



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

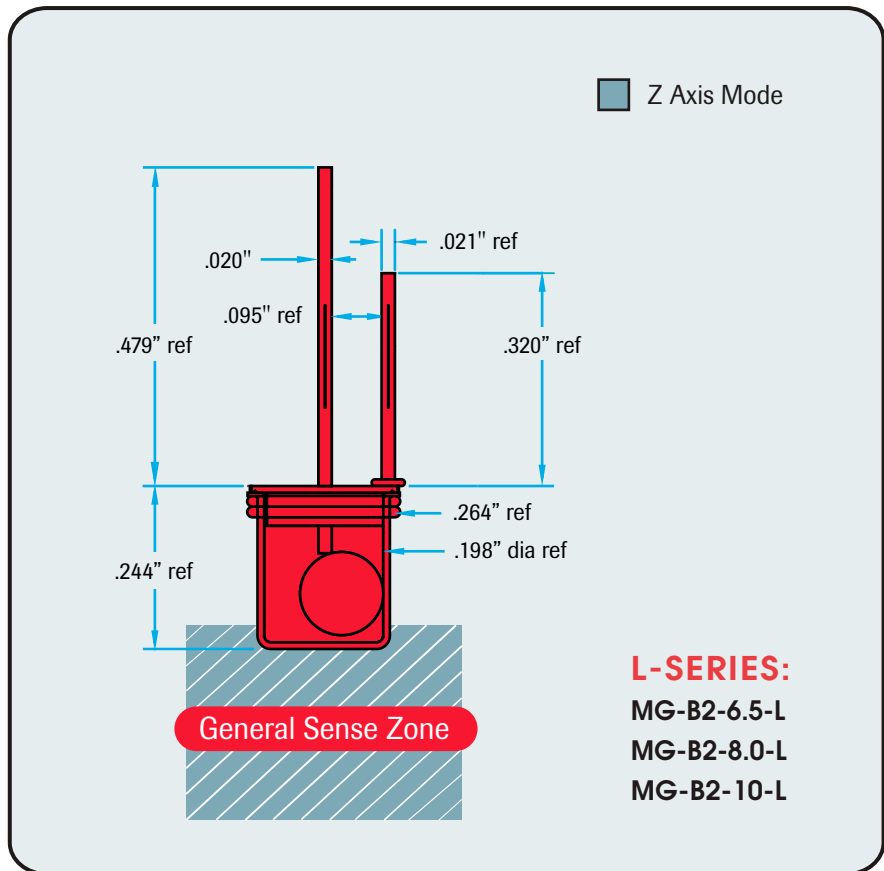
Operate/Release Values:
 See Switching Characteristics Table
Actuation Magnet Orientation:
 Either Pole
Maximum Operating Frequency: 20 Hz
Mounting Position: Any Plane
Operating Temperature: -40°C to +85°C
Shock (Switch Damage): > 100 G's
Vibration: 10-15 G's (80-450 Hz)
 (Higher Values Available)

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
	MG-B2-6.5-L Digikey Part#: 735-1005-ND	(a) Leads Horz. "OPEN" (b) Leads Horz. "CLOSED"	1.000" 1.092"	.813" 1.825"	1.187" 1.359"
	MG-B2-8.0-L Digikey Part#: 735-1006-ND	(a) Leads Horz. "OPEN" (b) Leads Horz. "CLOSED"	.921" .989"	.831" .918"	1.011" 1.050"
	MG-B2-10-L Digikey Part#: 735-1007-ND	(a) Leads Horz. "OPEN" (b) Leads Horz. "CLOSED"	.843" .902"	.739" .826"	.947" .978"
	MG-B2-6.5-L Digikey Part#: 735-1005-ND	(a) Leads Horz. "OPEN" (b) Leads Horz. "CLOSED"	.128" .152"	.103" .137"	.153" .167"
	MG-B2-8.0-L Digikey Part#: 735-1006-ND	(a) Leads Horz. "OPEN" (b) Leads Horz. "CLOSED"	.116" .138"	.084" .107"	.148" .169"
	MG-B2-10-L Digikey Part#: 735-1007-ND	(a) Leads Horz. "OPEN" (b) Leads Horz. "CLOSED"	.111" .131"	.083" .113"	.139" .149"

NEO 35 MAGNET TARGET
0.5" L x .375" Dia

FERROUS METAL TARGET
EG: C1010 Low Carbon
1.0" L x 1.0" W x .0625" Dia

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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.



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) | |

MAGNASPHERE® NOTICE OF LIMITED LICENSE AND RIGHTS: (Security Applications)
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