



## L-Series



Offers remarkable ferrous metal proximity sensing (needs no magnet actuator) in such a compact, low cost two-wire switch. Can also be configured as a magnetically tamper resistant device. Robust all metal construction and design make it highly resistant to permanent contact welding due to power surges.

### CONTACT CHARACTERISTICS

Contact Form: B (Normally Closed-N.C.)

Contact Material: Gold/Gold

Initial Contact Resistance (Typical):

< 150 Milli Ohms

Contact Capacitance: < 1 pf

Contact Ratings: 30 VDC @ 250 ma

Contact Bounce\* (Typical): < 10 milliseconds\*. Recommended trial de-bounce - 15 milliseconds (min.) closed contact condition for logic state changes - or 30 Hz low pass filter buffer

Minimum Breakdown Voltage (Typical): 300 VDC

Insulation Resistance (Typical):

> 5 Mega Ohms

### OPERATION CHARACTERISTICS

Operate/Release Values:

See Switching Characteristics Table

Actuation Magnet Orientation:

Either Pole

Maximum Operating Frequency: 20 Hz

Mounting Position: Any Plane

Operating Temperature: -40°C to +85°C

Shock (Switch Damage): > 100 G's

Vibration: 10-15 G's (80-450 Hz)

(Higher Values Available)

### GENERAL CHARACTERISTICS & INFORMATION

**Construction:** Non-Ferrous Metal Housing, Compression Seal Hermetically Sealed, Protective Gas Atmosphere, Precious Metal Plated Spherical Magnet Contact.

**Soldering Guidelines:** 600° F (315° C) Temperature iron for 5 sec. (max.). Do not solder within 1/8" (3 mm) of glass seal. Lead pins precious metal plated for enhanced solderability.

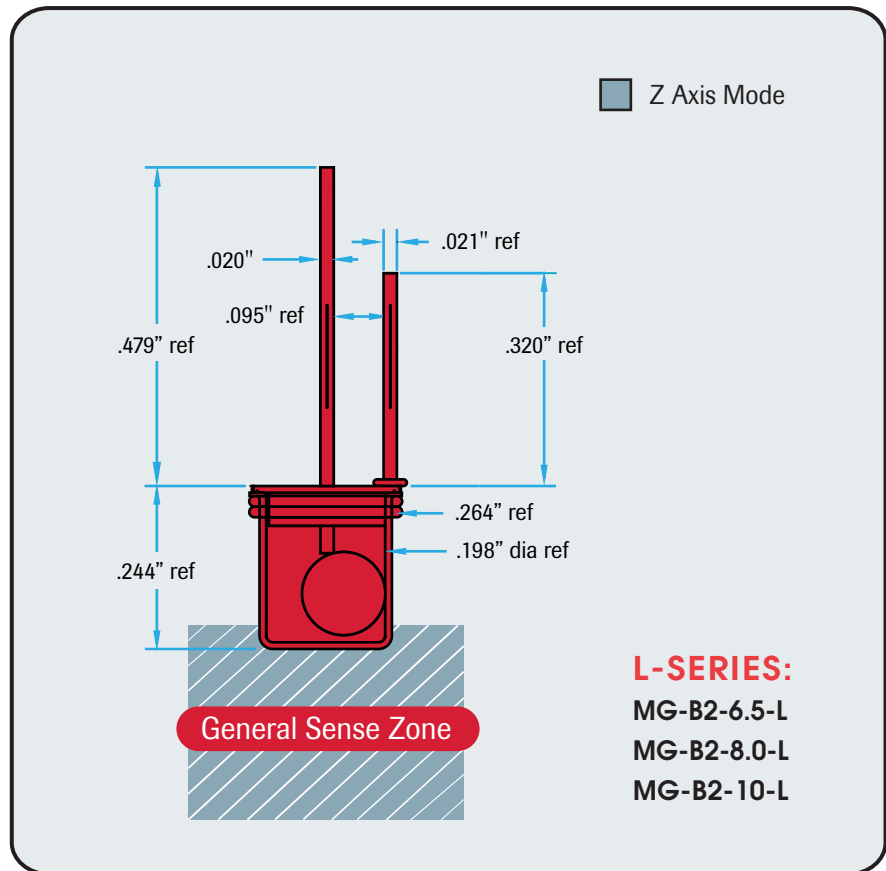
**Termination Polarity Guidelines:** Polarity selection is non-critical, though some

life gain may be realized by center pin as cathode on logic loads, but center pin as anode on larger loads.

**Lead Wire Cutting / Bending Guidelines:** Cut length has no effect on magnetic OP/REL values. Shearing action type cutters are recommended, but end nippers and side cutters are NOT recommended. Metal style seals are extraordinarily rugged, but the bending of unsupported lead wire pins adjacent to the glass seal is not recommended (i.e. when bending

use the support of some type of parallel jaws spaced away from the glass seal to grip the lead wirepins while bending the pins' free ends, so no bending strains are imposed on the glass seal.

**Other Comments:** Ferromagnetic materials and strong Electromagnetic devices proximate to the switch or its actuator magnet may adversely affect expected OP/REL switching values. Experimentation is recommended to investigate areas of concern.





The Most Advanced and Effective Magnetic Sensor

		SWITCHING CHARACTERISTICS		AIR GAP DISTANCE		
		POSITION	TYPICAL	MIN	MAX	
The Most Advanced and Effective Magnetic Sensor	MG-B2-6.5-L	(a) Leads Horz. <b>"OPEN"</b> (b) Leads Horz. <b>"CLOSED"</b>	1.000" 1.092"	.813" 1.825"	1.187" 1.359"	NEO 35 MAGNET TARGET 0.5" L x .375" T
	MG-B2-8.0-L	(a) Leads Horz. <b>"OPEN"</b> (b) Leads Horz. <b>"CLOSED"</b>	.921" .989"	.831" .918"	1.011" 1.050"	
	MG-B2-10-L	(a) Leads Horz. <b>"OPEN"</b> (b) Leads Horz. <b>"CLOSED"</b>	.843" .902"	.739" .826"	.947" .978"	
	MG-B2-6.5-L	(a) Leads Horz. <b>"OPEN"</b> (b) Leads Horz. <b>"CLOSED"</b>	.128" .152"	.103" .137"	.153" .167"	FERROUS METAL TARGET EG. C1010 Low Carbon 1.0" L x 1.0" W x .0625" T
	MG-B2-8.0-L	(a) Leads Horz. <b>"OPEN"</b> (b) Leads Horz. <b>"CLOSED"</b>	.116" .138"	.084" .107"	.148" .169"	
	MG-B2-10-L	(a) Leads Horz. <b>"OPEN"</b> (b) Leads Horz. <b>"CLOSED"</b>	.111" .131"	.083" .113"	.139" .149"	

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**Switching characteristics** the target moves closer (a), this normally closed switch will OPEN at the air gap distance (d), and CLOSE when the target moves away (b).

### ABOUT MAGNASPHERE

MAGNASPHERE® Corp. is a privately held company founded in 2002, with the purpose of providing superior performing magnetic switch and sensor technology to the industrial/commercial OEM and security markets. MAGNASPHERE's patented, award-winning technology establishes new standards for magnetic switch performance while providing an affordable and more effective alternative to other magnetic switch technologies.

Learn more: Visit us at [www.MAGNASPHERE.com](http://www.MAGNASPHERE.com).



### PATENTED DESIGN

MAGNASPHERE® products are covered by one or more of the following U.S. and international patents:

- |          |                   |          |
|----------|-------------------|----------|
| #5332992 | #5530428          | #5673021 |
| #5880659 | #5977873          | #6087936 |
| #6506987 | #6603378          | #6803845 |
| #7023308 | (Patents Pending) |          |

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The purchase of MAGNASPHERE® switches provides the purchaser and the purchaser's customers with a limited right and license to make, use, offer for sale, and sell security devices, each making use of a single MAGNASPHERE® switch; however, this limited right and license does not extend to and specifically excludes security devices making use of two or more MAGNASPHERE® switches that cooperatively monitor a single area or location.

### INDUSTRY AWARDS

- Best of Show Award: ISC Expo
- Gold Award Sensor Technology: Sensors Expo
- Best Intrusion Detection: ISC Expo