D 1R



Panasonic

MINIATURE RELAY

DS2Y RELAYS

FEATURES

- 2 Form C contact
- · High sensitivity-200 mW nominal operating power
- High breakdown voltage 1500 V FCC surge between open contacts
- DIP-2C type matching 16 pin IC socket
- Sealed construction

SPECIFICATIONS

Contact

Contact							
Arrangemen	t		2 Form C				
Initial contact (By voltage of		,	50 mΩ				
Contact material			Gold-clad sliver				
Rating (resistive)	Max. switc	hing power	60 W, 62.5 VA				
	Max. switc	hing voltage	220 V DC, 250 V AC				
	Max. switc	hing current	2 A				
	Max. carry	ring current	3 A				
Expected life (min. operations)	Mechanica	al	1×10 ⁸				
	El a statis a l	1 A 30 V DC	5×10 ⁵				
	Electrical	2 A 30 V DC	1×10 ⁵				

mm inch

Coil (polarized) (at 20°C 68°F)

Singleside	Minimum operating power	Approx. 98 mW (147 mW: 48 V)		
stable	Nominal operating power	Approx. 200 mW (300 mW: 48 V)		
2 coil latching	Minimum set and reset power	Approx. 88 mW (177 mW: 48 V)		
	Nominal set and reset power	Approx. 180 mW (360 mW: 48 V)		

Remarks

- Specifications will vary with foreign standards certification ratings.
- *1 Measurement at same location as "Initial breakdown voltage" section
- *2 Detection current: 10mA
- *3 Excluding contact bounce time
- ^{*4} Half-wave pulse of sine wave: 11ms, detection time: 10μs *5 Half-wave pulse of sine wave: 6ms
- *6 Detection time: 10µs

^{*7} Refer to 6. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT

TYPICAL APPLICATIONS

- Telecommunication equipment
- Office equipment
- Computer peripherals
- · Security alarm systems
- Medical equipment

Ex DS2Y-S L2	DC12 V [R		
Operating function	Coil voltage	Polarity		
Nil: Single side stable L2: 2 coil latching	DC 1.5, 3, 5, 6, 9, 12, 24, 48 V	Nil: Standard polarity R: Reverse polarity		

(Notes) 1. Standard packing: Carton: 50 pcs. Case: 500 pcs. 2. 1 coil latching type available.

ORDERING INFORMATION

Characteristics (at 20°C 68°F)

Initial insula	tion resistance*	Min. 100 M Ω (at 500 V DC)					
Initial	Between open	contacts	750 Vrms				
breakdown	Between conta	act sets	1,000 Vrms				
voltage*2	Between conta	act and coil	1,000 Vrms				
FCC surge between co	voltage ntacts and coil	1,500 V					
Operate tim	e*3 (at nominal	voltage)	Approx. 4 ms				
Release tim	e*3 (at nominal	voltage)	Approx. 3 ms				
Set time*3 (I	atching) (at nor	Approx. 3 ms					
Reset time*3	(latching) (at no	Approx. 3 ms					
Temperature	e rise	Max. 65°C with nominal voltage across coil and at nominal switching capacity					
Shock resistance		Functional*4	Min. 490 m/s ² {50 G}				
		Destructive*5	Min. 980 m/s ² {100 G}				
Vibration resistance		Functional*6	10 to 55 Hz at double amplitude of 3.3 mm				
		Destructive	10 to 55 Hz at double amplitude of 5 mm				
Conditions for operation, transport and storage ^{*7} (Not freezing and condens- ing at low temperature)		Ambient temp.	−40°C to +70°C −40°F to +158°F				
		Humidity	5 to 85% R.H.				
Unit weight		Approx. 4 g .14 oz					

FCC (Federal Communication Commission) requests following standard as Breakdown Voltage specification.

1500V Ŧ 750V

TYPES AND COIL DATA (at 20°C 68°F)

Single side stable

Nominal voltage, V DC	Part No.	Pick-up voltage, V DC (max.)	Drop-out voltage, V DC (min.)	Nominal operating current mA (±10%)	Coil resistance, Ω (±10%)	Nominal operating power mW	Maximum allowable voltage, V DC (at 50°C 122°F)
1.5	DS2Y-S-DC1.5V	1.05	0.15	132.7	11.3	200	3
3	DS2Y-S-DC3V	2.10	0.3	66.7	45	200	6
5	DS2Y-S-DC5V	3.5	0.5	40	125	200	10
6	DS2Y-S-DC6V	4.2	0.6	33.3	180	200	12
9	DS2Y-S-DC9V	6.3	0.9	22.2	405	200	18
12	DS2Y-S-DC12V	8.4	1.2	16.7	720	200	24
24	DS2Y-S-DC24V	16.8	2.4	8.3	2,880	200	48
48	DS2Y-S-DC48V	33.6	4.8	6.3	7,680	300	86

(Note) Standard packing: Carton: 50 pcs. Case: 500 pcs.

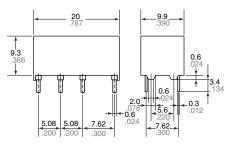
2 coil latching

Nominal voltage,	Part No.	Reset set,	Nominal operating current mA (±10%)		Coil resistance, Ω (±10%)		Nominal operating power, mW		Maximum allowable voltage, V DC
V DC		V DC (max.)	Set	Reset	Set	Reset	Set	Reset	(at 50°C 122°F)
1.5	DS2Y-SL2-DC1.5V	1.05	120	120	12.5	12.5	180	180	3
3	DS2Y-SL2-DC3V	2.1	60	60	50	50	180	180	6
5	DS2Y-SL2-DC5V	3.5	36	36	139	139	180	180	10
6	DS2Y-SL2-DC6V	4.2	30	30	200	200	180	180	12
9	DS2Y-SL2-DC9V	6.3	20	20	450	450	180	180	18
12	DS2Y-SL2-DC12V	8.4	15	15	800	800	180	180	24
24	DS2Y-SL2-DC24V	16.8	7.5	7.5	3,200	3,200	180	180	48
48	DS2Y-SL2-DC48V	33.6	7.5	7.5	6,400	6,400	360	360	72

(Note) Standard packing: Carton: 50 pcs. Case: 500 pcs.

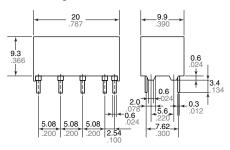
DIMENSIONS

Single side stable



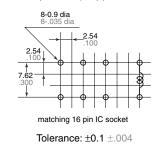
General tolerance: $\pm 0.3 \pm .012$

2 coil latching



General tolerance: $\pm 0.3 \pm .012$

PC board pattern (Copper-side view)



PC board pattern (Copper-side view)

.54

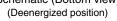
matching 16 pin IC socket

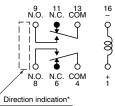
Tolerance: ±0.1 ±.004

10-0.9 dia

Schematic (Bottom view)

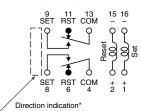
mm inch





*A polarity bar shows the relay direction.

Schematic (Bottom view) (Reset position)



*A polarity bar shows the relay direction.

Diagram shows the "reset" position when terminals 2 and 15 are energized. Energize terminals 1 and 16 to transfer contacts.

