

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

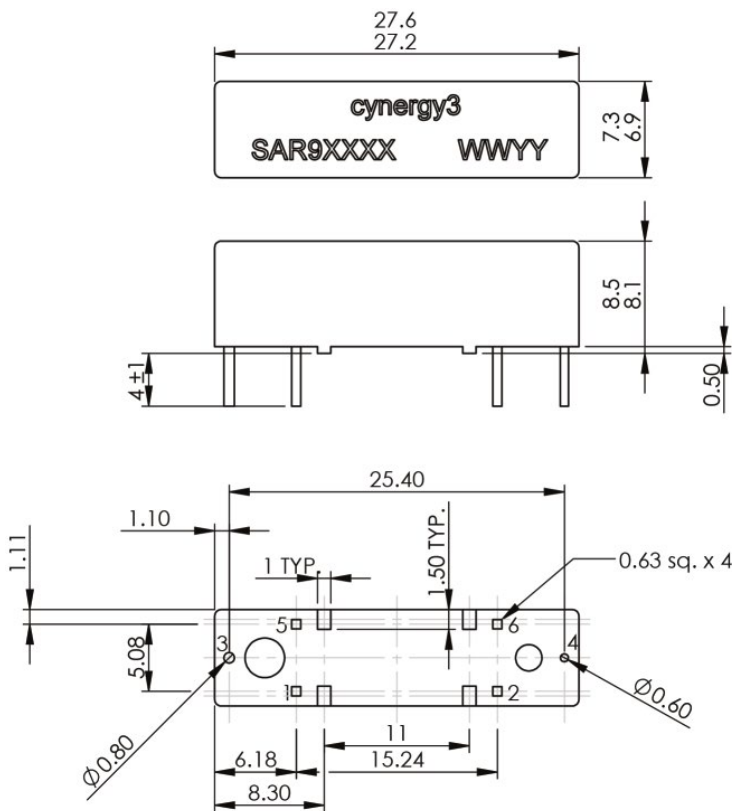
Relay	Unit	Condition	3kV SPNO	5kV SPNO
Isolation Contact/Coil	kV		5	5
Insulation Resistance Contact to all Terminals	Ω min (typical)		$10^{10}(10^{13})$	$10^{10}(10^{13})$
Environmental Conditions				
Operating Temperature Range	$^{\circ}\text{C}$		-20 to +70	-20 to +70
Weight	gm		3.1	3.1

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

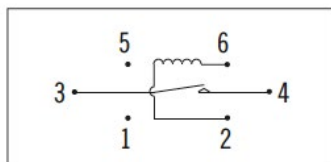


DIMENSIONS

All dimensions are in millimeters.



Relay Circuit Diagram



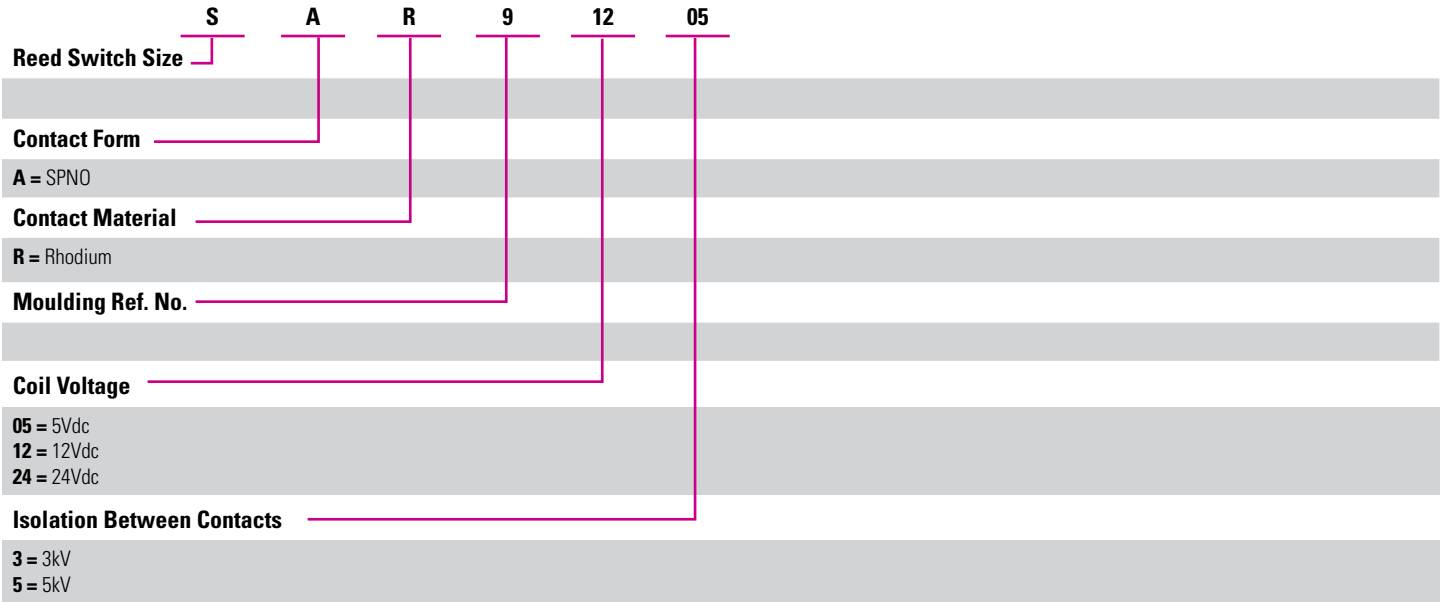
(Viewed from Underside)

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



ORDERING OPTIONS

Example : SAR91205



Made in the UK

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