

Energate LC301Z Load Control Switch

ZigBee compliance ensures that utilities and consumers benefit from seamless communications with other ZigBee enabled components within the Smart Grid. The ZigBee-enabled LC301Z Load Control Switch is a core component of Energate's home energy management solution that lets consumers and utilities conveniently manage energy use and reduce peak demand.



Energate's Home Energy Management Suite empowers consumers while enabling utilities and energy service providers.



ZigBee
Member

Demand Response Enabled

Some of the most significant electrical loads within the home can be disabled for periods of time without impacting the end consumer, and as such, the ability to extend the Smart Grid into the home to manage energy use is critical. Energate's ZigBee Load Control Switch can disable major loads such as air conditioning compressors, pool pumps, and water heaters, and also communicates with the ZigBee-enabled smart meters being deployed by leading utilities to more effectively manage energy consumption and costs, enabling new demand-side programs.

Extending the Smart Grid

With its robust design, the LC301 Load Control Switch provides reliable utility control of major wired household loads, including air conditioning compressors. Key features include:

- Reliable design suitable for outdoor installations
- Multiple load control categories and capabilities for Demand Response programs
- ZigBee wireless connectivity
- "Over the air" upgradeable firmware
- Smart Energy Profile compliant
 - Demand Response and Load Control



Connecting Conservation with Comfort

Building on our extensive experience in the HVAC industry, Energate has developed home energy management solutions that balance the needs of utilities with those of consumers — connecting conservation with comfort. Like all Energate products, the LC301 Load Control Switch controls energy use inside the home by empowering consumers and utilities to respond to changing energy pricing, and peak load conditions. The capability provided by the ZigBee-enabled LC301 gives utilities the flexibility to establish Demand Response programs that are tailored to their needs and the needs of their customers.

ZigBee Smart Energy Profile

The Smart Energy Profile defines a series of standards designed to ensure interoperability between energy utilities and household devices such as smart thermostats and appliances. This results in a seamless wireless communications infrastructure which lets consumers manage their energy consumption more precisely, while allowing utilities to implement new advanced metering and Demand Response programs.

General Specifications

Size	5.25"H x 5"W x 2.5"D		
Equipment control capabilities	240VAC ¾ HP, 120V	Up to 30A (@ 240VAC) 1½ HP, 240V	Power Measurement Optional
Operating range	100 to 250 volts AC/50Hz to 60Hz	Operating temperature	-22°F to 150°F
Storage temperature	-40°F to 185°F	Humidity (non-condensing)	10 to 95%
Max power consumption	4W	Mechanical life	2,000,000 cycles
Electrical life	150,000 cycles half-load, 35,000 cycles full-load		
Enclosure	NEMA-3R Polycarbonate enclosure with captured gasket		
Voltage measurement	95 to 300 vac RMS 50 / 60 Hz +/- 1% accuracy - .5 volt resolution (optional feature)		
Current measurement	0 to 40 amps RMS 50 / 60 Hz +/- 1% full scale - .1 amp resolution (optional feature)		
Power factor	0.001 resolution, +/- 0.05 accuracy (optional feature)		
Wireless interface	ZigBee		

Features

Interface	LEDs indicate power, communication link status, and switch status
Remote upgrade	Firmware upgradeable over ZigBee communication link.
Radio	IEEE 802.15.4 compliant ZigBee radio
Operating frequency	2405 – 2483.5 MHz, supports ZigBee channels 11 to 26, 5MHz spacing
Receiver sensitivity	-102dBm typical
Transmitter power	+20dBm output power (100mW) typical

Supports

Direct Load Control (DLC)	Senses load current in any load control circuit
Customer temporary "opt out"	Senses load "calling" in any control circuit
Scheduled operations up to 190 operations per week (half-load, 15 years)	Provides cold load pickup in each circuit

Standard Compliance

ZigBee Smart Energy Profile	FCC Part 15 B and C
UL 916 (ETL)	Industry Canada ICES-001
UL 94	Industry Canada RSS-210
NEMA 3R	
ANSI C37.90a1974	

Also available:

LC301R – FM/RDS version
LC301RZ – Dual radio ZigBee, FM/RDS version



About Energate

Energate is a leading provider of advanced energy management solutions for residential and small business applications. Our products interface to the smart grid in support of demand response programs.

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