

2301 Controller Product Sheet



New 16 Port Connector

- 0-5 volt outputs provide temperature & level data for connection to existing alarm/monitor system
- 4-20 mA outputs provide temperature & level data for connection to existing alarm/monitor system
- Sequential and One-Fill-All-Fill input and output connection for filling systems

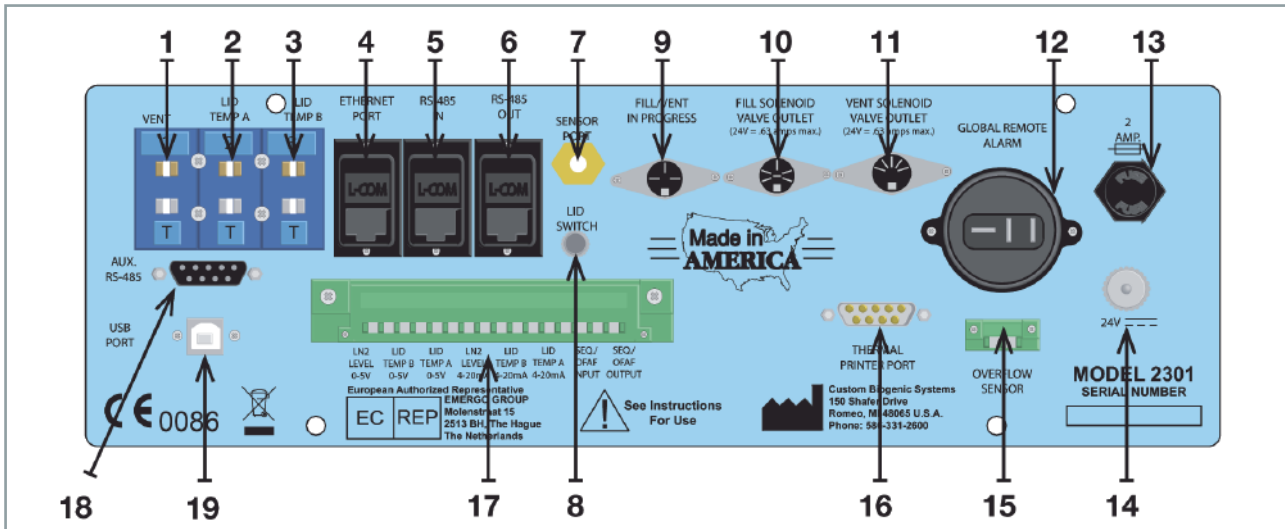
New two level temperature display option

- Temp A displays temperature at the lid, approximately 27.94 cm
- Temp B displays temperature inside the storage space, approximately 50.80 cm

Additional Features

- Download cryomonitor data files to PC and be able to convert them to .csv files for use in EXCEL
- Ethernet and auxiliary RS485 for future expansion
- Dedicated 24VDC signal output to activate one TS-1B LN2 liquid supply tank switcher or activate a third 24VDC valve to control the LN2 supply
- Global Remote Alarm - Dry contact that switches during any alarm condition
- Overflow Sensor (Optional)
- Fill Timer
- Data Log - Report Temp A, Temp. B and level with date and time stamp. Printed or displayed.

Features / Specifications



1. Vent Thermocouple
2. Temp. A Thermocouple - Lid temp (located 11" down)
3. Temp. B Thermocouple - Temp (located 20" down)
4. Ethernet Port - For future expansion
5. RS-485 IN - For use with cryomonitor communication between controller
6. RS-485 OUT - For use with cryomonitor communication between controller
7. Sensor Port
8. Lid Switch
9. Fill/Vent In Progress - Dedicated 24VDC signal output to activate one TS-1B LN2 liquid supply tank switcher or activate a third 24VDC valve to control the LN2 supply
10. Fill Solenoid Valve Outlet
11. Vent Solenoid Valve Outlet
12. Global Remote Alarm - Dry contact that switches during any alarm condition
13. 2 Amp Fuse
14. 24 V Power Supply
15. Overflow Sensor (Optional)
16. Thermal Printer Port - For printing alarms & data
17. 16 Port Connector:
 - 0-5V Outputs - For Temp. A, Temp. B. and Level
 - 4-20mA Outputs - For Temp. A. , Temp. B. and Level
 - Seq. OFAF Input and Output Connection - For communication between controllers
18. Auxiliary RS 485 - For future expansion
19. USB Port - Used for cryomonitor communication between PC and controller

Updated Hardware:

- Converted to surface mount components wherever possible.
- Additional Thermocouple circuit for second temperature probe.
- Low noise oscillator on board instead of using module.
- Two phone jacks (one redundant) for RS-485 between controllers, no custom cabling between controllers.

Optional Overflow Sensor:

When installed will sense liquid nitrogen entering the sample storage space.

At approximately 3mm or 1/8 inch, an audible, visual and remote alarm is activated and all power to filling valves is stopped.



ISO 13485:2003
FM 93655