



## S SERIES

### HIGH VOLTAGE RELAYS



The S series relay was developed for the high voltage ATE market, where printed circuit board space is at a premium.

The S series high voltage relay offers a 3kV or 5kV\* isolation performance in a 30mm package.

Low contact resistance, through the use of Rhodium contact reed switches, makes the S series suitable for many high voltage applications at DC and low frequency, where performance and reliability are paramount.

### Features

- Compact footprint
- Designed specifically for High Voltage ATE
- Rhodium contacts for Low Contact Resistance
- 3kV or 5kV\* Isolation between contacts and 5kV isolation between contacts and coil
- Excellent lifetime characteristics

## SPECIFICATIONS

Contact	Unit	Condition	3kV SPNO			5kV SPNO		
<b>Contact Material</b>			Rhodium			Rhodium		
<b>Isolation Across Contacts</b>	kV	DC or AC peak	3			5*		
<b>Switching Power Max.</b>	W		10			10		
<b>Switching Voltage Max.</b>	V	DC or AC peak	20			20		
<b>Switching Current Max.</b>	A	DC or AC peak	0.5			0.5		
<b>Carry Current Max</b>	A	DC or AC peak	1.5			1.5		
<b>Capacitance Across Contacts</b>	pF	coil to screen grounded	<0.1			<0.1		
<b>Lifetime Operations</b>	dry switching		10 <sup>9</sup>			10 <sup>9</sup>		
	10W switching		10 <sup>6</sup>			10 <sup>6</sup>		
<b>Contact Resistance</b>	mΩ max (typical)		80 (30)			80 (30)		
<b>Insulation Resistance</b>	Ω min (typical)		10 <sup>10</sup> (10 <sup>13</sup> )			10 <sup>10</sup> (10 <sup>13</sup> )		
<b>*DC only, Pin 3 at high voltage</b>								
<b>Coil Specification at 20°C</b>			<b>5V</b>	<b>12V</b>	<b>24V</b>	<b>5V</b>	<b>12V</b>	<b>24V</b>
<b>Must Operate Voltage</b>	V	DC	3.7	9	20	3.7	9	20
<b>Must Release Voltage</b>	V	DC	0.5	1.25	4	0.5	1.25	4
<b>Operate Time</b>	ms	diode fitted	1.0	1.0	1.0	1.0	1.0	1.0
<b>Release Time</b>	ms	diode fitted	0.5	0.5	0.5	0.5	0.5	0.5
<b>Resistance</b>	Ω		140	600	1000	140	600	1000

Note. The operate / release voltage and coil resistance will change at a rate of 0.4% per degree C. Values are stated at room temperature (20 degrees C)

Relay	Unit	Condition	3kV SPNO	5kV SPNO
Isolation Contact/Coil	kV		5	5
Insulation Resistance Contact to all Terminals	$\Omega$ min (typical)		$10^{10}(10^{13})$	$10^{10}(10^{13})$
Environmental Conditions				
Operating Temperature Range	$^{\circ}\text{C}$		-20 to +70	-20 to +70
Weight	gm		3.1	3.1

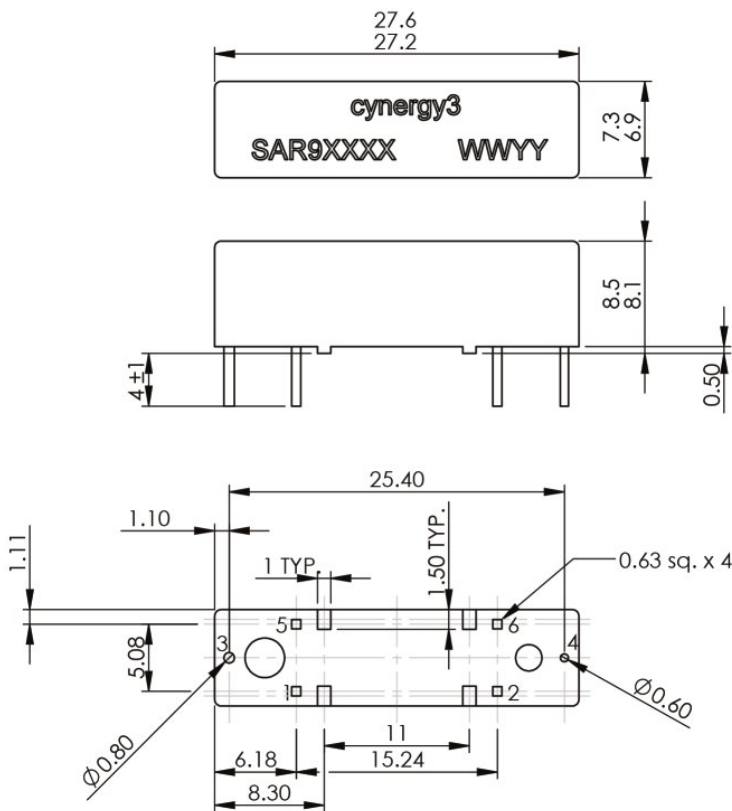
Please refer to this document for circuit design notes:  
<https://www.cynergy3.com/blog/reed-relay-application-notes>

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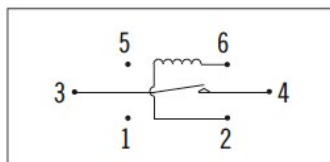


## DIMENSIONS

All dimensions are in millimeters.



### Relay Circuit Diagram



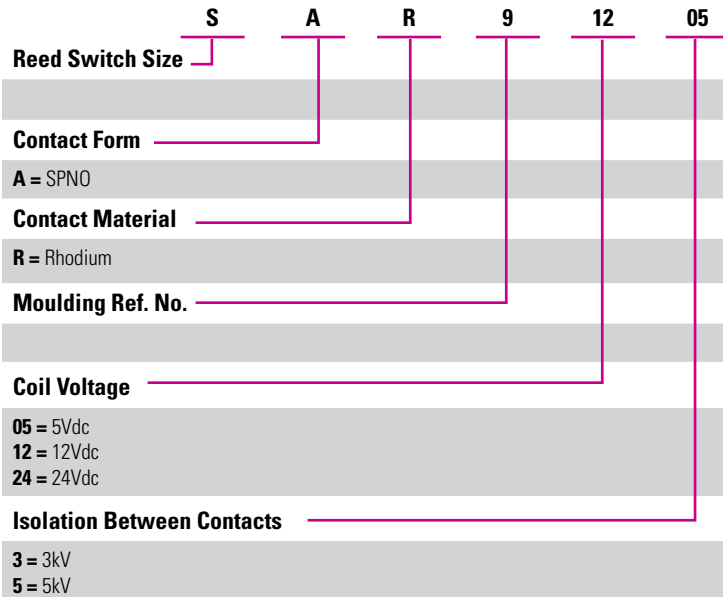
(Viewed from Underside)

Pin 1 is top left, when viewed from above, with respect to part marking



## ORDERING OPTIONS

Example : SAR91205



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