



# FRD12000

*screened*  
**8kV, 6A**



An open frame RF reed relay with 8kV isolation and 6A (at 30MHz) carry current, the FRD12000 series has been used in many HF radio system specifications over the years, with applications in commercial maritime (GMDSS) equipment and military HF radio units worldwide. The use of vacuum reed switches with rhodium contacts offers high isolation voltages, low contact resistance and long operating lifetime.

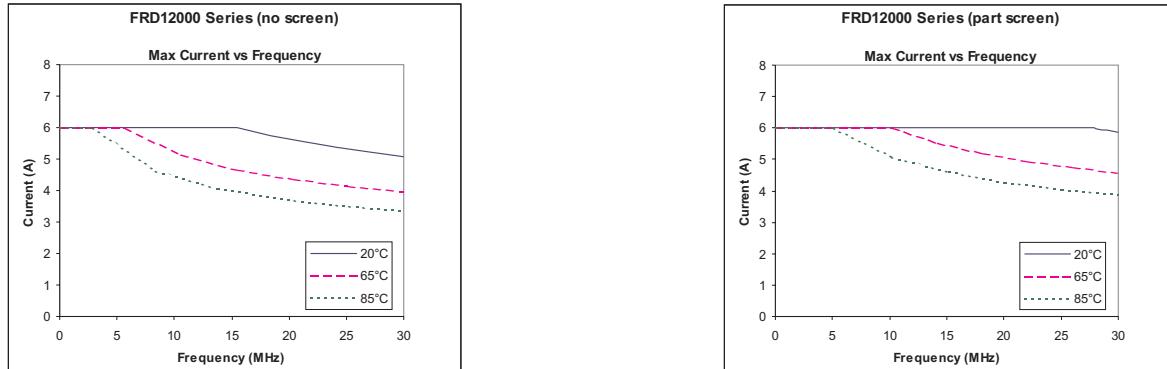
Available as Form A (SPNO) or Form B (SPNC) contact configurations.



- **Up to 8kVDC Isolation between Contacts**
- **6A Carry Current (up to 30MHz)**
- **Excellent RF Performance**
- **Ideal for Antenna Tuning Units**
- **Form A/B Contact Configuration**
- **Customising Facility**

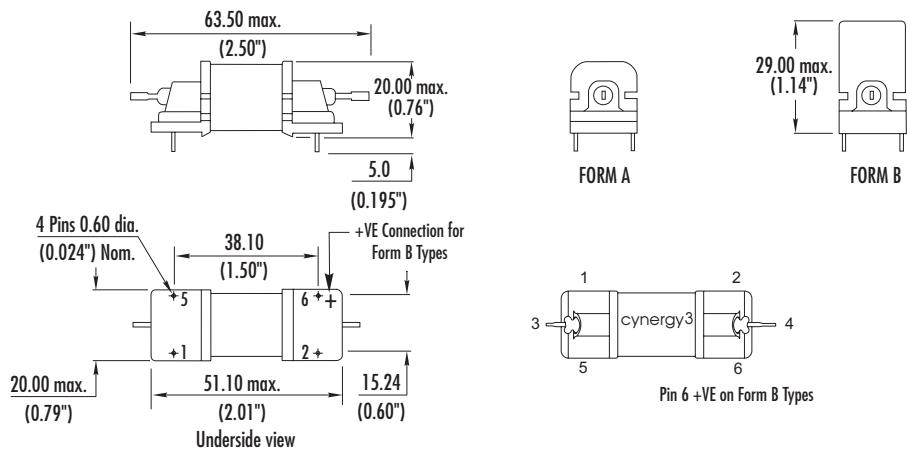
Contact	Units	Conditions	FRD12015	FRD12021	FRD12023	FRD12049
Action (form A, B or Latching)		A	A	B	A	B
Switching Voltage	V	DC max	20	20	20	20
Switching Current	A	DC max	1	1	1	1
Carry Current	A	RMS max	6	6	6	6
Isolation	kV	DC max	8	8	5	8
Capacitance	pF	coil/screen gnd	0.4	0.6	0.6	0.6
Lifetime	operations	dry switching	$10^9$	$10^9$	$10^9$	$10^9$
Contact Resistance	mOhms	maximum (typical)	50 (15)	50 (15)	50 (15)	50 (15)
Insulation Resistance	Ohms	minimum (typical)	$10^{10}$ ( $10^{13}$ )	$10^{10}$ ( $10^{13}$ )	$10^{10}$ ( $10^{13}$ )	$10^{10}$ ( $10^{13}$ )
ESR at 4.5A, 30MHz	mOhms	typical	100	150	150	150
<b>COIL at 20°C</b>						
Nominal Working Voltage	VDC		24	12	12	24
Must Operate	VDC	max	15	8	8	14
Must Release	VDC	min	2	2	2	4
Nominal Resistance	ohms	+/-10%	1000	380	480	1500
RF Screening			Part	-	-	-
RF Screening Connection		pin position	2 & 5	2 & 5		
Coil Connections		pin position	1 & 6	1 & 6	1 & 6	1 & 6
<b>RELAY</b>						
Operate time (including bounce)	ms		2	3	3	3
Release time	ms		1	2	1	2
Isolation contact to all other terminals	kV	DC max	10	10	10	10
Isolation coil to screen	kV	DC max	0.5	N/A	N/A	N/A
Capacitance contact to all other terms	pF	contacts open	2.0	2.5	1.5	2.5
<b>ENVIRONMENTAL</b>						
Storage temperature range	°C				-55 to +125	
Operating temperature range	°C	Limited current*			-40 to +85	
Shock	g	11ms 1/2 sine pk			100	
Bump	g	6ms 1/2 sine pk			40	
Vibration	g	10- 500Hz			10	
Weight	gm		24	33	24	33

see graphical data.



#### **Mechanical Dimensions**

All dimensions are in millimeters (inches)



#### **ISO9001 Certified**

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