COMUS Group

COMUS formerly

RI-90 Series Dry Reed Switch



RI-90 Series

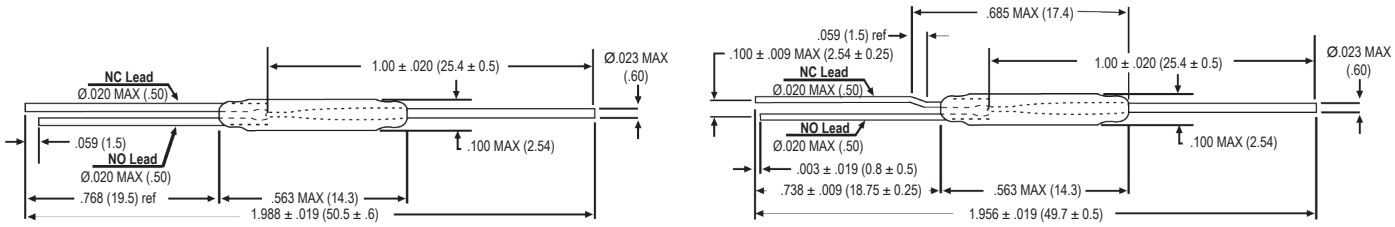
Micro changeover dry-reed switch hermetically sealed in a gas-filled envelope. Single-pole, double-throw (SPDT) type, having a normally open and a normally closed contact.

The switch may be actuated by an electromagnet, a permanent magnet or a combination of both. The device is intended for use in sensors, relays, pulse counters or similar devices.

RI-90 Series Features

- Ideal for ATE switching and proximity sensors
- Contact layers: Ruthenium on gold
- Superior glass-to-metal seal and blade alignment
- Excellent life expectancy and reliability
- RoHS Compliant

Dimensions for RI-90 Series



All Dimension in inches (mm) nominal

General data for all models RI-90

AT-Customization / Performed 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 performed 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 1.25 times the published maximum operate value for each type in the RI-90 series.

No load conditions (operating frequency: 100Hz)

Life expectancy: min. 10^8 operations with a failure rate of less than 2 x 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).

Operating and Storage Temperature

Operating ambient temperature; min: -55°C; max: +125°C. Storage temperature; min: -55°; max: +125°C. Note: Temperature excursions up to 150°C may be permissible. For more information contact your nearest Comus Group 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.

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Technical Specifications

Parameters	Test Conditions	Units	RI-90
Operating Characteristics			
Operate Range		AT	15-40
Release Range		AT	5 (min)
Operate Time - including Bounce (typ.)		ms	1.0
Bounce Time (typ.)		ms	1.5
Release Time (max)		ms	1.0
Resonant Frequency (typ.)		Hz	TBD
Electrical Characteristics			
Switched Power (max)		W	5
Switched Voltage DC (max)		V	175
Switched Voltage AC, RMS value (max)		V	125
Switched Current DC (max)		mA	400
Switched Current AC, RMS value (max)		mA	280
Carry Current DC (max)		A	0.5
Breakdown Voltage (min)		V	200
Contact Resistance (initial max.)		mΩ	140
Contact Resistance (initial typ.)		mΩ	120
Contact Capacitance (max)	without test coil	pF	0.8
Insulation Resistance (min)	RH ≤ 45%	MΩ	10^3

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.

• As part of the company policy of continued product improvement, specifications may change without notice. Our sales office will be pleased to help you with the latest information on this product range and the details of our full design and manufacturing service. All products are supplied to our standard conditions of sale unless otherwise agreed in writing.

RI-90 Series Dry Reed Switch

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