

## **Technical Data Sheet**

MENUS / ACTIVE VIEWS

Analyser

menus

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level

# KIGAZ 100 Combustion Gas Analyser



Protection of sensors by pump stopping



Supplied with magnetic protective cover

### **KEY POINTS**

- Protection of sensors by pump stopping
- Interchangeable CO and COH, sensors
- 2 Go memory (100 000 measurements)
- Step-by-step procedure
- Self-test menu

#### **INSTRUMENT FEATURES**

| GAS                 | Ambient CO<br>max                             | CO flue gas                             | Interchangeable sensors : $O_2$ and CO compensated $H_2$ | Excess air<br>Losses | Efficiency ><br>100%  |
|---------------------|---|---|--|----------------------|-----------------------|
| PRESSURE            | Differential<br>pressure<br>measurement       | Draft<br>measurement                    |  |                      |                       |
| TEMPERATURE         | Ambient<br>temperature                        | Flue gas<br>temperature                 | Delta Temperature  | DHW<br>temperature   | Dew point temperature |
| OTHERS<br>FUNCTIONS | 15<br>programmed<br>combustibles <sup>1</sup> | Adding 5<br>combustibles<br>by the user | Automatic<br>measurements                                | Opacity<br>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%



## HOUSING

99.0

05.0

23.5 42 9

1.30 ppm (

Example of

analysis

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

Weight (battery included) 900 g

**Display** Grey scale 3.5" display

**Keypad** 10 keys dome switch keypad

Material Housing and probe : ABS Probe cable : neoprene

Protection IP40

+50°C

**PC interface** USB Bluetooth<sup>®</sup> (optional)

Power supply Li-lon 3,6V 4400 mA battery

Battery life 10 h in continuous operating

Use and storage temperature From -5 to +50°C and from -10 to

#### MEASURING RANGE

| Parameter                                | Sensor                         | Measuring range       | Resolution | Accuracy*   |
|--|--------------------------------|-----------------------|------------|---|
| 0,2                                      | Electro-chemical               | from 0% to 21%        | 0.1% vol.  | ±0.2% vol.  |
| CO<br>(with H <sub>2</sub> compensation) | Electro-chemical               | from 0 to 8000 ppm    | 1 ppm      | From 0 to 200 ppm : $\pm$ 10 ppm<br>From 201 to 2000 ppm : $\pm$ 5% of the measured value<br>From 2001 to 8000 ppm : $\pm$ 10% of the measured value  |
| Flue gas temperature                     | K thermocouple                 | from -100 to +1250°C  | 0.1°C      | $\pm 1.1^{\circ}$ C or $\pm 0.4\%$ of measured value  |
| Ambient temperature                      | Internal NTC                   | From -20 to +120°C    | 0.1°C      | ±0.5°C  |
| Ambient temperature                      | Pt100 (1/3 Din external probe) | From -50 to +250°C    | 0.1°C      | $\pm 0.3\%$ of the measured value $\pm 0.25^{\circ}C$   |
| 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      | $\pm 1.1^{\circ}$ C or $\pm 0.4\%$ of measured value  |
| Differential pressure<br>Draft           | Semiconductor                  | From -200 to +200 hPa | 0.01 hPa   | From -200.00 to -1.00 hPa : $\pm 0.5\%$ of the measured value +0.045 Pa From -1.00 to -0.40 hPa : $\pm 5\%$ of the measured value From -0.40 to 0.40 hPa : $\pm 0.02$ hPa From 0.40 to 1.00 hPa : $\pm 5\%$ of the measured value From 1.00 to 200.00 hPa : $\pm 0.5\%$ of the measured value + 0.045 hPa |
| 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)<br>(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 analyzer.

#### SOFTWARE

**Analysers are supplied with LIGAZ software** allowing database creation (Customers, Boilers, inspections), downloading and printing inspections and analyser configuration.

#### SUPPLIED WITH

- The analysers are supplied with the following items :
- Differential pressure kit including 2 x 1 m of silicone tube
- Transport bag
- 180 mm flue gas probe and its water trap
- LIGAZ software and its USB cable
- Mains adapter
- · Calibration certificate
- Magnetic protective cover

Transport bag

#### REFERENCES

• KIGAZ100 : combustion analyser with 2 sensors (O2 and CO-H2)

## **OPTIONAL**<sup>1</sup>

- SCOT : ambient CO probe
- SCO2T : ambient CO<sub>2</sub> probe
- SPA 150SP : ambient Pt100 probe
- SKCT : contact probe for pipes
- SDFG : gas leak detection probe (CH<sub>4</sub>)
- KEG : gas network tightness kit
- PMO : opacity pump
- Bluetooth<sup>®</sup> module : data downloading and device configuration
- SCI : Measurement probe of ionisation
  current



<sup>1</sup>Please see the technical datasheet of accessories for kigaz for further details

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