

# Combustion gas analyser KIGAZ 110

## KEY POINTS



Long-life O<sub>2</sub> sensor



Interchangeable CO-H<sub>2</sub> sensor



Sensor protection by pump stopping

- 2 Go memory (100 000 measurements)
- Step by step procedure menu (gas flow, inspections)
- Self-test menu
- Built-in printer



## CONFORMITY AND STANDARDS

### Conformity

The analyser is in compliance with the following european directives:

- 2004/108/EC
- 2006/95/EC Low voltage
- 2011/65/EU RoHS II
- 2012/19/EU WEEE

### Standards

The analyser is in compliance with the EN 50379-1 and EN 50379-2 standards.



KIGAZ MOBILE Application

## HOUSING

### Dimensions

Instrument: 331 x 112 x 86 mm  
Flue gas probe: 180 mm  
Cable length: 2.50 m

### Keypad

10-key dome switch keypad

### Protection

IP40

### Battery life

10 h in continuous operating

### Weight (battery and protective cover included)

1035 g

### Material

Housing: ABS  
Plasturgy of detachable probe: PA 6.6 reinforced 10% glass fiber  
Probe cable: neoprene

### Communication

USB  
Bluetooth<sup>®</sup> (option)

### Battery charging time

10 h

### Display

LCD 120 x 160 pixels, 50 x 67 mm

### Power supply

Li-Ion battery 6 V 1.5 A  
Voltage of power supply: 100-240 VAC, 50/60 Hz

### Operating and storage temperature

From +5 to +50°C  
and from -20 to +50°C  
Altitude: from 0 to 2000 m

## INSTRUMENT FEATURES

<b>GAS</b>	Ambient max CO	Flue gas CO	Interchangeable sensors: long-life O <sub>2</sub> and CO compensated H <sub>2</sub>	Excess air Losses	Efficiency > 100%
<b>PRESSURE</b>	Draft measurement	Differential pressure measurement			
<b>TEMPERATURE</b>	Ambient temperature	Flue gas temperature	Delta Temperature	DHW temperature	Dew point temperature
<b>OTHER FUNCTIONS</b>	15 programmed combustibles <sup>1</sup>	Adding 5 combustibles by the user	Opacity index	External water trap	

<sup>1</sup>Combustibles: Sahara/Fos-sur-Mer Natural Gas, Groningen Natural Gas, Russia/North Sea Natural Gas, Propane, LPG, Butane, Light Oil, Heavy Oil, Bituminous coal, Hard coal, Coke gas, Bio fuel 5%, Wood 20%, Wood-chip 21%, Pellet 8%

## MEASURING RANGE

Parameter	Sensor	Measuring range	Resolution	Accuracy*	T <sub>90</sub> response time
Long-life O <sub>2</sub>	Electro-chemical	From 0% to 21%	0.1 % vol.	±0.2% vol.	30 s
CO (with H <sub>2</sub> compensation)	Electro-chemical	From 0 to 8000 ppm	1 ppm	From 0 to 200 ppm: ±10 ppm From 201 to 2000 ppm: ±5% of measured value From 2001 to 8000 ppm: ±10% of measured value	30 s
Flue gas temperature	K thermocouple	From -100 to +1250°C	0.1°C	±0.4% of measured value or ±1.1°C	45 s
Ambient temperature	Internal NTC	From -20 to +120°C	0.1°C	±0.5°C	-
Ambient temperature	Pt100 (external probe 1/3 DIN)	From -50 to +250°C	0.1°C	±0.3% of measured value or ±0.25°C	30 s
Dew-point temperature	Calculated**	From 0 to +99°Ctd	0.1°C	-	-
DHW temperature	TcK (external probe)	From -200 to +1300°C	0.1°C	±0.4% of measured value or ±1.1°C	-
Differential pressure	Semiconductor	From -20 000 to +20 000 Pa	1 Pa	From -20 000 to -751 Pa: ±0.5% of measured value ±4.5 Pa From -750 to -61 Pa: ±0.9% of measured value ±1.5 Pa From -60 to 60 Pa: ±2 Pa From 61 to 750 Pa: ±0.9% of measured value ±1.5 Pa From 751 to 20 000 Pa: ±0.5% of measured value + 4.5 Pa	-
Draft		From -10 to +10 Pa From -1000 to +1000 Pa	0.1 Pa 1 Pa	-	-
Losses	Calculated**	From 0 to 100%	0.1%	-	-
Excess air (λ)	Calculated**	From 1 to 9.99	0.01	-	-
Lower efficiency (ηs)	Calculated**	From 0 to 100%	0.1%	-	-
Higher efficiency (ηt) (condensing)	Calculated**	From 0 to 120%	0.1%	-	-
Opacity index	External instrument	From 0 to 9	-	-	-

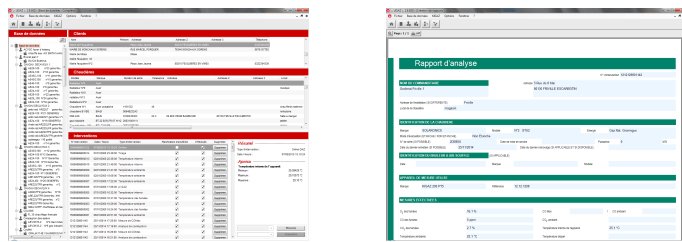
\*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.  
\*\*Calculation is made based on the measured values by the analyser.

## SOFTWARE



The analysers are supplied with the LIGAZ-2 software

It allows database creation (customers, boilers, inspections), inspections downloading and printing, synchronisation instrument/PC and analyser configuration.



## SUPPLIED WITH

The analysers are supplied with the following items:

- Transport bag
- 180 mm flue gas probe and its water trap
- LIGAZ-2 software and its USB cable
- Power supply adapter and Li-ion battery
- Calibration certificate
- Protective cover with magnets



## ACCESSORIES\*

- SCOT: Ambient CO probe
- SCO2T: Ambient CO<sub>2</sub> probe
- SPA 150SP: Ambient Pt100 probe
- SDFG: Gas leak detection probe (CH<sub>4</sub>)
- PMO: Opacity pump  
Supplied with 50 filters and a reference table
- SKCT: pipeline contact probe
- SCI: Ionisation current measurement probe
- KEG: gas network tightness kit

Bluetooth® module

KIGAZ MOBILE application for smartphones and tablets

Allows connection to the KIGAZ MOBILE application:

- Graphic visualisation
- Saving
- Exportation under CSV, XML, PDF format
- Reports sending by e-mail

Download on the App Store

Available on the Google play

\*See the technical datasheet of accessories for KIGAZ for more details.

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