

# Liquid Nitrogen Level Indicator & Controller QAR-3080

## Automatic Control of Liquid Nitrogen Levels With Continuous Level Read-Out



For reliable automatic control of liquid nitrogen levels in :

- \* Phase Separators
- \* Pressurised Vessels
- \* Refrigerators
- \* Cold Traps
- \* Cryostats
- \* Dewars

Clear Reading of Level of Liquid Nitrogen (0 - 100%)

Adjustable High Level & Low Level Control Points

Adjustable High Alarm & Low Alarm Levels

Simple to Install & Use

Six easy to read 'Status' lights indicate the action of the controller.

Built-in audible alarm and connection for remote alarm.

Uses well proven 'Capacitance Probe' principle.

Can be used either with low voltage automatic valve for electrical safety (12 v DC) or with 240 or 110 v AC valves.

## Description

The QAR-3080 capacitance probe is mounted in the vessel in which the level of liquid nitrogen is to be controlled and monitored.

The probe is connected to the QAR-3080 level indicator and controller unit by a low voltage cable. The QAR-3080 processes the signal from the probe, indicates the actual level of liquid on a panel meter (0 - 100%), displays the state of the control (eg. NORMAL, LOW LEVEL, HIGH ALARM, FILLING) and opens or closes an automatic cryogenic valve in the liquid inlet line to allow or to prevent the automatic refilling of the vessel.

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## Operation

The liquid nitrogen level in the vessel being controlled falls until it reaches the pre-set 'Low Level' when the QAR-3080 activates an internal relay to open an external automatic valve (not supplied). This allows liquid nitrogen to enter the vessel until the pre-set 'High Level' is reached when the QAR-3080 closes the valve automatically.

If, for any reason, the level of liquid nitrogen continues to fall below the 'Low Level' to the 'Low Alarm' level, or continues to rise above the 'High Level' to the 'High Alarm' level, the alarm level is indicated by the corresponding red light and the Audible Alarm is activated together with any alarm connected to the Remote Alarm Socket.

## Technical Specification

Power Requirements	240 / 220 v AC, 50 Hz (110 & 24 v Available)
Power Output to Automatic Valve	12v DC (110 & 240v AC Options)
Indications & Alarms	7 Independent LED's
	Power On - Amber LED
	Filling - Green LED
	High Alarm - Red LED
	High Level - Yellow LED
	Normal - Green LED
	Low Level - Yellow LED
	Low Alarm - Red LED
	Panel Meter - 0 - 100%
	Audible Alarm - Pulsed Tone
Probe Unit	Material - Stainless Steel
	Diameter - 8mm. Length To Suit Vessel
Probe Cable	Standard Length 2m. Lengths Up To 50m Available

Remote display head available – length of cable to be specified.