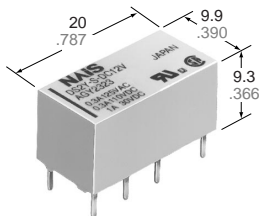


# NAIS MINIATURE RELAY DS2Y-RELAYS



mm inch

## 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

Arrangement	2 Form C		
Initial contact resistance, max. (By voltage drop 6 V DC 1 A)	50 mΩ		
Contact material	Gold-clad sliver		
Rating (resistive)	Max. switching power	60 W, 62.5 VA	
	Max. switching voltage	220 V DC, 250 V AC	
	Max. switching current	2 A	
	Max. carrying current	3 A	
Expected life (min. operations)	Mechanical	1×10 <sup>8</sup>	
	Electrical	1 A 30 V DC	5×10 <sup>5</sup>
		2 A 30 V DC	1×10 <sup>5</sup>

### Coil (polarized) (at 20°C 68°F)

Single side stable	Minimum operating power	Approx. 98 mW (147 mW: 48 V)
	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)

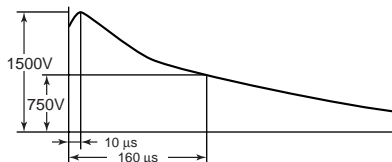
### Remarks

- \* 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 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT (Page 61).

### Characteristics (at 20°C 68°F)

Initial insulation resistance*1		Min. 100 MΩ (at 500 V DC)
Initial breakdown voltage*2	Between open contacts	750 Vrms
	Between contact sets	1,000 Vrms
	Between contact and coil	1,000 Vrms
FCC surge voltage between contacts and coil		1,500 V
Operate time*3 (at nominal voltage)		Approx. 4 ms
Release time*3 (at nominal voltage)		Approx. 3 ms
Set time*3 (latching) (at nominal voltage)		Approx. 3 ms
Reset time*3 (latching) (at nominal voltage)		Approx. 3 ms
Temperature rise		Max. 65°C with nominal voltage across coil and at nominal switching capacity
Shock resistance	Functional*4	Min. 490 m/s <sup>2</sup> {50 G}
	Destructive*5	Min. 980 m/s <sup>2</sup> {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 condensing 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.



## TYPICAL APPLICATIONS ORDERING INFORMATION

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

Ex DS2Y-S [L2] — [DC12 V] — [R]

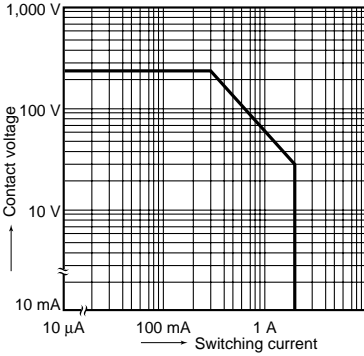
Operating function	Coil voltage	Polarity
Nil: Single side stable L2: 2 coil latching	DC 1.5, 3, 5, 6, 9, 12, 24, 48 V	Nil: Standard polarity R: Reverse polarity

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

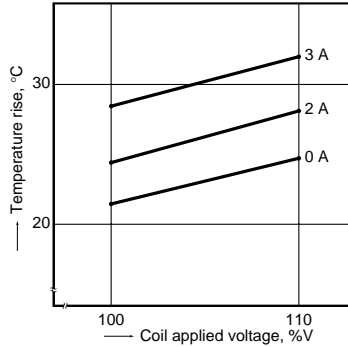


**REFERENCE DATA**

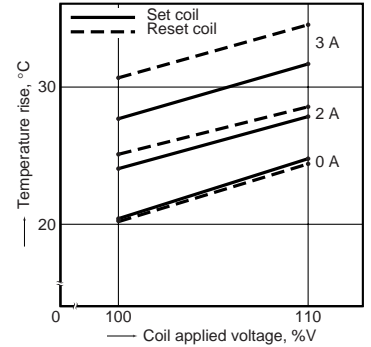
**1. Maximum switching capacity**



**2-(1) 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

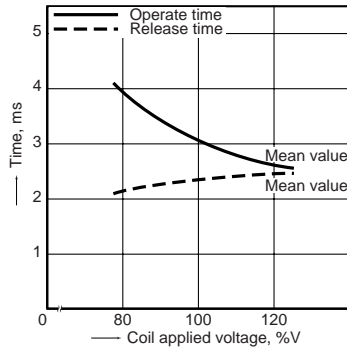


**2-(2) Coil temperature rise 2 coil latching**  
 Tested sample: DS2Y-SL2-DC12V, 5 pcs.  
 Measured portion: Inside the coil  
 Ambient temperature: 21°C to 25°C 70°F to 77°F



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

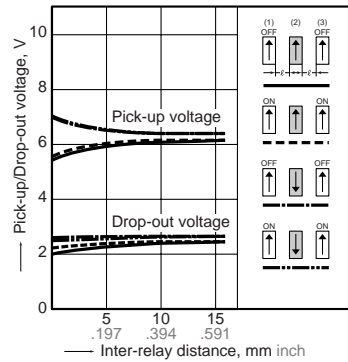
Tested sample: DS2Y-S-DC12V, 10 pcs.  
 Ambient temperature: 20°C 68°F



**4-(1) Influence of adjacent mounting**  
 Tested sample: DS2Y-S-DC12V, 10 pcs.  
 Ambient temperature: 20°C 68°F

**TEST METHOD**

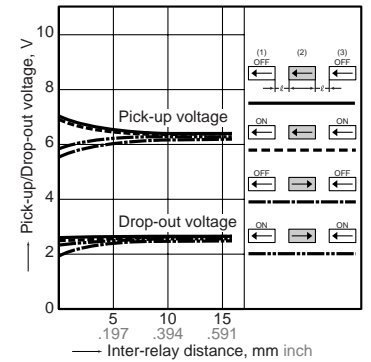
1. Apply nominal voltage to No. (1) and (3) DS2Y relays.
2. Measure pick-up voltage and drop-out voltage of No. (2) relay when inter-relay distance ( $\ell$ ) changes.



**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 ( $\ell$ ) changes.



**For Cautions for Use, see Relay Technical Information**