## 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

ORDER INFORMATION

| SERIES | PACKAGING <br> SIZE | MAGNETIC <br> SENSITIVITY |
| :---: | :---: | :---: |
| MK6 - | $\mathrm{X}-$ | X |
|  | 4 | $\mathrm{~B}, \mathrm{C}, \mathrm{D}, \mathrm{E}$ |
| OPTIONS | 5 | $\mathrm{~B}, \mathrm{C}$ |
|  | 6 | $\mathrm{~A}, \mathrm{~B}, \mathrm{C}, \mathrm{D}, \mathrm{E}$ |
|  | 8 | $\mathrm{~A}, \mathrm{~B}, \mathrm{C}, \mathrm{D}, \mathrm{E}$ |
|  | 8 (Form A) | $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}, \mathrm{E}$ |
|  | 8 (Form C) | $\mathrm{H}, \mathrm{I}, \mathrm{K}$ |



* See footnote on following page.

MAGNETIC SENSITIVITY

| SENSITIVITY <br> CLASS | PULLIN <br> 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

## MK6 Series

## Reed Sensors for

## PCB Mounting

## DIMENSIONS

All dimensions in mm [inches]


* 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 $20{ }^{\circ} \mathrm{C}$ | ```Switch Model --> Contact Form --> Packaging styles -->``` | $\begin{gathered} \text { Contact } 71 \\ \text { Form A, B, E } \\ 6,7,8,10 \end{gathered}$ |  |  | $\begin{gathered} \text { Contact } 80 \\ \text { Form A } \\ 4 \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contact Ratings | Conditions | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
| 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 | $\mathrm{w} / 0.5 \mathrm{~V}$ \& 10 mA |  |  | 150 |  |  | 200 | $\mathrm{m} \Omega$ |
| Dynamic Contact Resistance | Measured w/ 0.5 V \& 50 mA 1.5 ms after closure |  |  | 200 |  |  | 250 | $\mathrm{m} \Omega$ |
| Insulation Resistance across Contacts | 100 Volts applied | $10^{10 *}$ |  |  | $10^{9}$ |  |  | $\Omega$ |
| 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 11 ms |  |  | 50 |  |  | 50 | g |
| Vibration Resistance | From 10-2000 Hz |  |  | 20 |  |  | 20 | g |
| Ambient Temperature | $10^{\circ} \mathrm{C} /$ minute max. allowable | -20 |  | 85 | -20 |  | 85 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature | $10^{\circ} \mathrm{C} /$ minute max. allowable | -35 |  | 85 | -35 |  | 85 | ${ }^{\circ} \mathrm{C}$ |
| Soldering Temperature | $5 \mathrm{sec} . \mathrm{dwell}$ |  |  | 260 |  |  | 260 | ${ }^{\circ} \mathrm{C}$ |

Please note: The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch.

* Insulation resistance of $10^{12}$ 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.


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Reed Sensors for
PCB Mounting

CONTACT DATA

| All data $20{ }^{\circ} \mathrm{C}$ | Switch Model --> <br> Contact Form --> <br> Packagingstyles --> | $\begin{gathered} \text { Contact } 81 \text { * } \\ \text { Form A } \\ 6,7,8 \end{gathered}$ |  |  | $\begin{gathered} \text { Contact } 87 \\ \text { Form A } \\ 5 \end{gathered}$ |  |  | $\begin{aligned} & \text { Contact } 90 \\ & \text { Form C } \\ & 8 \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contact Ratings | Conditions | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
| 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 | $\mathrm{w} / 0.5 \mathrm{~V}$ \& 10 mA |  |  | 200 |  |  | 150 |  |  | 150 | $\mathrm{m} \Omega$ |
| Dynamic Contact Resistance | Measured w/ 0.5 V \& 50 mA <br> 1.5 ms after closure |  |  | 200 |  |  | 200 |  |  | 250 | $\mathrm{m} \Omega$ |
| Insulation Resistance across Contacts | 100 Volts applied | $10^{9}$ |  |  | $10^{9}$ |  |  | $10^{9}$ |  |  | $\Omega$ |
| 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 11 ms |  |  | 30 |  |  | 50 |  |  | 50 | g |
| Vibration Resistance | From $10-2000 \mathrm{~Hz}$ |  |  | 10 |  |  | 20 |  |  | 20 | g |
| Ambient Temperature | $10^{\circ} \mathrm{C} /$ minute max. allowable | -20 |  | 85 | -20 |  | 85 | -20 |  | 85 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature | $10^{\circ} \mathrm{C} /$ minute max. allowable | -35 |  | 85 | -35 |  | 85 | -35 |  | 85 | ${ }^{\circ} \mathrm{C}$ |
| Soldering Temperature | $5 \mathrm{sec} . \mathrm{dwell}$ |  |  | 260 |  |  | 260 |  |  | 260 | ${ }^{\circ} \mathrm{C}$ |

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[^0]:    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.

