



Description

The LC2200 is a Load Control Switch, featuring up to 2 high-voltage (HV) and 2 low-voltage (LV) switched circuit, in its maximum configuration.

The high-voltage circuits can be used with typical wired 120VAC, 208VAC and 240VAC loads up to 30A or 1½HP. Compatible loads include pool pumps, electric water heaters, electric vehicle charging station, baseboard heaters and HVAC compressors.

The low-voltage circuits can be used with typical wired 24V HVAC control circuits up to 3A.

The LC2200 uses ZigBee Smart Energy Profile networks for communication.

The LC2200 also features remote load running and call for load detection.

Mounting Instructions

Securely mount the LC2200 where it will not be subject to physical damage, the access door can be opened, and the indicators are visible. Observe the directional arrow on the LC2200 label for mounting orientation.


Perform any modifications to the LC2200 before mounting the device. Modifications can include removing knockouts, adding any cable entry connectors and/or adapters, as required for the installation.

The LC2200 is suitable for both indoor and outdoor use. The LC2200 should not be installed inside a metal enclosure. The LC2200 can operate at a case temperature of -40°F to 158°F (-40°C to 70°C).

The LC2200 includes an integrated junction box, with an internal volume of 14.8 in³/243 cm³. Check with the electrical code to determine the volume of the junction box required for your installation. If required, use an external junction box.

In all cases, follow National and Local Electrical codes.

Wiring Instructions

 **Turn off the circuit breaker at the panel to avoid electrical shock. Use a voltmeter to verify the circuit is dead.**

The power input leads are two BLACK wires for line-to-line connection or one BLACK wire and one GREY wire for line-to-neutral connection. Verify that the LC2200 transformer voltage label matches the supply voltage.

The YELLOW and RED wires can be used to connect to a 30A (1½HP) load, each. The BROWN and WHITE wires can be used to connect to a 3A control circuit, each.

When there is a local disconnect or timer, it is recommended that the LC2200 be connected before the disconnect or timer, such that it remains energized when the disconnect or timer is turned off.

Commissioning Instructions

The following steps assume that the Home Area Network (HAN) coordinator has been commissioned.

1. Turn on the circuit breaker and observe the Power LED Indicator on the LC2200 to verify that it has been energized.
2. Confirm the load is energized. Note the cold load pickup feature may be engaged for up to two minutes after the LC2200 is energized.
3. Open the LC2200 cover and locate the SW1 and SW2 buttons (bottom left corner). Identify the load type based on the following table and record the required LED indicator(s):

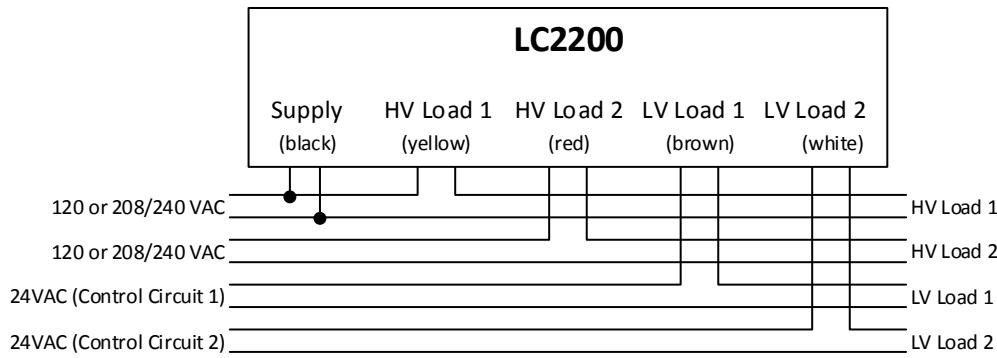
LED Indicator(s)	Load Type (Device Class)
Green	HVAC compressor, furnace, A/C and/or strip/baseboard heaters
Red	Simple miscellaneous residential loads
White	Electric water heater
Blue	Pool Pump/Spa/Jacuzzi
Yellow	Lighting
Green & Yellow	Electric Vehicle

4. Press and hold the SW2 button. Press the SW1 button one or more times until the required LED indicator(s) flash to indicate the configured load type.
5. Provision the LC2200. This may require a call to a call center or data entry in an installer portal. Provisioning the LC2200 requires the MAC Address and Install Code of the LC2200.
6. Observe the LC2200. Once the Link LED Indicator illuminates continuously, the device has been commissioned.

Troubleshooting

Issue	Resolution
LC2200 does not energize (all indicators off)	<ul style="list-style-type: none"> • Check supply wiring. • Confirm that the circuit breaker and any additional disconnects are turned on.
Load does not appear to be energized and the Disconnect indicator is OFF	<ul style="list-style-type: none"> • Check load wiring. • Confirm that the circuit breaker and any additional disconnects are turned on. • Check the equipment for a power switch and make sure that it is turned on. • If there is a thermostat or other control system, confirm that it is in the correct mode and calling for load to operate.
Load is not energized and the Disconnect indicator is ON	<ul style="list-style-type: none"> • The Cold Load Pickup feature may be engaged. Wait two minutes for the power-up delay to expire.
LC2200 will not commission	<ul style="list-style-type: none"> • Check the Link LED Indicator to see if it is flashing. If it is flashing then it recognizes the network. • The LC2200 may not receive its commission message for up to 10 minutes. • Press and hold SW1 for 5 seconds to reset the security keys. When all the LEDs turn off and flash release SW1. This will drop the LC2200 from a ZigBee network and it will try to join a new network. Note, this will also restore the LC2200 to the default manufacturing settings. • If provisioning delays have been accounted for, check the MAC Address and Install Code and repeat the commissioning process from step 5.
Fault LED on or flashing	<ul style="list-style-type: none"> • Contact Technical Support and/or replace LC2200 and return to Energate for RMA.

Typical Installation



The LC2200 must be installed consistent with local codes and by a trained professional such as a licensed electrician. Local building codes vary and it is the responsibility of the installer to ensure that this device is installed prudently on circuits not exceeding 30A (HV circuit) or 3A (LV circuit) and consistent with local codes using appropriate tools and goods for a safe installation. Exercise particular care in joining stranded and solid conductors together using a properly-sized connector listed by UL specifically for this purpose.

LED Indicator Key

Light	Colour	LED Indicator Mode		
		Off	On	Flashing
Power	Green	Power Off	Power On	Identify mode activated
Fault	Red	No fault detected	Fault detected	Critical fault detected
Link	White	Not commissioned	Commissioned	Device was commissioned and is searching for network
Event	Blue	No event in progress	Event in progress	User opt-out of event
Disconnect	Yellow	All provided Relays closed	All provided Relays open	N/A

- Power
- Fault
- Link
- Event
- Disconnect



Caution

Risk of Electric Shock - More than one disconnect switch may be required to de-energize the equipment before servicing.

Attention

Risque de choc électrique - Plus qu'une prise de déconnexion est recommandé pour débrancher l'équipement avant l'entretien.

ENERGATE

LC2200 Load Control Switch
FCC ID: WUR-LC2200 Industry Canada 8022A-LC2200 MADE IN CANADA

Specifications

Electrical Ratings:

Supply Input: 120, 208/240Vac, 5W maximum

Relay (High Voltage) Output: 30A Resistive @ 85-240Vac, or 1.5HP @ 250Vac

Relay (Low Voltage) Output: 3A Resistive/General Use @ 30Vac max

Rating temperature: 40°C

Communications:

Frequency: 2405 to 2480MHz

Transmitter Power: +20 dBm (100 mW)

Receiver Sensitivity: -102 dBm

Product Conformity

This equipment is RoHS compliant.

This equipment conforms to UL916.

This device complies with FCC Part 15 and 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.

This device complies with Health Canada's Safety Code 6.

To comply with FCC and Industry Canada RF exposure compliance requirements a separation distance of at least 20 cm must be maintained between the antenna of this device and all nearby persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Les changements ou modifications non expressément approuvés par la partie responsable de la conformité pourraient annuler l'autorité de l'utilisateur à utiliser cet équipement.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Cet appareil est conforme avec Santé Canada Code de Sécurité 6.

Pour se conformer aux exigences de conformité de l'exposition aux radiofréquences de la FCC et d'Industrie Canada, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil et toutes personnes à proximité. Ce dispositif ne doit pas être co-localisé ou opérer en conjonction avec tout autre antenne ou transmetteur.