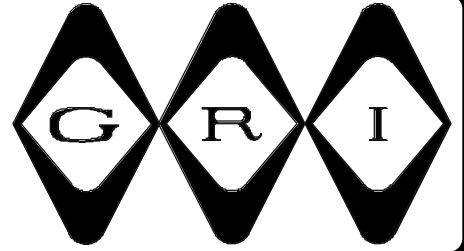


MAGNASPHERE

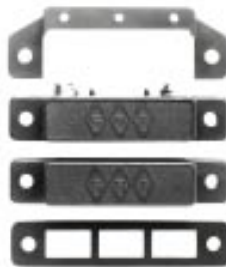


Surface Mount Switch Set with Magnasphere Technology MS28/MS29 and MS29P

- ◆ Higher Level of Security
 - ◆ Spherical Magnetism
- ◆ Resistant to Magnetic Tamper and Defeat
 - ◆ Hermetically Sealed
 - ◆ Screw Down Flanges
- ◆ Concealed Terminals on MS28
- ◆ Built-in E.O.L. Resistors and Diodes
- ◆ Switches and Magnets Available Separately
 - ◆ Colors: White, Brown, Gray
 - ◆ Private Labeling Upon Request
 - ◆ Lifetime Warranty
 - ◆ Standard Gap 3/8"



MS28A



MS29A



MS29PA

GEORGE RISK INDUSTRIES, INC.
GRI PLAZA
KIMBALL, NE 69145



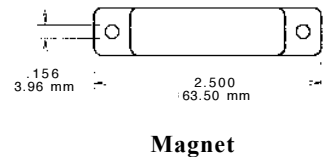
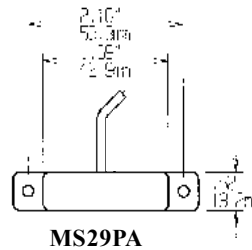
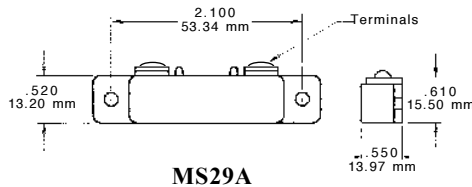
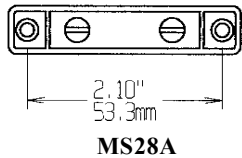
MADE IN U.S.A.

TOLL-FREE 1-800-445-5218
TOLL-FREE 1-800-523-1227
(308) 235-4645
FAX (308) 235-3561
E-MAIL: grisales@megavision.com
WEB SITE: www.grisk.com



INSTALLATION APPLICATIONS:

This series offers a standard gap of 1/2" inch and can be installed on a steel surface with a minimum gap penalty. The "P" style is a pre-wired switch with 2 feet of conductor cable. A broad range of mounting brackets are also available. (See spec sheet in accessory section of the G.R.I. full line catalog.)



CONSTRUCTION:

Magnasphere's® patented technology utilizes the principal of *Spherical Magnetism*. The heart of the switch is a magnetic sphere, or ball contact. This sphere is housed in a durable metal housing. Completing the switch is a seal that contains the contacting electrode, insulated from the magnetic perimeter by a time proven ceramic to metal bond.

The case or seal provides the second contact point required to complete the electrical circuit.

The seal/electrode cap is welded to the housing in an inert atmosphere providing a hermetically sealed contact.

OPERATION:

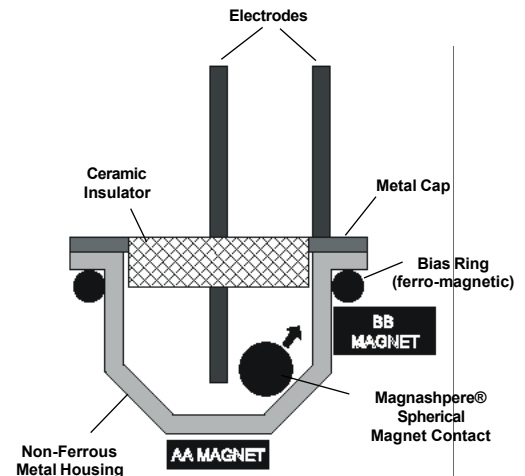
In the normally open position, the magnetic sphere is attracted to the ferromagnetic portion of the seal cap, away from the electrode. Because of this attraction the switch may be positioned in any orientation and will remain open.

When an actuator magnet approaches the switch from the end of the switch opposite the electrode, the magnetic ball is attracted to this field, and "snaps" to the bottom of the case, making contact with the electrode and case, closing the switch.

Unlike a reed switch that responds to a magnet within a global activation zone, the Magnasphere® switch responds to a magnet only within a restricted zone. A magnet outside the zone pulls the ball off the center electrode to open the switch.

PRINCIPLES OF SPHERICAL MAGNETISM:

Finite element analysis shows magnetic flux paths of the Magnasphere® magnetic ball contact. The spherical shape is not polarity sensitive and will be attracted to either pole of the actuating magnet.



Note: web site:
www.magnaspherecorp.com
 To download video on How it Works.

GRI products meet or exceed these minimum general specifications:

PART NUMBER	LOOP TYPE	ELECTRICAL CONFIG.	FORM	MAXIMUM INITIAL CONTACT RESISTANCE	MAXIMUM CONTACT RATING	MAXIMUM SWITCHING VOLTAGE	MAXIMUM SWITCHING CURRENT
MS28A	Closed	N/O	A	.400	5 Watts	250 AC/DC	.180*
MS29A	Closed	N/O	A	.400	5 Watts	250 AC/DC	.180*
MS29PA	Closed	N/O	A	.400	5 Watts	250 AC/DC	.180*

*Higher Maximum Switching Current ratings available.

CONTACT YOUR G.R.I. DISTRIBUTOR OR CALL:

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 G.R.I. PLAZA
 KIMBALL, NE 69145



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