



A latching RF reed relay designed for manpack, portable HF radio systems, from 1-30MHz, where power resources are limited and board space is at a premium. These relays have separate set and reset coils to simplify board design, are capable of carrying up to 1.5A current at 30MHz and can withstand either 1.5, 3 or 3.5kV between contacts. The FRS22012 is a fast latching relay with RF and magnetic screening, that enables switching with coil pulse lengths down to 0.5ms.

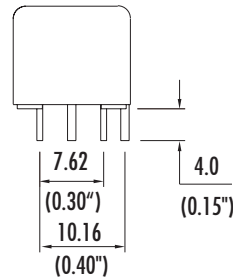
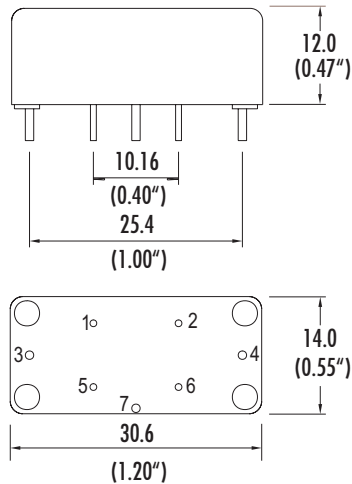
- **Bistable Latching Relay**
- **0.5 Coil Pulse length**
- **3.5kV DC Isolation**
- **1.5A Carry Current**
- **RF & Magnetic Screening**
- **Approved to MIL standards for Bump, Shock and Vibration**

Contact	Units	Conditions	FRS22012	SLR305SD01	SLR305SD02
Action (form A, B or Latching)				Latching	
Switching Voltage	V	DC max		20	
Switching Current	A	DC max		0.5	
Carry Current	A	RMS at 30MHz		1.5	
Isolation	kV	DC max	3.5	1.5	3.0
Capacitance	pF	coil/screen gnd	0.2	<1	<1
Contact Connections		pin number		3 & 4	
Lifetime	operations	dry switching		10 <sup>9</sup>	
Contact Resistance	mOhms	maximum (typical)		80 (30)	
Insulation Resistance	Ohms	minimum (typical)		10 <sup>10</sup> (10 <sup>13</sup> )	
ESR at 1.5A, 30MHz	mOhms	typical		400	
<b>Coil At 20°C</b>					
Nom. Working Voltage	VDC		12	5	5
Min. pulse length	ms	Minimum	0.5	2	2
Operate time	ms	diode fitted	0.5	2	2
Nominal Resistance	ohms	+/-10%	500	300	300
RF Screening			Part	No	No
RF Screening Connection		pin number		7	
Coil Connections	Set	pin number		1 & 2(+)	
Reset				5 & 6(+)	
<b>Relay</b>					
Isolation contact to coil/screen	kV	DC max		4	
Capacitance contact to all other terminals	pF	contacts open		2.5	
Capacitance contact to all other terminals	pF	contacts closed	4.0	3	3
<b>Environmental</b>					
Operating temperature range	°C			-40 to +85	
Storage temperature range	°C			-40 to +125	
Weight	gm		11	7	7

**Mechanical Dimensions**

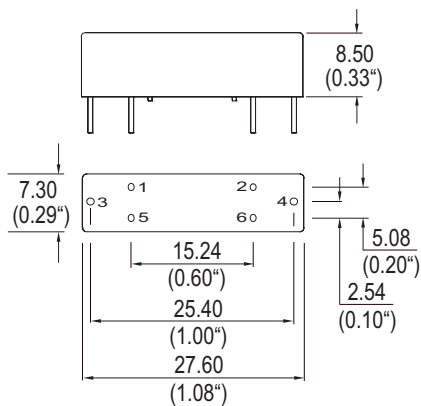
All dimensions are in millimeters (inches)

**FRS22012**

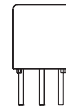


PIN SIZE	
PINS 3 & 4	1.0 (0.039") dia.
PINS 1, 2, 5 & 6	0.7 (0.026") dia.
PIN 7	1.0 x 1.0 Square (0.039")

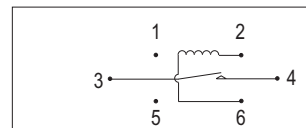
**SLRS**



PIN SIZE	
PINS 1, 2, 5 & 6	0.7 Square (0.025")
PINS 3 & 4	0.8 (0.031") dia.



CIRCUIT DIAGRAM.



**ISO9001 Certified**

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