INSTALLATION
!CAUTION!

## - This product is not intended for life or safety applications

Severe injury or death can result from electrical shock during contact with high voltage conductors or related equipment. Disconnect and lock-out all power sources during installation. Applications shown are suggested means of installing relays, but it is the responsibility of the installer to ensure that the installation is in compliance with all national and local codes. Installation should be attempted only by individuals familiar with codes, standards, and proper safety procedures for high-voltage installations. Do not rely on status indications of device exclusively to determine of power is present in conductor.
Ensure load and coil source are shut off and locked out before any installation

1. Using the threaded nipple connect the V102 to the desired enclosure through a knock out.
2. Secure with the conduit nut provided.
3. Connect Coil:

- Choose the coil common lead (White with Yellow Stripe) and connect it to the $(-)$ source termination point.
- Choose either the low (10-30VAC/DC White w/blue stripe) or high (120VAC White w/black stripe) voltage lead whichever fits your application, and connect it to the (+) source termination point.*
NOTE: When connecting the control side of this device (\#18 wires) to power line circuits, current limiting is to be provided of 7 amps max.

4. Connect Relay Contacts:

- Choose the two solid orange wires (N.O. Contact) and connect them to your switched load.

5. Connect Resistive HOA Monitor:

- Choose the two solid grey wires and take them to a resistive (0-10K $)$ input of the control system.

6. Secure your enclosure and reconnect power.
7. Program resistive input to the ranges listed (reverse).
*Wires which are not terminated must be isolated or insulated, i.e. wire nut.

## WIRING EXAMPLES

Nipple mount directly to a panel


Nipple mount to any $2 x$ or $4 x$ electrical box

*Any unused wires must be isolated, e.g. wire nut.

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## WIRE COLORS



## V102 RESISTIVE HOA POSITION MONITOR



NOTE: See reverse for programming ranges.

## HOA POSITIONS



When the switch is in the up position,


## SPECIFICATIONS

## PROGRAMMING for the RESISTIVE MONITOR

## General

| Operating Temp........................... $-40^{\circ}$ to $55^{\circ} \mathrm{C}$ |  |
| :---: | :---: |
| Operating Humidity ...................... $0-95 \%$ non condensing |  |
| Expected Relay Life ........................ 10 million cycles min. mechanical |  |
| Relay Status...............................LED 0 O $=$ relay coil energized |  |
| Dimensions................................ $4.0{ }^{0}(\mathrm{~L}) \times 2.04{ }^{\prime \prime}(\mathrm{W}) \times 2.50{ }^{\prime \prime}(\mathrm{H})$ |  |
|  | 3/4" NPT nipple |
| Resistive Monitor Maximums |  |
| Voltage Max............... | 13.4VAC/DC |
| Current Max................ | $4 \mathrm{~mA} \mathrm{AC/DC}$ |


| TYPICAL COIL PERFORMANCE |  |  |
| :---: | :---: | :---: |
| Coil Voltage 10-30VAC/DC, 120VAC Pull In Voltage | AC | DC |
| 10-30V................................ | 8 | 9 |
| 120V.................................. | 78 |  |
| Drop Out Voltage | AC | DC |
| 10-30V................................ | 2 | 3 |
| 120V........................... | 18 |  |
| Voltage Coil Curre |  |  |
| AC | DC |  |
| 10V.................. 25 mA ................. | 14 mA |  |
| 24V................. 31mA................. | 16 mA |  |
| 30V................. 39mA................. | 18 mA |  |
| 120 V .................. 22 mA | - |  |


| CONTACT RATINGS |  |
| :--- | :--- |
| Resistive..... | 10A(r)@277VAC |
| Motor....... | $1 / 3$ HP@240VAC N.0. |
|  | $1 / 6$ HP@240VAC N.C. |
| Gold Flash... | Yes |

The resistive monitor is a $0-10 \mathrm{~K} \Omega$ analog output for monitoring the HOA switch position. Please use the following ranges for your DDC scaling.

$\left.$| Condition |  | Range* |
| :--- | :--- | :--- | | Nominal Values |
| :--- |
| w/o Wire Resistance* | \right\rvert\,

*Ranges based on the presence of 0-10000 of resistance due to wire. Average \# of feet for $1000 \Omega$ by wire AWG listed below.

| Wire Typet $\boldsymbol{t}$ | Distance Allowed (ft.) |
| :--- | :---: |
| AWG 26 | 12,189 |
| AWG 22 | 30,864 |
| AWG 18 | 78,296 |

tAll 2-wire runs

