

5. Adjusting

Alert Timeout

To enter the TIMEOUT adjustment mode, turn the SUPERVISOR KEY and then press the SET button. (Both Air & Blood temperatures must display OK)

Note 1 Timeout 1 and 2 are the same value.

For example, if the timeout value is set a 10 minutes an alert alarm will slow flash the LED and sounder for 10 minutes, then will fast flash the LED and sounder for a further 10 minutes. Then if the Alarm Accept button has not been pressed the alarm relay will activate. The Alarm Timeout can be set between 2 and 20 minutes.

Removing the SUPERVISOR KEY will save the setting to memory.

Calibration

To enter CALIBRATE mode the calibration jumper must be fitted on the RS232 header pins 4-5. In this configuration turning the SUPERVISOR KEY will enter CALIBRATE mode. This enables the temperature readings to be offset by ± 19.9 °C. Both the Offset and the temperature reading are shown on the display.

The Offset is written back to memory when the SUPERVISOR KEY is removed.

MPA-2AA

M.H.R.A. Compliant Blood Fridge Alarm



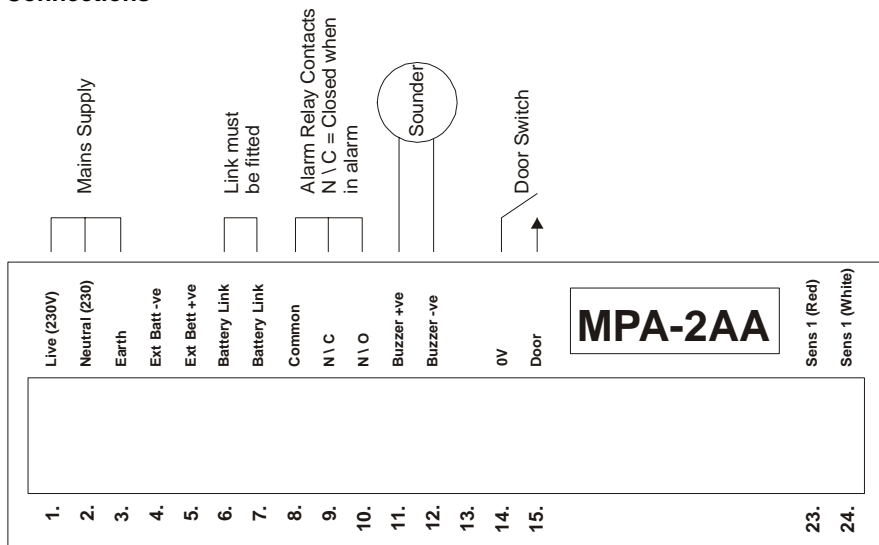
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Connections



3. Front Panel Buttons and keys

SUPERVISOR Key.

In NORMAL mode turning the SUPERVISOR KEY and pressing SET will allow the user to change the TIMEOUT period for the ALERT alarm

In ALERT mode this key will cancel the relay and local sounder while turned.

In ACTION mode this key will cancel the relay and local sounder while turned.

In ACTION mode pressing ALARM ACCEPT with the SUPERVISOR KEY turned will make the unit display ****OUT OF SERVICE****. To maintain this state the SUPERVISOR KEY must be removed while still pressing ALARM ACCEPT.

During calibration both the offset and resulting temperature are displayed.

ALARM ACCEPT.

If an ALERT condition exists, then pressing this button will cancel the local sounder for a further timeout period and make the LED blink once in three seconds. Pressing this button after the timeout period and before the alarm relay has activated will silence the alarm and leave the LED blinking again once in three seconds. This state will last for a further timeout period, after which the local sounder and LED will be activated each second.

If no further action is taken the alarm relay will be activated after a further timeout period.

In NORMAL mode it has no effect, on its own.. If pressed while the SUPERVISOR key is turned it forces the MPA2aa to enter OUT OF SERVICE mode.

In ACTION mode pressing this key has no effect, unless the SUPERVISOR KEY is turned after which the unit will display ****OUT OF SERVICE****. To maintain this state the SUPERVISOR KEY must be removed while still pressing ALARM ACCEPT.

SET Button.

Enables the user to change the TIMEOUT period. Only if the SUPERVISOR KEY is turned and the unit is in NORMAL mode. Removing the key saves the setting.

UP and DOWN Buttons.

In TIMEOUT and CALIBRATE modes, these buttons allow the parameters to be adjusted within their specified range limits.

ALARM TEST Button.

Pressing this on its own illuminates the LED and sounds the local sounder.

Pressing this with the SUPERVISOR KEY inserted and turned will also activate the relay. Note the button must be pressed for 8 seconds to activate the alarm relay.

4. Alarms

ALERT

When the Air temperature first moves outside the prescribed limits ($>+8$ $<+2$) the MPA2AA will signal Alert 0.00mins, blink the LED once every 3 seconds and sound the local sounder once every 3 seconds.

This will continue for the first timeout period.

(Unless the air temp returns to within limits, when the display will again show NORMAL).

After the first timeout period the unit will enter the second time out period and the LED will flash every second, the local sounder will sound each second.

(Unless the air temp returns to within limits, when the display will again show NORMAL).

After the second timeout period the Relay Alarm Contacts will be activated.

The user may press Alarm Acknowledge at any time during timeout period 1 or 2. This will mute the sounder and reset the timer back to the beginning of the first time out period.

ACTION

When the Blood temperature first moves outside the prescribed limits ($>+6$ $<+2$) the MPA2AA will signal ACTION 0.00mins, the LED and relay will come on and the local sounder will be activated continuously. The ALARM ACCEPT button will have no effect.

Turning the SUPERVISOR KEY will silence the local sounder and cancel the relay alarm.

Pressing the ALARM ACCEPT button and at the same time removing the SUPERVISOR KEY will place the unit in OUT OF SERVICE mode and the relay and sounder will be disabled. The temperatures will still be shown on the display along with an "OK" indication if they are within limits.

POWER

When the Mains Supply fails the MPA2AA will enter battery backup mode, signal POWER FAIL on the LCD display, activate the alarm relay, blink the LED and sound the local sounder once every 3 seconds until the power is restored. Pressing the MUTE button or turning the SUPERVISOR key will mute the sounder but the relay and LED will remain in alarm.

Duration of the battery while in battery backup mode is greater than 6 hours.

DOOR

If the door switch is activated the MPA2AA will signal DOOR OPEN on the LCD display, blink the LED and sound the local sounder. The Relay does NOT activate.

The local sounder may be cancelled with ALARM ACCEPT or the SUPERVISOR key.