



# **BRL-1000**

## **Control Menu Reference Guide**

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## **MENUS**

Entries related to the particular options will not be shown if these options are not installed in the **<CONFIGURATION MENU>**.

**<PASSCODE MENU>** (*Enter User passcode to put the Control into change mode from view only mode*)

- Enter user passcode: Passcode range is 0 to 9999. Factory default user passcode is 5. The Control will return to view only mode after 60 minutes.
- Change new passcode, Supervisor passcode is needed to change to a new user passcode, factory default supervisor passcode is 10.
- Passcode can be overridden by pushing the passcode-overriding button, which is located inside the control at the main P.C. board.
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**<CONFIGURATION MENU>** (*This Menu allows user to setup the Control for different operating options, clear alarm logs and clear memory*)

- Enable/Disable: Door alarm
- Enable/Disable: Turn fan off when door opened. If enabled, both fan and liquid valve will be turned off when door is opened; minimum off time is one minute. If disable, fan and liquid valve operation is not affected by the door switch
- Enable/Disable: Temperature control
- Enable/Disable: FIFO maximum cooling. If enabled, the lead-lag control method can be changed to the First In, First out maximum cooling method by an external Max-Cooling Switch. Both compressors can be turned on at the same time to provide maximum cooling capacity to the room. (*This option is shown only if temperature control is enabled*).
- Enable/Disable: Temperature high alarm.
- Enable/Disable: Temperature low alarm.
- Enable/Disable: System #1 defrost heating cycle termination by temperature probe. (*If disable, snap-on thermo disc can be used to terminate the heating cycle defrost*).
- Enable/Disable: System #2 defrost heating cycle termination by temperature probe. (*If disable, snap-on thermo disc can be used to terminate the heating cycle defrost*).
- Enable/Disable: Refrigerant leak monitor detection (*Optional sensors required*).
- Enable/Disable: Alarm auto clear after the alarm condition is returned to normal (Latched alarm or Un-latched alarm.)
- Clear all memory configurations: Clear all the settings and reload the factory default values to the Control.
- Clear all alarm logs.
- Entrapment alarm is always active. If entrapment function is not used, short the entrapment input terminals together with a bare wire.

**<SETTING MENU>** *(This menu allows user to setup the operating parameters for those installed options)*

- Door alarm delay minute (2 – 240).
- Temperature set point for control the liquid valve on/off degree (-45.0°F -- 110.0°F).
- Temperature differential (0.5°F - 5.0°F).
- Temperature high alarm degree (-45.0°F – 110.0°F).
- Temperature high alarm delay minute (2 – 120).
- Temperature low alarm (-45.0°F – 110.0°F).
- Temperature low alarm delay minute (2 – 120).
- Termination temperature for system#1 defrost – heating cycle set point (-45.0°F – 110.0°F).
- Termination temperature for system#2 defrost – heating cycle set point (-45.0°F – 110.0°F).
- Leak monitor level 1 set point (20 ppm– 999 ppm).
- Leak monitor level 1 alarm delay minute (1 – 120).
- Leak monitor level 2 set point (20 ppm – 999 ppm).
- Leak monitor level 2 alarm delay minute (1 – 120).

**<DEFROST MENU>**

- **<SET DFT LENGTH>** *(This submenu setup the defrost length on each defrost cycle)*
  - i. Defrost pump down cycle minute (0-240).
  - ii. Defrost heater cycle minute (0-240).
  - iii. Defrost drip cycle minute (0-240).
  - iv. Defrost fan on delay cycle minute (0-240).
- **<DEFROST SCH>** *(This submenu setup the defrost schedule or force defrost on/off manually)*
  - i. Number of defrost per-day (0-6).
  - ii. Change every defrost start time in 15 minutes increment.
  - iii. Force defrost on/off.

**<CALIBRATION MENU>** *(This Menu allows user to calibrate those sensors that are active)*

- Temperature probe calibration
- System #1 defrost heating cycle termination temperature probe calibration
- System #2 defrost heating cycle termination temperature probe calibration
- Leak monitor sensor calibration, absolute reading on the sensor must be less than 80 for successful calibration. Before calibration, the sensor leak reading shows the raw reading. After calibration, actual leak reading is shown which is at zero level for no refrigerant leak. The Refrigerant Sensor itself does need calibration. Please refer to the Refrigerant Sensor manual.
- Shows absolute leak monitor sensor raw reading. For calibrated sensor, the reading is between 10 to 25.
- Undo leak monitor sensor calibration.

**<CLOCK MENU>** (Set the real time clock)

- Current time setting.
- Current date setting.
- Current year setting.
- Daylight saving install.

**<ALARM LOG MENU>** (*This menu allows user to view all recent alarm events*)

- There are 10 alarm logs. Alarm log 1 to 8 records the most recent alarm event with time stamp. ALM9 and ALM10 are for entrapment alarm log. The alarm log can be cleared at **<CONFIGURATION MENU>**

**<STATUS MENU>** (*This menu allows user to view the control settings and current operating conditions*)

- Time of the day.
- Door condition (opened or closed).
- Door alarm delay.
- FIFO Max Cooling mode status.
- Room temperature reading.
- Room temperature set point for control liquid valve open/close.
- Room temperature differential.
- Room temperature high alarm set point.
- Room temperature high alarm delay.
- Termination #1 reading.
- Termination #1 set point.
- Termination #2 reading.
- Termination #2 set point.
- Refrigerant leak monitor reading.
- Refrigerant leak monitor level 1 alarm set point.
- Refrigerant leak monitor level 1 alarm delay.
- Refrigerant leak monitor level 2 alarm set point.
- Refrigerant leak monitor level 2 alarm delay.
- System control firmware version no.

**<TEST MENU>** (*This menu allows user to test the relay on/off*)

- Relay testing. Turn on or off each relay manually. All forced relays will be canceled and returned to there operating stages when this menu is exited.)
- Reset the system (*only when all alarms were cleared*).