
Sampling pump	1.4 l/min - 100 mbar
Smoke measurement	Using the external manual pump
Printer	24 columns with 58 mm paper roll Autonomy:, 40 reports with full battery

General specifications

Size	115 x 90 x 330 mm
Weight	1.1 kg with battery and printer
Power supply	110/230 VAC (50/60 Hz)
Battery	Type: Rechargeable 7.2 Ah

	Battery life: 10 hours continuous use Charging time: 3 h at 90%
Communication ports	USB
Internal test memory	Up to 250 complete analysis data points structured by boiler

Environmental specifications

Operating reference range	From -5°C to +45°C (up to 50°C for short time)
Storage temperature limits	From -20 to +60°C (3 months max. at temperatures exceeding the operational limits)

Models and accessories

Instrument:

Ordering code structure: 7825 – A – B – CC – D – EEE – F – GGGGG – H / X

Please select the required options from tables A, B... below to define the right device reference.

7825 UniGas 3000

Standard delivery includes:

- Base unit with 2 sensors (O_2 + CO)
- Li-ION battery + charger module
- Internal impact printer
- Draft and differential pressure measurement
- CO cell dilution system
- Configuration software GasConfig
- Data management software DBGas2004 Lite version
- USB adapter
- Factory test report
- Instruction manual
- Warranty: 1 year

Table A – Sensor n°1

1	O_2 (0 - 25%)

Table B – Sensor n°2

2H	CO (0 - 8,000 ppm) H_2 compensated + Dilution system
2X	CO (0 - 20,000 ppm)

Table C – Sensor n°3 and n°4 *(2 choices mandatory)*

0	None
4	NO (0 - 4,000 ppm / res. 1 ppm) & NO_x calculation *(sensor n°3 only)*
4LO	NO (0 - 500 ppm / res. 0.1 ppm) & NO_x calculation *(sensor n°3 only)*
5	NO2 (0-1000 ppm) *(sensor n°4 only)*
6	SO2 (0-4000 ppm) *(sensor n°4 only)*

Table D – Sample probes - *including water trap and line filter (1 choice only)*

0	None
1D	180 mm sampling dual hose probe BB610051 (Gas + Draft) - max 800°C
3	300 mm sampling dual hose probe BB610046 (Gas + Draft) - max 800°C
5D	750 mm sampling dual hose probe BB610080 (Gas + Draft) - max 800°C

Table E – Options (1 is mandatory)

1	Built-in impact printer
3	Leak test kit (pump + hose + adapters)
6	Electrovalve for autozero quick start-up
8	Internal sensor for gas leak detector (sniffer)

Table F – Mains adapter / Charger *(1 choice only)*

1	115 V – 50 / 60 Hz – USA plug
3	230 V – 50 / 60 Hz – UK plug
4	230 V – 50 / 60 Hz – European plug
5	100 V – 50 / 60 Hz – USA / Japan plug

Table G – Accessories

0	None
1	DBGas 2004 standard software
3	ABS rigid carrying case
3V	Vinyl carrying case with shoulder strap
5	Pt100 remote air temperature sensor with 2 m cable and positioning cone
7	Differential pressure connection kit (2 x EE300088)
B	Manual pump for smoke index measurements + 40 filters + table

Table H – Calibration certificate

1	Factory certificate (gas + pressure + temperature)

Table X – Customization

INTL	English language - manual in English - English Keyboard
USA	English language - manual in English - English Keyboard
FR	French language - manual in French - French Keyboard
HOL	Dutch language - manual in English - English Keyboard
POL	Polish language - manual in English - English Keyboard
SPA	Spanish language - manual in English - English Keyboard
UK	English language - manual in English - English Keyboard

Accessories:

Probes and sensors:

BB610051	180 mm sampling dual hose probe BB610051 (Gas + Draft) - max 800°C

BB610046	300 mm sampling dual hose probe BB610046 (Gas + Draft) - max 800°C
BB610080	750 mm sampling dual hose probe BB610080 (Gas + Draft) - max 800°C
BB830018	Pt100 remote air temperature sensor, with 2 m cable and positioning cone
BB830025	External probe for natural boiler draft (200 Pa)
F2132100	130 mm air TC K-type probe
F2137100	130 mm contact TC K-type probe
F2139000	Pipe Velcro TC K-type probe
F2139100	Tc K-type clamp temperature probe
F2139200	Pt100 clamp temperature probe
BB610057	3 m extension for dual hose probe and Tc
BB610103	6 m extension for dual hose probe and Tc

Test tools and miscellaneous:

EE300088	Single hose pressure probe and burner hose kit
EE300248	Kit for detecting leaks in gas networks (pump + hose + adapters)
F7828000	Manual pump for smoke index measurements + 40 filters + table

Software and connectors:

BB260166	DBGas 2004 standard software
EE700476	USB adaptator cable

Transport cases and protections:

BB880028	ABS rigid carrying case
BB880043	Vinyl carrying case with shoulder strap
EE880047	Rubber holster with magnetic support

Consumable parts:

EE340005	Printer paper roll - *Minimum order of 10* pcs
EE490002	Printer ribbon - *Minimum order of 3 pcs*
EE650011	Filter for soot (40 pieces per pack)
EE650074	Filter cartridge for EE650076 / EE 650082 water trap + filter - *Minimum order of 10 pcs*