

# V222



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## 20A SPST Enclosed Relay With Resistive HOA Monitor

### Installer's Specifications

Operating Temperature	-40° to 60°C (-40° to 131°F)
Operating Humidity	10-90% RH, non-condensing
Expected Relay Life	Electrical (@ rated current) 100,000 cycles; Mechanical (unpowered) 10,000,000 cycles
Relay Status	LED ON=energized
<b>Wire Specifications:</b>	
Lead Length	14"(356mm) min.
Gauge	UL1015; Coil: 18AWG; Contacts: 12AWG; HOA monitor wires: 16AWG
Insulation Class	277VAC RMS
<b>Resistive Monitor Maximums:</b>	
Voltage Max.	13.4VAC/DC
Current Max.	4mA AC/DC
Agency Approvals	UL 508 enclosed device listing, pollution degree 2

## **⚠ DANGER ⚡**

### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

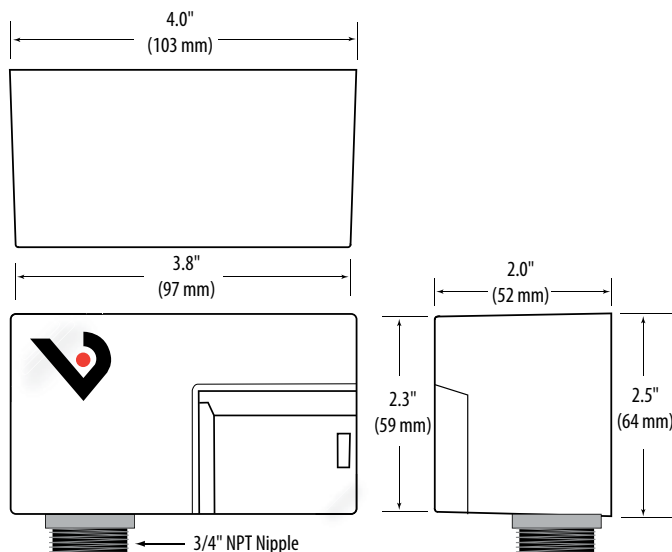
- Follow safe electrical work practices. See NFPA 70E in the USA, or applicable local codes.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Read, understand and follow the instructions before installing this product.
- Turn off all power supplying equipment before working on or inside the equipment.
- Use a properly rated voltage sensing device to confirm power is off.  
**DO NOT DEPEND ON THIS PRODUCT FOR VOLTAGE INDICATION**

**Failure to follow these instructions will result in death or serious injury.**

## NOTICE

- This product is not intended for life or safety applications.
- Do not install this product in hazardous or classified locations.
- The installer is responsible for conformance to all applicable codes.
- Mount this product inside a suitable fire and electrical enclosure.

### DIMENSIONS



## INSTALLATION

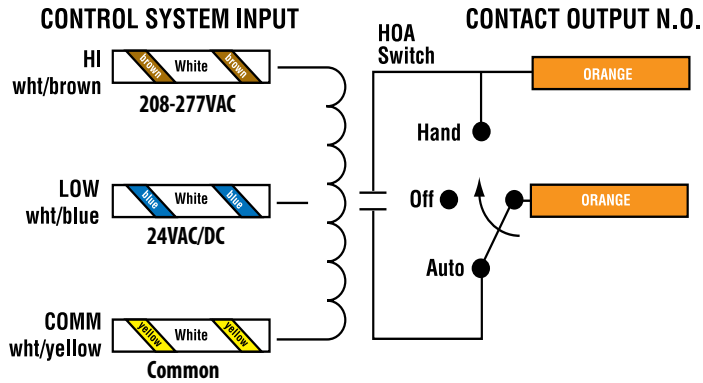
**Disconnect and lock out all power sources before beginning the installation.**

1. Using the threaded nipple, connect the relay to the desired enclosure through a knock out hole.
2. Secure with the conduit nut provided.
3. Connect coil wires:
  - Choose the coil common lead (white with yellow stripe) and connect it to the common (-) source termination point.
  - Choose either the low voltage (10-30VAC/DC, white with blue stripe) or high voltage (208-277VAC, white with brown stripe) lead, depending on the application requirements, and connect it to the (+) source termination point.\*

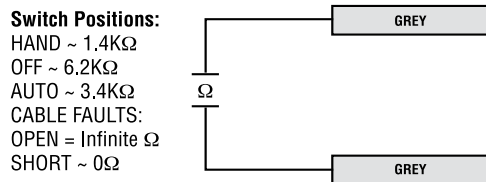
Note: When connecting the control side of this device (#18 wires) to power line circuits, provide currenting limiting at 7 amps max.
4. Connect relay contacts:
  - Choose the two solid orange wires (N.O. contact) and connect to the switched load.
5. Connect resistive HOA monitor wires:
  - Choose the two solid grey wires and connect them to a resistive (0-10kΩ) input in the control system.
6. Secure the enclosure and reconnect power.
7. Program the resistive input to the ranges listed.

\* Isolate or insulate all non-terminated wires according to local electrical code requirements, i.e. wire nut.

**WIRING COLOR CODES**

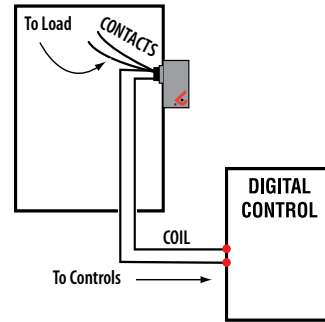


*Resistive HOA Position Monitor*

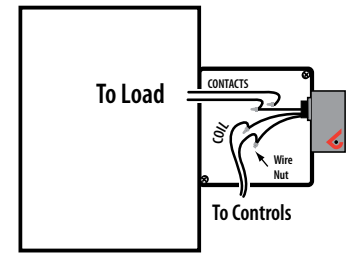


**WIRING EXAMPLE**

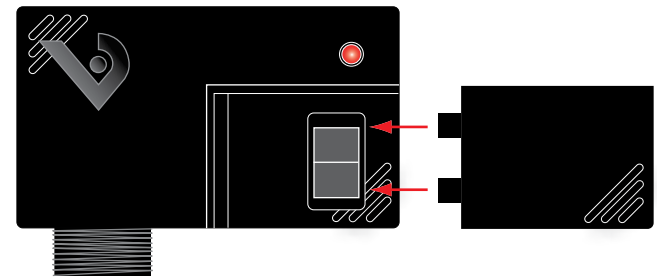
*Nipple mount directly to a panel*



*Nipple mount to a 2x or 4x electrical box*



**HOA POSITIONS**



- HAND** Up position: contacts are closed.
- OFF** Middle position: contacts are open.
- AUTO** Down position: control system actuates the contacts.

**CONTACT AND COIL SPECIFICATIONS**

TYPICAL COIL PERFORMANCE		
Coil Voltage 24VAC/DC, 208-277VAC		
Voltage	Coil Current	
	AC	DC
24V.....	75mA	32mA
208V.....	36mA	—
277V.....	49mA	—

CONTACT RATINGS	
<b>Resistive.....</b>	20A(r)@240VAC 8A@28VDC 14A@14VDC
<b>Motor.....</b>	250VAC, 1HP N.O. & N.C.

**PROGRAMMING THE RESISTIVE MONITOR**

The resistive monitor is a 0-10 kΩ analog output for monitoring the HOA switch position. Please use the following ranges for the DDC scaling.

Condition	Range (Ω)*	Nominal Values without Wire Resistance (Ω)*
Line Open	Greater than 8630	n/a
HOA Off	5290 to 8630	6190
HOA Auto	2880 to 5289	3391
HOA On	1200 to 2879	1406
Line Shorted	Less than 1200	n/a

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

Wire Type (AWG)†	Distance Allowed (ft.)
26	12,189
22	30,864
18	78,296

† All 2-wire runs