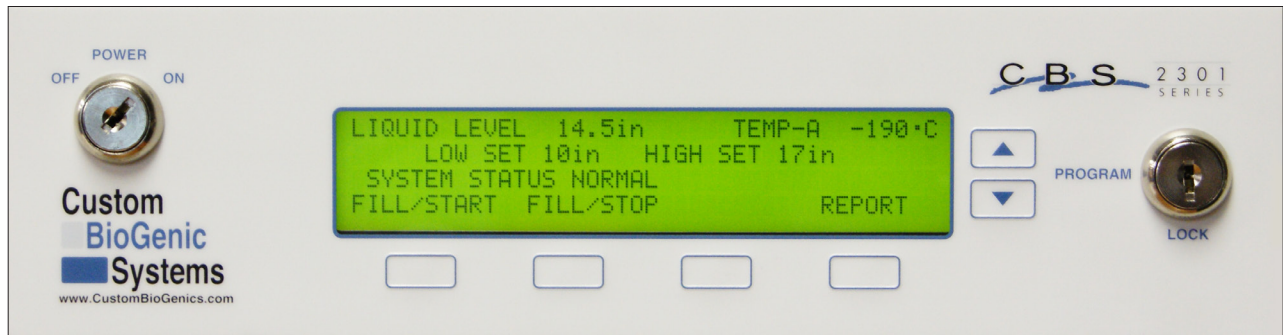


# Custom BioGenic Systems

## Model 2301 Controller



### 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 OFAF input and output connection for filling systems.

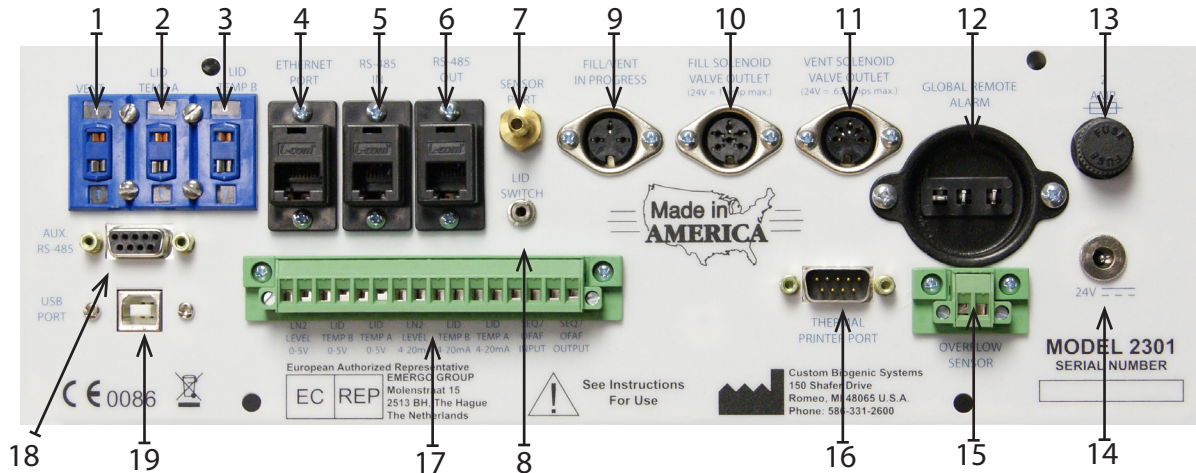
### New Two Level Temperature Display Option

- Temp A displays temperature at the lid, approximately 11" (27.94 cm).
- Temp B displays temperature inside the storage space, approximately 20" (50.80 cm).

### Additional Features

- Cryomonitor data files can be downloaded in .csv format for use in Microsoft Excel.
- Ethernet and auxiliary RS485 for future expansion.
- Dedicated 24 Vdc signal output to activate one TS-1B LN2 liquid supply tank switcher or activate a third 24 Vdc valve to control the LN2 supply.
- Global Remote Alarm - dry contact that switches during any alarm condition.
- Overflow Sensor (optional).
- Fill Timer.
- Data Log - Print or display 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 24 Vdc signal output to activate one TS-1B LN2 liquid supply tank switcher or activate a third 24 Vdc 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:
  - 0-5 V outputs - for temp. A, temp. B and level
  - 4-20 mA 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 3 mm or 1/8 inch, an audible, visual and remote alarm is activated and all power to filling valves is stopped.

Your Local CBS Representative is:



Custom BioGenic Systems is certified by BSI to the following standards:  
 ISO 13485:2003  
 MDD 93/42/EEC

