## : ©hipsmall

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## Reed Sensors with Screw Fastening Mounting Holes



## APPLICATIONS

- Position and limit switch

Pneumatic or hydraulic actuator position

- End motion detection for linear drive Indication and end travel limit switch
- Machine industry

End motion detection and door/flap control

## FEATURES

## DESCRIPTION

MK12 sensors are magnetically operated Reed Sensors designed for screw mounting. The larger casing permits the use of higher rated switches. 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.

- 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 cable terminations and lengths are available


## DIMENSIONS

All dimensions in mm [inch]


## ORDER INFORMATION

## Part Number Example

MK12-1A66 C-500 W
1A is the contact form
66 is the switch model
C is the magnetic sensitivity 500 is the cable length ( mm ) $\mathbf{W}$ is the termination

| Series | Contact <br> Form | Switch <br> Model | Magnetic <br> Sensitivity | Cable <br> length <br> (mm) | Termination |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MK12- | $\mathbf{x x}$ | $\mathbf{x x}$ | $\mathbf{x}-$ | $\mathbf{x x x}$ | $\mathbf{x}$ |
| Options | 1 Form A | 66 | B, C, D, E |  |  |
|  | 1 Form B <br> 1 Form C | 90 | C, D, E | 500 * | W |

## MAGNETIC SENSITIVITY

| Sensitivity <br> Class | Pull In <br> AT Range |
| :---: | :---: |
| 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.

| $\mathbf{W}$ | The cable cut length includes: <br> 5 mm of wire stripped and tinned |
| :--- | :--- | :--- |

## Reed Sensors with Screw Fastening Mounting Holes

## CONTACT DATA

| All Data at $\mathbf{2 0}^{\circ} \mathrm{C}$ | Switch Model $\rightarrow$ Contact Form $\rightarrow$ | Switch 52 Form A |  |  | Switch 66 Form A |  |  | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contact Ratings | Conditions | Min. | Typ. | Max. | Min. | Typ. | Max. |  |
| Switching Power | Any DC combination of V \& A not to exceed their individual max.'s |  |  | $\begin{gathered} 50 \\ 70 \text { (VA) } \end{gathered}$ |  |  | 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 |  |  | 2.5 |  |  | 1.25 | A |
| Static Contact Resistance | w/ 0.5 V \& 10mA |  |  | 200 |  |  | 150 | $\mathrm{m} \Omega$ |
| Dynamic Contact Resistance | Measured w/ 0.5 V \& 50 mA , 1.5 ms after closure |  |  |  |  |  | 200 | $\mathrm{m} \Omega$ |
| Insulation Resistance across Contacts | 100 volts applied | $10^{10}$ |  |  | $10^{10}$ * |  |  | $\Omega$ |
| Breakdown Voltage across Contact | Voltage applied for $60 \mathrm{sec} . \mathrm{min}$. | 600 |  |  | 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 | at 10 kHz cross contact |  | 0.2 |  |  | 0.2 |  | pF |
| Contact Operation ** |  |  |  |  |  |  |  |  |
| Must Operate Condition | Steady state field | 10 |  | 30 | 10 |  | 60 | AT |
| Must Release Condition | Steady state field | 4 |  | 27 | 4 |  | 54 | AT |
| Environmental Data |  |  |  |  |  |  |  |  |
| Shock Resistance | $1 / 2$ sinus 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 | ${ }^{\circ} \mathrm{C}$ |
| Stock 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. <br> * Insulation resistance of $10^{12}$ and breakdown voltage of 480 VDC is available. <br> ** These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required. |  |  |  |  |  |  |  |  |

## CONTACT DATA

| All Data at $\mathbf{2 0}^{\circ} \mathrm{C}$ | Switch Model $\rightarrow$ Contact Form $\rightarrow$ | Switch 85 Form A |  |  | Switch 90 <br> Form B / C |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contact Ratings | Conditions | Min. | Typ. | Max. | Min. | Typ. | Max. | Unit |
| Switching Power | Any DC combination of V \& A not to exceed their individual max.'s |  |  | 100 |  |  | 20 | W |
| Switching Voltage | DC or peak AC |  |  | 400 |  |  | 175 | V |
| Switching Current | DC or peak AC |  |  | 1.0 |  |  | 0.5 | A |
| Carry Current | DC or peak AC |  |  | 2.5 |  |  | 1.0 | A |
| Static Contact Resistance | w/ 0.5 V \& 10 mA |  |  | 150 |  |  | 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 | $10^{10}$ |  |  | $10^{9}$ |  |  | $\Omega$ |
| Breakdown Voltage across Contact | Voltage applied for $60 \mathrm{sec} . \mathrm{min}$. | 4000 |  |  | 200 |  |  | VDC |
| Operate Time incl. Bounce | Measured w/ 100 \% overdrive |  |  | 1.0 |  |  | 0.7 | ms |
| Release Time | Measured w/ no coil suppression |  |  | 0.1 |  |  | 1.5 | ms |
| Capacitance | at 10 kHz cross contact |  | 0.2 |  |  | 1.0 |  | pF |
| Contact Operation * |  |  |  |  |  |  |  |  |
| Must Operate Condition | Steady state field | 20 |  | 60 | 15 |  | 40 | AT |
| Must Release Condition | Steady state field | 12 |  | 54 |  |  |  | AT |
| Environmental Data |  |  |  |  |  |  |  |  |
| Shock Resistance | $1 / 2$ sinus 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 | ${ }^{\circ} \mathrm{C}$ |
| Stock 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.

* These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required.

