Panasonic
ideas for life

8 A MINIATURE POWER RELAY IN DS RELAY SERIES

DS-P RELAYS

RoHS Directive compatibility information
http://www.mew.co.jp/ac/e/environment/

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, and complies with UL, CSA, and TÜV safety standards.

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 Environmental Hazardous Substances.
(The suffix “F” should be added to the part number)
(Note: The Suffix “F” is required only for 1 Form A 1 Form B contact type.
The 1 Form A and 2 Form A contact type is originally Cadmium free, the suffix “F” is not required.)
Please replace parts containing Cadmium with Cadmium-free products and 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
L2: 2 coil latching

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

Polarity
Nil: Standard polarity
R: Reverse polarity

Contact material
• $AgSnO_2$ 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.

TYPES

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