# LUMINOR MOD-RAM Emulator Module Remote Alarm Owner's Manual



Contents

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**EXCEPT:** The device must not be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction. Children should be supervised so that they do not play with the device.

* Modules not available in all markets.
* These instructions are available in soft copy by email from Luminor Customer Service.

## EMULATOR MODULE

### MODEL # MOD-EMU

The emulator module comes with a male IEP connection (Infinite Expandability Port). Before start-up, first, make sure all button switches for the "module alarm" and "L"amp alarm" are in the OFF position (turned on). Plug the emulator connector into the IEP on the BLACKCOMB / HO controller, then plug the Controller power cable. To emulate a certain module fault, switch the corresponding switch to the ON (switch down) position. The alarm can be cleared by returning the switch to its OFF position. The device can also emulate the UV intensity, which is reported by a UV sensor module.Turning the right "UV" knob clockwise will increase the intensity, while counter-clockwise will decrease the intensity.Please note that for all the capabilities of the To see the sensor, you must drive the intensity through the range of 49 to 66%.

* Only for merchant use. Not available for sale to the general public.


## REMOTE ALARM MODULE

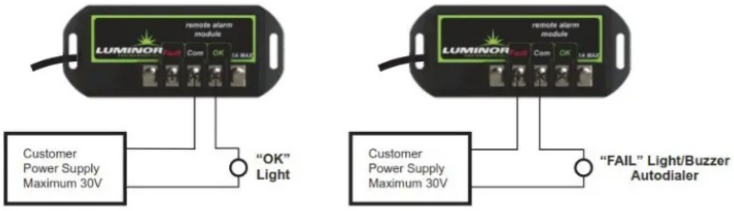
### MODEL # MOD RAM


The remote alarm module comes with a male and female IEP connection (Infinite Expandability Port). To start the module simply plug the male connector into the IEP on the standard or high output controller, or into any other BLACKCOMB module that contains an IEP (sensor, 4-20 mA module, solenoid module, etc.)
and then restart the system.

**Figure 1**
Secure module to wall with screws


**Figure 2**
IEP connection

The remote alarm module is a pair of dry contacts and can be used to connect the controller to a PLC-based system, an alarm buzzer (or light) or an “OK” light. Maximum contact rating is 30V/1A. If the connected device (eg light or buzzer) exceeds the 1A current rating, then use the remote alarm module to control an appropriately rated relay.
The remote alarm module may only be supplied at SELV.
Disconnect power supply before servicing.




## 4-20 mA MODULE

### MODEL # MOD-420


The 4-20 mA module comes with a male and female IEP connection (Infinite Expandability Port). To start the module simply plug the male connector into the IEP on the controller, or into any other BLACKCOMB module that contains an IEP (sensor, remote alarm, solenoid module, etc.)


The 4-20 mA module may only be supplied at SELV. Disconnect the power supply before servicing.

**Connect “LOOP” Connections as follows:**

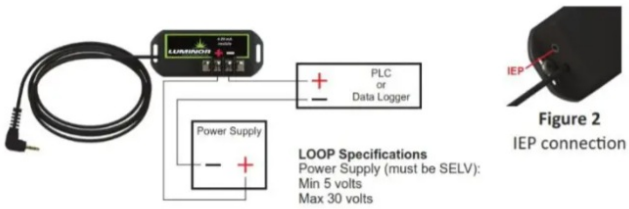



Figure 2
IEP connection

## SOLENOID MODULE

**MODEL # MOD-SOL1 (in 110V, NEMA 5-15 plug)**
**MOD-SOL2 (in 230V, CEE 7/7 plug)**
**MOD-SOL3 (in 230V, BS 1363 plug)**
**MOD-SOL4 (in 230V, AS/NZS 3112 plug)**


The solenoid module is designed for a NORMALLY CLOSED line voltage solenoid valve and the controller. It is possible to use a 12V or 24V normally closed solenoid by replacing the AC power cable. Note that the maximum contact rating is 240VAC (50-60Hz) / 30VDC / 2A.

### LOCATION

Step 1) Find a suitable location on the wall for the solenoid module. The module must be installed close enough to the controller, or the UV sensor to plug into the male IEP connector. The module must also be installed close enough to the actual solenoid valve and this distance will depend on the cord length of the particular solenoid valve that is used.


Step 2) Select a location for the solenoid valve and install according to the manufacturer's instructions. The solenoid module requires bare leads for connection to terminal blocks, so if the solenoid cable has a plug attached, remove the plug and strip the wires to a suitable length.

**QUESTION**

**Step 1)** Make sure the solenoid valve cable is NOT plugged into the electrical outlet. Insert the solenoid valve cable through the middle hole of the middle load. Connect the three electrical wires to the terminal block marked "SOLENOID" (see Fig. 2). Connect the ground wire in the position marked "GND", the line voltage wire in the position marked "L1" and the neutral wire in the position marked "N". Typical wire color configurations are marked directly on the circuit board to the left of the SOLENOID terminal block to help in this process (see Fig. Contractor. Once all the line voltage connections have been made, tighten the load nut to secure the cable to the solenoid module attach.

**Figure 2**
Solenoid Wire Installation


**Figure 3**
Wiring Colour Guide


Step 2) Plug the solenoid valve into the applicable electrical outlet. At this stage, the functionality of the solenoid valve can be tested by pressing the solenoid test button located on the upper left side of the circuit board. Manually pressing (and holding) this button will complete the electrical circuit and open the normally closed solenoid valve. You should hear the activation of the solenoid valve at this time to ensure that the valve is working properly (see Fig. 4).

Step 3) Make sure your UV controller is disconnected from the power source. Once all these connections have been made, attach the male IEP connector of the solenoid module cable to the IEP port on the controller (see Fig. 5), or any other available IEP port such as the UV sensor, 4-20 mA module, or remote alarm module. It doesn't matter which IEP port each module is connected to, as long as they are attached.


**Figure 4**
Solenoid Test Button


**Figure 5**
IEP connection

## OPERATION

**Step 1)** Plug the BLACKCOMB controller into the power source and make sure the solenoid module on the controller is activated. During the startup sequence, the SOLENOID MODULE screen will show “initialized” if the module is properly powered up (see Fig. 6).

**Figure 6**
Solenoid Activation Screens


detecting the presence of a solenoid module

if solenoid module is present, returns this screen

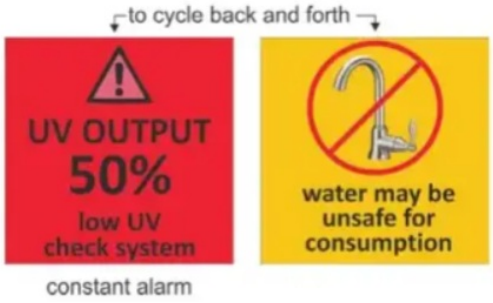
if solenoid module is not present, returns this screen

**Point 2)** The controller will only notify you when there is a fault mode where the solenoid module (and associated solenoid valve) is activated. In the BLACKCOMB 5.1 system, the solenoid module is activated (turns off the water flow) on LAMP FAILURE (see Fig. 7). To resolve this, replace the UV lamp and restart the system according to the instructions outlined in the Owner’s Manual.


**Figure 7**
LAMP FAILURE Screen

**Point 3)** In the BLACKCOMB 6.1 system, where a UV sensor is installed, the solenoid module is activated (turns off the water flow) at a LOW UV condition (less than 50%) (see Fig. 8). To solve this, you must address the reason for this low UV condition, which can be due to a dirty UV sensor and quartz sleeve, al.amp that does not emit enough UV energy, or a change in water quality. Please refer to the UV systems owner's manual for corrective action procedures.

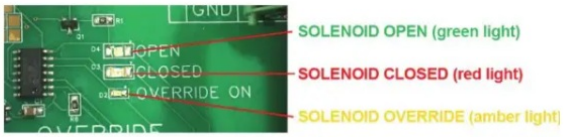
**Figure 8**
LOW UV
Screens



constant alarm

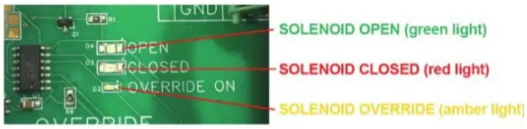
**Step 4)** To determine which position the solenoid valve is currently in, the solenoid module incorporates three lights on the circuit board (see Fig. 9). When the solenoid is in the OPEN position, a green light will appear on the circuit board next to the word "OPEN". When the valve is closed, a red light will appear on the circuit board next to the word "CLOSE". And when the solenoid is in an OVERRIDE position, an amber light will appear on the circuit board next to the word "OVERRIDE ON".

**Figure 9**
Solenoid Status
(Colour)




**Boiling Water Advice: If a fault occurs on a BLACKCOMB UV system, the water must not be used for human consumption until the system has returned to a safe operating mode. If the water is used for human consumption during this period, the water must be boiled (minimum 20 minutes at a full boil) before consumption.**

**Figure 9**
Solenoid Status
(Colour)




**EMERGENCY BYPASS**

In a case where the solenoid valve has been activated (valve is closed and no water is allowed to flow), the

solenoid module has the ability to bypass the solenoid valve in case of an emergency water. To initiate this bypass, press the button labeled “OVERRIDE” in the lower left part of the circuit board (see Fig. 10)

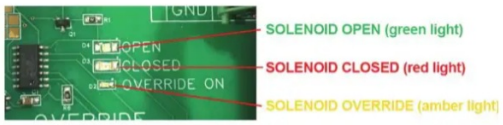



**Figure 9**
Solenoid Status (Colour)

When this button is pressed, the system will remain in this override mode, regardless of whether or not the condition causing the solenoid activation has been resolved. To reset the system, power to the controller must be turned off and restarted. While in this override mode, the controller will intermittently display a red “SOLENOID OVERRIDE” screen (see Fig. 11).


**Figure 11**
SOLENOID OVERRIDE Screen

**DISABLING EMERGENCY BYPASS**

In certain regulated applications, the availability and use of the emergency bypass feature may violate local, state/provincial codes. If this is the case, the bypass feature can be easily disabled by physically removing the bypass button. To accomplish this, carefully use needle-nose pliers and physically remove the current bypass button (marked “OVERRIDE”) from the circuit board.



**Figure 12**
SOLENOID FAILURE
Screen

**OTHER FAILURE MODES**

In the event that there is a problem with the solenoid connection from the IEP cable to the controller, the system will register a “SOLENOID FAILURE” screen on the controller (see Fig. 12).

**ATTENTION: BEFORE WORKING ON THE SOLENOID MODULE, THE POWER CORD MUST BE DISCONNECTED FROM ITS POWER SOURCE (WALL PLUG).**

## WATER QUALITY MONITOR MODULE

**MODEL # MOD-SHERPA**


The module comes with a SHERPA transmitter and a SHERPA remote display. The transmitter connects to a BLACKCOMB and BLACKCOMB-HO controller and transmits the status of the controller wirelessly to the remote display. Each transmitter and remote display is paired with each other and uses encryption to create a reliable and secure communication link between the two devices. Each transmitter supports up to five remote displays. Additional remote displays can be purchased and installed separately. Refer to ‘Pairing and Additional Remote Display’ for additional remote display installation.


**Installation**

**Step 1)** Turn off the BLACKCOMB or BLACKCOMB-HO controller.
**Step 2)** Plug the male connector of the SHERPA transmitter into the IEP (Infinite Expandability Port) on the controller, or into any other LUMINOR module that contains an IEP (sensor, 4-20 mA module, solenoid module, etc.) and then the system restart “*?,

**Step 3)** To get the status of the BLACKCOMB or BLACKCOMB-HO controller on the SHERPA Remote Display, plug the AC/DC wall adapter into the power port on the SHERPA Remote Display (5V Max) and slide the switch to the ON position.


**Operation**

| | | |
|---|---|---|
| **Status LEDs** | Good (Green) | Water is safe for consumption. No active alarms. |
| | Caution (Yellow) | Water may not be safe for consumption. Active minor alarm, check system for details. |
| | alarm (red) | Water is NOT safe for consumption. Active major alert, check system for details. |

| | | |
|---|---|---|
| **Come on. LEDs** | Light | Communication works. |
| | Flashing | Communication does NOT work.<br>Remote display is out-of-range, transmitter is turned off OR controller is turned off |

| | | |
|---|---|---|
| ON | Remote display tries to pair with a local transmitter in the vicinity. | |
| **Power switch** | I | Remote Display Powered ON |
| | O | Remote Display Powered OFF |

NOTE 1: Not compatible with MOD-RAM. The SHERPA is detected as a “Remote Alarm” on the BLACKCOMB or BLACKCOMB-HO controller during the startup sequence.

NOTE 2: The wireless range may vary based on the installation environment; Objects, walls and metal obstacles can interfere and degrade the wireless signal. Best suited for residential applications.

**Pairing an additional remote display**
To pair an additional remote display with a currently installed transmitter:

**Step 1)** Power ON the additional remote display within 5m (15ft) proximity of the transmitter; by simply plugging the AC/DC wall adapter into the power port on the remote display and sliding the switch to the ON position.
**Step 2)** The remote display self-pairs with the local transmitter. Once paired, the communication LED on the remote display will turn OFF and a status LED will turn ON.
**Step 3)** When pairing is complete, move the remote display to any location.

## UV CONCIERGE MODULE

**MODEL # MOD APP**

The UV Concierge module connects to your wireless network (WiFi) and transmits the status of your UV system to the uvconcierge.com web page. You can then view your status online anywhere you have internet access, and receive email or SMS notifications about the status of your system on your mobile device.


The UV Concierge module comes with a male and female IEP connection (Infinite Expandability Port). To start the module, simply plug the male connector into the IEP on the standard or high output controller, or into any other BLAACKCOMB module that contains an IEP (sensor, 4-20 mA module, solenoid module, etc.), plug in the included power adapter to the wall and your UV Concierge module, and then restart the UV system.
Once the system is initialized as above, you will need to provide your WiFi login credentials to the system. Install the UV Concierge app on your iOS or Android device by searching for it in your iOS App Store or Google Play Store, or scan the QR code below:

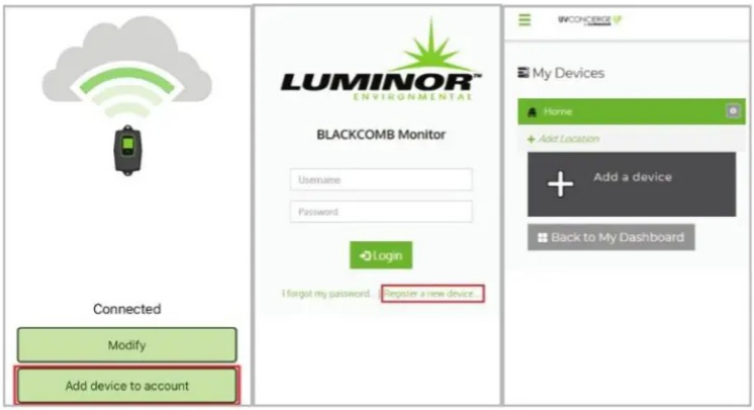
Download on the App Store

http://onelink.to/tx8qkp

GET IT ON Google Play

**http://onelink.to/tx8qkp**

From the app, click the Connect Device button, and follow the prompts to select your WiFi network and enter your password.
If the app reports that the module is connected, add the device to your account using one of the three following methods:




**If you do not currently have a uvconcierge.com account:** From the UV Concierge app, click “Add device to account”. This method will automatically fill in your module key for you. OR
**Note the module key from the label on your UV Concierge module.** Go to uvconcierge.com and click on the “Register a new device” link. You need the module key to successfully register your module.
**If you currently have a uvconcierge.com account:** Follow one of the two options above OR log into your account, select (or add, then select) the location where you want the device, then click the “Add a device” button. You need the module key to successfully register your module.

## App troubleshooting

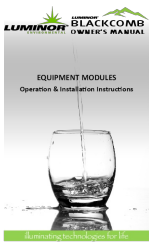
**The app does not find my UV Concierge Module**
Make sure you have plugged your UV Concierge Module into the power outlet using the included power adapter.

**I’m stuck at “Waiting for system to complete startup”**
You need to restart your system by unplugging the controller power cord and plugging in after plugging in the UV concierge module. Once the controller detects the UV Concierge module and the startup routine completes, you will automatically skip this section. After the startup is
complete, you can press and hold the controller button for 3 seconds to see which modules it currently recognizes. If the controller does not recognize the UV Concierge module, check your IEP connections. Connect one module to the controller at a time to test each module individually. With multiple modules, the order of the daisy chain (which device is connected) does not matter.

I get a “Pairing Failed” error
After the app finds your device, you must enter the 6 numbers displayed on the controller into your app, including leading zeros. If you’re still stuck, try restarting the UVConcierge module by powering it off and plugging it back in. Also try restarting your iOS/Android device. If the problem persists, try using another iOS or Android device.

***Read more about this manual & download PDF:***

## Documents / Resources

| | |
|---|---|
|   | LUMINOR MOD-RAM Emulator Module Remote Alarm [pdf] Owner's Manual<br>MOD-RAM Emulator Module Remote Alarm, Emulator Module Remote Alarm, Module Remote Alarm, Remote Alarm, Alarm |

## References

- Login | BLACKCOMB Monitor
- Canada's Leading Manufacturer of Ultraviolet Water Disinfection Solutions | Luminor
- User Manual