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 an 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, 120-377V, 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
- Recepted mounting flanges available

ENVIRONMENT
- -32 to 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:

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R08BD-000</td>
<td>8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, No Relays</td>
</tr>
<tr>
<td>R08BD-104</td>
<td>8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 4 Std Relays</td>
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<tr>
<td>R08BD-108</td>
<td>8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 8 Std Relays</td>
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<td>R08BD-204</td>
<td>8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 4 2-Pole Relays</td>
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<tr>
<td>R08BD-208</td>
<td>8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 8 2-Pole Relays</td>
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<tr>
<td>R08BD-C04</td>
<td>8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 4 347V Relays</td>
</tr>
<tr>
<td>R08BD-C08</td>
<td>8 Relay Cabinet, Basic CM, 120, 277 and 347V Input, 8 347V Relays</td>
</tr>
</tbody>
</table>

**RELAY MODULES**

| 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 |

**ACCESSORIES**

| RAC00-0BF | Flush Trim Kit for 8 Relay Cabinet |
### Product Specifications

<table>
<thead>
<tr>
<th>Cabinet</th>
<th>Length</th>
<th>Height</th>
<th>Depth</th>
<th>Weight – Fully Loaded</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Relay’s – Basic</td>
<td>13&quot; (330.20 mm)</td>
<td>13&quot; (330.20 mm)</td>
<td>4 11/32 &quot; (110.55 mm)</td>
<td>15 lbs (6.80 kg)</td>
</tr>
<tr>
<td>4 Relay’s – Basic</td>
<td>13&quot; (330.20 mm)</td>
<td>13&quot; (330.20 mm)</td>
<td>4 11/32 &quot; (110.55 mm)</td>
<td>14.29 lbs (6.48 kg)</td>
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</tbody>
</table>

**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)