



CRYOMAGNETICS, INC.
INNOVATIVE SUPERCONDUCTING MAGNET SOLUTIONS

Model LM-500 Liquid Cryogen Level Monitor



Can your Liquid Cryogen Monitor . . .

Simultaneously Display LHe and LN2 Liquid Levels?

The LM-500's two-line display can! Requires two sensor option and appropriate sensors. One instrument now does the work of two! Can also be configured to simultaneously monitor two like sensors. This is perfect for monitoring both storage and research cryostat liquid levels during automated refill cycles.

Control Separate Refill Cycles for Each Channel?

Another industry first! With the two-sensor option both channels have separate high and low setpoints. Separate output signals simplify automated refill cycles.

Easily Monitor Multi-Manufacturer LHe Sensors?

Front panel menu configuration to almost any LHe sensor manufactured. It is possible to set normal sensor resistance and active sensing length via the front panel. The LM-500 does all the work with NO potentiometers to adjust and without opening the case! There is even a fine-tune adjustment to account for lead losses of nonstandard two or three-wire sensors.

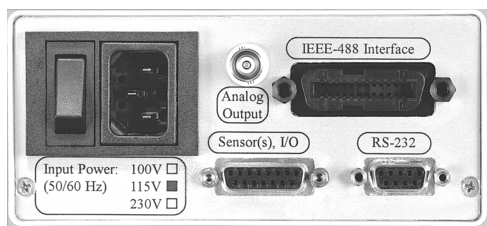
Provide Flexible Computer Control?

All functions of the monitor can be controlled or monitored via the included RS-232 interface. An optional IEEE-488.2 interface with LabVIEW® drivers is also available. All the most recent developments included at a price the competition cannot match!

Contact us today for pricing and delivery information!



Model LM-500 Liquid Cryogen Monitor



Rear Panel View

The LM-500 is a microcontroller-based instrument. Analog signals from the level sensors are digitized and converted to liquid level readings according to the particular level sensor characteristics. Flexible sensor setup information is entered into the LM-500's nonvolatile memory via the easily navigated front menu or via remote computer commands.

The LM-500 configured as a liquid helium level monitor will use a NbTi superconducting filament sensor. A capacitive-type sensor is used in the liquid nitrogen level measurement configuration. Levels can be displayed in centimeters, inches, or as a percentage of full.

The high and low setpoint output is suitable for operating low-voltage relays. An optional line-voltage control unit is available to operate line-powered solenoid valves. With the two sensor option separate outputs are provided for each channel. Separately configurable high and low setpoints for each channel provide added flexibility in automating refill cycles.

Ease of use without sacrificing advanced features was the driving idea behind the development of this new monitor. There are no complicated setup procedures and no confusing menus. All commands are intuitive and easily understood. The LM-500 is designed to make research the prime activity of your day – not wasting valuable time keeping up with different instruments monitoring different cryogens. See for yourself the ease of use and convenience of the LM-500 today!

Standard Features

- Bright, two-line vacuum fluorescent display
- Level indication in centimeters, inches, or percent
- LHe sensor de-ice cycle
- LHe sensor filament burnout protection
- Sample and hold operation (1 minute to 99 hours)
- Manual update or continuous operation
- Sensor calibration via front panel menu
- Control output with high and low setpoints
- Audible alarm
- RS-232 interface

Optional Features

- Option 1: Analog Output (0-1 Volt or 4-20mA)
- Option 2: IEEE-488.2 Interface
- Option 3: Two Sensor Readout
Can be configured to monitor two each LHe or LN2 sensors, or one of each. (specify at time of order)
- Option 4: Rack Mount Cabinet
- Option 5: Line voltage output controller.

Physical Data

- Dimensions: Height X Width X Depth
2.50 X 5.50 X 7.50 (inches)
63.5 X 140 X 190.5 (mm)
- Rack Mount: Standard 3.5 X 19 (Height X Width in inches). Up to three instruments can be placed side by side in one rack mount panel.
- Net Weight: 3.50 pounds (1.59 kilograms)

Electrical Data

- Input Power: 100-115Vac, 50/60 Hz
200-230Vac, 50/60 Hz
(Please specify with order)
- Output Sensor Capability :
LHe Version: Up to 200cm active length.
LN2 Version: Up to 250cm active length.

Contact us for information on our Model TM-600 Cryothermometer and Model GM-700 Gaussmeter!

Model TM-600 Temperature Monitor

It is now possible to purchase an inexpensive temperature monitor for ruthenium-oxide and platinum temperature sensors. The TM-600 is available with the same options as the LM-500. Flexible alarm setpoints as with the LM-500 are also included.

Model GM-700 Gaussmeter

Rounding out the family of cryogenic instrumentation sharing a common look and feel is the GM-700. This monitor provides accurate readouts of Hall effect sensors such as the ultra-compact HSU-series by Cryomagnetics.



CRYOMAGNETICS, INC.
INNOVATIVE SUPERCONDUCTING MAGNET SOLUTIONS

1006 Alvin Weinberg Drive
Oak Ridge, Tennessee 37830
Phone: (865) 482-9551

Fax: (865) 483-1253
E-mail: sales@cryomagnetics.com
Web: www.cryomagnetics.com