Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

RI-48 Series Dry Reed Switch

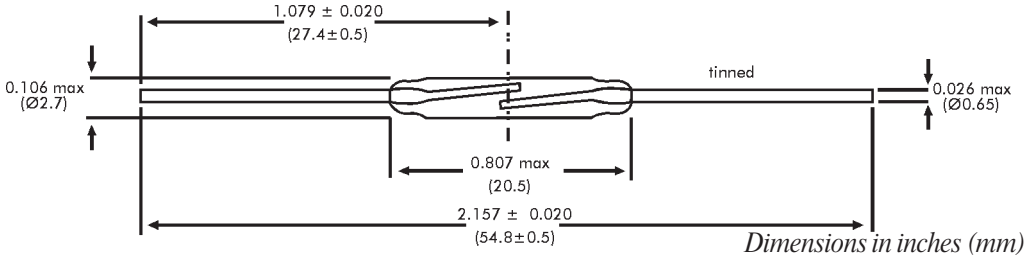
RI-48 Series

Micro dry-reed switch hermetically sealed in a gas-filled glass envelope. Single-pole, single-throw (SPST) type, having normally open contacts, and containing two magnetically actuated reeds. The switch is of the double-ended type and may be actuated by an electromagnet, a permanent magnet or a combination of both.

The device is intended for use in relays for switching power loads and high stand-off voltage applications.

RI-48 Series Features

- Perfect heavy load switch
- Can handle loads up to 70 Watts
- Contact layers: gold, sputtered ruthenium
- Superior glass-to-metal seal and blade alignment
- Excellent life expectancy and reliability



Dimensions in inches (mm)

General data for all models RI-48

AT-Customization / Preformed Leads

Besides the standard models, customized products can also be supplied offering the following options:

- Operate and release ranges to customer specification
- Cropped and/or preformed leads

Coils

All characteristics are measured using the Philips Standard Coil. For definitions of the Philips Standard Coil, refer to *"Application Notes"* in the *Reed Switch Technical & Application Information* Section of this catalog.

Life expectancy and reliability

The life expectancy data given below are valid for a coil energized at 1.5 times the published maximum operate value for each type in the RI-48 series.

No-load conditions (operating frequency: 100 Hz)

Life expectancy: min. 10^8 operations with a failure rate of less than 10^{-9} with a confidence level of 90%.

End of life criteria:
Contact resistance > 1Ω after 2 ms
Release time > 2 ms (latching or contact sticking).

Loaded conditions (resistive load: 20 V; 500 mA; operating frequency: 125 Hz)

RI-48AA

Life expectancy: min. 10^7 operations with a failure rate of less than 10^{-8} with a confidence level of 90%.
End of life criteria:
Contact resistance > 2Ω after 2.5 ms
Release time > 2.5 ms (latching or contact sticking).

RI-48A; RI-48B; RI-48C

Life expectancy: min. 2.5 x 10^7 operations with a failure rate of less than 10^{-8} with a confidence level of 90%.
End of life criteria:
Contact resistance > 2Ω after 2.5 ms
Release time > 2.5 ms (latching or contact sticking).

Loaded conditions (resistive load: 100 V-700 mA; operating frequency: 20 Hz)

RI-48B; RI-48C

Life expectancy: min. $3x10^5$ operations with a failure rate of less than 10^{-6} with a confidence level of 90%.

RI-48 Series Dry Reed Switch

Model Number			RI-48A	RI-48B	RI-48C
Parameters	**Test Conditions**	**Units**			
Operating Characteristics					
Operate Range		AT	15-28	24-51	46-70
Release Range		AT	8-20	13-27	18-32
Operate Time - including bounce (typ.)	(energization)	ms	0.35 (35 AT)	0.35 (64 AT)	0.35 (87.5 AT)
Bounce Time (typ.)	(energization)	ms	0.15 (35 AT)	0.15 (64 AT)	0.15 (87.5 AT)
Release Time (max)	(energization)	μs	30 (35 AT)	30 (64 AT)	30 (87.5 AT)
Resonant Frequency (typ.)		Hz	3200	3200	3200
Electrical Characteristics					
Switched Power (max)		W	70	70	70
Switched Voltage DC (max)		V	200	200	200
Switched Voltage AC, RMS value (max)		V	250	250	250
Switched Current DC (max)		mA	1000	1000	1000
Switched Current AC, RMS value (max)		mA	1000	1000	1000
Carry Current DC; AC, RMS value (max)		A	1.75	2.25	2.25
Breakdown Voltage (min)		V	400	580	780
Contact Resistance (initial max)	(energization)	m Ω	90 (27 AT)	90 (36AT)	90 (36 AT)
Contact Resistance (initial typ.)	(energization)	m Ω	60 (27 AT)	60 (36 AT)	60 (36 AT)
Contact Capacitance (max)	without test coil	pF	0.2	0.2	0.2
Insulation Resistance (min)	RH ≤ 45%	M Ω	10^6	10^6	x10^6

End of life criteria:
Contact resistance > 1.5Ω after 2.5 ms.
Release time > 2.5 ms (latching or contact sticking).
Switching different loads involves different life expectancy and reliability data. Further information is available on request.

Mechanical Data
Contact arrangement is normally open; lead finish is tinned; net mass is approximately 280 mg; and can be mounted in any position.

Shock
The switches are tested in accordance with “IEC 68-2-27”, test Ea (peak acceleration 500 G, half sinewave; duration 11 ms). Such a shock will not cause an open switch (no magnetic field present) to close, nor a switch kept closed by an 80 AT coil to open.

Vibration
The switches are tested in accordance with “IEC 68-2-6”, test Fc (acceleration 10 G; below cross-over frequency 57 to 62 Hz; amplitude 0.75 mm; frequency range 10 to 2000 Hz, duration 90 minutes). Such a vibration will not cause an open switch (no magnetic field present) to close, nor a switch kept closed by an 80 AT coil to open.

Mechanical Strength
The robustness of the terminations is tested in accordance with “IEC 68-2-21”, test Ua_1 (load 40 N).

Operating and Storage Temperature
Operating ambient temperature; min: -55°C; max: +125°C. Storage temperature; min: -55°C; max: +125°C. **Note:** Temperature excursions up to 150°C may be permissible. For more information contact your nearest Coto Technology sales office.

Soldering
The switch can withstand soldering heat in accordance with “IEC 68-2-20”, test Tb, method 1B: solder bath at 350 ±10°C for 3.5 ±0.5 s. Solderability is tested in accordance with “IEC 68-2-20”, test Ta, method 3: solder globule temperature 235°C; ageing 1b: 4 hours steam.

Welding
The leads can be welded.

Mounting
The leads should not be bent closer than 1 mm to the glass-to-metal seals. Stress on the seals should be avoided. Care must be taken to prevent stray magnetic fields from influencing the operating and measuring conditions.