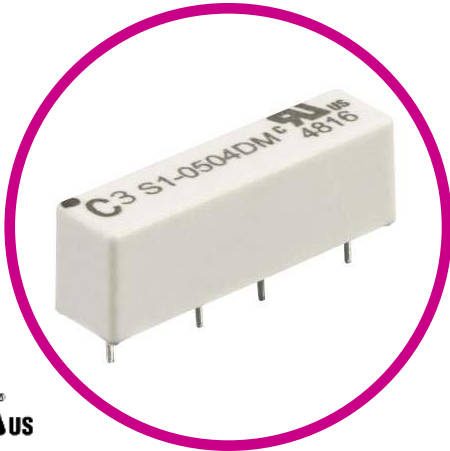




## | S1 RELAY SERIES

### UL APPROVED\* MINIATURE HIGH VOLTAGE RELAY



The S1 series is a miniature high voltage single-in-line 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

- Single-in-line package
- 4kV Isolation Voltage across contacts
- Isolation Voltage 5kV contact to coil
- 2.5A carry current
- Up to 350V switching voltage

Please refer to this document for circuit design notes:

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

Custom versions can be made for particular applications.

Please contact Sensata with your requirements.

### \*Consult factory for UL ratings

These products have been UL approved for use as per pollution degree 2 classification. If you require further information as to how this may affect product usage, please contact [c3w\\_sales@sensata.com](mailto:c3w_sales@sensata.com).



## SPECIFICATIONS

Contact	Condition	
Switch Action		SPST (Form A)
Material		Rhodium
Isolation Across Contacts	kV DC or AC peak	4
Switching Power Max.	VA	100
Switching Voltage Max.	V	350dc/300ac
Switching Current Max.	A DC or AC peak	1.0
Carry Current Max	A DC	2.5
Lifetime Operations	dry switching	10 <sup>9</sup>
Contact Resistance	mΩ max	100
Insulation Resistance	Ω min (typical)	10 <sup>10</sup> (10 <sup>13</sup> )

Coil (at 20°C)	Condition	5V coil	12V coil	24V coil
<b>Must Operate Voltage</b>	V DC	4	10.8	16
<b>Must Release Voltage</b>	V DC	1	2	3
<b>Operate Time</b>	ms diode fitted	1	1	1
<b>Release Time</b>	ms diode fitted	0.5	0.5	0.5
<b>Resistance</b>	$\Omega$ ( $\pm 10\%$ )	180	500	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

<b>Isolation Contact/Coil</b>	kV DC	5
<b>Insulation Resistance Contact to all Terminals</b>	$\Omega$ min (typical)	
<b>Environmental Conditions</b>		
<b>Operating Temperature Range</b>	°C	-40 to +85
<b>Storage Temperature Range</b>	°C	-40 to +100

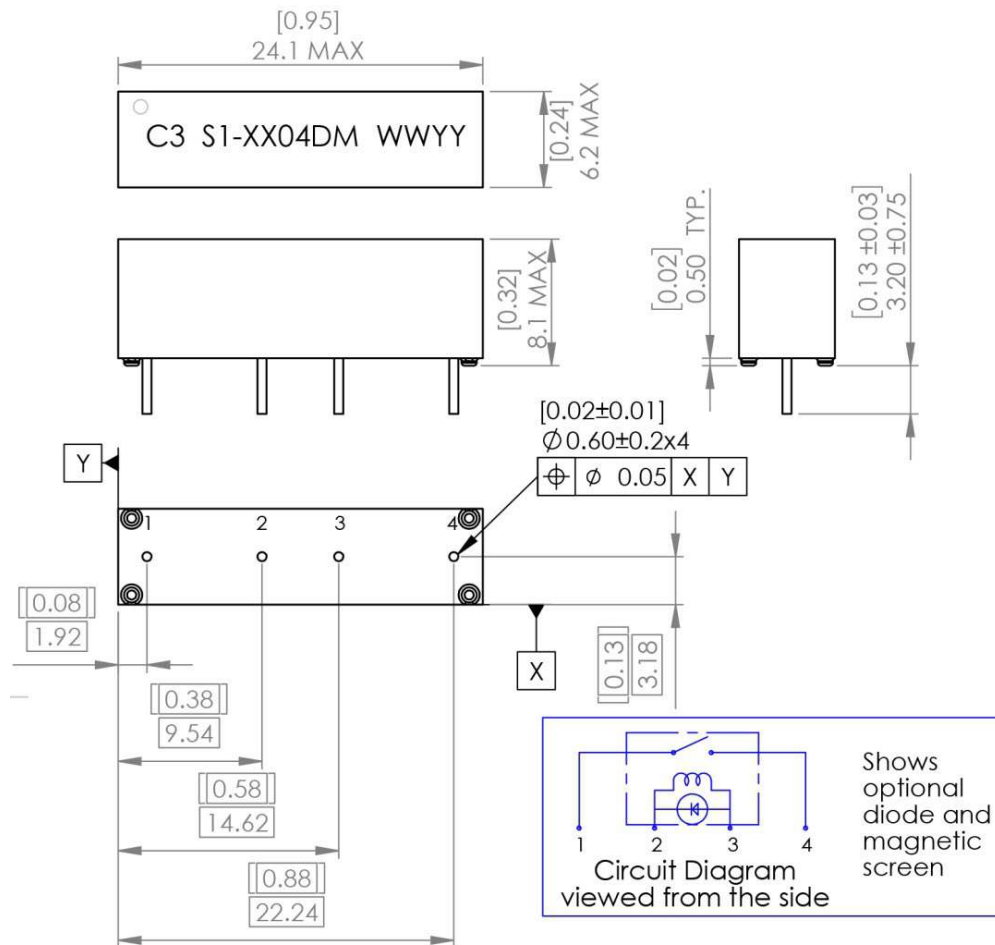
Shock - EN60068-2-27 11ms Half sine 50g. MIL-STD-202G Method 213B, Test condition A.

Vibration - EN60068-2-6 Sine vibration 20g peak 10Hz to 2000Hz. MIL-STD-202G Method 204D, Test condition D.



## DIMENSIONS

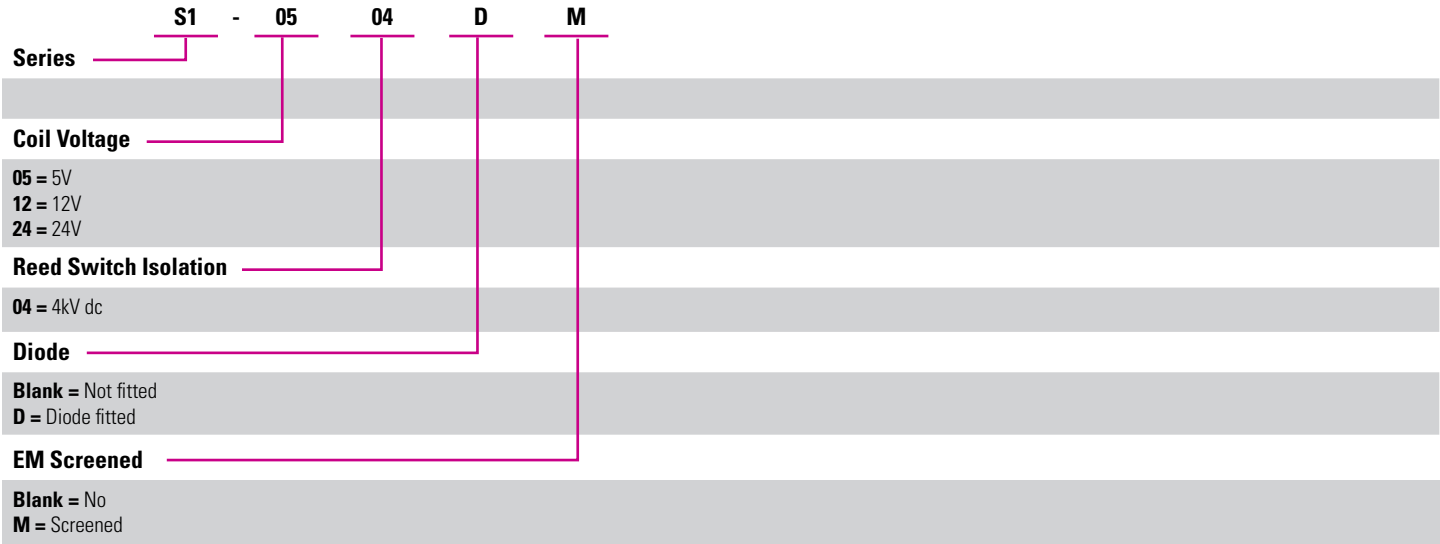
All dimensions are in millimeters.





# ORDERING OPTIONS

Example : S1-0504DM



Made in the UK

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://www.sensata.com) SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

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

## CONTACT US

+44 (0)1202 897969  
 c3w\_sales@sensata.com  
 Cynergy3 Components Ltd.  
 7 Cobham Road,  
 Ferndown Industrial Estate,  
 Wimborne, Dorset,  
 BH21 7PE, United Kingdom