

## S Series

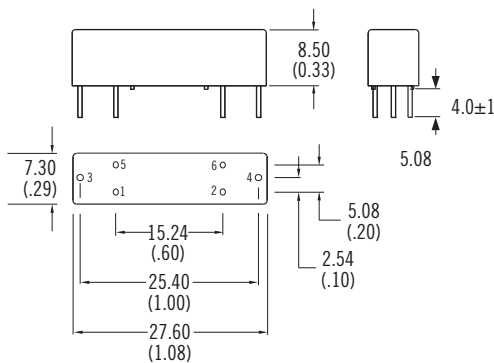
### High Voltage relays



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

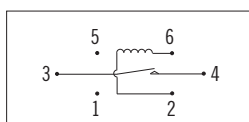
All dimensions are in Millimetres (inches)



#### 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)

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Made in the UK

ISO9001 CERTIFIED

S Series 2018

- 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> )

\*DC only, Pin 3 at high voltage

Coil Specification at 20°C	5V	12V	24V	5V	12V	24V
Must Operate Voltage	3.7	9	20	3.7	9	20
Must Release Voltage	0.5	1.25	4	0.5	1.25	4
Operate Time	1.0	1.0	1.0	1.0	1.0	1.0
Release Time	0.5	0.5	0.5	0.5	0.5	0.5
Resistance	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	5	5	5
Insulation resistance contact to all terminals	10 <sup>10</sup> (10 <sup>13</sup> )	10 <sup>10</sup> (10 <sup>13</sup> )	10 <sup>10</sup> (10 <sup>13</sup> )
Environmental			
Operating Temp range	-20 to +70	-20 to +70	-20 to +70
Weight	3.1	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

S A R 9 12 05

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

[www.cynergy3.com](http://www.cynergy3.com)

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