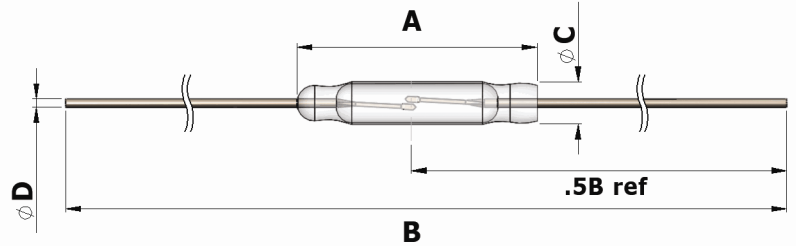


# GR501 Reed Switch



REACH & RoHS Compliant

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- Professional grade sub miniature reed switch with rhodium contacts
- Designed for applications where the available magnetic field is very low
- Useful for "wide-gap" security system applications and other magnetic systems requiring long operating distances with permanent magnets

## Physical Characteristics

<b>A</b>	<b>Glass Length (Max.)</b>	12.7 mm
<b>B</b>	<b>Overall Length (Max.)</b>	54.0 mm
<b>C</b>	<b>Glass Diameter (Max.)</b>	2.3 mm
<b>D</b>	<b>Lead Diameter (Nom.)</b>	0.45 mm

## Electrical Characteristics

<b>Contact Arrangement</b>	Form A (SPST), Center Gap
<b>Contact Material</b>	Rhodium
<b>Power Rating</b> <sup>1</sup>	10VA maximum
<b>Switching Current (Max.)</b>	0.5 Amp. DC, 0.5 Amp. AC
<b>Carry Current (Max.)</b>	0.75 Amp. DC, 0.75 Amp. AC
<b>Switching Voltage (Max.)</b>	100 VDC, 125 VAC
<b>Breakdown Voltage (Min. @20AT)</b> <sup>2</sup>	200 Volts DC
<b>Contact Resistance</b> <sup>3</sup>	150 Milliohms
<b>Insulation Resistance (Min.)</b>	10 <sup>12</sup> ohms
<b>Contact Capacitance (pf Max.)</b>	0.3 pf

1. The specification for VA rating may sometimes be exceeded for less sensitive (higher AT) switches, and should be decreased for very sensitive (lower AT) switches. Standex-Meder Electronics will run life tests specific to a customer's load upon request.
2. Breakdown voltage is measured in the presence of a radioactive ionising source. Switch leakage current is limited to 100 microamperes
3. Contact resistance measurements are made at 10ma from a 1-volt source, with 50% overdrive, using a 4-wire (Kelvin) measuring system. Contact probes are located on 43 mm centres.

## Minimum Switching Life with Standard Test Loads, using 20AT switch

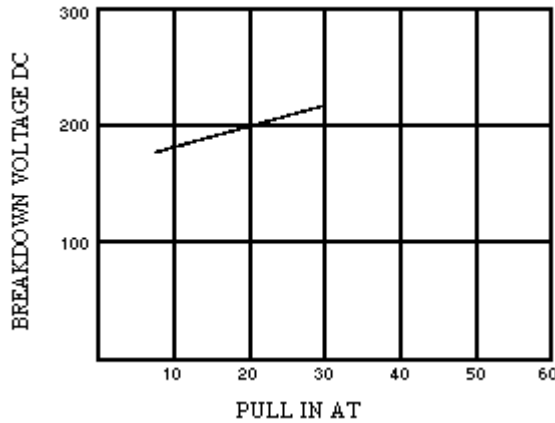
<b>Voltage</b>	5 VDC	10 VDC	12 VDC	24 VDC	100 VDC	125 VAC
<b>Current</b>	2 mA	1 A	10 mA	10 mA	100 mA	80 mA
<b>Life</b>	100 x 10 <sup>6</sup>	0.5 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	2 x 10 <sup>6</sup>	0.5 x 10 <sup>6</sup>	0.5 x 10 <sup>6</sup>

**Note:** End of life is defined as contact resistance exceeding one ohm and/or failure to operate.

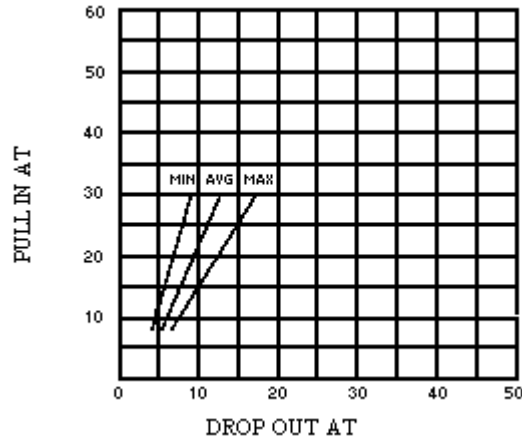
**Operating Characteristics**

<b>Magnetic Sensitivity (Range - Pull In)</b>	7 to 30 Ampere Turns
<b>Magnetic Sensitivity (Range - Drop Out)</b>	(See chart below)
<b>Operate Time, including bounce (typ.)</b>	1.0 Milliseconds
<b>Release Time (typ.)</b>	0.1 Milliseconds
<b>Resonant Frequency (typ.)</b>	3.2 kHz
<b>Vibration, 10-2,000 Hz (G's Max.)</b>	50 G
<b>Shock, 11-ms. 1/2 Sine wave (G's Max.)</b>	100 G
<b>Operating Temperature</b>	-40°C to + 125°C
<b>Storage Temperature</b>	-50°C to + 155°C

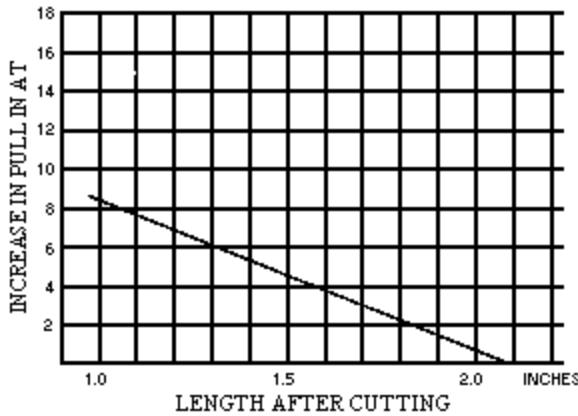
**Charts**



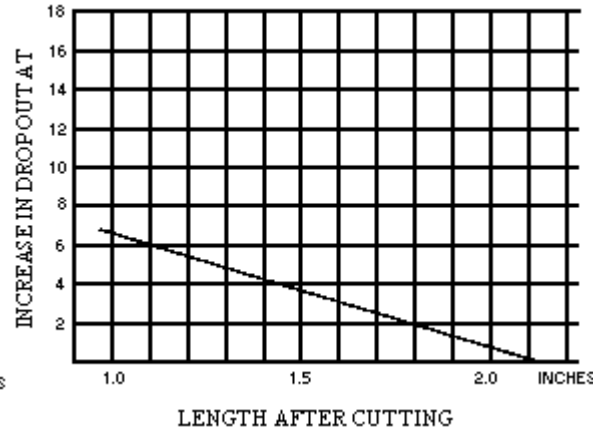
**Breakdown Voltage Plotted  
Against Pull-In Ampere Turns**



**Pull-In Ampere Turns Plotted  
Against Drop-Out Ampere Turns**



**Change In Pull-In Ampere Turns  
After Switch Lead Cutting**



**Change In Drop-Out Ampere Turns  
After Switch Lead Cutting**

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