Standex MEDER ELECTRONICS

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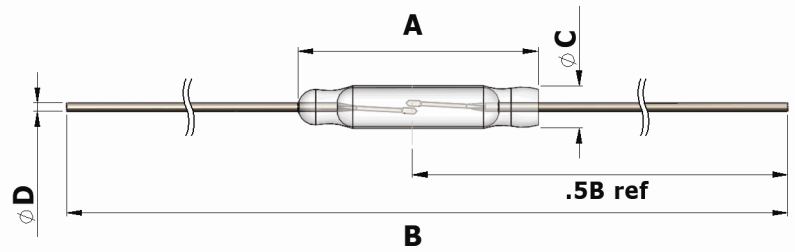
GP501 Reed Switch



REACH & RoHS Compliant

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- Professional grade sub miniature reed switch with PGM alloy 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

A	**Glass Length (Max.)**	12.7 mm
B	**Overall Length (Max.)**	54.0 mm
C	**Glass Diameter (Max.)**	2.3 mm
D	**Lead Diameter (Nom.)**	0.45 mm

Electrical Characteristics

Contact Arrangement	Form A (SPST), Center Gap
Contact Material	PGM alloy
Power Rating [1]	10VA maximum
Switching Current (Max.)	0.5 Amp. DC, 0.5 Amp. AC
Carry Current (Max.)	0.75 Amp. DC, 0.75 Amp. AC
Switching Voltage (Max.)	100 VDC, 125 VAC
Breakdown Voltage (Min. @20AT) [2]	200 Volts DC
Contact Resistance [3]	150 Milliohms
Insulation Resistance (Min.)	10^{12} ohms
Contact Capacitance (pf Max.)	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

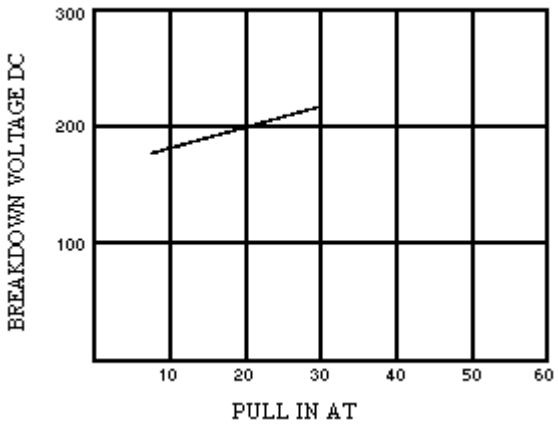
Voltage	5 VDC	10 VDC	12 VDC	24 VDC	100 VDC	125 VAC
Current	2 mA	1 A	10 mA	10 mA	100 mA	80 mA
Life	100×10^6	0.5×10^6	10×10^6	2×10^6	0.5×10^6	0.5×10^6

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

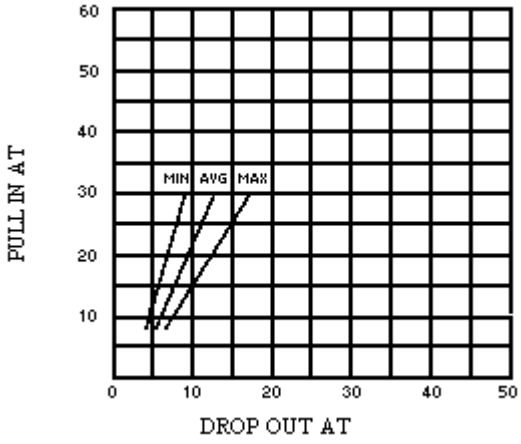
Operating Characteristics

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

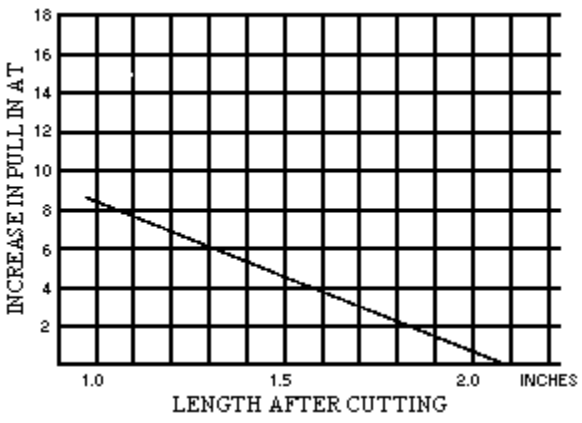
Charts



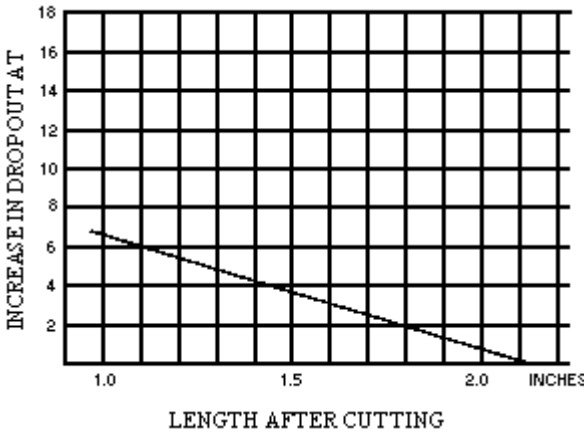
Breakdown Voltage Plotted Against Pull-In Ampere Turns



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

Mouser Electronics

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GP501202501 GP501152001 GP501101501