

## Reed Sensors for Screw Fastening



## DESCRIPTION

MK04 sensors are magnetically operated Reed proximity switches designed for screw 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.

## APPLICATIONS

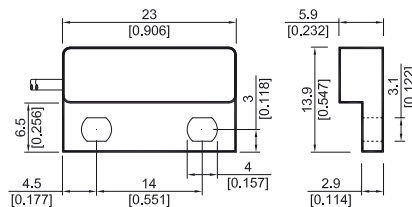
- **Position and limit switch**  
Pneumatic or hydraulic actuator position indication and end travel limit switch
- **Door and window contacts**  
Security system applications
- **Level sensor**  
Use with magnetic floats for water level detection in coffee makers, washing machines or dishwashers

## 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 cable terminations and lengths are available

## DIMENSIONS

All dimensions in mm [inch]



**ORDER INFORMATION**

**Part Number Example**

MK04 - 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)

**W** is the termination

| Series                          | Contact form         | Switch-model | Magnetic Sensitivity | Cable Length (mm) | Termination |
|---------------------------------|----------------------|--------------|----------------------|-------------------|-------------|
| <b>MK4 -</b>                    | <b>XX</b>            | <b>XX</b>    | <b>X -</b>           | <b>XXX</b>        | <b>X</b>    |
| <b>Options</b>                  | 1 Form A             | 66           | B, C, D, E           | 500*              | W           |
|                                 |                      | 84           | C, D, E              |                   |             |
|                                 | 1 Form B<br>1 Form C | 90           |                      |                   |             |
| * Other cable length available. |                      |              |                      |                   |             |

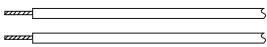
**MAGNETIC SENSITIVITY**

| Sensitivity Class | Pull In 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.

|          |   |  |
|----------|---|--|
| <b>W</b> |  | The cable cut length includes:<br>5 mm of wire stripped and tinned |
|----------|---|--|

## Reed Sensors for Screw Fastening

### CONTACT DATA

| All Data at 20° C   | Switch Model →<br>Contact Form →                                  | Switch 66<br>Form A |      |      | Switch 84<br>Form A |      |      | Units |
|---|---|---------------------|------|------|---------------------|------|------|-------|
|   |   | Min.                | Typ. | Max. | Min.                | Typ. | Max. |       |
| <b>Contact Ratings</b>  | <b>Conditions</b>   |                     |      |      |                     |      |      |       |
| Switching Power   | Any DC combination of V & A not to exceed their individual max.'s |                     |      | 10   |                     |      | 10   | W     |
| Switching Voltage   | DC or peak AC   |                     |      | 200  |                     |      | 400  | V     |
| Switching Current   | DC or peak AC   |                     |      | 0.5  |                     |      | 0.5  | A     |
| Carry Current   | DC or peak AC   |                     |      | 1.25 |                     |      | 1.0  | A     |
| Static Contact Resistance   | w/ 0.5 V & 10mA   |                     |      | 150  |                     |      | 150  | mΩ    |
| Dynamic Contact Resistance  | Measured w/ 0.5 V & 50mA ,<br>1.5 ms after closure                |                     |      | 200  |                     |      | 200  | mΩ    |
| Insulation Resistance across Contacts   | 100 volts applied   | 10 <sup>10</sup> *  |      |      | 10 <sup>10</sup>    |      |      | Ω     |
| Breakdown Voltage across Contact  | Voltage applied for 60 sec. min.                                  | 225 *               |      |      | 700                 |      |      | VDC   |
| Operation Time incl. Bounce   | Measured w/ 100 % overdrive                                       |                     |      | 0.5  |                     |      | 2.0  | ms    |
| Release Time  | Measured w/ no coil suppression                                   |                     |      | 0.1  |                     |      | 0.1  | ms    |
| Capacitance   | at 10 kHz cross contact   |                     | 0.2  |      |                     | 0.7  |      | pF    |
| <b>Contact Operation **</b>   |   |                     |      |      |                     |      |      |       |
| Must Operate Condition  | Steady state field  | 10                  |      | 30   | 15                  |      | 30   | AT    |
| Must Release Condition  | Steady state field  | 4                   |      | 27   | 6                   |      | 27   | AT    |
| <b>Environmental Data</b>   |   |                     |      |      |                     |      |      |       |
| Shock Resistance  | 1/2 sinus wave duration 11 ms                                     |                     |      | 50   |                     |      | 50   | g     |
| Vibration Resistance  | From 10 - 2000 Hz   |                     |      | 20   |                     |      | 20   | g     |
| Ambient Temperature   | 10°C/ minute max. allowable                                       | -20                 |      | 85   | -20                 |      | 85   | °C    |
| Stock Temperature   | 10°C/ minute max. allowable                                       | -35                 |      | 85   | -35                 |      | 85   | °C    |
| Soldering Temperature   | 5 sec.  |                     |      | 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 10 <sup>12</sup> 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. |   |                     |      |      |                     |      |      |       |

**CONTACT DATA**

| <b>All Data at 20° C</b>  | <b>Switch Model →<br/>Contact Form →</b>                          | <b>Switch 90<br/>Form B / C</b> |             |             |              |
|---|---|---------------------------------|-------------|-------------|--------------|
| <b>Contact Ratings</b>  | <b>Conditions</b>   | <b>Min.</b>                     | <b>Typ.</b> | <b>Max.</b> | <b>Units</b> |
| Switching Power   | Any DC combination of V & A not to exceed their individual max.'s |                                 |             | 3           | W            |
| Switching Voltage   | DC or peak AC   |                                 |             | 175         | V            |
| Switching Current   | DC or peak AC   |                                 |             | 0.25        | A            |
| Carry Current   | DC or peak AC   |                                 |             | 1.2         | A            |
| Static Contact Resistance   | w/ 0.5 V & 10mA   |                                 |             | 150         | mΩ           |
| Dynamic Contact Resistance  | Measured w/ 0.5 V & 50mA , 1.5 ms after closure                   |                                 |             | 250         | mΩ           |
| Insulation Resistance across Contacts   | 100 volts applied   | 10 <sup>9</sup>                 |             |             | Ω            |
| Breakdown Voltage across Contact  | Voltage applied for 60 sec. min.                                  | 200                             |             |             | VDC          |
| Operation Time incl. Bounce   | Measured w/ 100 % overdrive                                       |                                 |             | 0.7         | ms           |
| Release Time  | Measured w/ no coil suppression                                   |                                 |             | 1.5         | ms           |
| Capacitance   | at 10 kHz cross contact   |                                 | 0.2         |             | pF           |
| <b>Contact Operation **</b>   |   |                                 |             |             |              |
| Must Operate Condition  | Steady state field  | 10                              |             | 35          | AT           |
| Must Release Condition  | Steady state field  | 4                               |             | 30          | AT           |
| <b>Environmental Data</b>   |   |                                 |             |             |              |
| Shock Resistance  | 1/2 sinus wave duration 11 ms                                     |                                 |             | 50          | g            |
| Vibration Resistance  | From 10 - 2000 Hz   |                                 |             | 20          | g            |
| Ambient Temperature   | 10°C/ minute max. allowable                                       | -20                             |             | 85          | °C           |
| Stock Temperature   | 10°C/ minute max. allowable                                       | -35                             |             | 85          | °C           |
| Soldering Temperature   | 5 sec.  |                                 |             | 260         | °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 <sup>12</sup> 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. |   |                                 |             |             |              |