

K6050 & KG6050 Portable Gas Analysers

- **Wide range of gases monitored, including hydrogen, carbon dioxide, argon and SF6**
- **Optional oxygen measurement**
- **Rugged and portable**
- **Fast warm-up with rapid response time**
- **Weatherproof to IP67**

Applications

- **Hydrogenation processes**
- **Gas purity**
- **Food processing**
- **Refrigeration systems**
- **Power generation/distribution**
- **Breweries**
- **Metallurgical atmospheres**
- **Products of fermentation**



The K6050 range of analysers accurately measure the changes of one constituent in binary or pseudo-binary gas mixtures (ie, mixtures in which only one constituent changes). Examples include hydrogen, carbon dioxide, argon, helium and various halogenated hydrocarbons such as the Freons. Almost any single constituent of a gas mixture can be measured, providing its thermal conductivity differs from that of the other components. The ranges provided depend upon the gas being measured but can be from high ppm to 100%.

A non-depleting katharometer sensor measures the thermal conductivity of the gas. The sensor incorporates a highly sensitive element of low thermal capacity, which requires no maintenance. Signal processing is provided by a microprocessor to give a level of accuracy and a range not normally associated with this type of sensor. Little or no calibration is required because of the system's inherent high stability.

A built-in sample pump means that samples can be drawn from low-pressure sources or can be naturally aspirated. An integral needle valve and flow indicator are used to control the sample flow through the analyser.

Dual-gas measurement is provided by the KG6050. It combines the measurement abilities of the K6050 with oxygen measurement by electrochemical cell. Concentration ranges from 100ppm to 100% of oxygen are available, depending on the application.

True portability is achieved from sealed rechargeable batteries, which offer 6 hours continuous operation. Extended operation is possible by running the unit with the battery charger connected. The whole instrument is housed in a tough co-polymer waterproof case with carrying handle.

A large, alphanumeric LCD shows measured values and also displays messages and prompts for the menu-driven configuration and calibration routines. These procedures are simple and straightforward.

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SPECIFICATION

Display

Dot-matrix LCD showing two or four lines of alphanumeric characters

Thermal conductivity ranges and gas types

0 to 20%, to 0 to 100%, 80 - 100% (alter ranges on application)

Carbon dioxide, argon, methane, SF₆
0 to 1%, to 0 to 5%, 0 to 20%, 0 to 100%
Hydrogen, helium

Consult MTL product line for other gases and ranges

Accuracy

±1% of span (typically)

Stability

Better than 1% fsd/month

Oxygen measurement ranges (KG6050 only)

0 to 100%

Resolution: 0.1%

Accuracy: ±0.25%

0 to 25%

Resolution: 0.1%

Accuracy: ±0.1% (5 to 100% of scale)

ppm level ranges also available, subject to application

Oxygen cell life

Typically 2 years

Speed of response (typical)

Oxygen measurement: 12s (T90)

Thermal conductivity measurement: 20s

Sample connections

Compression fitting suitable for 0.25 inch (6mm) OD tubing or quick release connector

Sample pressure

Pump off: +6 bar G maximum

Pump on: -100mb G minimum

Higher pressures available on request

Sample flow

100 to 300ml/min for optimum performance

Sample temperature

-10 to +55°C (non-condensing)

Outputs

0 to 1V analogue

Ambient temperature

-5 to +40°C

Battery capacity

6 hours

Battery chargers – supplied

Mains: 240V ac (UK only)

Vehicle cigarette lighter: 12V dc

Case

Tough co-polymer resin with carrying handle

Dimensions

338mm wide x 295mm deep x 162mm high with handle parked in forward position

Weight

5.2kg approximately



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