

Combustion gas analyser KIGAZ 80

KEY POINTS

- 2 Go memory (100 000 measurements)
- Step by step procedure menu (gas flow, inspections)
- Self-test menu
- External infra-red IRDA® printer (optional)



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.



HOUSING

Dimensions

Instrument: 240 x 100 x 80 mm
Flue gas probe: 180 mm

Keypad

10 keys
Dome switch keypad

Protection

IP40

Battery life

10 h in continuous operating

Weight (battery and protective cover included)

660 g

Material

Housing: ABS
Probe cable: neoprene
Probe: PA 6.6 reinforced
10 % glass fiber

PC communication

Bluetooth® (optional)
USB
Infra-red IRDA® (printer)

Battery charging time

10 h

Display

Graphic screen
Active view dimensions: 54 x 50 mm

Power supply

Li-Ion battery 6 V 1.5 A

Operating and storage temperature

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

FEATURES OF THE INSTRUMENT

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

¹Combustibles: 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 ₉₀ response time |
|---|--------------------------------|--|----------------|--|-------------------------------|
| O ₂ | Electro-chemical | From 0 % to 21 % | 0.1 % vol. | ±0.2 % vol. | 30 s |
| CO (with H ₂ 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 (1/3 DIN external probe) | From -50 to +250 °C | 0.1 °C | ±0.3 % of measured value ±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 ±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 | - |
| Draft | | From -10 to +10 Pa From -1000 to +1000 Pa | 0.1 Pa 1 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 | - |
| Losses | Calculated** | From 0 to 100 % | 0.1 % | - | - |
| Excess air (λ) | Calculated** | From 1 to 9.99 | 0.01 | - | - |
| Lower efficiency (η _s) | Calculated** | From 0 to 100 % | 0.1 % | - | - |
| Higher efficiency (η _t) (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.

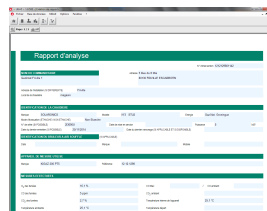
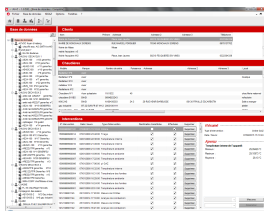
**Calculation is made based on the measured values by the analyser.

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



OPTIONS



• SCOT: ambient CO probe



• SCO2T: ambient CO₂ probe



• SPA 150SP: Pt100 ambient probe



• SKCL 150: thermocouple probe



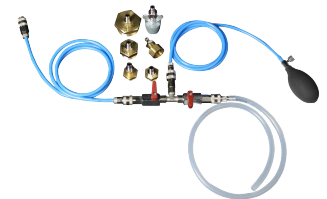
• SDFG: Gas leak detection probe (CH₄)



• SCI: Ionisation current measurement probe



• PMO: Opacity pump
Supplied with 50 filters and a reference table



• KEG: Gas network tightness kit

• KDIP-2: Infra-red IRDA® printer



Allows connection to the KIGAZ MOBILE application:

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



KIGAZ MOBILE Application
For smartphones and tablets



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

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