

DESCRIPTION

MK6 sensors are magnetically operated Reed proximity switches for direct PCB mounting. The sensor should be mounted on a fixed surface with the actuating magnet on the moving surface. Introduction or removal of the magnetic field determines the closing and opening of the Reed Switch. (2.54 mm PCB pin spacing, available with different distances)



FEATURES

- Form A, B, C and E (Latching) available
- High power switches available
- Various case sizes available
- Five operate sensitivities available

APPLICATIONS

- **Telecommunications**
Telephone hook switch, keyboard applications
- **Domestic appliances**
Door switch for washing machines, dishwashers, microwave ovens, baking ovens, refrigerators
- **Limit switch for low-power signals**
Garage door controls, lever hoists, conveyors
- **Lifts / elevators**
Position indicators

ORDER INFORMATION

| SERIES | PACKAGING SIZE | MAGNETIC SENSITIVITY |
|---------|----------------|----------------------|
| MK6 - | X - | X |
| OPTIONS | 4 | B, C, D, E |
| | 5 | B, C |
| | 6 | A, B, C, D, E |
| | 7 | A, B, C, D, E |
| | 8 (Form A) | A, B, C, D, E |
| | 8 (Form C) | H, I, K |

| SERIES | CONTACT FORM |
|-----------------------------------|--------------|
| MK6 - 10 - | X * |
| OPTIONS | B |
| | E |
| * See footnote on following page. | |

MAGNETIC SENSITIVITY

| SENSITIVITY CLASS | PULL IN AT RANGE |
|-------------------|------------------|
| A | 5 - 10 |
| B | 10 - 15 |
| C, H | 15 - 20 |
| D, I | 20 - 25 |
| E, K | 25 - 30 |

Part Number Example

MK6 - 4 - C

4 is the packaging size
C is the magnetic sensitivity

Part Number Example

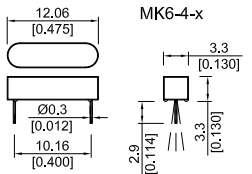
MK6 - 10 - E

E selects the latching option

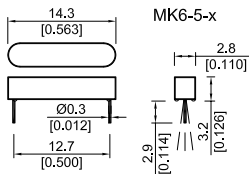
Reed Sensors for
PCB Mounting

DIMENSIONS

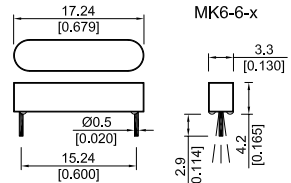
All dimensions in mm [inches]



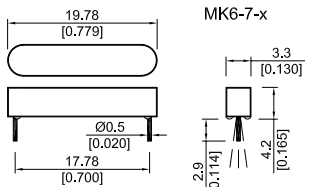
Angle of pins may deviate $\pm 7.5^\circ$



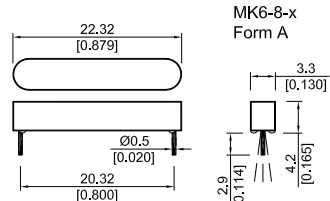
Angle of pins may deviate $\pm 7.5^\circ$



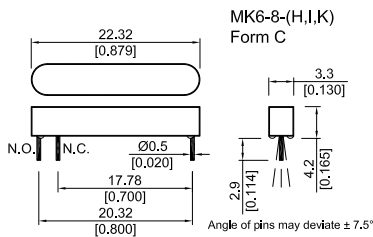
Angle of pins may deviate $\pm 7.5^\circ$



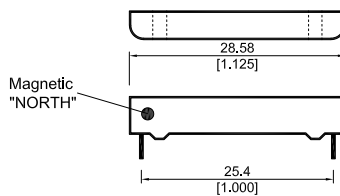
Angle of pins may deviate $\pm 7.5^\circ$



Angle of pins may deviate $\pm 7.5^\circ$



Angle of pins may deviate $\pm 7.5^\circ$



Angle of pins may deviate $\pm 7.5^\circ$

* **MK6-10-E** is a magnetic latching sensor which is opened or closed by a passing magnet and remains in that state until a magnet of opposite polarity or direction passes by again. The E refers to a latching sensor and does not represent the magnetic sensitivity.

MK6-10-B is a normally closed sensor. The B refers to a latching sensor and does not represent the magnetic sensitivity.

CONTACT DATA

| All data at 20 °C | Switch Model --> Contact Form --> Packaging styles --> | Contact 71 Form A, B, E 6, 7, 8, 10 | | | Contact 80 Form A 4 | | | Units |
|---------------------------------------|---|---|------|------|---------------------------|------|------|-------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Contact Ratings | Conditions | | | | | | | |
| Contact Rating | Any DC combination of V & A not to exceed their individual max.'s | | | 10 | | | 10 | W |
| Switching Voltage | DC or peak AC | | | 200 | | | 170 | V |
| Switching Current | DC or peak AC | | | 0.5 | | | 0.5 | A |
| Carry Current | DC or peak AC | | | 1.25 | | | 0.5 | A |
| Static Contact Resistance | w/ 0.5V & 10mA | | | 150 | | | 200 | mΩ |
| Dynamic Contact Resistance | Measured w/ 0.5V & 50mA 1.5 ms after closure | | | 200 | | | 250 | mΩ |
| Insulation Resistance across Contacts | 100 Volts applied | 10 ¹⁰ * | | | 10 ⁹ | | | Ω |
| Breakdown Voltage | Voltage applied for 60 sec. min. | 225 * | | | 210 | | | VDC |
| Operate Time, incl. Bounce | Measured w/ 100% overdrive | | | 0.5 | | | 0.6 | ms |
| Reset Time | Measured w/ no coil suppression | | | 0.1 | | | 0.1 | ms |
| Capacitance | @ 10kHz across contact | | 0.2 | | | 0.2 | | pF |
| Contact Operation ** | | | | | | | | |
| Must Operate Condition | Steady state field | 10 | | 30 | 10 | | 30 | AT |
| Must Reset Condition | Steady state field | 4 | | 27 | 4 | | 27 | AT |
| Environmental Data | | | | | | | | |
| Shock Resistance | 1/2 sine wave duration 11ms | | | 50 | | | 50 | g |
| Vibration Resistance | From 10 - 2000 Hz | | | 20 | | | 20 | g |
| Ambient Temperature | 10 °C/ minute max. allowable | -20 | | 85 | -20 | | 85 | °C |
| Storage Temperature | 10 °C/ minute max. allowable | -35 | | 85 | -35 | | 85 | °C |
| Soldering Temperature | 5 sec. dwell | | | 260 | | | 260 | °C |

Please note: The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch.
 * Insulation resistance of 10¹² and breakdown voltage of 480 VDC is available.
 ** These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required.

Reed Sensors for
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CONTACT DATA

| All data 20 °C | Switch Model --> Contact Form --> Packaging styles --> | Contact 81 * Form A 6, 7, 8 | | | Contact 87 Form A 5 | | | Contact 90 Form C 8 | | | Units |
|--|---|-----------------------------------|------|------|---------------------------|------|------|---------------------------|------|------|-------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Contact Ratings | Conditions | | | | | | | | | | |
| Contact Rating | Any DC combination of V & A not to exceed their individual max.'s | | | 5 | | | 10 | | | 3 | W |
| Switching Voltage | DC or peak AC | | | 90 | | | 200 | | | 175 | V |
| Switching Current | DC or peak AC | | | 0.5 | | | 0.5 | | | 0.25 | A |
| Carry Current | DC or peak AC | | | 1.0 | | | 0.5 | | | 1.2 | A |
| Static Contact Resistance | w/ 0.5V & 10mA | | | 200 | | | 150 | | | 150 | mΩ |
| Dynamic Contact Resistance | Measured w/ 0.5V & 50mA 1.5 ms after closure | | | 200 | | | 200 | | | 250 | mΩ |
| Insulation Resistance across Contacts | 100 Volts applied | 10 ⁹ | | | 10 ⁹ | | | 10 ⁹ | | | Ω |
| Breakdown Voltage across Contacts | Voltage applied for 60 sec. min. | 100 | | | 230 | | | 200 | | | VDC |
| Operate Time, incl. Bounce | Measured w/ 100% overdrive | | | 0.5 | | | 0.6 | | | 0.7 | ms |
| Reset Time | Measured w/ no coil suppression | | | 0.1 | | | 0.1 | | | 1.5 | ms |
| Capacitance | @ 10kHz across contact | | 0.2 | | | 0.2 | | | 1.0 | | pF |
| Contact Operation ** | | | | | | | | | | | |
| Must Operate Condition | Steady state field | 5 | | 10 | 10 | | 20 | 15 | | 30 | AT |
| Must Reset Condition | Steady state field | 2 | | 9 | 4 | | 18 | 6 | | 27 | AT |
| Environmental Data | | | | | | | | | | | |
| Shock Resistance | 1/2 sine wave duration 11ms | | | 30 | | | 50 | | | 50 | g |
| Vibration Resistance | From 10 - 2000 Hz | | | 10 | | | 20 | | | 20 | g |
| Ambient Temperature | 10 °C/ minute max. allowable | -20 | | 85 | -20 | | 85 | -20 | | 85 | °C |
| Storage Temperature | 10 °C/ minute max. allowable | -35 | | 85 | -35 | | 85 | -35 | | 85 | °C |
| Soldering Temperature | 5 sec. dwell | | | 260 | | | 260 | | | 260 | °C |
| Please note: The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch. * Switch model 81 is used for sensitivity range A only. ** These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required. | | | | | | | | | | | |

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