

S Series

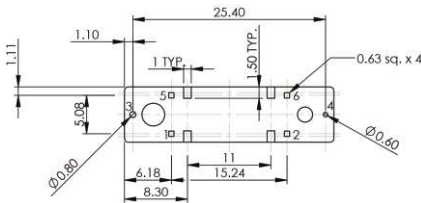
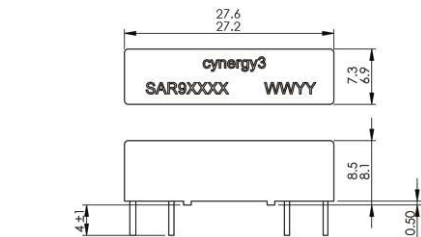
High Voltage relays



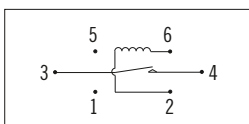
The S series relay was developed for the high voltage ATE market, where printed circuit board space is at a premium. The S series high voltage relay offers a 3kV or 5kV* isolation performance in a 30mm package. Low contact resistance, through the use of Rhodium contact reed switches, makes the S series suitable for many high voltage applications at DC and low frequency, where performance and reliability are paramount.

Mechanical Dimensions

All dimensions are in Millimetres (inches)



Relay Circuit Diagram



(Viewed from Underside)

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

- 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

Contact Specification	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	Ωmin	(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 Specification	5V	12V	24V
Isolation contact/coil	kV	5	5
Insulation resistance contact to all terminals	Ωmin (typical)	10 ¹⁰ (10 ¹³)	10 ¹⁰ (10 ¹³)
Environmental			
Operating Temp range	°C	-20 to +70	-20 to +70
Weight	gm	3.1	3.1

Please refer to this document for circuit design notes:-
<http://www.cynergy3.com/blog/application-notes-reed-relays-0>

Part Numbering System

