

# Z-MAX™ Stand-Alone Relay System

## DESCRIPTION:

The Z-MAX 8 Basic is designed for small to medium applications that traditionally would use a time clock in conjunction with contactors. The Z-MAX 8 Basic comes complete with 8 switch inputs, that allow the use of low voltage switches, occupancy sensors, photocells and much more. It accommodates up to 8 relay modules, all housed in a compact NEMA 1 enclosure. This system features on-board keypad programming with self-prompting 2-line, 16 character LCD display and is equipped with a USB port. The system is easy to install, and simple to program.

## FEATURES

- Integrated astronomical time clock
- Relays are rated for all light sources as well as motors
- Relays are individually replaceable
- Single pole and two pole relays fit in the same location. Same density regardless!
- Panel is prewired and tested
- Standard transformer has inputs for 120 V, 277 V or 347 V power
- Panels may be surface or recess mounted
- CEC Title 24 Compliant
- ASHRAE 90.1 Compliant

## SPECIFICATIONS:

### Z-MAX Panels work with:

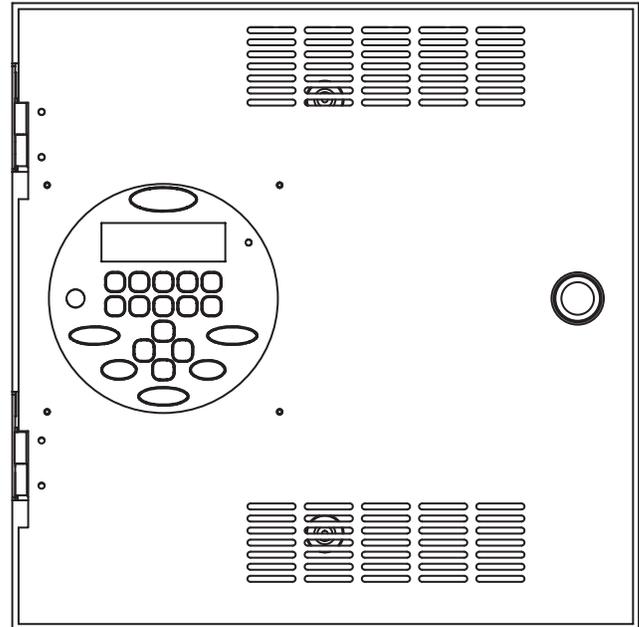
- Analog Controllers
- Low Voltage Switches
- Discrete and Analog Photocells
- Occupancy Sensors

## STANDARDS

- UL and CUL Listed (Reference: UL File E123072)

## POWER

- Input Power: 120 V, 277 V and 347 V. All voltages 50/60Hz, phase to neutral
- Lifetime power failure memory: restores lighting to levels prior to power interruption
- User adjustable for either sequential or non sequential cycling of relays



## SOURCES

- Incandescent (Tungsten) and Halogen
- Magnetic Low Voltage Transformer
- Electronic Low Voltage Transformer
- Neon or Cold Cathode
- Magnetic and Electronic Fluorescent Lamp Ballasts
- HID
- Motor Loads (1 HP at 120V, 2 HP at 277V, 2 HP at 480V)

## RELAYS

- 3 Relays to choose from
  - Z-MAX relay card, 120-277V, 20A, Single Pole
  - 120-347V 20A Relay Card, Single Pole
  - 2 Pole 208-480V 20A relay card
- Relays rated at 20 A for lighting loads.
- Z-MAX zero cross circuit eliminates arcing at mechanical contacts when loads are switched. Prolongs relay life to an average of 10,000,000 cycles (on/off). Handles 50 times inrush. Rated for resistive, inductive, or capacitive sources.

# Product Specifications

## WIRING

- Internal: Factory prewired and tested
- System Communications: Low voltage Class 2 (PELV) wiring connects panels to external controls
- Line (mains) voltage: Feed (for Control Electronics) and Load in and out wiring only. No other wiring or assembly required.

## PHYSICAL DESIGN

- Enclosure: NEMA-Type 1, IP-20 protection; #16 U.S. Gauge Steel. Indoors only.
- Dimension:
  - 13" (33 cm) x 13" (33 cm) x 4 1/4" (10.8 cm)
- Weight:
  - 15 lbs (6.80 kg)

## MOUNTING:

- Surface mount or recess
- Recessed mounting flanges available

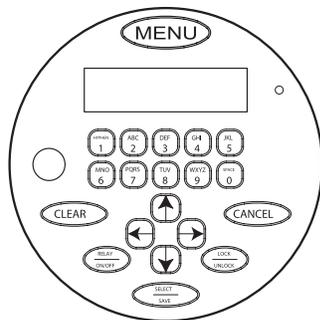
## ENVIRONMENT

- 32-104° F (0-40° C). Relative humidity less than 90% non-condensing.

## CONTROL MODULE

### Control Module Overview

The control module is used to configure the entire Z-MAX 8 Basic system. The Z-MAX 8 Basic controller features an LCD user interface to facilitate programming of all switching system and astronomic time clock (ATC) parameters.



### Control Module Features

- Integrated astronomic time clock (ATC) automates switching with up to 999 user-defined events and 999 holiday schedules.
- ATC events may be triggered by time of day or by a time offset from either sunrise or sunset.
- System location is programmable by specifying your location.
- ATC automatically adjusts for daylight savings time and leap year (where applicable).
- Programmable "blink warn" and user programmable refresh time.
- Overrides available at panel for controls, time clock, and relays.
- Located in the panel for easy access.

- 8 low voltage switch inputs (24 VDC)
- Astronomic time clock
- Daylight harvesting
- Masking
- Prioritization of switch inputs and TOD schedules
- Switch input timers
- Timed overrides
- Individual override switch per relay

## ASTRONOMIC TIME CLOCK

- Capable of up to 999 events
- Capable of 999 holidays
- Holiday schedules are programmable one year in advance
- Astronomic time clock programmable by entering your location
- California Energy Code Title 24 compliant

## SWITCH INPUTS

- 8 Switch inputs
- Inputs can control the following:
  - Low Voltage Switches
  - Momentary
    - Toggle
    - Maintained
  - Occupancy Sensors
  - Analog Photocells
  - Discrete Photocells
  - Analog Inputs
  - Contact Closures
- May be configured as pull up to 24 VDC (externally supplied) or pulled down to common

## NETWORK CONNECTIONS

- USB for programming via a PC
- RJ-45 for Optional Ethernet Board & Modem

**What a Model Number Tells you:**

R ① ② ③ - ④ ⑤

① **Cabinet Size**  
08= 8 Relays Max

② **Control Module Type**  
B = Basic for 8 Relay Cabinet Only

③ **Input Voltage for Control Module**  
D = Domestic Dual-Volt, 120, 277 & 347V  
F = International 100, 220, 230, 240V (Future)

④ **Relay Type**  
0 = No Relays shipped in Cabinets  
1 = Standard Relay (Single Pole, 120, 277 V)  
2 = Two (2) Pole Relay (208-480V or 240, 480V)  
C = International (Single Pole, 347V)

⑤ **Number of Relays - Relays can be added individually \***  
04  
08

Catalog Number	Description
R08BD-000	8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, No Relays
R08BD-104	8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 4 Std Relays
R08BD-108	8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 8 Std Relays
R08BD-204	8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 4 2-Pole Relays
R08BD-208	8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 8 2-Pole Relays
R08BD-C04	8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 4 347 V Relays
R08BD-C08	8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 8 347 V Relays

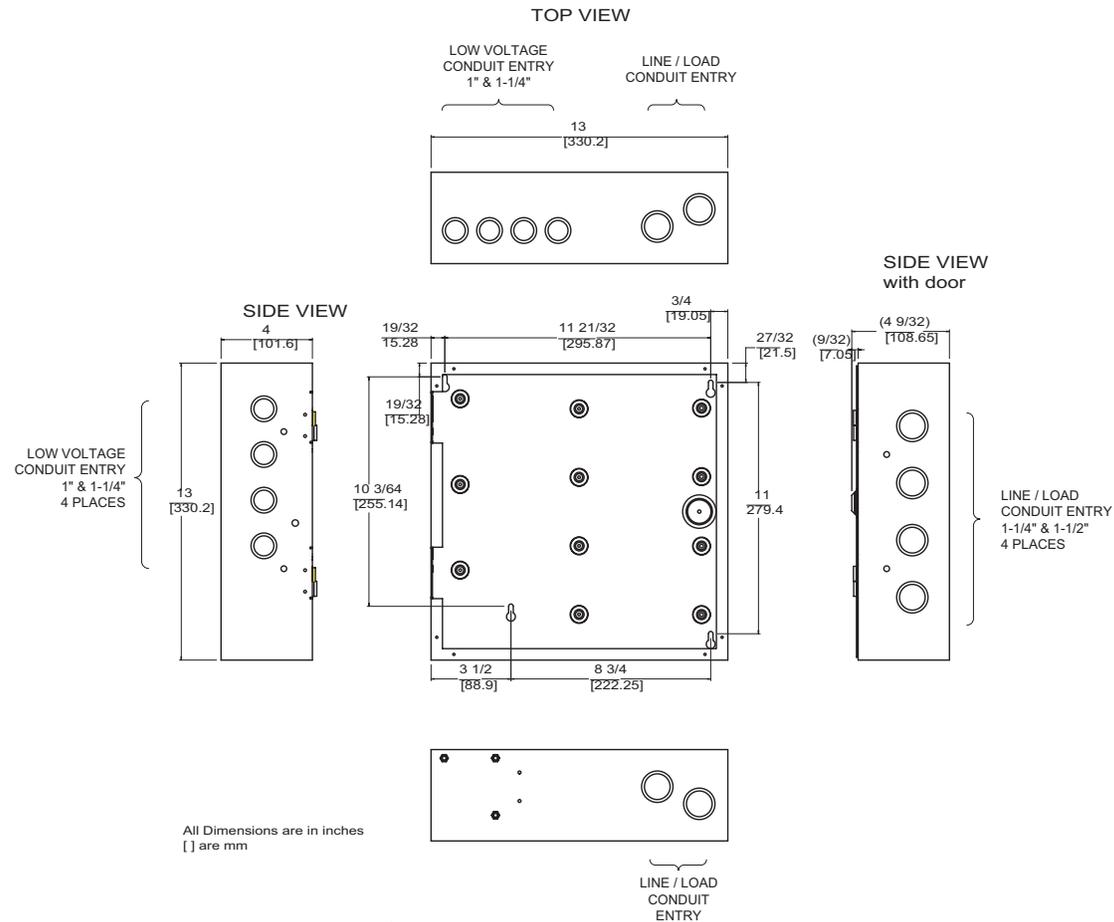
<b>RELAY MODULES</b>	
RELAY-STD	Standard Relay Card, 20A, 120-277V,
RELAY-2PL	2-Pole Relay Card, 20A , 208-480V,
RELAY-347	347V Relay Card, 20A, 120-347V

<b>ACCESSORIES</b>	
RAC00-08F	Flush Trim Kit for 8 Relay Cabinet

# Product Specifications

## Z-MAX Stand-Alone Relay System

Cabinet	Length	Height	Depth	Weight – Fully Loaded
8 Relay's – Basic	13" (330.20 mm)	13" (330.20 mm)	4 11/32 " ( 110.55 mm)	15 lbs (6.80 kg)
4 Relay's – Basic	13" (330.20 mm)	13" (330.20 mm)	4 11/32 " ( 110.55 mm)	14.29 lbs (6.48 kg)



### BOTTOM VIEW

### SUGGESTED MOUNTING:

- For indoor Use only
- Reinforce wall for weight and local codes
- Mount where voltage wiring is at least 6 feet from sound and electronic equipment and wiring

Cabinet	Suggested Mounting Height to bottom of cabinet
8 Relay's – Basic	53" (1358.9 mm)

