## S2(UL) Series

UL Approved* Axial Style Reed Relay


The S2(UL) reed relay series from Cynergy3 has been developed and approved by UL for applications where PCB mounting is not possible.

The relay can be mounted in a variety of methods and orientations to suit particular applications. The leadout wires are flexible enough to allow bending for assembly into equipment.

Available with either a 10 W or 50 W contact in a pressurised reed switch or a 100VA contact in an evacuated reed switch.

Please refer to this document for circuit design notes:-
http://www.cynergy3.com/blog/application -notes-reed-relays-0
*Consult factory for UL ratings

Cynergy3 Components Ltd.
7 Cobham Road
Ferndown Industrial Estate
Wimborne, Dorset BH21 7PE
Telephone +44 (0) 1202897969
Email:sales@cynergy3.com

ISO9001 certified
S2(UL) Series 2016

- Variable mounting options
- 10W, 50W and 100VA contact options


## - Reliable reed switch contacts

| Contact Specification | Conditions | Units | S2-03P | S2-XXP | S2-XXE |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Material |  |  | Ruthenium | Rhodium | Rhodium |
| Switch atmosphere |  |  | Pressurised | Pressurised | Vacuum |
| Isolation across contacts |  | Volts DC | 200 | 500 | 1000 |
| Switching power max. | Resistive load | Watts | 10 | 50 | - |
| Switching power max. | Resistive load | VA | - | 70 | 100 |
| Switching voltage DC max. | Resistive load | Volts DC | 200 | 350 | 350 |
| Switching voltage AC max. | Resistive load | Volts AC RMS | 140 | 300 | 300 |
| Switching current DC max. | Resistive load | mA DC | 250 | 700 | 1000 |
| Switching current AC max. | Resistive load | mA AC RMS | 250 | 500 | 1000 |
| Carry current max. |  | Amps DC/AC RMS | 1 | 2.5 | 2.5 |
| Contact capacitance max. | Open | Pico Farad (pF) | 0.3 | 0.5 | 0.5 |
| Initial contact resistance max. | @ Nominal coil voltage | Milliohms (m m ) | 100 | 100 | 100 |
| Insulation resistance |  | Ohms ( $\Omega$ ) | 10 E 10 | 10 E 10 | 10 E 10 |
| Life time operations | Hot switching resistive load | Operations 50\% duty cycle | $\begin{gathered} 10 \mathrm{E} 7 \\ (12 \mathrm{~V} D, 4 \mathrm{~mA}) \\ \hline \end{gathered}$ | $\begin{gathered} \text { 10E6 } \\ (350 \mathrm{~V} D C, 1 \mathrm{~mA}) \end{gathered}$ | $\begin{gathered} 10 \mathrm{E7} \\ (500 \mathrm{~V} \text { DC, } 1 \mathrm{~mA}) \end{gathered}$ |
|  | Dry switching | Operations 50\% duty cycle | 10E8 | 10E9 |  |


| Coil Specification |  |  | $\mathbf{3 V}$ | $\mathbf{5 V}$ | $\mathbf{1 2 V}$ | $\mathbf{2 4 V}$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Must operate voltage | $@ 20^{\circ} \mathrm{C}$ | Volts DC | 2.25 |  | 3.7 | 9 | 19 |
| Must release voltage | $@ 20^{\circ} \mathrm{C}$ | Volts DC | 0.5 |  | 1 | 2 | 3 |
| Operate time inc bounce | $@ 20^{\circ} \mathrm{C}$ | Milliseconds | 0.1 |  | 1.0 | 1 | 11 |
| Release time inc bounce | $@ 20^{\circ} \mathrm{C}$ | Milliseconds | 0.07 |  | 0.5 | 0.5 | 0.5 |
| Resistance | $@ 20^{\circ} \mathrm{C}$ | Ohms | 250 |  | 160 | 1000 | 1000 |


| Relay Specification |  |  |  |
| :--- | :---: | :---: | :---: |
| Isolation contact /coil min. |  | Volts DC | 1000 |
| Insulation resistance <br> contact to coil | $500 \mathrm{~V} \mathrm{DC}, 60$ <br> $\mathrm{sec}, 20^{\circ} \mathrm{C}$ <br> $\pm 5^{\circ} \mathrm{C}, 45 \% \mathrm{Rh}$ | Ohms | T.B.C. |
| Operating temp range |  | ${ }^{\circ} \mathrm{C}$ | -40 to +85 |
| Storage temp range |  | ${ }^{\circ} \mathrm{C}$ | -40 to +125 |


| Standard Parts | Coil Volts VDC | Switching Power | Isolation VDC | Switch Atmosphere |
| :--- | :--- | :--- | :--- | :--- |
| S2-03PU | 3 | 10 W | 200 | Pressurised |
| S2-05PU | 5 | 70 VA | 500 | Pressurised |
| S2-12PU | 12 | 70 VA | 500 | Pressurised |
| S2-24PU | 24 | 70 VA | 500 | Pressurised |
| S2-05EU | 5 | 100 VA | 1000 | Vacuum |
| S2-12EU | 12 | 100 VA | 1000 | Vacuum |
| S2-24EU | 24 | 100 VA | 1000 | Vacuum |

Custom versions can be made for particular applications. Please contact Cynergy3 with your requirements.

## Mechanical Dimensions



