GreenMax® Distributed Room Controller

Cat. No. DRC00-0L0

INSTALLATION INSTRUCTIONS   ENGLISH

WARNINGS
- **TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!**
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult an electrician.

CAUTIONS
- Use this device with **copper or copper clad wire only.**
- For indoor applications only.
- Save these instructions.

Application Notes

The GreenMax Distributed Room Controller (DRC) comes in a Line Voltage and Low Voltage LumaCAN™ powered product. The product manages all the energy management business logic within a single room, and, is fully setup and configured using a Wi-Fi® enabled cell phone or tablet.

- Only one room controller should be used per room. Each room requires one controller.
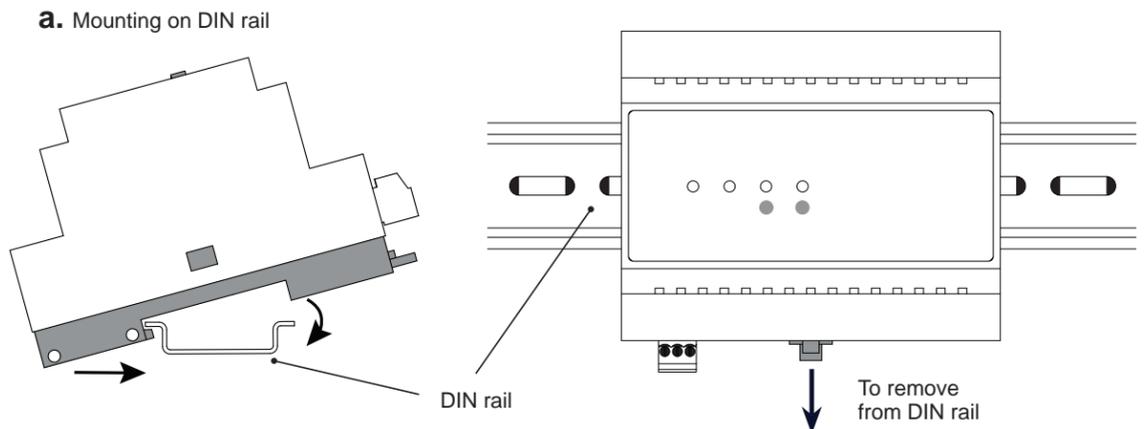
- The LumaCAN network can span multiple rooms and connect multiple DRC devices together; however it is important to pay particular attention to control and setup of rooms to avoid cross room control.
- Each GreenMax DRC Controller can connect to a variety of devices, such as DRC smart packs, relay panels, Intellect™ fixtures, Lumina™ RF sensors, DALI devices, and other devices. For specific capabilities and capacities, refer to the product data sheet.
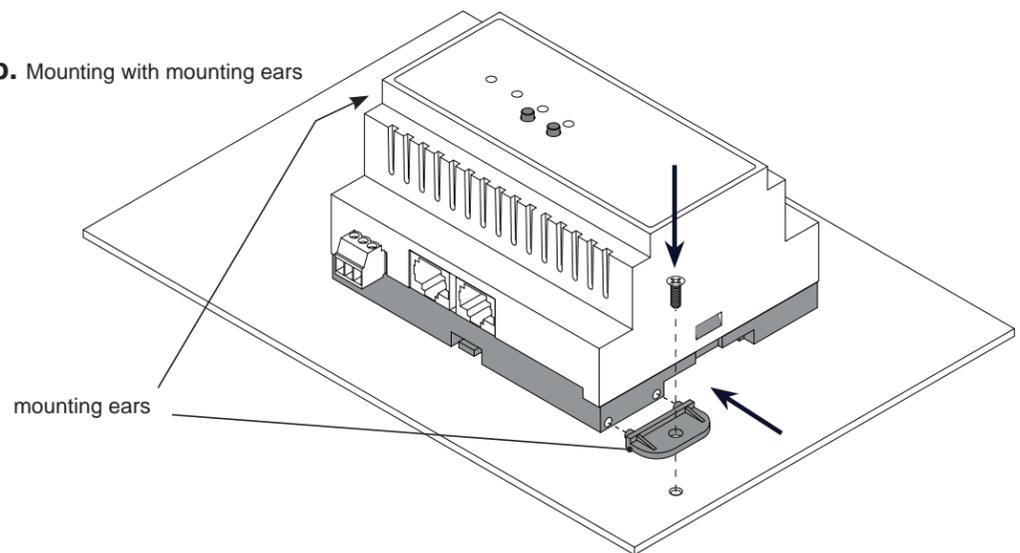
Installation

WARNING: **TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER at circuit breaker or fuse and test that power is off before wiring!**

1. Mount the controller using one of the mounting options.

    NOTE: To remove the controller from the DIN rail, pull down on the tension spring and lift off.

a. Mounting on DIN rail

DIN rail

To remove from DIN rail

b. Mounting with mounting ears

mounting ears

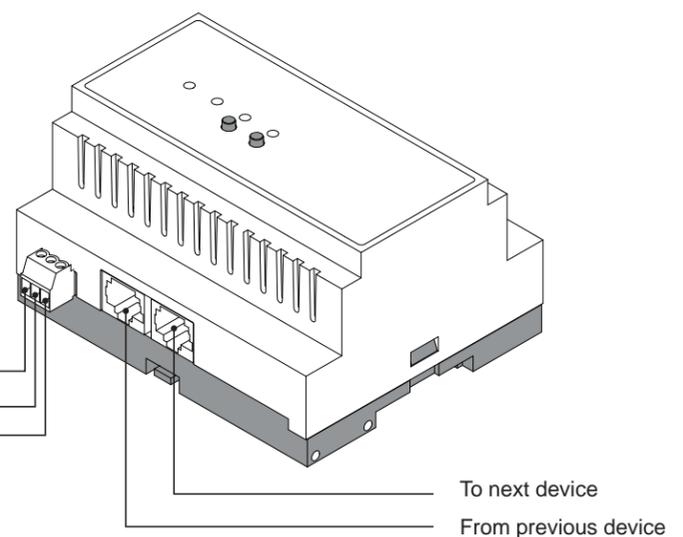**2.** Make all low voltage connections per the wiring diagram.

3. LumaCAN
- Wire per the TIA-568B standard.
- The sequence of network nodes, as described in the Construction Documents, may be critical to ensure power distribution between nodes.
- All LumaCAN wire segments must be tested and validated prior to powering up of the system.
- The last device in each LumaCAN run must be terminated using an RJ45 terminator plug. Each DRC is supplied with one terminator plug preinstalled in the smart pack.
- Devices on LumaCAN follow daisy chain topology. Home Run topology supported with the use of repeaters. Max 110 nodes per segment, max 250 nodes per sub-net.
- Perform voltage drop calculations on all networks.

Low Voltage Input
1. Pinout:
    Pin 1 - Signal Input
    Pin 2 - Common
    Pin 3 - +24 VDC
(V follows LumaCAN supply)
2. Detects 0-24VDC. Can be used as contact closure, 0-10V photocell input, or dry contact.

To next device
From previous device

Configuration

1. Configuring the controller.

In order to configure a room with the GreenMax DRC it is necessary to have an iOS or Android WiFi capable device with the "GreenMax DRC" App installed. Connect to the GreenMax DRC Controller as a WiFi Access point then use the App to move through the configuration process.

- Factory Default Access Point Name: GreenMax DRC-[serial number] (The serial number is printed on the product label, use **only** last four character.)
- Factory Default Security: WEP Security, Password: leviton0000
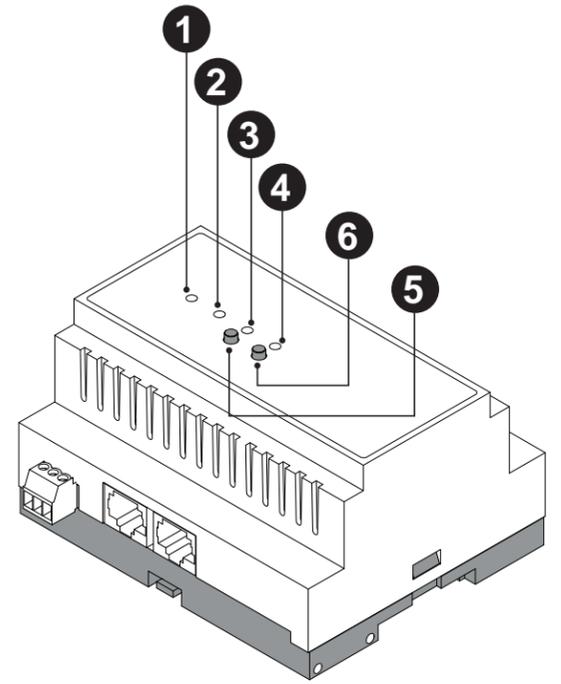
2. Changing network configuration.

In situations where a wireless access point or password is changed but the configuration of the DRC needs to remain the same use the following procedure to reset the network and reconnect to the device:

- Press and hold the Wi-Fi button for 20 seconds until the Wi-Fi LED flashes green rapidly.
- Release the button.
- The LED will continue to flash green rapidly until the reset cycle is complete. The LED will go dark then blink slowly indicating that it is ready for connection using its factory default AP name and credentials.

NOTE: that even though you can connect to it, you must have been granted access by the site administrator to use the app for configuration.

WEB VERSION

Indicator Light and Switch Functions

① STATUS LED				
Indicator	**Feature**	**Blink Rate (# blinks per second)**	**Duration**	**Possible Causes**
RED	Duplicate LumaCAN address	2	Until conflict is resolved	Another LumaCAN device is using the same address
	UI error didn't get value set in time	8	Until 60 seconds or UI setting restarted	Took too long to enter manual information
	Possible processor failure after startup	Solid	Until watchdog circuit is no longer tripped	Application update failure, processor failure
GREEN	Normal operating condition	1		
	In boot loader	4	Until entering actual application	Application update failure if alternating with RED LED.
OFF	LumaCAN overcurrent or failure	–	–	

② LumaCAN Indicator	
Indicator	**Feature**
Solid GREEN	LumaCAN enabled
Blink GREEN	Traffic
OFF	LumaCAN disabled

③ LuminaRF/Intellect/Zigbee Indicator	
Indicator	**Feature**
Solid GREEN	Enabled, no traffic
Blink GREEN	Network traffic
OFF	Disabled

④ WiFi Indicator	
Indicator	**Feature**
Solid GREEN	Wifi enabled, no traffic
Blink GREEN	Network traffic
OFF	WiFi disabled

⑤ LuminaRF/Intellect/Zigbee Switch Actions		
Action	**Feature**	**Result**
Press/Release <1 second	Status indication	One blink - not configured Three blinks - network formed
10 second press	Enable/disable	2 rapid flashes when triggered
20 second press	Reset device to factory default state	Rapid continuous flashing, reset triggered on release
>25 second press	LED goes dark	When released, no action will be taken

⑥ WiFi Switch Actions		
Action	**Feature**	**Result**
Press/Release <1 second (also can be done with power cycle)	Re-trigger SSID broadcast	SSID broadcast times out after 15 minutes
10 second press	Enable/disable WiFi	2 rapid flashes when triggered
20 second press	Reset Wi-Fi network configuration to factory default state	Rapid continuous flashing, reset triggered on release
>25 second press	LED goes dark	When released, no action will be taken

TROUBLESHOOTING		
Issue	**Cause**	**Resolution**
Device is ON but is not immediately operational.	This is normal operation. The device has a 7-10 second startup time before it is operational.	Wait a short time and device will be operational.
Status LED shows failure state (solid RED)	Processor fails or failed application (RED)	Cycle power. If a power cycle does not restore proper operation, remove LumaCAN connections and cycle power again. Do not reconnect LumaCAN until after normal operation is restored.
		If a power cycle does not restore proper operation, remove LumaCAN connections and cycle power again. Do not reconnect LumaCAN until after normal operation is restored.
	Off-failure	Remove LumaCAN wires. If device starts up, there is either an over-current or short on the LumaCAN line. Resolve the problem and reconnect.

SPECIFICATIONS	
Catalog No.	DRC00
Input Voltage	+12-24 VDC
Standby Power	55-28 mA
Max Input Power	435-210 mA
Connections Low Voltage	• LumaCAN: (2) RJ-45, CAT6A or better, termination via provided jumper (LCTRM-RJ) • Aux In: 3-wire 2-part terminals, 26-18AWG (solid or stranded)
Mounting	Surface via provided device mounting ears, or DIN rail mount (EN 60715 TH35 DIN rail)
Operating Temperature	0°C - 40°C (32°F - 104°F)
Storage Temperature	-10°C - 85°C
Radios	• Wi-Fi 802.11 a/b/g/n/ networks @2.4 GHz with WPA or WPA2 security. • 802.15.4 @2.4 GHz, 75' range
Certifications	FCC Part 15 Class B See datasheet for additional compliance
IP Rating	IP30

FCC COMPLIANCE STATEMENT:

Contains FCC ID: QGH-ZBMG (Zigbee)
QGH-LB1GC or VPYLB1GC (Wi-Fi)
The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(i.) This device may not cause harmful interference (ii.) This device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by Leviton could void the user's authority to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

INDUSTRY CANADA COMPLIANCE STATEMENT:

Contains IC: 2473B-ZBMG (Zigbee)
2473B-LB1GC or 772C-LB1GC (Wi-Fi)

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. IMPORTANT! Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This Class B digital apparatus complies with Canadian ICES-003.

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FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at **Leviton Manufacturing of Canada Ltd to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9** or by telephone at **1 800 405-5320.**

WEB VERSION