

S8 RELAY SERIES

MINIATURE HIGH VOLTAGE RELAY



The S8 series is a miniature high voltage reed relay for applications where space saving is a prime consideration.

The coil pins are positioned near the center of the relay while the contact pins are near the ends to give improved isolation between the High Voltage contacts and the low voltage coil.

Features

- Space saving package
- Isolation Voltage across contacts 4kV or 5kV (dependent on coil voltage)
- Isolation Voltage 7kV contact to coil
- 2.5A carry current
- Up to 1000V switching voltage

SPECIFICATIONS

| Contact | | Condition | 5V coil | 12V coil | 24V coil |
|-----------------------------|----------------|-------------------------|--|----------|----------|
| Switch Action | | | SPST (Form A) | | |
| Material | | | Rhodium | | |
| Isolation Across Contacts | kV | DC or AC peak | 4 | 4 | 5 |
| Switching Power Max. | VA | (W for V variants) | 100 | | |
| Switching Voltage Max. | V | | 350dc/300ac (1000Vdc & ac peak for V variants) | | |
| Switching Current Max. | A | DC or AC peak | 1.0 | | |
| Carry Current Max | A | DC | 2.5 | | |
| Capacitance Across Contacts | pF | coil to screen grounded | 0.5 (typical) | | |
| Lifetime Operations | | dry switching | 10 ⁹ | | |
| | | 100W switching | 10 ⁷ | | |
| Contact Resistance | mΩ max | | 150 | | |
| Insulation Resistance | Ωmin (typical) | | 10 ¹⁰ (10 ¹³) | | |
| Coil | | | | | |
| Must Operate Voltage | V | DC | 4 | 9.6 | 19 |
| Must Release Voltage | V | DC | 1 | 2 | 3 |
| Operate Time | ms | diode fitted | 1 | 1 | 1 |
| Release Time | ms | diode fitted | 0.5 | 0.5 | 0.5 |
| Resistance | Ω | | 120 | 750 | 1550 |

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 | | Condition | 5V coil | 12V coil | 24V coil |
|--|---------------------------|-----------|---------|-------------|----------|
| Isolation Contact/Coil | kV | | | 7 | |
| Insulation Resistance Contact to all Terminals | Ω_{\min} (typical) | | | | |
| Environmental Conditions | | | | | |
| Operating Temp Range | °C | | | -40 to +85 | |
| Storage Temp Range | °C | | | -40 to +125 | |

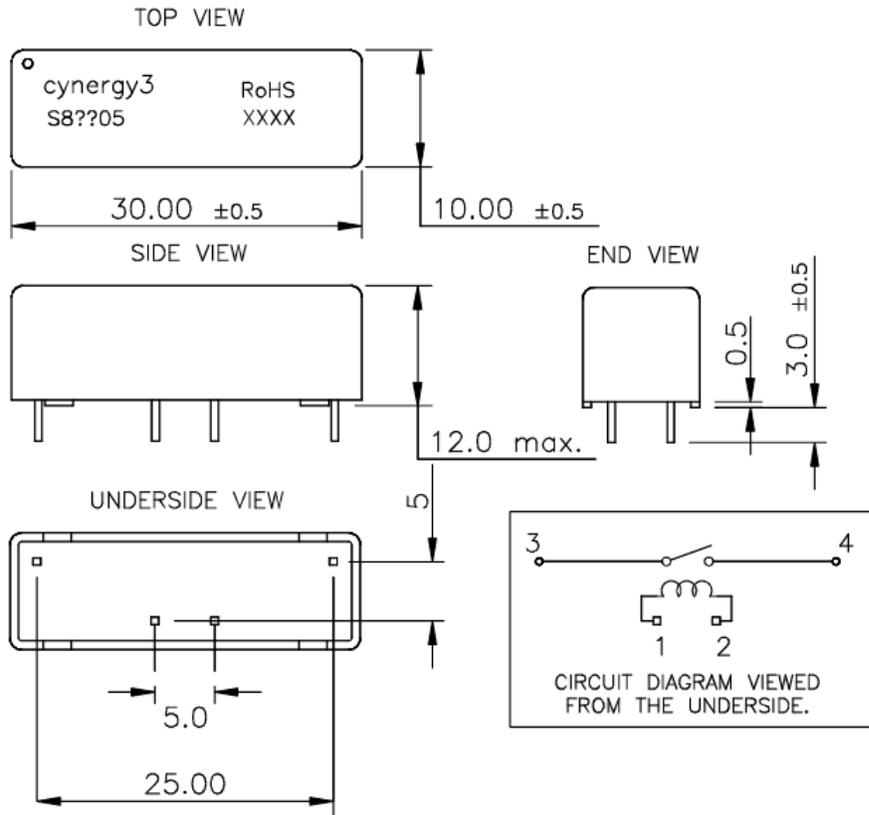
● STANDARD PARTS

| | Coil Voltage Vdc | Isolation Across Contacts kV | Max. Switching Voltage Vdc (Vac peak) |
|-----------------|------------------|------------------------------|---------------------------------------|
| S8-0504 | 5 | 4 | 350 (300) |
| S8-0504V | 5 | 4 | 1000 (1000) |
| S8-1204 | 12 | 4 | 350 (300) |
| S8-1204V | 12 | 4 | 1000 (1000) |
| S8-2405 | 24 | 5 | 350 (300) |
| S8-2405V | 24 | 5 | 1000 (1000) |

Custom versions can be designed for particular applications. Please contact Sensata with your requirements.

DIMENSIONS

All dimensions are in millimeters.



Pins 0.635mm Square ±0.05mm.

Pins 1 & 2 Tin over Nickel plated, on CuSn6 Phosphor Bronze.

Pins 3 & 4 Tin plated on NiFe Nickel Iron.

Case Material Nylon.

Encapsulant: Epoxy

Please refer to this document for circuit design notes:

<https://www.cynergy3.com/blog/reed-relay-application-notes>

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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

CONTACT US

Sensata Technologies
Jan Tinbergenstraat 80
7559 SP Hengelo
The Netherlands
1-508-236-3800
+44 (0)1202 897969
cynergy3.enquiries@sensata.com