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## DESCRIPTION

MK7 sensors are magnetically operated Reed proximity switches in a cylindrical form with an 8 $\mathrm{mm} \times 0.75$ thread and connecting cable or coupler. The sensor can be screwed directly onto a fixed surface with the actuating magnet on the moving surface. The MK7 series is compatible with several inductive and magnetic proximity sensors.

## FEATURES

- Form A, B, and C available
- High power switches available
- Other cables, connectors and colors available
- Various case sizes available
- Five operate sensitivities available
- A choice of switch terminations and cable lengths are available



## APPLICATIONS

- Position and limit switch

Pneumatic or hydraulic actuator position Indication and end travel limit switch

- Door and window contacts Security system applications
- Level sensor

Use with magnetic floats for water level detection in coffee makers, washing machines or dishwashers

## DIMENSIONS

All dimensions in mm [inches]


Cylindrical Reed Sensors with M8 Thread

## ORDER INFORMATION

| SERIES | CONTACT FORM | SWITCH MODEL | MAGNETIC SENSITIVITY | CABLE <br> LENGTH (mm) | TERMINATION |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MK7 - | xx | xX | x - | xxx | x |
| OPTIONS | 1 Form A | 71 | B, C, D, E | 500 * | W, X, Y |
|  |  | 81 | A |  |  |
|  |  | 51 | C, D, E |  |  |
|  | 1 Form B <br> 1 Form C | 90 |  |  |  |
| * Other cable lengths available. |  |  |  |  |  |

## Part Number Example

MK7-1A71 C-500 W

1A is the contact form 71 is the switch model C is the magnetic sensitivity 500 is the cable length ( mm ) $\mathbf{W}$ is the termination

## MAGNETIC SENSITIVITY

| SENSITIVITY <br> CLASS | PULL IN <br> AT RANGE |
| :---: | :---: |
| A | $5-10$ |
| B | $10-15$ |
| C | $15-20$ |
| D | $20-25$ |
| E | $25-30$ |

## TERMINATION

For wire and termination details please consult factory.
Form C version requires 3 conductors.
The cable cut length includes:
30 mm of seperated wire with
5 mm of wire stripped and tinned

CONTACT DATA

| All data at $20{ }^{\circ} \mathrm{C}$ | Switch Model --> Contact Form --> | Contact 51 Form A |  |  | Contact 71 Form A |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |  |  | 12 |  |  | 10 | W |
| Switching Voltage | DC or peak AC |  |  | 250 |  |  | 200 | V |
| Switching Current | DC or peak AC |  |  | 0.5 |  |  | 0.5 | A |
| Carry Current | DC or peak AC |  |  | 1.5 |  |  | 1.25 | A |
| Static Contact Resistance | $\mathrm{w} / 0.5 \mathrm{~V}$ \& 10 mA |  |  | 150 |  |  | 150 | $\mathrm{m} \Omega$ |
| Dynamic Contact Resistance | Measured w/ 0.5 V \& 50 mA 1.5 ms after closure |  |  | 200 |  |  | 200 | $\mathrm{m} \Omega$ |
| Insulation Resistance across Contacts | 100 Volts applied | $10^{11}$ |  |  | $10^{10 *}$ |  |  | $\Omega$ |
| Breakdown Voltage across Contacts | Voltage applied for 60 sec . min. | 350 |  |  | 225 * |  |  | VDC |
| Operate Time, incl. Bounce | Measured w/ 100\% overdrive |  |  | 1.0 |  |  | 0.5 | ms |
| Release 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 | 15 |  | 30 | 10 |  | 30 | AT |
| Must Release Condition | Steady state field | 6 |  | 27 | 4 |  | 27 | AT |
| Environmental Data |  |  |  |  |  |  |  |  |
| Shock Resistance | $1 / 2$ sine wave duration 11 ms |  |  | 50 |  |  | 50 | $g$ |
| Vibration Resistance | From $10-2000 \mathrm{~Hz}$ |  |  | 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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Cylindrical Reed Sensors with M8 Thread

## CONTACT DATA

| All data at $20{ }^{\circ} \mathrm{C}$ | Switch Model --> Contact Form --> | Contact 81 Form A |  |  | $\begin{gathered} \text { Contact } 90 \\ \text { Form B / C } \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |  |  | 5 |  |  | 3 | W |
| Switching Voltage | DC or peak AC |  |  | 90 |  |  | 175 | $v$ |
| Switching Current | DC or peak AC |  |  | 0.5 |  |  | 0.25 | A |
| Carry Current | DC or peak AC |  |  | 1.0 |  |  | 1.2 | A |
| Static Contact Resistance | w/ 0.5 V \& 10 mA |  |  | 200 |  |  | 150 | $\mathrm{m} \Omega$ |
| 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 | $10^{9}$ |  |  | $10^{9}$ |  |  | $\Omega$ |
| Breakdown Voltage across Contacts | Voltage applied for 60 sec . min. | 100 |  |  | 200 |  |  | VDC |
| Operate Time, incl. Bounce | Measured w/ 100\% overdrive |  |  | 0.5 |  |  | 0.7 | ms |
| Reset Time | Measured w/ no coil suppression |  |  | 0.1 |  |  | 1.5 | ms |
| Capacitance | @ 10kHz across contact |  | 0.2 |  |  | 1.0 |  | pF |
| Contact Operation ** |  |  |  |  |  |  |  |  |
| Must Operate Condition | Steady state field | 5 |  | 10 | 15 |  | 30 | AT |
| Must Reset Condition | Steady state field | 2 |  | 9 | 6 |  | 27 | AT |
| Environmental Data |  |  |  |  |  |  |  |  |
| Shock Resistance | $1 / 2$ sine wave duration 11 ms |  |  | 30 |  |  | 50 | 9 |
| Vibration Resistance | From $10-2000 \mathrm{~Hz}$ |  |  | 10 |  |  | 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 sec . 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. ** 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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