

# S Series

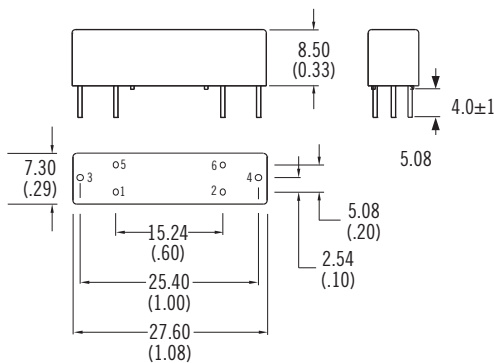
## High Voltage relays



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

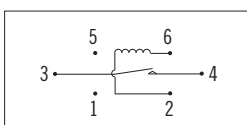
All dimensions are in Millimetres (inches)



#### PIN SIZE

PINS 1, 2, 5 & 6 0.7 Square (0.025")  
 PINS 3 & 4 0.8 (0.031") dia.

#### Relay Circuit Diagram



(Viewed from Underside)

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

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Made in the UK

- 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 <sup>9</sup>	10 <sup>9</sup>				
		10W switching	10 <sup>6</sup>	10 <sup>6</sup>				
Contact Resistance	mΩ	max (typical)	80 (30)	80 (30)				
Insulation Resistance	Ωmin	(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>								
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								
Isolation contact/coil	kV		5			5		
Insulation resistance contact to all terminals	Ωmin (typical)		10 <sup>10</sup> (10 <sup>13</sup> )			10 <sup>10</sup> (10 <sup>13</sup> )		
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

Reed Switch Size

Contact Form A=SPNO

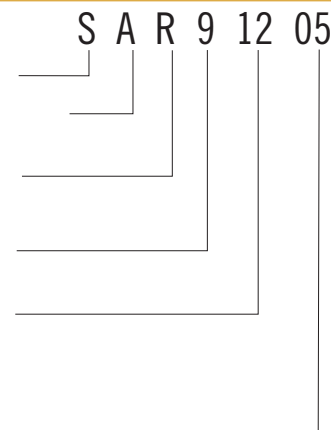
Contact Material  
 R=Rhodium,

Moulding Ref. No.

Coil Voltage  
 05=5Vdc, 12=12Vdc,  
 24=24Vdc

Isolation between  
 Contacts

3=3kV, 5=5kV



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