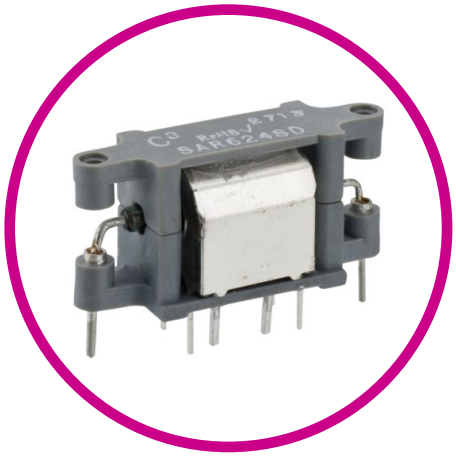
Sensata Technologies | cynergy3

| 6 SERIES

MINIATURE FULLY SCREENED 4A, 3.5KV



A fully screened relay offering low RF loss and high current carrying capacity. Developed with RF engineers in the radio communications industry.

The relay coil is totally enclosed in a copper screen, resulting in lower self heating and RF loss.

Rhodium contacts are used in the vacuum reed switches, yielding higher carry currents for a given frequency and ambient temperature.

Coil connections are via PCB and RF connections can be either via PCB or flying lead.

Available with SPNO (Form A), SPNC (Form B) or latching (Bistable) switching action.

Features

- Excellent RF characteristics - Low RF losses
- 4A Carry current (up to 30MHz)
- 3.5kV Isolation
- Custom versions can be designed to meet particular applications
- Long life expectancy

SPECIFICATIONS

Contact	Units	Condition			
Contact Material			Rhodium	Rhodium	Rhodium
Switch Action			SPNO	SPNC	Bistable
Carry Current Max	A	RMS@30MHz	4.0*	4.0*	1.5*
Switching Current	A	DC max	0.5	0.5	0.5
Switching Power	W	max	10	10	10
Switching Voltage Max	V	DC or AC peak	20	20	20
Isolation Across Conacts	kV	DC or AC peak	3	3	3.5
Capacitance	pF	coil/screen gnd	<0.1	<0.1	<0.1
Contact Connections		pin position	3 & 4	3 & 4	3 & 4
Lifetime	operations	dry switching	10^9	10^9	10^9
Contact Resistance	mΩ	max	80 (30)	80 (30)	80 (30)
Insulation Resistance	mΩ	max (typical)	10^{10} (10^{13})	10^{10} (10^{13})	10^{10} (10^{13})

*see Graphical Data on page 3.

Coil at 20ºC	Units	Condition								
Operating Voltage	V	Nominal	5	12	24	5	12	24	5	12
Must Operate Voltage	V		3.5	8	15	3.5	8	15	3	8
Must Release Voltage	V		1	2	4	1	2	4	Min Pulse	2ms
Resistance	Ω	Nominal	70	380	1500	65	350	1200	100 Set/Rest	500 Set/Rest
RF Screening			Full			Full			Full	
RF Screening Connection		pin position	1, 2, 5, 9			1, 2, 5, 9			1, 2, 5, 9	
Coil Connection		pin position	6 & 8			6 & 8			Set=6,7	Reset=7,8
Relay										
Construction			Covered			Covered			Covered	
Operate Time	ms	max incl bounce	1.0			1.0			1.0	
Release Time	ms	max incl bounce	0.5			0.5			N/A	
Isolation Contact to all other Terminals	kV	DC max	3			3			3	
Isolation Contact to Screen	V	DC max	250			250			250	
Environmental Conditions										
Storage Temperature	˚C	range	-40 to +125							
Operating Temperature	˚C	limited current	-40 to +100*							
Weight	gm	typical	5.3			6.1			5.0	

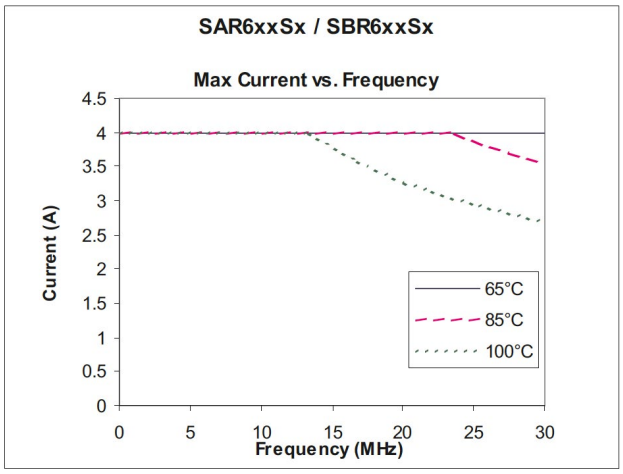
STANDARD PARTS

	Action	Carry Current A	Coil Voltage V	Isolation kV
SAR605SD	SPNO	4	5	3
SAR612SD	SPNO	4	12	3
SAR624SD	SPNO	4	24	3
SLR612SD	Bistable	1.5	12	3.5

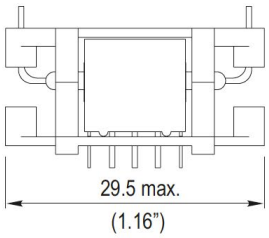
Please refer to this document for circuit design notes:
https://www.cynergy3.com/blog/reed-relay-application-notes

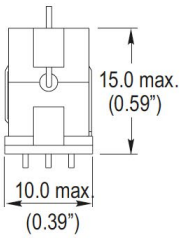
DIMENSIONS

All dimensions are in millimeters.

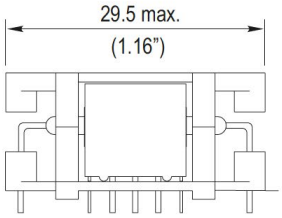


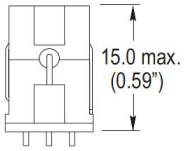
Flying Lead



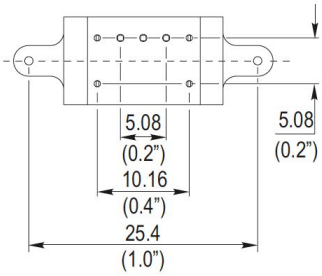


PCB Mount



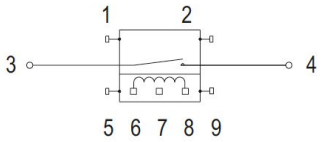


Pins 3, 4 require
1mm diameter ± 0.05 holes



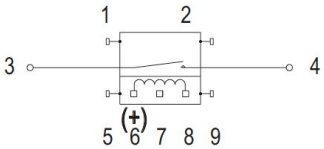
The following Pins require 0.9mm diameter ± 0.05mm holes, where fitted 1, 2, 5, 6, 7, 8, 9

Circuit diagram, Form A



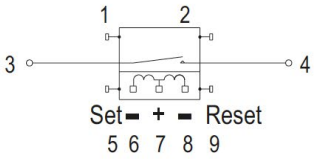
Pin 7 not fitted

Circuit diagram, Form B



Pin 7 not fitted

Circuit diagram, Latching



Please refer to this document for circuit design notes:
https://www.cynergy3.com/blog/reed-relay-application-notes

ORDERING OPTIONS

Example : SAR612SD

S	A	R	6	12	S	D

Reed Switch Size

Contact Form

A = SPNO
B = SPNC
L = Bistable

Contact Material

R = Rhodium

Relay Series Number

Coil Voltage

05 = 5V
12 = 12V
24 = 24V

RF Screening

S = Screened
N = Unscreened

RF Connection

D = via PCB
U = via Fly Lead