



# V23049-B series

**SR4 Safety Relay - PCB, polarized, monostable relay with four forcibly guided contacts.**

- File E48393
- File LR89731-16
- File R9819004
- File 6019

## Features

- 3 NO and 1 NC or 2 NO and 2 NC contacts.
- Compact dimensions.
- Low coil power of 550mW.
- Sealed case.
- Ideal for emergency shut-off, machine control, elevator and escalator control, light barrier control.

## Contact Data @ 23°C

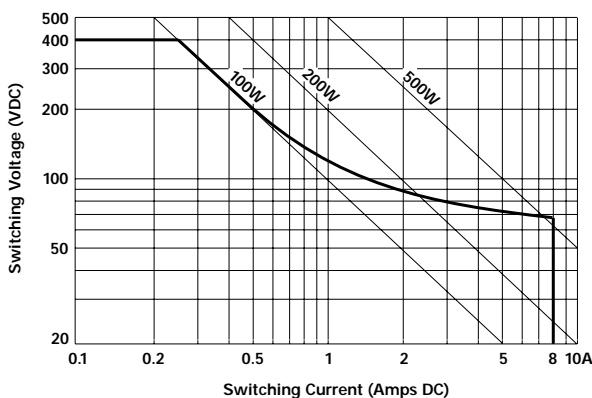
**Type:** Single button contacts.  
**Arrangements:** 3 NO and 1 NC or 2 NO and 2 NC.  
**Material:** Silver-cadmium oxide.  
**Max. Continuous Current at Max. Amb. Temp.:** 6A, 1 contact loaded.  
**Max. Switched Current:** See Expected Electrical Life chart.  
**Max. Switched Voltage:** 250VAC/VDC.  
**Max. Switched Power:** 1,500VA. (See Fig. 1, Limit. Curve for DC Power).  
**Max. Switching Rate:** 15 operations/min. at rated load.  
 1,200 operations/min. at minimum load.  
**Minimum Load:** AgCdO: 50mW.  
**Initial Contact Resistance:** AgCdO: 100mΩ - 1A/24VDC.  
**Expected Mechanical Life:** 10<sup>7</sup> operations.

## Expected Electrical Life

Contact Material	UL/CSA Ratings	Type	Operations
AgCdO	3A @ 480VAC 6A @ 250VAC	Resistive Resistive	100,000* 100,000**

\* Denotes test at 80°C ambient temperature.  
 \*\* Denotes test at 85°C ambient temperature.

**Figure 1 - Limiting Curve For DC Power Load**



## Initial Dielectric Strength

**Between Open Contacts:** 1,000VAC rms.  
**Between Adjacent Contacts:** 2,000VAC rms.  
**Between Coil and Contacts:** 2,500VAC rms.

## Coil Data @ 23°C

**Voltage:** 6 to 110VDC.  
**Nominal Power:** 550mW.  
**Max. Coil Temperature:** 120°C.  
**Duty Cycle:** Continuous.

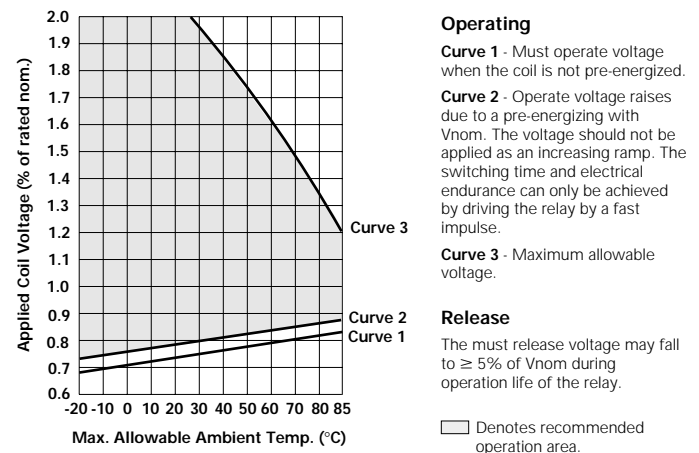
## Coil Data @ 23°C

Rated Coil Voltage (VDC)	Coil Resistance (Ohms)	Must Operate Voltage (VDC)	Nominal Coil Current (mA)
6	67 ± 7	4.5	89.6
9	134 ± 14	6.6	67.2
12	255 ± 26	8.9	47.1
19.4	700 ± 70	14.7	27.7
21	820 ± 82	16.0	25.6
24	1,020 ± 102	17.8	23.5
48	3,910 ± 587	35.8	12.3
60	6,140 ± 921	45.3	9.8
110	18,855 ± 2,829	81.8	5.8

## Operate Data @ 23°C

**Operate Time:** 20 ms (excluding bounce).  
**Release Time (wo/w parallel diode, typ.):** 8 ms/22 ms (excluding bounce).  
**Bounce Time:** 10 ms.  
**Must Release Voltage:** 10% of nominal voltage.

## Max. Allowed Ambient Temp. vs. Applied Coil Voltage



## Environmental Data

**Temperature Range:** -25°C to +80°C.  
**Vibration, Operational:** 5g, 10 - 200 Hz.  
**Shock, Operational:** 9g.  
**Solder Bath Temp./Max. Duration:** 260°C/5s.

## Mechanical Data

**Termination:** Printed circuit terminals.  
**Enclosure (94V-0 Flammability Ratings):** Sealed plastic case.  
**Weight:** 1.07oz. (32g).

**Ordering Information**

Typical Part Number ▶

**V23049B**

**1**

**005**

**A**

**1**

**22**

**1. Basic Series:**

V23049-B = SR4 safety relay.

**2. Enclosure:**

1 = Sealed.

**3. Coil Voltage:**

003 = 6VDC    004 = 9VDC    005 = 12VDC    006 = 21VDC    007 = 24VDC  
 009 = 48VDC    010 = 60VDC    012 = 110VDC    015 = 19.4VDC

**4. Contact Type:**

A = Single button, forcibly guided.

**5. Contact Material:**

1 = Silver -cadmium oxide.

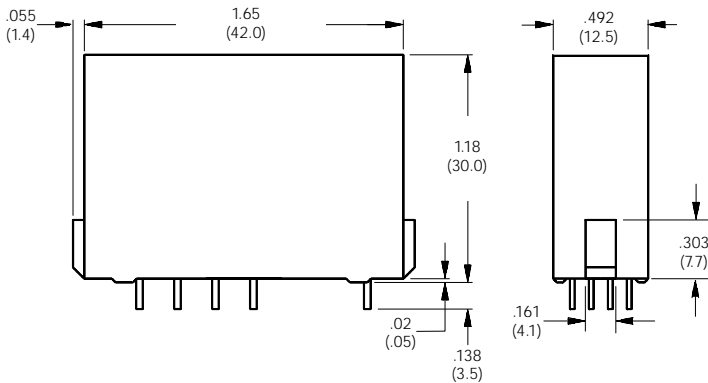
**6. Contact Arrangement:**

22 = 2 NO and 2 NC.  
 31 = 3 NO and 1 NC.

**Stock Items – The following items are maintained in stock.**

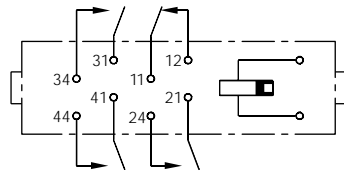
V23049B1005A122  
 V23049B1005A131

**Outline Dimensions**

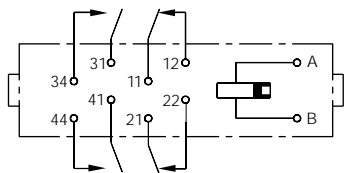


**Wiring Diagrams (Bottom Views)**

**3 NO and 1 NC**



**2 NO and 2 NC**



**Suggested PC Board Layouts (Bottom View)**

