

HELIUM LEVEL GAUGES

- **Compact design**
- **Pulse mode for low heat load**
- **Universal voltage 90-240 Volts AC/DC**
- **0-1100mm standard measurement range**
- **Removable probe**
- **Analogue and control output**



We offer mains powered liquid helium level gauges to measure and control liquid helium level. Two electronic units are available. The HLG200 for measurement only and the HLG210 for display with control functions.

The gauges use a superconducting wire driven partially into the normal state by a heat pulse as the sensing element. The lower heat capacity of the gas compared to liquid allows the liquid level to be determined. The gauge samples and displays the level with a variable pulse interval to minimise helium consumption. The gauges can be interfaced with our SMS magnet power supplies to sample and read the helium level. When the power supply is used with our software, the level can be read on computer.

LEVEL GAUGE ELECTRONICS

HLG200 Helium Level Display Unit

The front panel features a self-ranging 3½ digit LED display, which shows 0 to 1100mm depth with 1mm resolution. Switches are provided for on/off, probe type and pulse interval. On the back panel; fused mains input, probe input, SMS power supply interface, pulse inhibit input and analogue output (2mV per mm depth).

HLG210 Helium Level Display and Control unit

The HLG210 is similar to the HLG200 unit but offers additional control features. There are three pre-set levels which may be internally adjusted. Two of these levels drive a 2 pole changeover relay for power switching of auto-refill systems; the third provides a failsafe reference or output to an audio/visual alarm.

PROBE SPECIFICATIONS

Model No	Probe Length (mm)	Active Length (mm)
105A	1100	550
105B	600 to 1100	550
105C	1100 to 2000	550
250A	1500	1100
250B	1150 to 1500	1100
250C	1500 to 2000	1100
250L	1500 to 2000	1100 to 2000

Numerous special probe configurations can be manufactured to customer requirements e.g. bake out resistant, different active lengths, different tube diameters, flexible and glass fibre cases.

OPTIONAL EXTRAS

- Long probe option (1100 - 2000mm)
- 4-20mA output
- Audio alarm (HLG210 only)

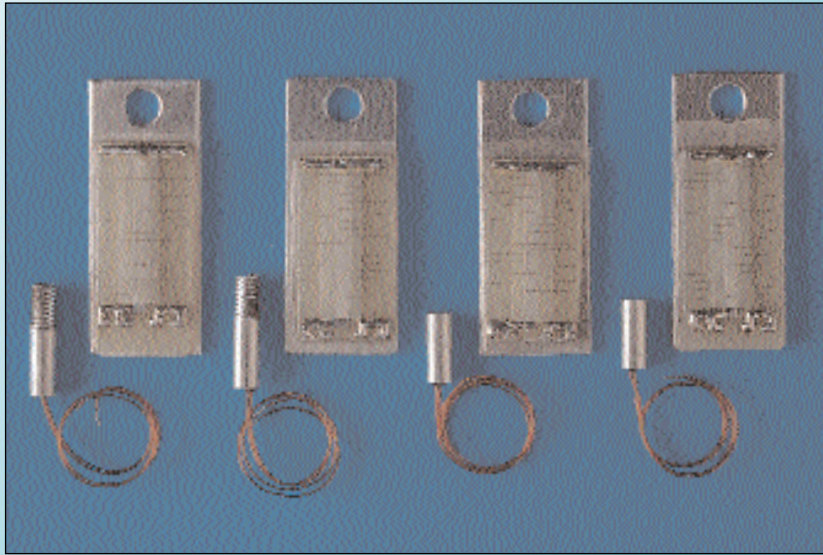
LEVEL PROBES

Standard probes consist of a superconducting element contained in a ventilated 2.1mm diameter stainless steel tube, terminated at the top with a 28mm long cap and 7 pin connector.

CRYOGENIC
CRYOGENIC LIMITED

"The Better Choice"

RHFE AND RuO₂ THERMOMETERS



- **High stability**
- **Damage resistant**
- **Suitable for vacuum mounting**
- **Low cost**
- **Flat Pack or Round Geometry**

Cryogenic supplies resistance thermometers of two types, using RhFe fine wire and RuO₂ chips. They are available in different configurations including flat pack form or in a cylindrical mount with wire leads. The flat pack RhFe type is particularly suitable for vacuum mounting, it can be wired directly to a room temperature connector using resistance wire without any significant temperature error.

RhFe has a highly stable, almost linear resistance versus temperature function and so gives constant sensitivity over a wide temperature range. It can be read directly with any 4 terminal meter or, for multiple thermometers, Cryogenic can supply a scanning interface which may be connected to a computer.

Ruthenium oxide thermometers are made with low resistance flying leads for 4-terminal measurement. The device is a very small chip bonded with epoxy into a damage resistant housing. They are especially suited for use on lambda plates and for all applications in high magnetic fields below liquid Nitrogen temperatures.

- | | |
|-----------------------------|---|
| RuO₂ FOR: | <ul style="list-style-type: none"> ● High sensitivity at low temperatures ● Low sensitivity to magnetic field |
| RHFE FOR: | <ul style="list-style-type: none"> ● High stability ● Easy measurements |

SPECIFICATIONS

TYPE	T100 Flat Geometry RhFe	T100R Round Geometry RhFe	R100 RuO ₂
Dimensions			
Length	40.4mm	22mm	10mm
Width	15.9mm	-	-
Depth	3.6mm	-	-
Diameter	-	6.1mm	4.0mm
Diameter of fixing hole	5.1mm	-	-
Flying Leads	Optional	4 Flying leads (copper) 100mm long	Flying leads 50mm long
Temperature / Nominal resistance	300K / 30Ω 77K / 7Ω 4.2K / 2.1Ω 1.5K / 1.8Ω	300K / 30Ω 77K / 7Ω 4.2K / 2.1Ω 1.5K / 1.8Ω	300K / 1000Ω 77K / 1015Ω 4.2K / 1350Ω 1.5K / 1750Ω

**For further information or a comprehensive quotation, please contact our Sales Department at:-
Cryogenic Limited, 30 Acton Park Industrial Estate, The Vale, London W3 7QE, UK
Tel: (+44) 181 743 6049 Fax: (+44) 181 749 5315
E-mail: cryogenic@cix.compulink.co.uk Web Site: <http://www.cryogenic.co.uk>**