

GreenMAX™ Relay Control Panels

Modular Relay System Offers Unparalleled Flexibility



GreenMAX Cabinet

- Cabinets and Relay Modules with 25,000A Short Circuit Current Rating (SCCR) at 277VAC
- Relay Modules Rated at 30A General Fluorescent Ballast and 20A Incandescent
- Relay Modules are Latching with Manual Actuator
- Industry standard 0-10V Dimming and Switching Relay Module
- Programming and Monitoring of the System is Done with the Exclusive Handheld Display Unit (HDU)
- Empty Enclosure Ships Separately From Electrical Components
- Supports Native Protocols of BACnet/IP, Ethernet, and LumaCAN
- 8, 16, 32 and 48 Relay Sizes

The Leviton GreenMAX Relay Control Panels line offers features and performance not available from any competing product on the market today. For increased reliability and durability, GreenMAX Cabinets and Relay Modules have a 25,000A Short Circuit Current Rating (SCCR) at 277VAC. Native communication network protocols - BACnet/IP, Ethernet, and LumaCAN - are built into each GreenMAX Command Module (processor) to offer unparalleled connectivity. No additional parts or adapters are needed to communicate with other products utilizing these protocols.

For increased flexibility, the modular GreenMAX system includes separate Cabinet enclosures, Command Modules (processor, power supply, and low voltage inputs), Relay Insert Panels, Relay Modules, and a Handheld Display Unit (HDU). For easier manageability and accessibility, Leviton ships empty cabinet enclosures separately from the electronic components. This makes the cabinets lighter and easier to handle and requires less effort to install. To further minimize handling and damage to the electronic components, Leviton can ship the electronic components later in the project schedule or as required.

All GreenMAX Relay Modules are 1-pole or 2-pole latching relay types that reduce parasitic energy use. The relay modules are the same

physical size, allowing the optimal mix of relays to be customized for each application. Models include a basic control relay module and/or a self-contained dimming and switching relay module that supports daylight harvesting capabilities.

A Handheld Display Unit (HDU) can be detached from the cabinet mounting location and moved to the most convenient network connection point to connect to any open LumaCAN or port on the same network as the cabinets. Commissioning and start-up functions are easier with the HDU, which allows programming to be done in the space being controlled rather than from the electrical room.

APPLICATIONS

- Heavy retrofit applications
- New construction projects
- Government facilities
- Office buildings
- Hospitals/medical offices
- Universities
- Restaurants
- Large campuses
- Any other location where centralized lighting control, programming, and monitoring are required

PRODUCT DATA

FEATURES

Relay Cabinet

- GreenMAX cabinet has a 25,000A at 277VAC Short Circuit Current Rating (SCCR) for increased reliability and durability
- Modular system includes separate empty cabinet enclosures, a command module, and relay insert panels to minimize handling and subsequent damage during installation
 - Command Module is the processor and power supply of the GreenMAX system and optionally includes a low voltage remote input card for analog devices
 - Relay insert panels feature quick install; each panel takes only two screws to install
- Native communication network protocols - BACnet/IP, Ethernet, and LumaCAN - are built into each command module to offer unparalleled connectivity; no additional devices are needed to communicate with other products utilizing these protocols
- Remote low voltage input cabinets can be installed closer to the devices they serve (such as occupancy sensors, LV switches and photocells) to reduce wiring and labor and provide additional power; this also makes commissioning and troubleshooting easier
- Increased arc flash protection - the cabinet door opens to expose only the low voltage area of the cabinet
 - High voltage areas can be accessed by removing the wire-way covers - this requires the removal of retaining screws
 - Wire-way covers can be quickly removed and replaced
 - Door lock cannot be defeated by unscrewing cover
- Voltage barriers can be installed between individual relay modules. This allows voltages from mixed sources in the same cabinet

Relay Modules

- All GreenMAX relay modules have a 25,000A Short



GreenMAX Relay Modules

Circuit Current Rating (SCCR) at 277V for increased reliability and durability

- Rated at 30A general fluorescent ballast (this rating is 20A, 347V in Canada) and 20A incandescent for all GreenMAX relays
- All relays are latching with a manual actuator to reduce parasitic energy waste over NO/NC relays
- Manual actuation lever on all GreenMAX relays allow users to manually bypass the system to turn lights on or off without a CPU or power
- Self-contained dimming and switching relay module in 1-pole configurations supports daylight harvesting capabilities

Handheld Display Unit (HDU)

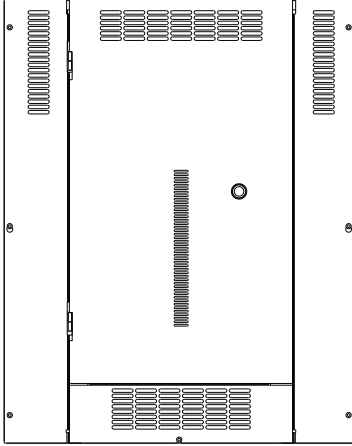
- Manage the GreenMAX system(s) remotely from any network device location
- System configuration and scheduling is performed via the HDU - this can be done while standing in the room or controlled space; programming is no longer confined to the electrical room
- Control entire GreenMAX system from any access point - relay cabinets, switches, or remote low voltage cabinets
- Provides interface with all devices and relays in the system
- One HDU can be used for multiple systems
- Can be stored in the cabinet or designated docking station
- Communicate via LumaCAN
- 7 hour run time on a single full charge (batteries included)
- Astronomical clock - sunrise/sunset
- HDU does not need to be connected to system during operation. Full system functionality is provided independent of HDU



GreenMAX Handheld Display Unit (HDU)

Comes Complete with four (4) AAA rechargeable Ni-MH batteries. Batteries charge when connected to lumacan

DIMENSIONS



RELAY CABINETS	WIDTH	HEIGHT	DEPTH
R08TC-100	21"	22"	4"
R16TC-100	25"	32"	4"
R32TC-100	25"	48"	4"
R48TC-100	25"	64"	4"
REMOTE LOW VOLTAGE CABINETS			
RLV08-110	14"	10"	4"
RLV16-110	14"	10"	4"
REMOTE POWER ONLY CABINET, NO INPUTS			
RLV00-110	14"	10"	4"

SPECIFICATIONS

Electrical

- Power Supply Input: 70W (max), 100-277VAC single phase
- All Voltages: 50/60Hz Phase to Neutral
- Non-volatile memory and micro SD card protect programming during blackouts

Wiring

- Internal: factory pre-wired and tested
- System Communications:
 - LumaCAN requires standard CAT6 network cabling
 - Low voltage Class 2 wiring connects input cards to control devices such as occupancy sensors, low voltage switches, and photocells
 - Hard-wired dedicated Emergency input is provided in each cabinet and requires an external normally open (N/O) contact closure; the Cabinet provides the source of low voltage +24VDC for this circuit; programmable individual relay response to the Emergency signal
- Line Voltage:
 - Feed for Command Module (control electronics) and load wiring only
 - Requires single phase hot and neutral connection
- LumaCAN Network:
 - Cat 6 cable
 - RJ45 connectors
 - Wiring configuration (EIA/TIA 568B)
- Power must be injected into LumaCAN cable every 900 feet
 - Use a Remote Low Voltage Cabinet or a Relay Cabinet
 - Power supply - two-sided allowing up to 750mA per side

- Voltage barriers available to separate circuits of different sources
 - Voltage barriers field install between Relay Modules

Network Connections

- Maximum LumaCAN communication network length is 1600 feet from end to end. Longer network lengths can be achieved with the use of a LumaCAN repeater
- Ethernet connectivity is native to each Command Module
 - Only one cabinet on a single run of LumaCAN requires an Ethernet connection
 - Ethernet can be used to bridge between runs of LumaCAN to extend network length
- BACnet/IP is native to each Command Module
 - BACnet/IP must be run to each cabinet - may require Ethernet/Network switch

Physical

- Enclosure: NEMA type 1, IP-20 protection; #16 US gauge steel; indoors only
- Mounting: surface mount only

Environmental

- Ambient Temperature Range: 0°C - 50°C (32°F - 122°F)
- Relative Humidity: < 90% non-condensing

Listings

- UL508, UL924, cUL, CEC Title 24 compliant, ASHRAE 90.1 compliant

Warranty

- Relay Modules backed by 10-year warranty
- Relay Panels backed by 2-year warranty

*ARRA compliant panels available - consult factory for availability

ORDERING INFORMATION

CAT. NO.	DESCRIPTION
Tubs and Covers (all cabinets are surface mount with a locking door)	
R08TC-100	GreenMAX Relay Cabinet, 8-Relay Size, NEMA 1
R16TC-100	GreenMAX Relay Cabinet, 16-Relay Size, NEMA 1
R32TC-100	GreenMAX Relay Cabinet, 32-Relay Size, NEMA 1
R48TC-100	GreenMAX Relay Cabinet, 48-Relay Size, NEMA 1
Command Modules (includes power supply and main processor unit)	
RPM00-100	Main Command Module, 100-277VAC, no inputs
RPM08-108	Main Command Module with 8-Port Low Voltage Input Card, 100-277VAC, 50/60Hz
RPM16-116	Main Command Module with 16-Port Low Voltage Input Card, 100-277VAC, 50/60Hz
Panel Interiors (all panels are 16-position, rated 30A, 120-230-277/347VAC, 50/60Hz)	
R0800-000	Relay Insert Panel, Empty with (8) Spaces
R1600-000	Relay Insert Panel, Empty with (16) Spaces
R1616-1CB	Relay Insert Panel with (16) 1-Pole RTC Basic Relays
R1616-1DS	Relay Insert Panel with (16) 1-Pole Dimming and Switching Relays
R1616-1TB	Relay Insert Panel with (16) 1-Pole Basic Relays
R1616-2CB	Relay Insert Panel with (16) 2-Pole RTC Relays
R1616-2TB	Relay Insert Panel with (16) 2-Pole Basic Relays

CAT. NO.	DESCRIPTION
Handheld Display Unit (HDU)	
RHDU1-000	Handheld Display Unit, Cabinet Mounting
RHDU1-BKT	Handheld Display Unit, Mounting Bracket
Remote Inputs with Power Supply (all remote inputs are rated 100-277VAC)	
RLV08-110	Remote Low Voltage Input Cabinet, 8 Inputs, NEMA 1 Enclosure
RLV16-110	Remote Low Voltage Input Cabinet, 16 Inputs, NEMA 1 Enclosure
RLV00-110	Remote Low Voltage Input Cabinet, No Inputs, NEMA 1 Enclosure
Relays (all relays are rated 30A, 120-230-277/347VAC, 50/60Hz)	
RELAY-1CB	GreenMAX Latching Relay, 1-Pole RTC Basic
RELAY-1DS	GreenMAX Latching Relay, 1-Pole Dimming and Switching
RELAY-1TB	GreenMAX Latching Relay, 1-Pole Basic
RELAY-2CB	GreenMAX Latching Relay, 2-Pole RTC
RELAY-2TB	GreenMAX Latching Relay, 2-Pole Basic
RELAY-BFM	Blank Filler Module
RGBAR-008	GreenMAX Voltage Barriers for 8 Relay Cabinets
RGBAR-016	GreenMAX Voltage Barriers for 16, 32 and 48 Relay Cabinets

GreenMAX™ Relay Control Panels

LEVITON SPECIFICATION SUBMITTAL

JOB NAME:	CATALOG NUMBERS:
JOB NUMBER:	

Leviton Manufacturing Co., Inc. Lighting & Energy Solutions

20497 SW Teton Avenue, Tualatin, OR 97062
 Telephone: 1-800-736-6682 • FAX: 503-404-5594 • Tech Line (6:00AM-4:00PM P.S.T. Monday-Friday): 1-800-959-6004

Leviton Manufacturing of Canada, Ltd.

165 Hymus Boulevard, Pointe Claire, Quebec H9R 1E9 • Telephone: 1-800-469-7890 • FAX: 1-800-563-1853

Leviton S. de R.L. de C.V.

Lago Tana 43, Mexico DF, Mexico CP 11290 • Tel. (+52) 55-5082-1040 • FAX: (+52) 5386-1797 • www.leviton.com.mx

Visit our Website at: www.leviton.com/les

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