RATING

1. Coil data

Single side stable type

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. applied voltage (at 50°C 122°F)
1.5V DC	70%V or less of nominal voltage (Initial)	10%V or more of nominal voltage (Initial)	132.7mA	11.3Ω	200mW	200%V of nominal voltage
3V DC			66.7mA	45Ω		
5V DC			40mA	125Ω		
6V DC			33.3mA	180Ω		
9V DC			22.2mA	405Ω		
12V DC			16.7mA	720Ω		
24V DC			8.3mA	2,880Ω		
48V DC			6.3mA	7,680Ω	300mW	

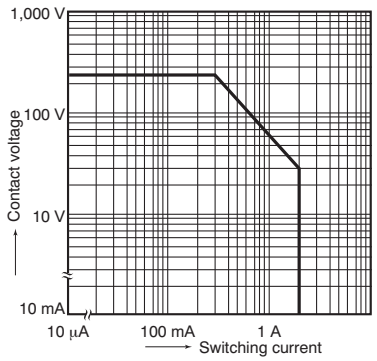
2. Specifications

Characteristics	Item		Specifications
Contact	Arrangement		2 Form C
	Initial contact resistance, max.		Max. 50 mΩ (By voltage drop 6 V DC 1A)
	Contact material		Ag+Au clad
Rating	Max. switching power		60 W, 62.5 VA (resistive load)
	Max. switching voltage		220 V DC, 250 V AC
	Max. switching current		2 A
	Max. carrying current		3 A
	Minimum operating power		Approx. 98 mW (147 mW: 48 V)
	Nominal operating power		Approx. 200 mW (300 mW: 48 V)
Electrical characteristics	Insulation resistance (Initial)		Min. 100MΩ (at 500V DC) Measurement at same location as “Initial breakdown voltage” section.
	Breakdown voltage (Initial)	Between open contacts	750 Vrms for 1min. (Detection current: 10mA.)
		Between contact sets	1,000 Vrms for 1min. (Detection current: 10mA.)
		Between contact and coil	1,000 Vrms for 1min. (Detection current: 10mA.)
	FCC surge breakdown voltage between contacts and coil		1,500 V
	Temperature rise (at 20°C 68°F)		Max. 65°C with nominal coil voltage across coil and at nominal switching capacity
	Operate time [Set time] (at 20°C 68°F)		Approx. 4 ms [approx. 3 ms] (Nominal coil voltage applied to the coil, excluding contact bounce time.)
	Release time [Reset time] (at 20°C 68°F)		Approx. 3 ms [approx. 3 ms] (Nominal coil voltage applied to the coil, excluding contact bounce time.) (without diode)
Mechanical characteristics	Shock resistance	Functional	Min. 490 m/s² (Half-wave pulse of sine wave: 11 ms; detection time: 10μs.)
		Destructive	Min. 980 m/s² (Half-wave pulse of sine wave: 6 ms.)
	Vibration resistance	Functional	10 to 55 Hz at double amplitude of 3.3 mm (Detection time: 10μs.)
		Destructive	10 to 55 Hz at double amplitude of 5 mm
Expected life	Mechanical		Min. 10^8
	Electrical		5×10^5 (1 A 30 V DC), 10^5 (2 A 30 V DC)
Conditions	Conditions for operation, transport and storage*		Ambient temperature: –40°C to +70°C –40°F to +158°F Humidity: 5 to 85% R.H. (Not freezing and condensing at low temperature)
	Max. operating speed (at rated load)		60 times/min.
Unit weight			Approx. 4g .14oz

* Refer to “6. Usage, Storage and Transport Conditions“ in AMBIENT ENVIRONMENT section in Relay Technical Information.

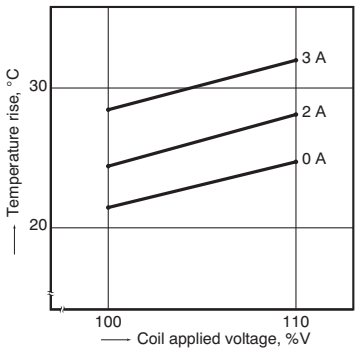
REFERENCE DATA

1. Maximum switching capacity



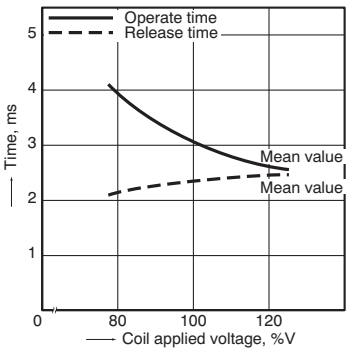
2. Coil temperature rise (Single side stable)

Tested sample: DS2Y-S-DC12V, 5 pcs.
Measured portion: Inside the coil
Ambient temperature: 21°C to 25°C 70°F to 77°F



3. Operate/release time for single side stable (Without diode)

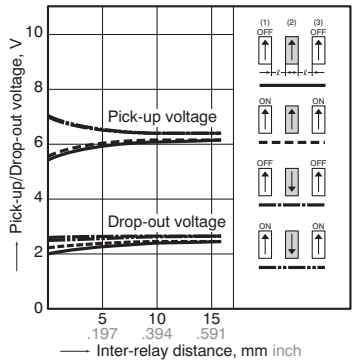
Tested sample: DS2Y-S-DC12V, 10 pcs.
Ambient temperature: 20°C 68°F



4-(1) Influence of adjacent mounting

Tested sample: DS2Y-S-DC12V, 10 pcs.
Ambient temperature: 20°C 68°F

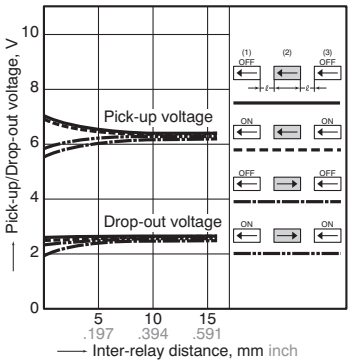
TEST METHOD
1. Apply nominal voltage to No. (1) and (3) DS2Y relays.
2. Measure pick-up voltage and drop-out voltage of No. (2) relay when inter-relay distance (ℓ) changes.



4-(2) Influence of adjacent mounting

Tested sample: DS2Y-S-DC12V, 10 pcs.
Ambient temperature: 20°C 68°F

TEST METHOD
1. Apply nominal voltage to No. (1) and (3) DS2Y relays.
2. Measure pick-up voltage and drop-out voltage of No. (2) relay when inter-relay distance (ℓ) changes.

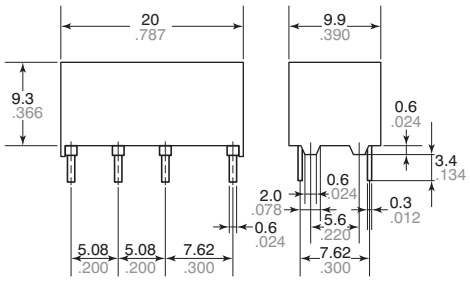


DIMENSIONS (mm inch)

Download CAD Data from our Web site.

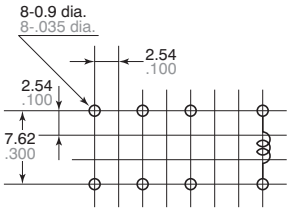
Single side stable

CAD Data External dimensions



General tolerance: ±0.3 ±.012

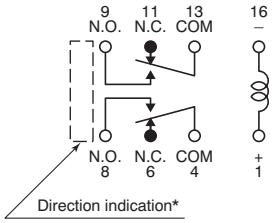
PC board pattern (Copper-side view)



matching 16 pin IC socket

Tolerance: ±0.1 ±.004

Schematic (Bottom view)
(Deenergized position)



*A polarity bar shows the relay direction.

For Cautions for Use, see Relay Technical Information.