REED SWITCH BASICS PART II

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Introduction
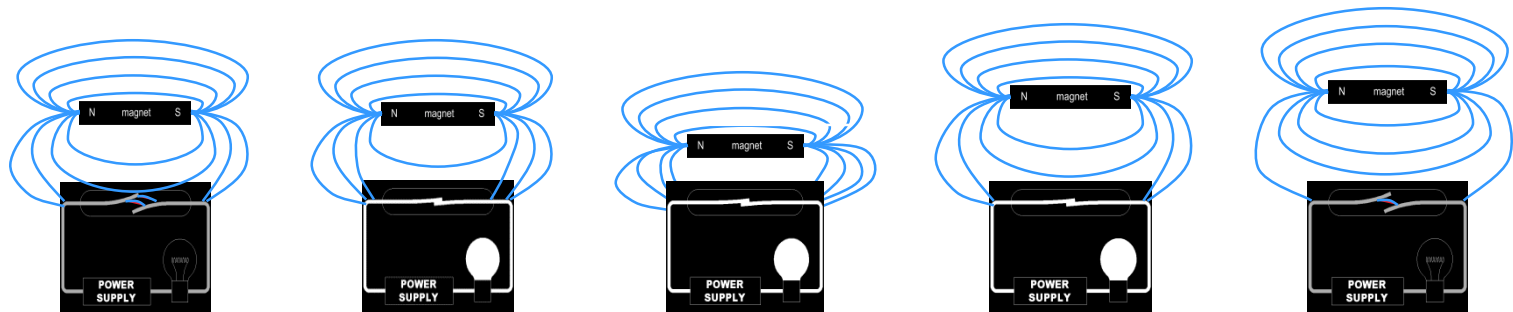
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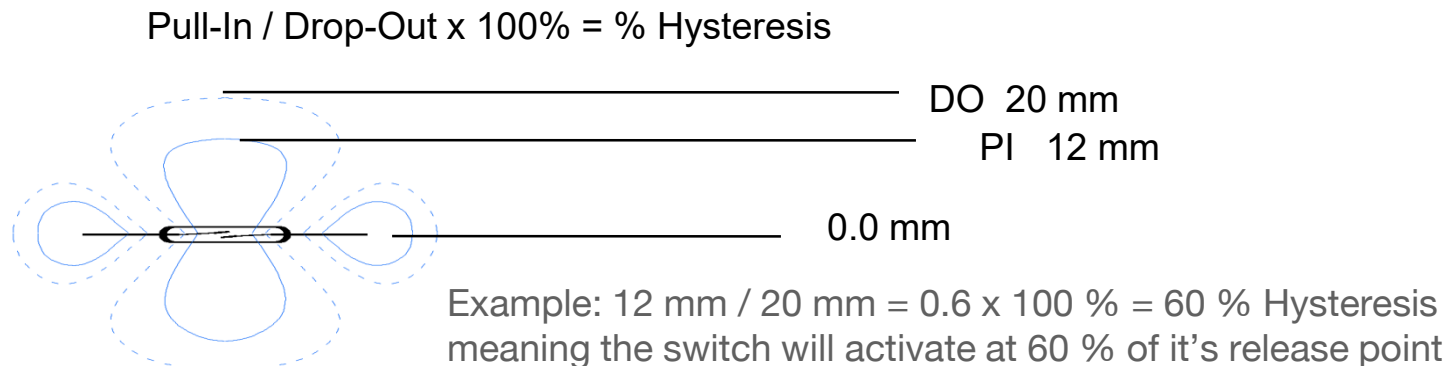# Reed Switch Operating Characteristics
Pull-in / Drop-out

› Pull In (PI) – is the point where the reed switch contacts close

› Drop out (DO) is the point where the reed switch contacts open

Reed Switch Operating Characteristics
Hysteresis

› Hysteresis can be a very important parameter in reed sensors, particularly when sensing liquid levels

› If the liquid being measured is in any type of moving vehicle or a vibrating environment, the hysteresis can play an important role in a successful application

› Once the sensing takes place the hysteresis will keep it in that state even after a considerable movement of the liquid level.

Pull-In / Drop-Out x 100% = % Hysteresis

DO 20 mm

PI   12 mm

0.0 mm

Example: 12 mm / 20 mm = 0.6 x 100 % = 60 % Hysteresis meaning the switch will activate at 60 % of it's release point

Reed Switch Parameters

Contact Parameters	
Rated Power (Watts)	up to 100
Switching Voltage (Volts DC/AC)	0 to 10,000
Breakdown Voltage (Volts DC)	200 to 15,000
Switching Current (Amps)	0 to 3.0
Carry Current (Amps)	0 to 15.0
Contact Resistance (milliOhms)	< 100
Isolation Resistance (Ohms)	up to 10E15
Operating Time (milliseconds)	< 1.0
Release Time (microseconds)	< 50
Capacitance (picoFarad)	0.2 typical

Reed Switch Parameters

› Pull-In (PI)

› Drop-out (DO)

› Hysteresis

› Switching voltage

› Breakdown voltage

› Common mode voltage

› Switching current

› Carry current

› Insulation resistance

› Capacitance

› Lifetime

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Reed Switch Basics Part II - END

Content of part III:

› Dynamic Contact Resistance

› The Reed Switch as Reed Relay

› The Reed Switch as Reed Sensor

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