



FEATURES

1. Compact with high contact rating

Even with small 10 mm .394 inch (H) x 11 mm .433 inch (W) x 20 mm .787 inch (L) (dimensions, high capacity switching is provided: 1a, 8 A 250 V AC; 2a and 1a1b, 5 A 250 V AC.

2. High switching capability

High contact pressure, low contact bounce, and wiping operation improve resistance to weld bonding. Resistant against lamp load and dielectric loading: 1a achieves maximum switching capacity of 2,000 VA (8A 250 V AC).

3. High sensitivity

Using the same type of high-performance polar magnetic circuits as DS relays, by matching the spring load to the magnetic force of attraction, greater sensitivity has been achieved. The resultant pick up sensitivity of about 190 mW makes possible direct driving of transistors and chips.

4. High breakdown voltage

Breakdown voltage has been raised by keeping the coil and contacts separate.

Between contact and coil	Between contacts
3,000 Vrms for 1 min. 5,000 V surge breakdown voltage	1,000 Vrms for 1 min. 1,500 V surge breakdown voltage

Conforms with FCC Part 68

5. Latching types available

6. Wide variation

Three types of contact arrangement are offered: 1a, 2a, and 1a1b. In addition, each is available in standard and reversed polarity types.

7. Sealed construction allows automatic washing

8. Complies with safety standards

- Complies with Japan Electrical Appliance and Material Safety Law requirements for operating 200 V power supply circuits
- Complies with UL, CSA and TÜV safety standards
- Complies with EN 60335 / GWT (test report available)

TYPICAL APPLICATIONS

1. Office and industrial electronic devices
2. Terminal devices of information processing equipment, such as printer, data recorder.
3. Office equipment (copier, facsimile)
4. Measuring instruments
5. NC machines, temperature controllers and programmable logic controllers.

About Cd-free contacts

We have introduced cadmium-free type products to reduce environmentally hazardous substances. Please replace parts that contain cadmium with Cd-free products. Evaluate them with your actual application before use because the life of a relay depends on the contact material and load.

ORDERING INFORMATION

DSP - - - -

Contact arrangement

1a: 1 Form A

1: 1 Form A 1 Form B

2a: 2 Form A

Operating function

Nil: Single side stable

L: 1 coil latching

L2: 2 coil latching

Coil voltage

DC 3, 5, 6, 9, 12, 24 V

Polarity

Nil: Standard polarity

R: Reverse polarity

Contact material

● AgSnO₂ type

F: 1 Form A 1 Form B

Nil: 1 Form A, 2 Form A

Notes: 1. Reverse polarity types available (add suffix-R)

2. UL/CSA, TÜV approved type is standard.

DSP

TYPES

Contact arrangement	Nominal coil voltage	Single side stable	1 coil latching	2 coil latching
		Part No.	Part No.	Part No.
1 Form A	3V DC	DSP1a-DC3V	DSP1a-L-DC3V	DSP1a-L2-DC3V
	5V DC	DSP1a-DC5V	DSP1a-L-DC5V	DSP1a-L2-DC5V
	6V DC	DSP1a-DC6V	DSP1a-L-DC6V	DSP1a-L2-DC6V
	9V DC	DSP1a-DC9V	DSP1a-L-DC9V	DSP1a-L2-DC9V
	12V DC	DSP1a-DC12V	DSP1a-L-DC12V	DSP1a-L2-DC12V
	24V DC	DSP1a-DC24V	DSP1a-L-DC24V	DSP1a-L2-DC24V
1 Form A 1 Form B	3V DC	DSP1-DC3V-F	DSP1-L-DC3V-F	DSP1-L2-DC3V-F
	5V DC	DSP1-DC5V-F	DSP1-L-DC5V-F	DSP1-L2-DC5V-F
	6V DC	DSP1-DC6V-F	DSP1-L-DC6V-F	DSP1-L2-DC6V-F
	9V DC	DSP1-DC9V-F	DSP1-L-DC9V-F	DSP1-L2-DC9V-F
	12V DC	DSP1-DC12V-F	DSP1-L-DC12V-F	DSP1-L2-DC12V-F
2 Form A	3V DC	DSP2a-DC3V	DSP2a-L-DC3V	DSP2a-L2-DC3V
	5V DC	DSP2a-DC5V	DSP2a-L-DC5V	DSP2a-L2-DC5V
	6V DC	DSP2a-DC6V	DSP2a-L-DC6V	DSP2a-L2-DC6V
	9V DC	DSP2a-DC9V	DSP2a-L-DC9V	DSP2a-L2-DC9V
	12V DC	DSP2a-DC12V	DSP2a-L-DC12V	DSP2a-L2-DC12V
	24V DC	DSP2a-DC24V	DSP2a-L-DC24V	DSP2a-L2-DC24V

Standard packing: Tube: 50 pcs.; Case: 500 pcs.

Note: Reverse polarity type are manufactured by lot upon receipt of order. Self-clinching types are also available, please consult us.

RATING

1. Coil data

1) Single side stable

Nominal coil voltage	Pick-up voltage (at 20°C 68°F)	Drop-out voltage (at 20°C 68°F)	Nominal operating current [±10%] (at 20°C 68°F)	Coil resistance [±10%] (at 20°C 68°F)	Nominal operating power	Max. allowable voltage (at 20°C 68°F)
3V DC	80%V or less of nominal voltage (Initial)	10%V or more of nominal voltage (Initial)	100mA	30Ω	300mW	130%V of nominal voltage
5V DC			60mA	83Ω		
6V DC			50mA	120Ω		
9V DC			33.3mA	270Ω		
12V DC			25mA	480Ω		
24V DC			12.5mA	1,920Ω		

2) 1 coil latching

Nominal coil voltage	Pick-up voltage (at 20°C 68°F)	Reset voltage (at 20°C 68°F)	Nominal operating current [±10%] (at 20°C 68°F)		Coil resistance [±10%] (at 20°C 68°F)		Nominal operating power		Max. allowable voltage (at 20°C 68°F)
			Set coil	Reset coil	Set coil	Reset coil	Set coil	Reset coil	
3V DC	80%V or less of nominal voltage (Initial)	80%V or less of nominal voltage (Initial)	50mA	50mA	60Ω	60Ω	150mW	150mW	130%V of nominal voltage
5V DC			30mA	30mA	167Ω	167Ω			
6V DC			25mA	25mA	240Ω	240Ω			
9V DC			16.7mA	16.7mA	540Ω	540Ω			
12V DC			12.5mA	12.5mA	960Ω	960Ω			
24V DC			6.3mA	6.3mA	3,840Ω	3,840Ω			

3) 2 coil latching

Nominal coil voltage	Set voltage (at 20°C 68°F)	Reset voltage (at 20°C 68°F)	Nominal operating current [±10%] (at 20°C 68°F)		Coil resistance [±10%] (at 20°C 68°F)		Nominal operating power		Max. allowable voltage (at 20°C 68°F)
			Set coil	Reset coil	Set coil	Reset coil	Set coil	Reset coil	
3V DC	80%V or less of nominal voltage (Initial)	80%V or less of nominal voltage (Initial)	100mA	100mA	30Ω	30Ω	300mW	300mW	130%V of nominal voltage
5V DC			60mA	60mA	83Ω	83Ω			
6V DC			50mA	50mA	120Ω	120Ω			
9V DC			33.3mA	33.3mA	270Ω	270Ω			
12V DC			25mA	25mA	480Ω	480Ω			
24V DC			12.5mA	12.5mA	1,920Ω	1,920Ω			