

# V23111 series



## Miniature, Sealed PC Board Relay

File E82292

File LR48471

### Features

- Designed for thermostats, modems, computer peripherals, video recording, security applications, and telecom terminals and accessories.
- 1 Form C contact arrangement.
- Low coil power requirement for IC compatibility.
- Terminals arranged on grid pattern.
- Designed for compact, high density mounting.

### Contact Data @ 25°C

**Arrangements:** 1 Form C (SPDT), single contact.

**Material:** Gold Overlay Silver Nickel Alloy.

**Max. Switching Rate:** 10 ops./sec. (no load).

**Expected Mechanical Life:** 50 million operations (no load).

**Expected Electrical Life:** 100,000 operations (rated load).

**Initial Contact Resistance:** 50 milliohms @ 100mA,6VDC.

### Contact Ratings

**Ratings:** 1A @ 102VAC/24VDC resistive,

**Max. Switched Voltage:** 120VAC/30VDC.

**Max. Switched Current:** 1A.

**Max. Switched Power:** 120VA, 24W.

### Initial Dielectric Strength

**Between Open Contacts:** 400VAC, 50/60 Hz. (1 minute).

**Between Contacts and Coil:** 1,500VAC, 50/60 Hz. (1 minute).

**Surge Voltage Between Coil and Contacts:** 1,500V FCC Part 68 (10/160 μs).

### Initial Insulation Resistance

**Between Mutually Insulated Conductors:** >100Mohm @ 500VDCM.

### Coil Data

**Voltage:** 3 to 24VDC.

**Duty Cycle:** Continuous.

**Nominal Power:** 150mW.

**Max. Coil Power:** 140% of nominal at 70°C.

**Max. Coil Temperature:** 115°C.

**Thermal Resistance:** 140K/W.

### Coil Data @ 20°C

V23111-A10... Sensitive						
Rated Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance ± 10% (ohms)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Max. Voltage @ 20°C (VDC)	Max. Voltage @ 85°C (VDC)
3	50.0	60	2.25	0.15	6.61	3.17
5	30.0	166	3.75	0.25	10.98	5.26
6	25.0	240	4.50	0.30	13.22	6.33
9	16.7	540	6.75	0.45	19.83	9.50
12	12.5	960	9.00	0.60	26.44	12.68
24	6.3	3,840	18.00	1.20	52.89	25.37

### Operate Data @ 20°C

**Must Operate Voltage:** 75% of nominal voltage or less.

**Must Release Voltage:** 5% of nominal voltage or more.

**Operate Time:** 5 ms max.

**Release Time:** 5 ms max.

### Environmental Data

**Temperature Range:**

**Operating:** -40°C to +85°C.

**Vibration, Mechanical:** 10 to 55 Hz., 1.5mm double amplitude

**Operational:** 10 to 55 Hz., 1.5mm double amplitude

**Shock, Mechanical:** 500m/s<sup>2</sup> (50G approximately).

**Operational:** 100m/s<sup>2</sup> (10G approximately).

### Mechanical Data

**Termination:** Printed circuit terminals.

**Enclosure:** Plastic sealed case, immersion cleanable (IP67).

**Weight:** 3 g approximately.

### Ordering Information

Typical Part Number ► **V23111 -A10 05 -B301**

#### 1. Basic Series:

V23111 = Miniature relay

#### 2. Termination:

A10 = Sensitive (150mW)

#### 3. Coil Voltage:

03 = 3VDC    06 = 6VDC    12 = 12VDC  
05 = 5VDC    09 = 9VDC    24 = 24VDC

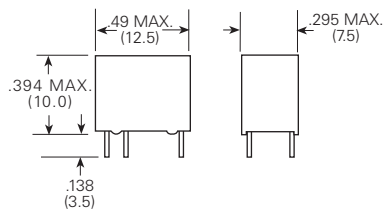
#### 4. Contact Material:

B301 = Gold Overlay Silver Nickel Alloy

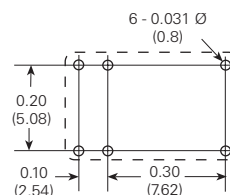
### Stock Items – The following items are normally stocked.

V23111A1005B301    V23111A1012B301  
V23111A1009B301    V23111A1024B301

### Outline Dimensions



### PC Board Layout (Bottom View)



### Wiring Diagram (Bottom View)

