

## 6 series

miniature fully screened, open frame 3.5 kV, 4A







A fully screened relay offering low RF loss and high current carrying capacity, which was developed with RF design engineers in the radio communications industry. The relay coil is totally enclosed in a copper screen, resulting in lower self-heating and RF loss, and Rhodium contacts are used in the vacuum reed switches, yielding higher carry currents for a given frequency and ambient temperature.

Available as Form A (SPNO), Form B (SPNC) or latching (bistable) contact configurations with switch connections via either PCB or flying lead

- Excellent RF Characteristics
- Carry Current up to 4A RF at 30MHz
- 3.5 kV Isolation
- Low RF Loss
- Long Lifetime

Contact	Units	Conditions	Form A				Form I		Latching		
Contact Material			Rhodium			Rhodium			Rhodium		
Isolation across contacts	kV	DC or AC peak	3			3			3.5		
Max. carry current	Α	DC or AC rms	4*			4*			1.5		
Max. switching power	W		10			10			10		
Max. switching voltage	V	DC or AC peak	20			20			20		
Max. switching current	Α	DC or AC peak	0.5			0.5			0.5		
Capacitance across contacts	pF	coil/screen grounded	<0.1			< 0.1			<0.1		
Lifetime	operations	dry switching	10 <sup>9</sup>		10 <sup>9</sup>			109			
Lifetime	operations	10W switching	108			108			108		
Contact Resistance	m0hms	maximum (typical)	80 (30)			80 (30)			80 (30)		
Insulation Resistance	Ohms	minimum (typical)	1010 (1013)		10 <sup>10</sup> (10 <sup>13</sup> )			1010 (1013)			
Coil			<b>5V</b>	12V	24V	5V	12V	24V	5V	12V	
Must Operate	V	DC, 20°C	3.5	8	15	3.5	8	15	N/A	N/A	
Must Release	V	DC, 20°C	1	2	4	1	2	4	3	7	
Min Pulse Length		ms	N/A	N/A	N/A	N/A	N/A	N/A	2.0	2.0	
Operate Time		ms	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Release Time	ms	diode fitted	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	
Resistance	Ohms	20°C	70	380	1500	65	350	1200	100	500	
Construction											
Isolation contact to coil	kV	DC or AC peak	3		3			3.5			
Environmental											
Operating temperature range	°C	Limited Current	-40 to +100*		-40 to +100*			-40 to +100			
Storage temperature range	°C		-40 to +125		-40 to +125			-40 to +125			
Weight	gm	typical	5.3		6.1			5.0			

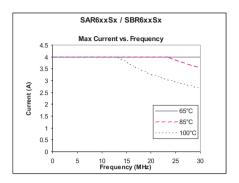
<sup>\*</sup>see graphical data

Part Numbering system	Α	R	05	U
Reed switch Size - S  Contact Form A: Form A, B: Form B, L: Latching  Contact Material R: Rhodium  Relay Series Number  Coil Voltage 5: 5V, 12: 12V, 24: 24V  Screening S: Fully Screened  Contact Din Orientation D. DOB II. flying lead				
Contact Pin Orientation D: PCB U: flying lead				



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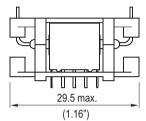
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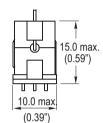


#### **Mechanical Dimensions**

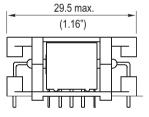
All dimensions are in millimeters (inches)

### Flying Lead



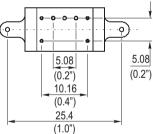


**PCB Mount** 



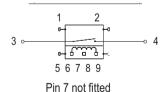


Pins 3, 4 require 1mm diameter ± 0.05 holes

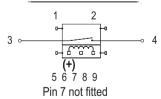


The following Pins require 0.9mm diameter  $\pm$  0.05mm holes, where fitted 1, 2, 5, 6, 7, 8, 9

Circuit diagram, Form A

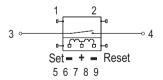


Circuit diagram, Form B



(all pins views from above)

### Circuit diagram, Latching



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