



C K MPS45WGW Magnetic Proximity Sensors Instructions

[Home](#) » [C K](#) » C K MPS45WGW Magnetic Proximity Sensors Instructions 

Contents

- [1 C K MPS45WGW Magnetic Proximity Sensors](#)
- [2 Product Information](#)
- [3 Product Usage Instructions](#)
- [4 Features/Benefits](#)
- [5 Specifications](#)
- [6 Documents / Resources](#)



C K MPS45WGW Magnetic Proximity Sensors



Product Information

The MPS Series Magnetic Proximity Sensors are contact-type sensors designed to detect the presence or absence of a magnet in close proximity. They feature a SPST NO (Contact Form A) electrical circuit, which means the reed switch opens when the magnet is removed from proximity and closes when the magnet is within the actuation range. The sensors have a contact rating of 50V AC/DC 50/60Hz 5W (0.25A maximum) for resistive loads. The contact resistance is 100 m Ω maximum initially, and the dielectric strength is 200V DC minimum. The mechanical and electrical life of the sensors is rated at 4 million operations. The product is packaged in bulk packaging with 10 switch and magnet pairs per package.

The housing, spacer, and cover of the sensors are made of ABS plastic (UL94V-0) in white color. The reed switch consists of rhodium coated reed contacts in a hermetically sealed, nitrogen-filled glass capsule. The wire leads are UL 1061/UL1007/UL2468 22 AWG stranded wires made of copper or aluminum. They have a length of 12 inches with stripped ends and are white in color. The wires are potted with epoxy for protection. The magnets used are NdFeB magnets, and the adhesive mounting is done using a foam-backed, pressure-sensitive adhesive with a release liner.

Product Usage Instructions

1. Ensure that the switch and magnet are parallel to each other and never in a 'T' configuration during installation.
2. For recessed and surface mount contacts, the magnet position gap distance must be carefully considered. The gap distance is a combination of the horizontal and vertical plane separation between the switch and magnet.
3. To determine the make gap, consider the offset of centerlines and distance between the faces of the switch and magnet. Refer to the actuation chart provided in the user manual for specific measurements.
4. When installing a recessed magnet, if it is off-center by 1/4 from the centerline of the switch, the make gap is reduced by 1/4.
5. Ensure proper center alignment of the switch and magnet for correct configuration.

6. Incorrect alignment, such as off-center alignment, may result in a larger make gap and affect the proper functioning of the sensor.
7. Refer to the user manual or consult the Customer Service Center for information on specific and custom switches.

Features/Benefits

- Long life—4M operations
- Sealed contacts
- Quality construction
- Quick and easy installation
- UL 61058 approved

Typical Applications

- Automotive sensors and indicators
- Industrial sensors
- Factory automation equipment
- Server / storage
- Security, alarms for windows



Specifications

CONTACT RATINGS: 50V AC/DC 50/60Hz 5W (0.25A maximum)

RESISTIVE

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

Materials

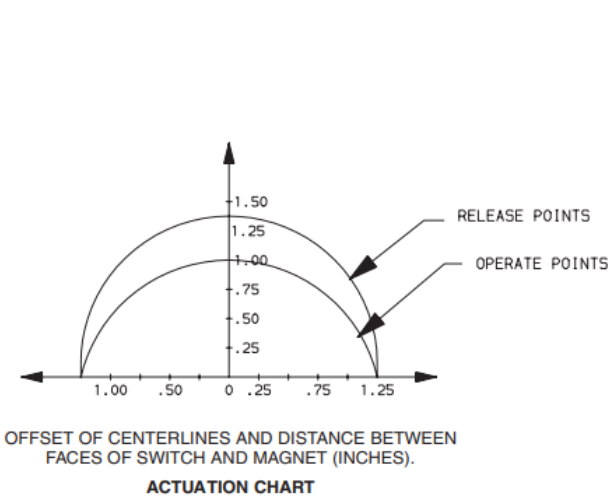
HOUSING/SPACER/COVER: ABS plastic (UL94V-0), white. REED SWITCH: Rhodium coated reed contacts in hermetically sealed, nitrogen filled glass capsule. Closed when magnet is in close proximity. Used in closed loop circuits.

- **WIRE LEADS:** UL 1061/ UL1007 / UL2468
- **All are 22 AWG wire:** stranded, made of copper or
- **aluminum; Length:** 12 in. with ends stripped; Color: white. **POTTING** (around wires): Epoxy.
- **MAGNETS:** NdFeB
- **ADHESIVE MOUNTING:** Foam-backed, pressure-sensitive adhesive with release liner.

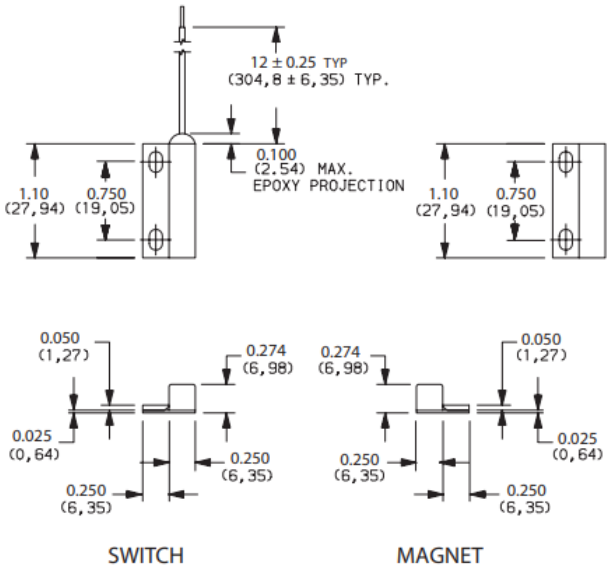
NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

How To Order

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



NOTE: UL 61058 Rating

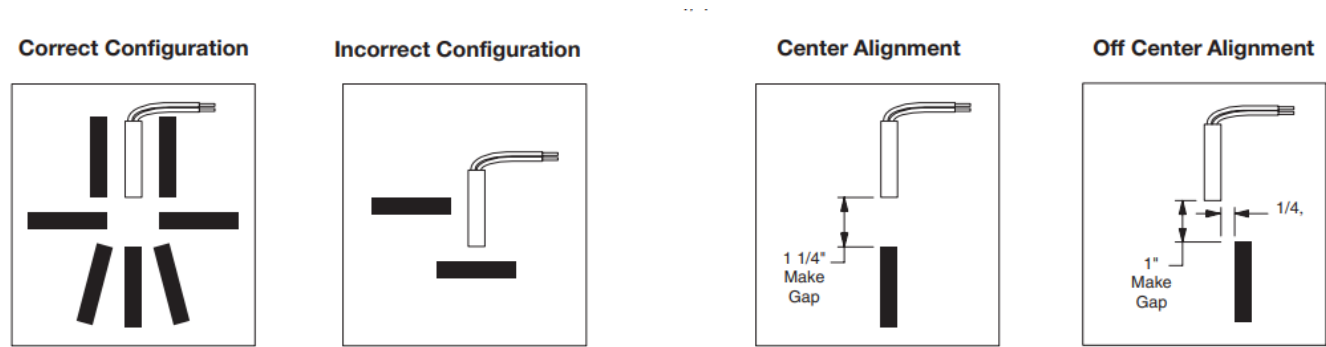


Actuating Positions

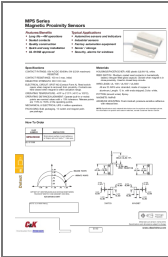
When installing recessed and surface mount contacts, magnet position is very important. The switch and magnet must always be parallel or end to end, and never in a ‘T’ configuration.

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”



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



[C K MPS45WGW Magnetic Proximity Sensors](#) [pdf] Instructions

MPS45WGW Magnetic Proximity Sensors, MPS45WGW, Magnetic Proximity Sensors, Proximity Sensors, Sensors