



File No.:E75887



## FEATURES

- High sensitive 2 pole relay suitable for signal circuit
- Adopts twin contacts that are superior in contact reliability
- Completely enclosed type relay with sealed construction being superior in durability to the environment
- BAPT Certificate NO.609662

## CONTACT RATINGS

Contact Arrangement	2C
Contact Resistance	50mΩ (0.1A 6VDC)
Contact Material	AgNi, Gold FLash, Silver Alloy
Contact Rating(Resistive)	0.5A 125VAC, 2A 30VDC
Max. Switching Voltage	250VAC/220VDC
Max. Switching Current	2A
Max. Switching Power	125VA/60W
Mechanical Life	1×10 <sup>8</sup> operations
Electrical Life	3×10 <sup>5</sup> operations (2A 30VDC) 1×10 <sup>6</sup> operations (1A 30VDC)

## CHARACTERISTICS

Insulation Resistance	100MΩ (at 500VDC)	
Dielectric Strength	Between coil & contacts	1500VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)	≤5ms	
Release time (at nomi. volt.)	≤3.5ms	
Humidity	Max.85% RH	
Ambient temperature	-40°C ~ +85°C	
Shock Resistance	Functional	490m/s <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
Vibration resistance	10Hz ~ 55Hz 1.5mm DA	
Unit weight	Approx. 4.5g	
Construction	Sealed	

Notes:1) The data shown above are initial values.

2) Please find coil temperature curve in the characteristic curved below.

**This datasheet is for customers' reference. All the specifications are subject to change without notice.**



\* SINCE 1976 \*

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## ORDERING INFORMATION

**HAS112/HS212 DC12 - XXX**

Model: \_\_\_\_\_  
 HAS112=Standard type  
 HS212=Sensitive type  
 Coil Voltage:5, 6, 9, 12, 24, 48VDC \_\_\_\_\_  
 Customer code \_\_\_\_\_

## COIL DATA

at 23°C

### Standard Type

Nominal Voltage VDC	Pick-up Voltage (Max.) VDC	Drop-out Voltage (Min.) VDC	Max. Allowable Voltage VDC	Coil Resistance Ω±10%
5	3.5	0.5	7.5	62.5
6	4.2	0.6	9.0	90
9	6.3	0.9	13.5	203
12	8.4	1.2	18.0	360
24	16.8	2.4	36.0	1440
48	33.6	4.8	72.0	5760

### Sensitive Type

Nominal Voltage VDC	Pick-up Voltage (Max.) VDC	Drop-out Voltage (Min.) VDC	Max. Allowable Voltage VDC	Coil Resistance Ω±10%
5	4.0	0.5	11.5	167
6	4.8	0.6	13.8	240
9	7.2	0.9	20.7	400
12	9.6	1.2	27.6	960
24	19.2	2.4	55.2	3840
48	38.4	4.8	110.4	15360

## COIL

Coil Power	Standard Type:400mW Sensitive Type:150mw
Temperature rise	≤65K

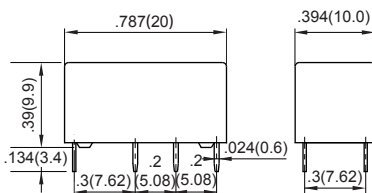
## SAFETY APPROVAL RATINGS

UL&CUL	0.5A 60VDC 2A 25VDC 2A 30VDC 1A 100VAC (Industrial control,business equipment) 1A 120VAC 2A 125VAC(Telephone equipment) 3A 30VDC
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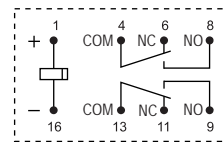
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT.

Unit: inch(mm)

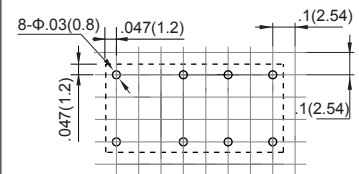
### Outline Dimensions



### Wiring Diagram (Bottom view)



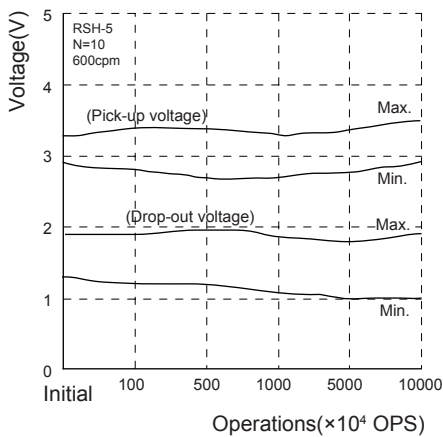
### PCB Layout (Bottom view)



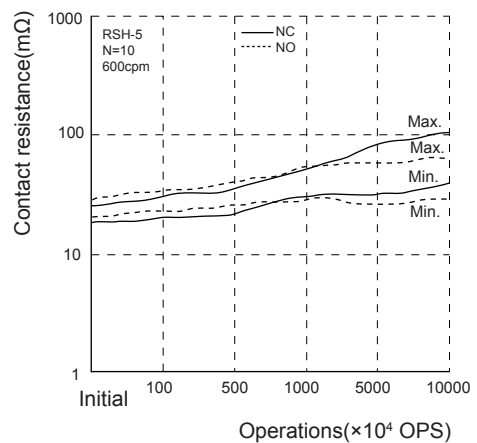
Remark:1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension > 1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension > 5mm, tolerance should be ±0.4mm.  
2) The tolerance without indicating for PCB layout is always ±0.1mm.

## CHARACTERISTIC CURVES

### Mechanical life test

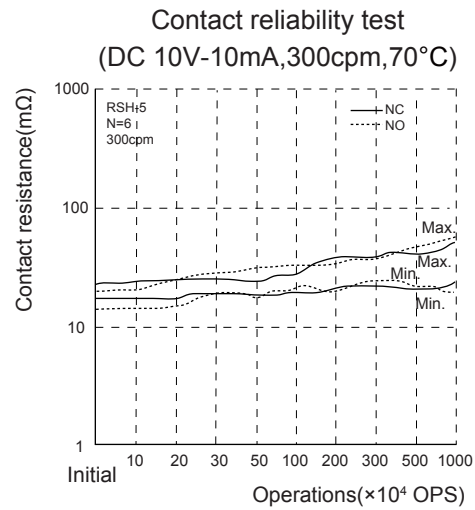
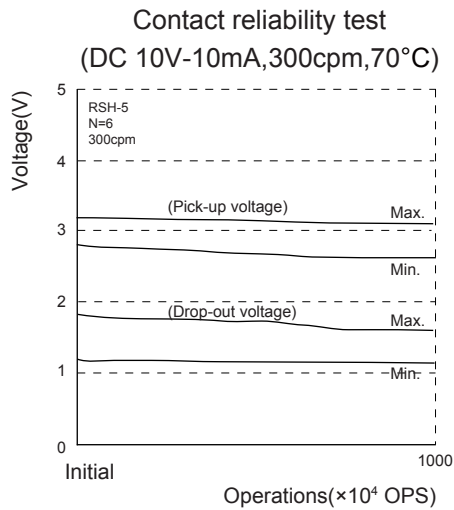
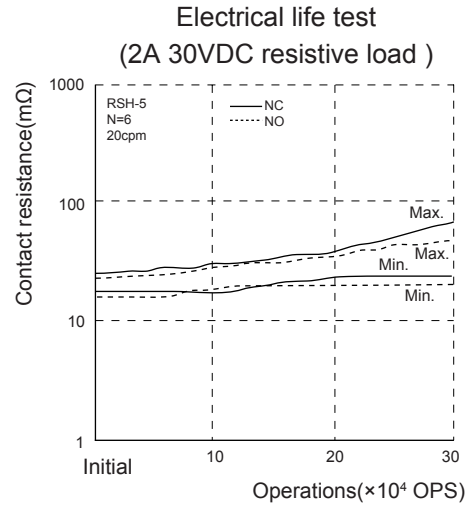
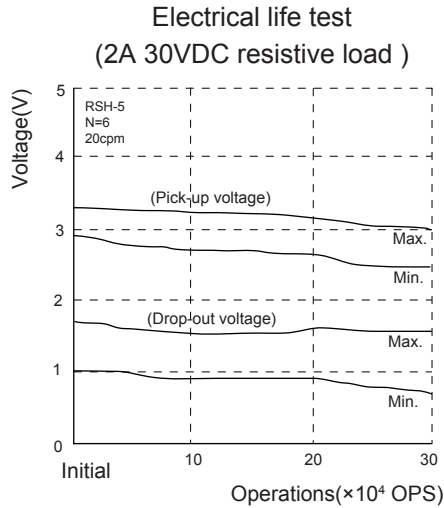


### Mechanical life test



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CHARACTERISTIC CURVES



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