

# 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 ± 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).

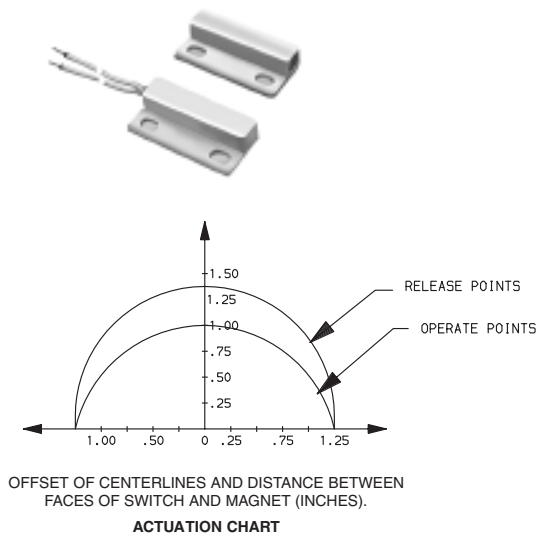
ADHESIVE MOUNTING: Foam-backed, pressure-sensitive adhesive with release liner (MPS45WGW model only).

**NOTE:** For the latest information regarding RoHS compliance, please go to: [www.ittcannon.com/rohs](http://www.ittcannon.com/rohs).

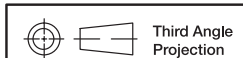
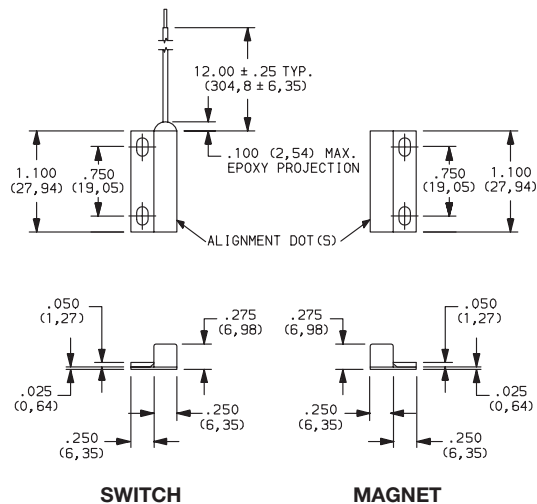
**NOTE:** Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

## How To Order

Complete part numbers for MPS Series Magnetic Proximity Sensors are shown on pages F-22 thru F-24.



PART NUMBER	SWITCH TYPE
<b>MPS45WGW</b>	Subminiature surface mount (adhesive or flange), side exit leads, 1" make gap.

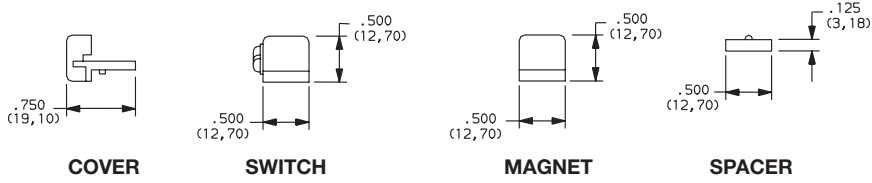
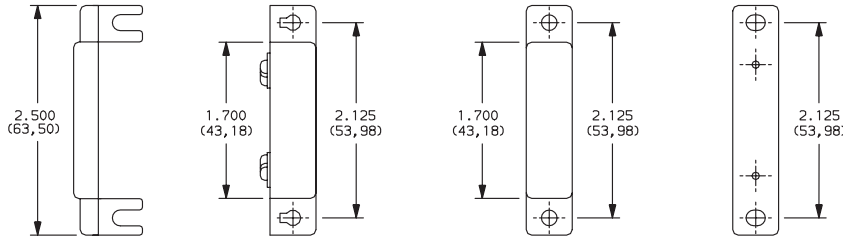


Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change



Detect

# MPS Series Magnetic Proximity Sensors



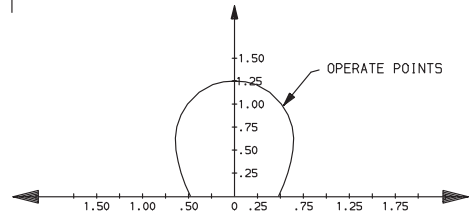
COVER

SWITCH

MAGNET

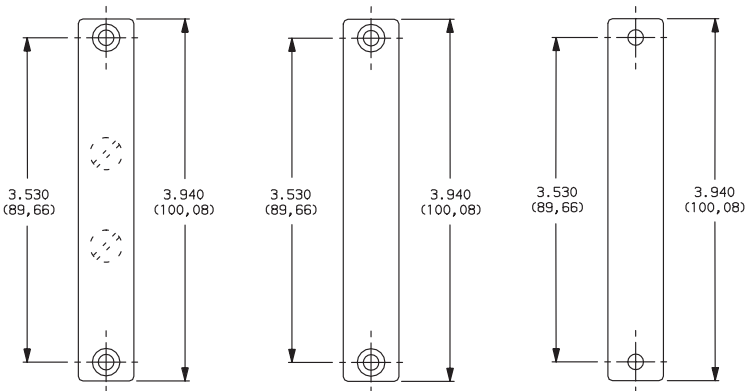
SPACER

PART NUMBER	SWITCH TYPE
<b>MPS20WGW</b>	Standard surface mount, screw terminals, 1 1/4" make gap.

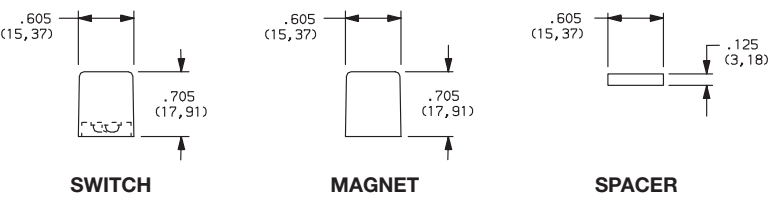


OFFSET OF CENTERLINES AND DISTANCE BETWEEN FACES OF SWITCH AND MAGNET (INCHES).

ACTUATION CHART



Detect

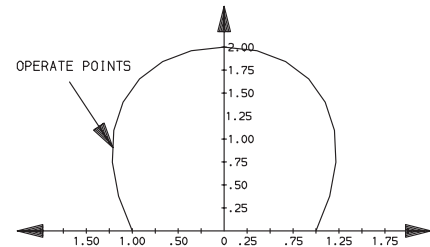


SWITCH

MAGNET

SPACER

PART NUMBER	SWITCH TYPE
<b>MPS80WGW</b>	Industrial surface mount, concealed screw terminals, 2" make gap.



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

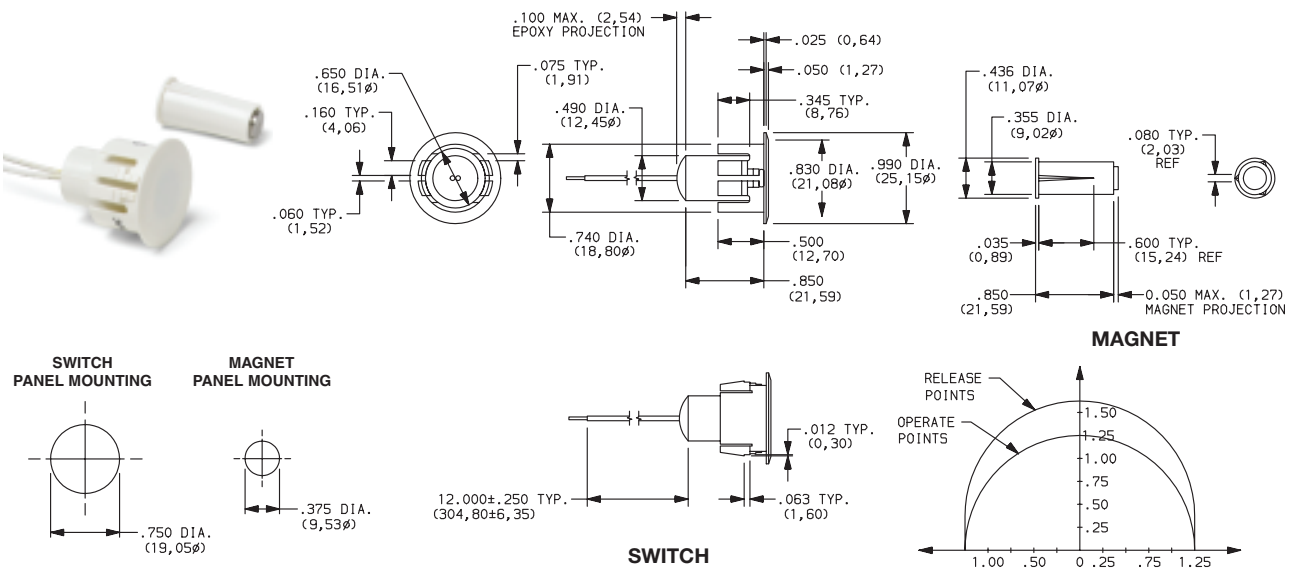
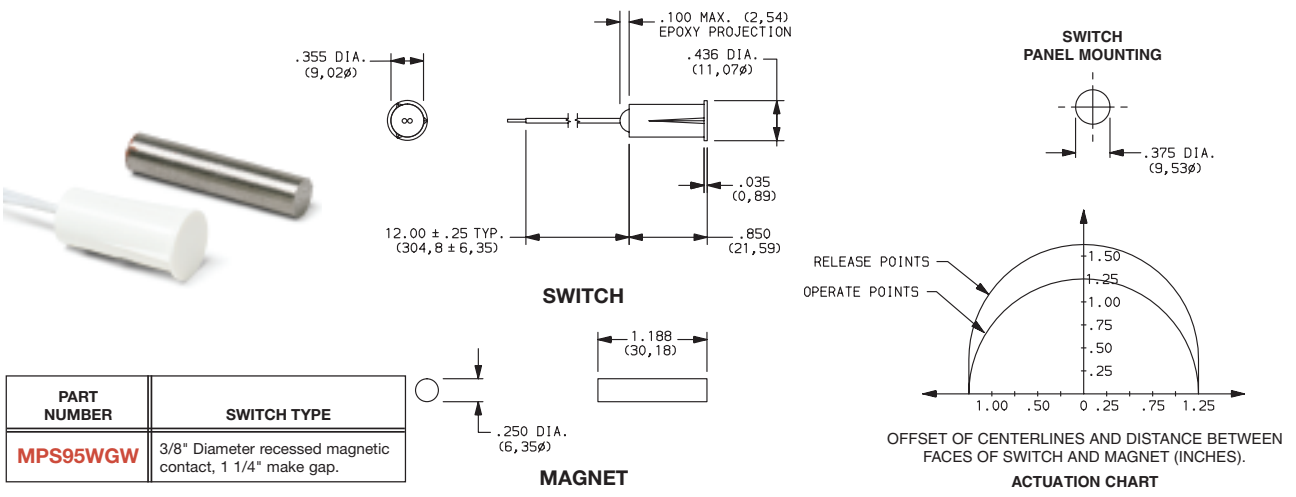
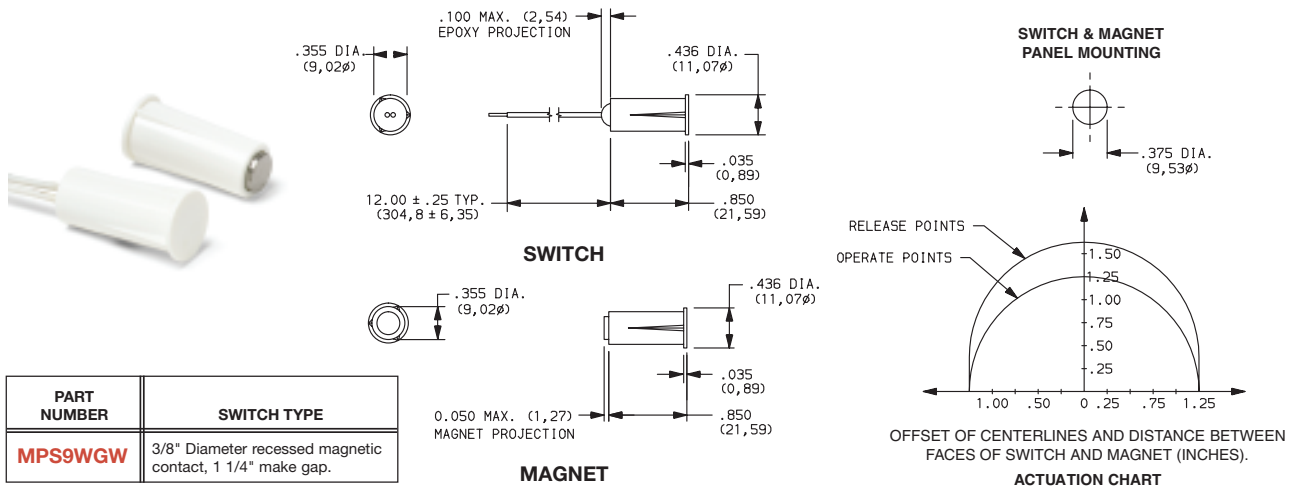
ACTUATION CHART



Third Angle  
Projection

Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

# MPS Series Magnetic Proximity Sensors



PART NUMBER	SWITCH TYPE
<b>MPS73WGW</b>	3/4" Diameter recessed magnetic contact, 1 1/4" make gap.

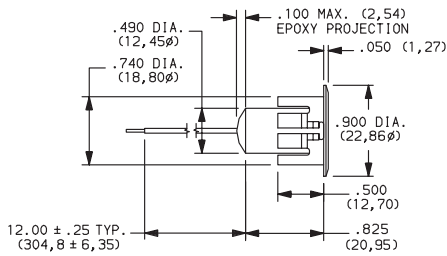


Detect

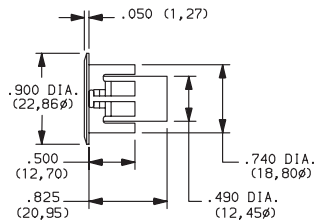


Third Angle Projection  
Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

# MPS Series Magnetic Proximity Sensors



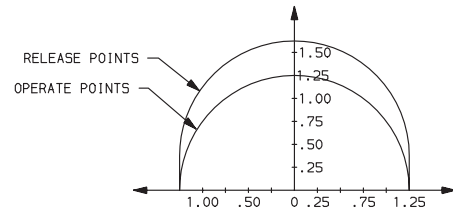
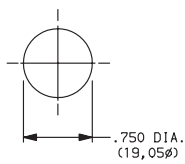
SWITCH



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.

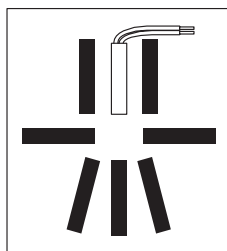
## Actuating Positions

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.

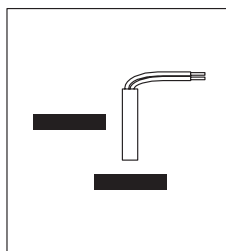
## Gap Distance

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"

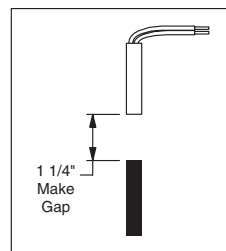
Correct Configuration



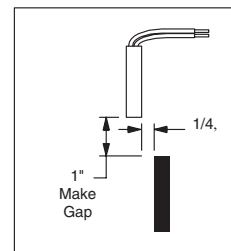
Incorrect Configuration



Center Alignment



Off Center Alignment



Detect



Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change