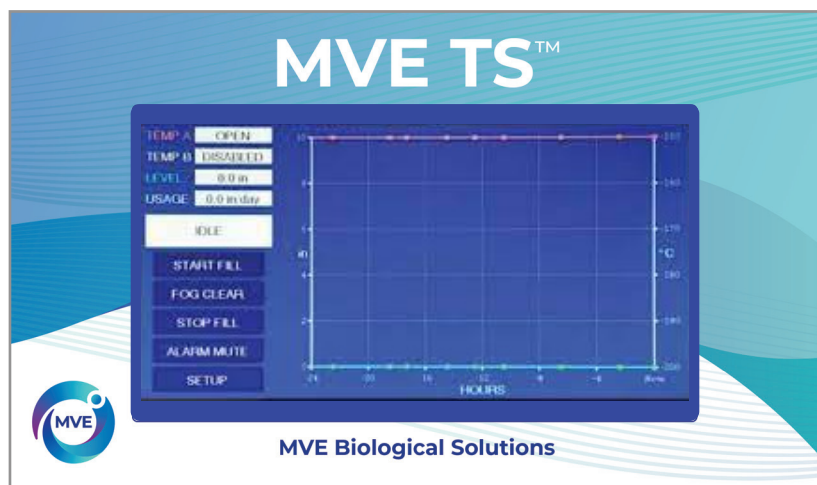


MVE TS (Touch Screen)



Key Features

- MVE TS employs a variety of advanced features that enable the controller to monitor and control the environment inside a freezer with a high level of precision.
- The new screen features X, Y graph for quick view of temperature and liquid nitrogen level!

Liquid Nitrogen Level Measurement

MVE TS uses a differential pressure system to determine the LN₂ level to an accuracy of ± 0.5 in. (15 mm) and a resolution of 0.1 in. (5.0 mm). Unlike alternative level sensing systems, differential pressure allows the exact level to be measured and displayed. Using the simple single point calibration in a range of 3.0 in. to 48.0 in. (75 mm to 1220 mm), the self-maintaining, closed-loop system displays in inches, millimeters, or a percentage full.

Automatic Liquid Nitrogen Level Control

The fully automated LN₂ level control system is based on user-defined parameters that can be electronically adjusted over the entire level range. The parameters include Low Level Alarm, Low Level Fill Point, High Level Fill Point and High Level Alarm. The redundant Dual Solenoid Valves for overfill protection run on 24 VDC, 1.0 amp (max).

Liquid Usage

This feature provides an estimation of liquid usage to track LN₂ consumption and can provide an early failure warning to allow sufficient time to implement corrective action and save irreplaceable samples.

User-Defined Alarms

A total of 18 audio/visual alarms are used to alert the user to any potential or developing problems. The alarms include: High Temperatures, Low Temperatures, High Level, Low Level, Liquid Usage, Maximum Fill Time, Gas Bypass, Stuck Open/Closed, Temperature Calibrations, Low Battery, Power Failure, Lid Open and Communication Loss.

Remote Alarm Monitoring

Alarm monitoring includes Global/Discrete Remote Alarm Relay.

MVE TS (Touch Screen)

Temperature Measurement

Two independent temperature measurement channels are employed to accurately measure the temperature across the entire storage space. The two platinum RTD sensors have an accuracy of $\pm 1.0^{\circ}\text{C}$ and a resolution of 0.1°C . The temperature can be displayed in $^{\circ}\text{C}$, $^{\circ}\text{F}$ or K. The single or two point calibration also has altitude compensation for the highest accuracy.

Temperature Inlet Settings (Hot Gas Bypass)

This unique feature is able to vent warm nitrogen gas from the supply line before initiating a fill. This prevents warm gas from entering the freezer space, which helps maintain a stable temperature gradient and increases the efficiency by reducing excess LN_2 evaporation.

Event Log / Data Storage

Store vital, unalterable, time-stamped data in nonvolatile memory. This is a great tool for assessing

freezer performance and troubleshooting any problems. The memory can store 30,000 events, an estimated 10 years of storage capacity. The data includes time-stamped temperatures, LN_2 level, liquid usage, and any alarms or events.

Password Security

The multilevel security system comprised of up to ten user-specific programmable passwords and four security levels can be customized to grant or restrict personnel access to certain menus and settings.

Communication Capabilities

ONE independent port can be used to communicate with other MVE TS controllers, a remote PC, serial printer, or other RS-485 networks and devices. Options include ASCII, MODBUS, Printer and One Fill All Fill (OFAF).

Ethernet Capabilities

One independent RJ45 port can be used for network connection.

