K1550 range noble gas analysers

Thermal conductivity analysers for helium, neon, argon, krypton & xenon

- **Measured gases include: He, Ne, Ar, Kr, and Xe**
- **Proven technology from the katharometer experts**
- **Cost effective for expensive gases**
- **Hazardous area options**
- **Non-depleting remote sensor**
- **Fixed and variable compensation options**

Applications

- **Helium recovery**
- **Welding gas analysis**
- **Window filling**
- **Gas mixing**

The K1550 range of analysers are ideal for measuring % levels of one gas in a binary or pseudo-binary mixture. For example, air is composed of many gases but in known, fixed ratio, therefore helium in air is a pseudo-binary mixture and can be measured at % levels with a K1550 noble gas analyser.

Helium, neon, argon, krypton and xenon – the noble gases - are particularly well suited to this technique because there are no dedicated sensors for these inert gases. Katharometers provide cost effective analysis solutions to potentially difficult measurements of expensive gases.

Applications for the analysers include gas blending and mixing, welding gas analysis, helium recovery systems, solar panel manufacture and window filling.

A compensation input is available as an option, either fixed or variable via a 4-20mA input. This extends the capability of the analyser to measure in more complex mixtures. The KG1550 range also features an integral oxygen sensor.

All versions are available with 0 – 100% range. 0 – 20% and 80 – 100% ranges are also available, depending upon the measured and background gas. Multi-range instruments are sometimes available on request.

Different sample conditioning systems are available, standard or bespoke, according to the process conditions. For corrosive gases a variety of sensor assemblies and fittings are available to suit the specific gas. Hitech are prepared to recommend complete systems on receipt of full gas stream specifications.

For hazardous area applications the sensor may be mounted remotely in the hazardous area and connected through an MTL barrier to the electronics unit in a safe area. Alternatively the electronics unit can be supplied in an EExd enclosure, with remote keypad for non-intrusive calibration, for full hazardous area use.

Powering Business Worldwide

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Publication No. EPS 500-0023 Rev 5
February 2017

K1550 hydrogen analyser

February 2017

SPECIFICATION

Ranges available
(Depends upon measured/background gas)
0 - 20%, 80 – 100%, 0 - 100% for most gases
0 - 5%, for some helium ranges
Consult Hitech for gas type and range

Stability
<1 % f.s.d./month

Accuracy
±2% f.s.d. depending upon span and gas

Repeatability
<1% f.s.d.

Speed of response
T90: 20 seconds (typ.)

Sample flow
100–300ml/min for optimum performance

Sample pressure
Nominally atmospheric, set by vent pressure

Sample connections
Inlet and outlet: Captive seal compression suitable for 0.25inch (or 6mm) outside diameter tube

Display
LCD 2 or 4 lines of alphanumeric characters

Analogue output
4–20mA
(User-programmable)

Outputs (alarm)
Two alarms: each user-configurable to OFF, HIGH or LOW

Relay outputs
Rated at 30V ac or dc, 0.5A, normally energised

Ambient operating temperature range
Sensor: –10°C to 40°C
Electronics: 0°C to 40°C
(0-90% R.H. non-condensing)

Storage temperature range
–5°C to +55°C
(0-90% R.H. non-condensing)

Supply Voltage
110/120V or 220/240V AC, 50/60Hz

Power consumption
12VA

MOUNTING

Electronics unit
Panel mounting with two clamps

Remote sensor unit
Wall/ bulkhead (optional)

MATERIALS

Enclosure
Glassfibre-reinforced Noryl to IP40 (IP54 locking door option)

Remote sensor
Supplied in IP65 housing with flowmeter and needle valve

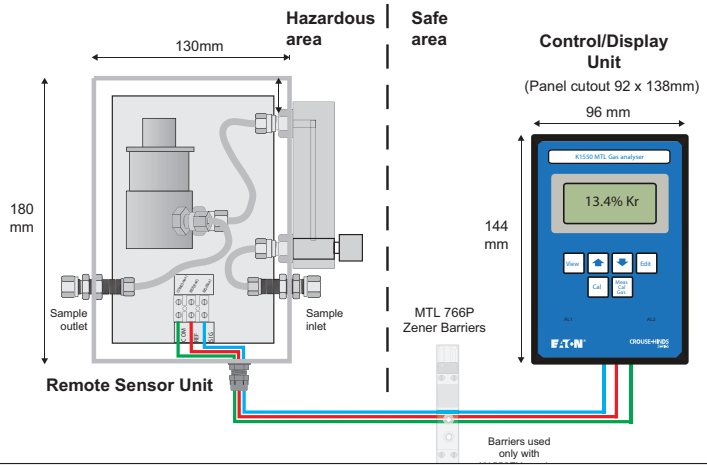
K1550FX (hazardous area version)
As above specification but with certified stainless steel sensor block and MTL zener barrier (supplied loose).

Option
EEx d enclosure for K1550FX electronics unit

ORDERING INFORMATION

Specify	Measured gas	Background gas	Range	Output	Supply voltage	Options
K1550R	Specify	Specify	0 - 100% 0 - 20%, 80 - 100%	4-20mA	110V or 220V	Compensation input
K1550FX	Specify	Specify				EEx enclosure

DIMENSIONS



K1550FX electronics unit in optional EEx enclosure with remote keypad

APPROVALS (ATEX Directive - Europe) for K1550FX version

Authority	Product/Cert. No.	Standards	Approved for
DEMKO	210 Gas detection head DEMKO02ATEX132848X	EN50014 EN50018	E II 2G EEx d IIB + H_2 T6 -40°C ≤ T_a ≤ 40°C E II 2G EEx d IIB + H_2 T3 -40°C ≤ T_a ≤ 150°C
BASEEFA	MTL766P barrier BAS01ATEX7202	IEC60079-0 IEC60079-11	E II 1GD [EEx ia] IIC T6 -20°C ≤ T_a ≤ 60°C
ISSeP	EEx enclosure ISSeP03ATEX005	EN50014 EN50018 EN50281-1-1	E II 2GD EEx d IIC T6 (85°C) or T5 (100°C)

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Publication No. EPS 500-0023 Rev 5 150217
February 2017

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