

Distributed by:



www.Jameco.com ♦ 1-800-831-4242

The content and copyrights of the attached
material are the property of its owner.

Jameco Part Number 588131

MPS Series Magnetic Proximity Sensors



Features/Benefits

- Long life—10M operations
- Sealed contacts
- Quality construction
- Quick and easy installation

Typical Applications

- Automotive sensors and indicators
- Industrial sensors
- Factory automation equipment

Specifications

CONTACT RATINGS: 3.0 W max. @ 30 V DC or 30 V AC max. @ 0.3 AMP max.; 1.0 msec. max. operate time (including bounce); 1.0 AMP max. carry current.

CONTACT RESISTANCE: 100 m Ω max. initial.

DIELECTRIC STRENGTH: 200 V DC min.

ELECTRICAL CIRCUIT: SPST NO (Contact Form A). Reed switch opens when magnet is removed from proximity. Contacts are held closed when magnet is within actuation range.

OPERATING TEMPERATURE: -40°F to 212°F (-40°C to 100°C).

OPERATING DISTANCE/ALIGNMENT: Operate (pull-in or make) points are nominal values with $\pm 10\%$ tolerance. Release points are 110% to 150% of the operating points.

MECHANICAL & ELECTRICAL LIFE: 10 million operations.

PACKAGING: Bulk packaging, 10 switch and magnet pairs per package.

Materials

HOUSING/SPACER/COVER: ABS plastic (UL94V-0), white.

REED SWITCH: Rhodium coated reed contacts in hermetically sealed, nitrogen filled glass capsule. Closed when magnet is in close proximity. Used in closed loop circuits.

WIRE LEADS: UL 1061, 22 AWG wire: stranded, made of copper or aluminum; Length: 12 in. with ends stripped; Color: white.

POTTING (around wires): Epoxy.

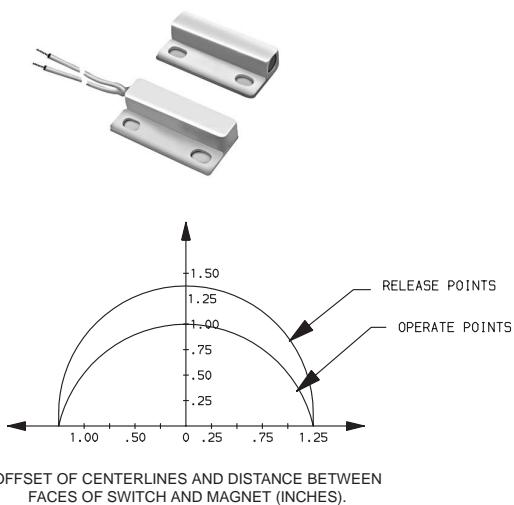
MAGNETS: Alnico V (all models, except MPS80WG) and Ceramic Ferrite 8 (MPS80WG model only).

ADHESIVE MOUNTING: Foam-backed, pressure-sensitive adhesive with release liner (MPS45WG model only).

NOTE: Wide gap contacts are polarity sensitive. Use alignment dots for proper installation of surface mount contacts.

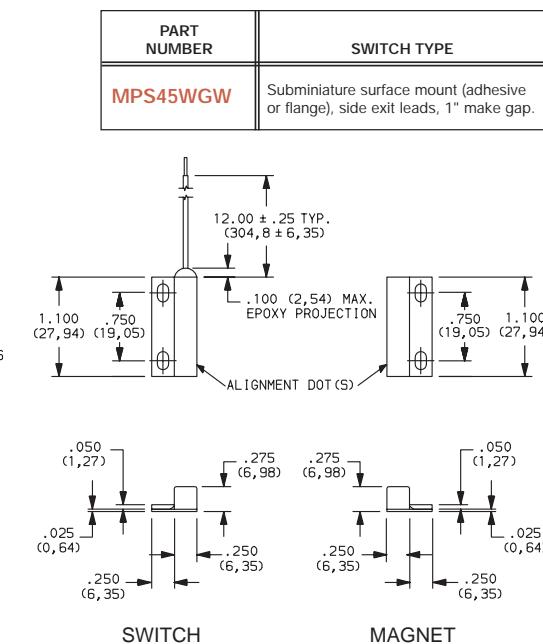
How To Order

Complete part numbers for MPS Series Magnetic Proximity Sensors are shown on pages E-16 thru E-19.



OFFSET OF CENTERLINES AND DISTANCE BETWEEN FACES OF SWITCH AND MAGNET (INCHES).

ACTUATION CHART



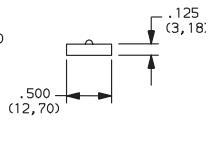
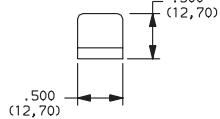
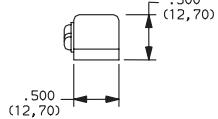
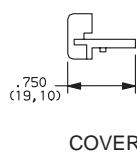
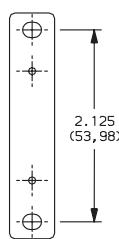
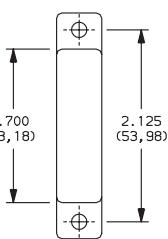
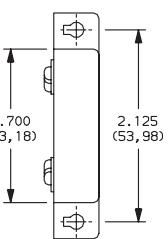
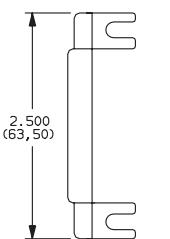
SWITCH

MAGNET



Dimensions are shown: IN (mm)
Dimensions subject to change

MPS Series Magnetic Proximity Sensors

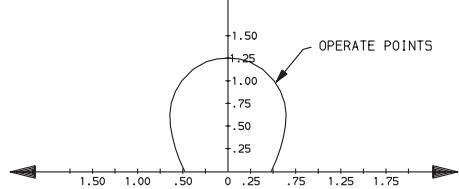


COVER

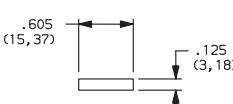
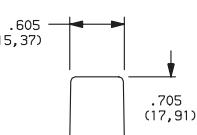
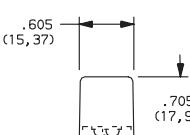
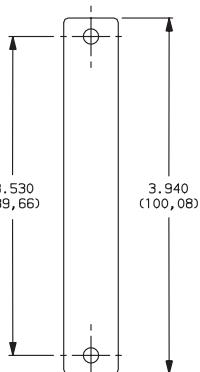
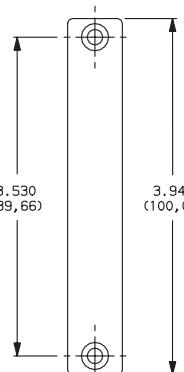
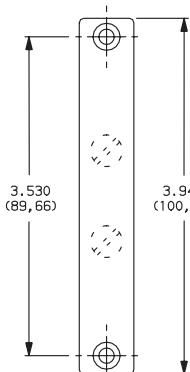
SWITCH

MAGNET

SPACER



| PART NUMBER | SWITCH TYPE |
|-----------------|---|
| MPS20WGW | Standard surface mount, screw terminals, 1 1/4" make gap. |



SWITCH

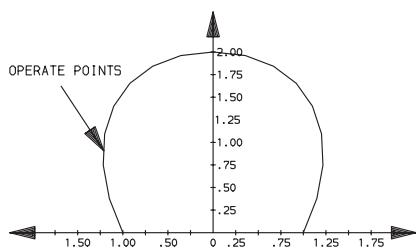
MAGNET

SPACER



E

Detect



| PART NUMBER | SWITCH TYPE |
|-----------------|---|
| MPS80WGW | Industrial surface mount, concealed screw terminals, 2" make gap. |

OFFSET OF CENTERLINES AND DISTANCE BETWEEN FACES OF SWITCH AND MAGNET (INCHES).

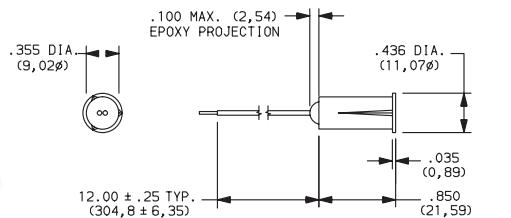
ACTUATION CHART



Third Angle Projection

Dimensions are shown: IN (mm)
Dimensions subject to change

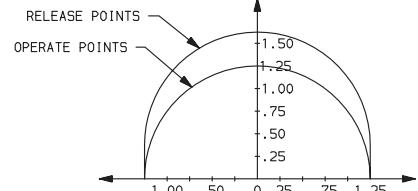
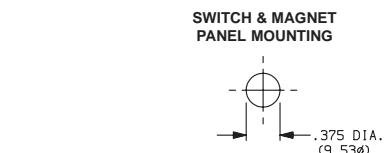
MPS Series Magnetic Proximity Sensors



| PART NUMBER | SWITCH TYPE |
|----------------|---|
| MPS9WGW | 3/8" Diameter recessed magnetic contact, 1 1/4" make gap. |

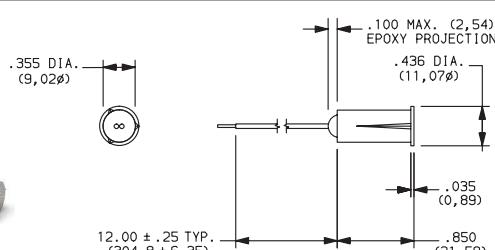
0.050 MAX. (1.27)
MAGNET PROJECTION

MAGNET



OFFSET OF CENTERLINES AND DISTANCE BETWEEN
FACES OF SWITCH AND MAGNET (INCHES).

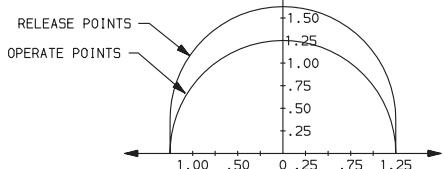
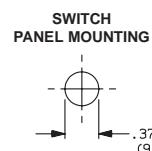
ACTUATION CHART



| PART NUMBER | SWITCH TYPE |
|-----------------|---|
| MPS95WGW | 3/8" Diameter recessed magnetic contact, 1 1/4" make gap. |

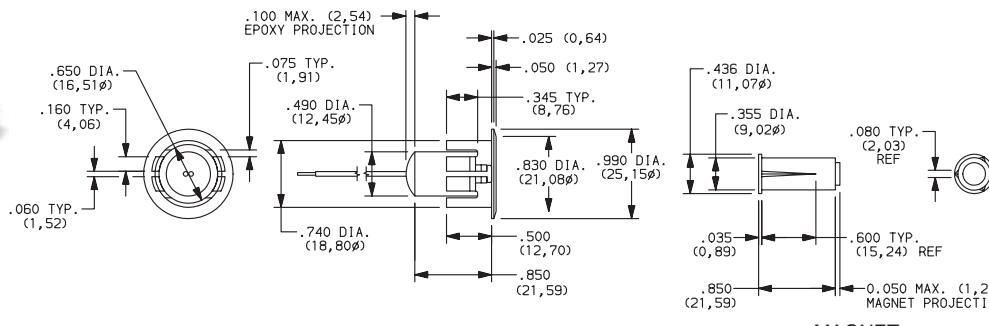
SWITCH

MAGNET



OFFSET OF CENTERLINES AND DISTANCE BETWEEN
FACES OF SWITCH AND MAGNET (INCHES).

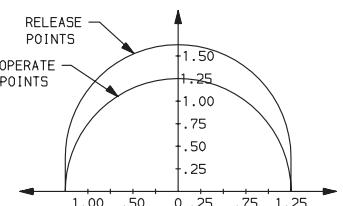
ACTUATION CHART



| PART NUMBER | SWITCH TYPE |
|-----------------|---|
| MPS73WGW | 3/4" Diameter recessed magnetic contact, 1 1/4" make gap. |

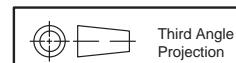
12.000 ± .250 TYP.
(304.80 ± 6.35)

SWITCH



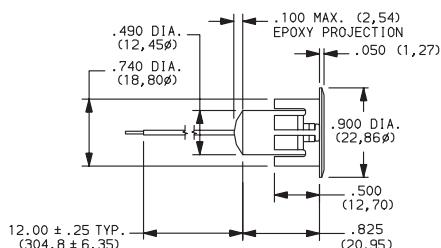
OFFSET OF CENTERLINES AND DISTANCE BETWEEN
FACES OF SWITCH AND MAGNET (INCHES).

ACTUATION CHART

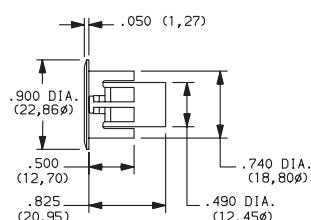


Dimensions are shown: IN (mm)
Dimensions subject to change

MPS Series Magnetic Proximity Sensors



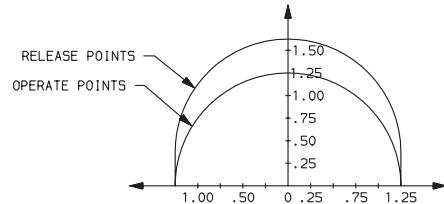
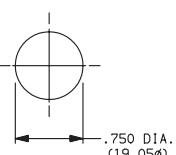
SWITCH



MAGNET



SWITCH & MAGNET
PANEL MOUNTING



OFFSET OF CENTERLINES AND DISTANCE BETWEEN
FACES OF SWITCH AND MAGNET (INCHES).

ACTUATION CHART

| PART NUMBER | SWITCH TYPE |
|-----------------|---|
| MPS70WGW | 3/4" Diameter recessed magnetic contact, 1 1/4" make gap. |

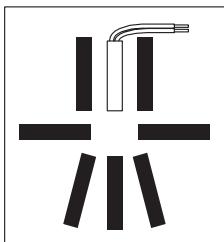
Actuating Positions

When installing recessed and surface mount contacts, magnet position is very important. The switch and magnet must always be parallel or end to end, and never in a 'T' configuration.

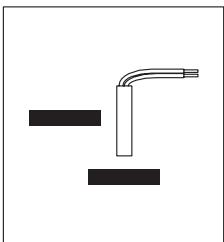
Gap Distance

Gap distance is a combination of the horizontal and vertical plane separation of the switch and magnet. Example: if a recessed magnet is 1/4" off the centerline of the switch, the make gap is reduced by 1/4"

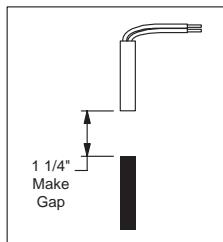
Correct Configuration



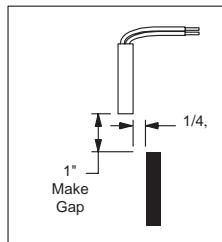
Incorrect Configuration



Center Alignment



Off Center Alignment



Detec