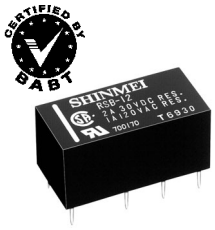
Using Permanent Magnet, High sensitivity Two Poles Signal Relay
RSB RELAYS

[] Features

<>2 pole relay suitable for signal circuit.
<>High sensitive polarized relay.
100mW pick-up power. (200mW Electric power consumption)
<>150mW Electric power consumption available.
<>High reliability and long life.
1 x 10^8(mechanical life), 3 x 10^5(2A 30VDC electrical life)
<>High breakdown voltage.
1,500VAC Between coil and contact.
1,000VAC Between open contacts.
<>Gold-clad Silver palladium contact available, too.
<>Sealed construction.
<>Approved by UL , CSA , BABT



Actual size

[] Applications

<>Switch board, Facsimile, Telephones
<>Audio equipment, Industrial machines

[] UL , CSA Rating , BABT Approval Number

2A 30VDC , 1A120VAC (UL File No.E128155 , CSA File No.LR700170)
(BABT Certificate No.608150)

[] Model Number

RSB □ — □ — □

Nil : Single side stable
L : 2 coil latching
K : 1 coil latching

Coil voltage(3,5,6,9,12,24,48VDC)

Nil : Standard type :400mW
S : High sensitive type :200mW

[] Products Line (Single side stable , Standard type)(at 20 degree Celsius)

Model number	Nominal Voltage (VDC)	Pick-up voltage (VDC)	Drop-out voltage (VDC)	Coil resistance (ohm)	Nominal operating current (mA)	Electric power consumption (mW)	Max .allowable voltage (VDC)
RSB-3	3	70% Max .of nominal voltage	10% Min .of nominal voltage	22.5	133.3	400	4.6
RSB-5	5			62.5	80.0		7.7
RSB-6	6			90	66.7		9.3
RSB-9	9			203	44.3		14.0
RSB-12	12			360	33.3		18.7
RSB-24	24			1,440	16.7		37.4
RSB-48	48			5,760	8.3		74.8

[] Products Line (Single side stable , High sensitive type)(at 20 degree Celsius)

Model number	Nominal Voltage (VDC)	Pick-up voltage (VDC)	Drop-out voltage (VDC)	Coil resistance (ohm)	Nominal operating current (mA)	Electric power consumption (mW)	Max .allowable voltage (VDC)
RSB-3-S	3	70% Max .of nominal voltage	10% Min .of nominal voltage	45	66.7	200	5.9
RSB-5-S	5			125	40.0		9.8
RSB-6-S	6			180	33.3		11.7
RSB-9-S	9			406	22.2		17.7
RSB-12-S	12			720	16.6		23.5
RSB-24-S	24			2,880	8.3		47.1
RSB-48-S	48			11,520	4.2		94.3

[] Products Line (2 coil latching , Standard type)(at 20 degree Celsius)

Model number	Nominal Voltage (VDC)	Set voltage (VDC)	Reset voltage (VDC)	Coil resistance (ohm)	Nominal operating current (mA)	Electric power consumption (mW)	Max .allowable voltage (VDC)
RSBL-3	3	70% Max .of nominal voltage	70% Min .of nominal voltage	25	120	360	4.6
RSBL-5	5			69.4	72		7.8
RSBL-6	6			100	60		9.3
RSBL-9	9			225	40		14.0
RSBL-12	12			400	30		18.7
RSBL-24	24			1,600	15		37.4
RSBL-48	48			6,400	7.5		74.8

[] Products Line (2 coil latching , High sensitive type)(at 20 degree Celsius)

Model number	Nominal Voltage (VDC)	Set voltage (VDC)	Reset voltage (VDC)	Coil resistance (ohm)	Nominal operating current (mA)	Electric power consumption (mW)	Max .allowable voltage (VDC)
RSBL-3-S	3	70% Max .of nominal voltage	70% Min .of nominal voltage	50	60	180	5.8
RSBL-5-S	5			139	36		9.8
RSBL-6-S	6			200	30		11.8
RSBL-9-S	9			450	20		17.7
RSBL-12-S	12			800	15		23.6
RSBL-24-S	24			3,200	7.5		47.2
RSBL-48-S	48			12,800	3.8		94.4

[] Products Line(1 coil latching , Standard type)(at 20 degree Celsius)

Model number	Nominal Voltage (VDC)	Set voltage (VDC)	Reset voltage (VDC)	Coil resistance (ohm)	Nominal operating current (mA)	Electric power consumption (mW)	Max .allowable voltage (VDC)
RSBK-3	3	70% Max .of nominal voltage	70% Min .of nominal voltage	25	120	360	4.6
RSBK-5	5			69.4	72		7.8
RSBK-6	6			100	60		9.3
RSBK-9	9			225	40		14.0
RSBK-12	12			400	30		18.7
RSBK-24	24			1,600	15		37.4
RSBK-48	48			6,400	7.5		74.8

▯ Products Line (1 coil latching , High sensitive type)(at 20 degree Celsius)

Model number	Nominal Voltage (VDC)	Set voltage (VDC)	Reset voltage (VDC)	Coil resistance (ohm)	Nominal operating current (mA)	Electric power consumption (mW)	Max .allowable voltage (VDC)
RSBK-3-S	3	70% Max .of nominal voltage	70% Min .of nominal voltage	50	60	180	5.8
RSBK-5-S	5			139	36		9.8
RSBK-6-S	6			200	30		11.8
RSBK-9-S	9			450	20		17.7
RSBK-12-S	12			800	15		23.6
RSBK-24-S	24			3,200	7.5		47.2
RSBK-48-S	48			12,800	3.8		94.4

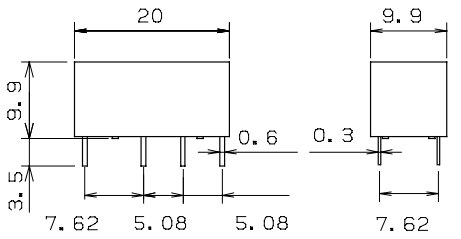
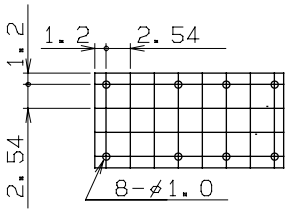
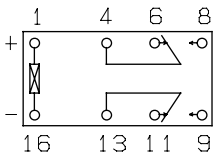
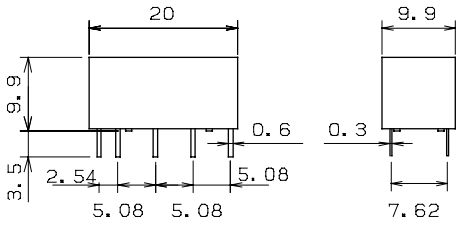
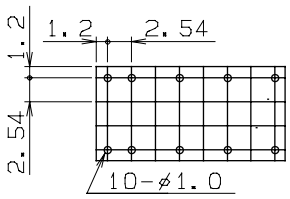
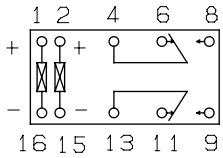
▯ Typical Specifications

Item			Specifications
Contact	Arrangement		2c
	Initial contact resistance max.		Max. 50 milliohm
	Material		Silver alloy, gold clad
Rating	Nominal switching Capacity		2A30VDC , 1A125VAC*
	Max .switching power		60W, 125VA
	Max .switching voltage		220VDC, 250VAC
	Max .switching current		2A
Electrical specification	Initial insulation resistance		Min.100 megohm (at 500VDC)
	Withstanding voltage (Initial)	Between open contacts	AC1,000V (1 minute)
		Between contacts and coil	AC1,500V (1 minute)
	Coil Temperature rise(at nominal Voltage)	Standard type	Max.40 degree Celsius
		High sensitive type	Max.30 degree Celsius
	Operate time(Set & Reset time) (at nominal voltage)		Max.5msec
	Release time(at nominal voltage)		Max.3.5msec
Mechanical specification	Shock resistance	Functional	Min.392m/s^2 (40G)
		Destruction	Min.980 m/s^2 (100G)
	Vibration resistance	Functional	10 to 55Hz at double amplitude of 1.5mm
		Destruction	10 to 55Hz at double amplitude of 1.5mm
Life expectancy	Mechanical life		100,000,000 Operations(at 600cpm)
	Electrical life(at rating)		300,000 operations (2A30VDC, 1A125VAC) 1000,000 operations(1A30VDC, 0.5A125VAC) (at 20cpm)
Ambient temperature	Operating		-40 to +70 degree Celsius (without being frozen)
Unit weight			Approx.4.5g

*These AC ratings are under random phase-control. In driving AC load, life expectancy so greatly depends on the phase at turning on or off so that user should check selected relays with actual load

Dimensions

Unit:mm

Dimensions	PC board pattern (Bottom view)	Schematics (Bottom view)
RSB(Single side stable , 1 coil latching)	RSB(Single side stable , 1 coil latching)	RSB(Single side stable , 1 coil latching)
		 Reverse polarity available
RSBL(2 coil latching)	RSBL(2 coil latching)	RSBL(2 coil latching)
		 Reverse polarity available

Note

1. The appearance and specifications of the product may be modified without prior notice to improve its performance
2. This catalog shows only outline specifications. When using the product, please obtain formal specifications for supply
3. Please see appendix “Technical Definitions” and “Technical Notes”
4. Please feel free to contact us for relays with the specifications not shown in this catalogue.
5. Please confirm the performance on actual operation by simulation with actual environments for high reliability.