

418 - Luft detector infra-red (IR) gas analyser

In addition to reference method gas analysers, Signal Group also manufactures a full range of sample handling, calibration and test instruments; making Signal Group a one-stop-shop for emissions monitoring equipment.

FEATURES

- Luft, R.F. capacitive bridge circuit detector for highly specific gas detection
- Advanced optical design allows direct ambient measurement
- Wide range choice with auto range (ppm to 100%)
- Temperature controlled for maximum stability
- Fast response with high accuracy, repeatability and low noise
- Full automatic microprocessor operation with auto start up, calibration with health checks and alarms
- 4U high 19" rack enclosure, switchable 115/230 V AC
- 2 year warranty
- Remote control (RS232) & logic status and control
- 0-10Vdc and 4-20 mA outputs



GASES MEASURED

• NH₃ • SF₆ • NF₃ • CO₂ • CO • NO • N₂O • SO₂ • CFCs • Hydrocarbons

APPLICATIONS INCLUDE

• Toxic Gas Measurement • Specialist Research • Semiconductor Gases

SPECIFICATION

DETECTOR

Dual chamber gas filled variable capacitor utilising RF detection to optimise sensitivity

RANGES

Dependant on gas, from ppm up to 100% concentration (see separate data sheet for full details).

RESPONSE

Dependant on gas and settings. Typically less than 15 seconds (5-95%) at 1 l/min flow, with time constant of 2 seconds (see separate data sheet for full details).

BYPASS FLOW SENSITIVITY

Typically less than +/- 1% change in reading from 0.2 to 2.0 l/min into ambient pressure exhaust.

ACCURACY & REPEATABILITY

Better than +/- 1% of range or +/- 0.2 ppm, whichever is greater.

DETECTOR NOISE

Gas and range dependant, see separate data sheet. Range time constants can be configured to suit

application sample noise. Longer time constants will reduce noise at the expense of response time.

LINEARITY

Better than +/- 0.5% of range
Ambient Temperature Effects
Zero : +/- 0.2 % per °C of highest range from -5 °C to 30 °C.
Span : Less than +/- 0.2 % of range from 5 °C to 30 °C.
Chart recorder output: add +/- 0.02% of range per °C.

DRIFT

Zero and span drift are less than 1% of range in 1 hour at constant temperature and pressure.

DISPLAY

240 x 64 pixel LCD display with switchable back-light shows concentration units and gas in large, clear characters.
Vertical bar graph of chart output with alarm markers and sample flow indication. Range, control and message areas. Multi screen operation for full analyser status and configuration.

INPUTS

Digital control lines are provided for the remote control of Range, Input Port, Sleep (Standby), and Calibration. The inputs are arranged for contact closure to Common Return to represent the TRUE condition.

OUTPUTS

Non isolated 0 - 10Vdc, isolated 4 - 20 mA analogue outputs of displayed range, Range analogue output is supplied.
Digital lines are provided for the remote indication of the analyser status. Range, Input Port, Calibration in Progress, Calibration Failed, High Alarm, and Low Alarm are available.

REMOTE CONTROL

Serial interface RS232 using AK protocol all functions available. Baud rate from 1200 to 19200.
Logic control Full function control via digital inputs, status monitor via digital outputs.

AUTOCALIBRATION

Controlled by microprocessor, RS232 or switched logic.

SAMPLE CONDITION

Gas to be analysed must not exceed 50 °C, with a dew point of 10 °C below local ambient temperature.

SAFETY

All high voltage/current circuits are shielded within the analyser.

DIMENSIONS

19" Rack or bench mount 4U high. 550mm behind mounting face, 45 mm in front of mounting face.

SERVICES

Sample, span and zero inlets - 1/4" tube fittings, bypass outlet 1/4". Zero grade N₂ for zero calibration and dual cell purge. Span calibration gas.

APPROXIMATE WEIGHT

18 Kg

POWER

Switchable between 115 V and 230 V AC
+/- 15%. 50Hz and 60 Hz compatible.

Authorised Representative:



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