V23105 series

3 Amp, DPDT, High Sensitivity, DIP PC Board Relay

File E48393
File LR45064-27

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

Features

- Standard DIP configuration mates with 16-pin socket.
- Meets FCC Part 68 (10/160µs).
- For applications in telecommunications, office automation, security devices, measurement and control equipment.
- Immersion cleanable, plastic sealed case.
- 150mW, 200mW, 400mW or 500mW coil.
- Ultrasonic cleaning not recommended.

Contact Data @ 23°C

Arrangement: 2 Form C (DPDT) single contacts.
Material: Stationary: Silver-nickel, gold overlaid.
Ratings: Max. Switched Current: 3A.
Max. Carry Current: 3A.
Max. Switched Voltage (at nom. voltage): 220VDC, 250VAC.
Max. Switched Power: 60W DC or 125VA AC.
Min. Switching Load: 10mVDC.
UL/CSA Ratings: 1A / 30VDC; 300mA / 100VDC;
1A / 125VAC (400 & 500mW coils only);
500mA / 125VAC (150 & 200mW coils only).
Initial Contact Resistance: 100 milliohms @ 10mA / 20mV.
Expected Mechanical Life: 15,000,000 ops.
Expected Electrical Life: 2 million operations @ 100mA / 6VDC.
500,000 operations @ 1.0A / 30VDC.
100,000 operations @ 2.0A / 30VDC for 400mW and 500mW versions only.
300,000 operations @ 500mA / 230VAC.
Thermoelectric potential: <15µV.

High Frequency Data

Capacitance: Between Open Contacts: 1pF, max.
Between Coil and Contacts: 2pF, max.
Between Poles: 1.5pF, max..
RF Characteristics: Isolation at 100 / 900 MHz: -39.0 db / -20.7 db.
Insertion loss at 100 / 900 MHz: -0.02 db / -0.27 db.
V. S. W. R. at 100 / 900 MHz: 1.04 / 1.40 .

Initial Dielectric Strength

Between Open Contacts: 750Vrms for 1 minute.
Between Coil and Contacts: 1,000Vrms for 1 minute.
Between Poles: 750Vrms for 1 minute.
Surge Voltage Resistance per FCC 68 (10 / 160 µs):
Between Open Contacts: 1,500V.
Between Coil and Contacts: 1,500V.
Between Poles: 1,500V.

Initial Insulation Resistance

Between Contact and Coil: 10^9 ohms or more @ 500VDC.

Coil Data @ 23°C

Voltage: 3 to 48VDC.
Nominal Power: See Coil Data table.
Duty Cycle: Continuous.

Coil Data @ 23°C

Nominal Voltage (VDC)	Minimum Voltage (VDC)	Maximum Voltage (VDC)	Resistance ±10% (Ohms)	Coil Version Voltage Code
150mW versions				
5	4.0	13.0	167	001
6	4.8	15.6	240	002
9	7.2	23.4	540	006
12	9.6	31.2	960	003
24	19.2	59.5	3,480	005
200mW versions				
3	2.1	6.7	45	308
5	3.5	11.2	125	301
6	4.2	13.5	180	302
9	6.3	20.3	405	306
12	8.4	27.0	720	303
24	16.8	54.1	2,880	305
48	33.6	108.3	11,520	307
400mW versions				
5	3.5	7.9	62	401
6	4.2	9.5	90	402
9	6.3	14.3	203	406
12	8.4	19.1	360	403
24	16.8	37.9	1,440	405
48	33.6	75.8	5,760	407
500mW versions				
5	3.5	6.3	36	501
6	4.2	8.9	70	502
9	6.3	12.5	140	506
10	7.0	15.0	200	504
12	8.4	18.0	280	503
24	16.8	36.0	1,050	505
48	33.6	72.0	4,000	507

Operate Data @ 23°C

Operate Voltage: 70% of nominal voltage (80% for 150mW coil).
Release Voltage: 5% of nominal voltage.
Operate Time (Including Bounce): <10 ms.
Release Time (Including Bounce): <10 ms.

Environmental Data

Temperature Range: 150/200mW coil: -25°C to +85°C.
400mW coil: -25°C to +75°C.
500mW coil: -25°C to +60°C.
Maximum Allowable Coil Temperature: 105°C.
Thermal Resistance: < 100K/W.
Shock: Functional: 10g.
Destructive: 40g.
Vibration, 10-55 Hz.: Functional: 10g.
Needle Flame Test: Application time 20s, burning time <15s.
Resistance to Soldering Heat: 260°C for 10S..

Mechanical Data

Termination: DIP compatible, printed circuit terminals.
Enclosure Type: Immersion cleanable (IP67) plastic case.
Weight: 0.21 oz. (6g) approximately.

Ordering Information

Typical Part Number ►	V23105-A5	4	01	A201

1. Basic Series:
V23105-A5 = Miniature PC board relay.

2. Version:
0 = 150mW coil.
3 = 200mW coil.
4 = 400mW coil.
5 = 500mW coil.

3. Coil Voltage:

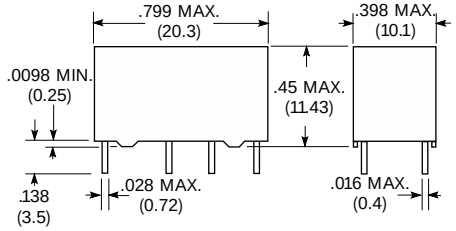
08 = 3VDC (150mW and 200mW coils only)	06 = 9VDC	05 = 24VDC
01 = 5VDC	04 = 10VDC (500mW coil only)	07 = 48VDC (not available with 150mW coil)
02 = 6VDC	03 = 12VDC	

4. Contact Type and Material:
A201 = DPDT, silver-nickel, gold overlaid.

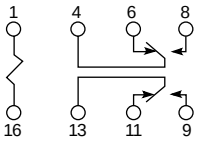
Our authorized distributors are more likely to stock the following items for immediate delivery.

V23105A5001A201	V23105A5401A201
V23105A5003A201	V23105A5403A201
V23105A5005A201	V23105A5405A201
	V23105A5407A201

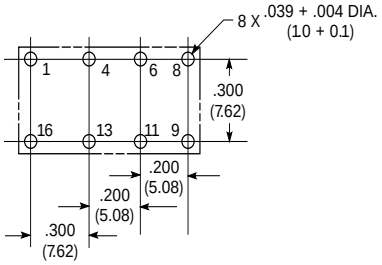
Outline Dimensions



Wiring Diagram (Bottom View)



PC Board Layout (Bottom View)



Dimensions are shown for reference purposes only.
Dimensions are in inches over (millimeters) unless otherwise specified.
Specifications and availability subject to change.
www.tycoelectronics.com
Technical support:
Refer to inside back cover.