

Reed Sensors with Screw Fastening Mounting Holes



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.

APPLICATIONS

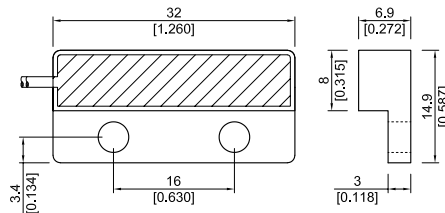
- **Position and limit switch**
Pneumatic or hydraulic actuator position
- **End motion detection for linear drive**
Indication and end travel limit switch
- **Machine industry**
End motion detection and door/flap control

FEATURES

- 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)

W is the termination

| Series | Contact Form | Switch Model | Magnetic Sensitivity | Cable length (mm) | Termination |
|---------------------------------|----------------------|--------------|----------------------|-------------------|-------------|
| MK12 - | xx | xx | x - | xxx | x |
| Options | 1 Form A | 66 | B, C, D, E | 500 * | W |
| | | 52, 85 | | | |
| | 1 Form B 1 Form C | 90 | C, D, E | | |
| * Other cable lengths available | | | | | |

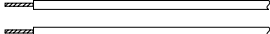
MAGNETIC SENSITIVITY

| 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.

| | | |
|----------|---|---|
| W |  | The cable cut length includes: 5mm of wire stripped and tinned |
|----------|---|---|

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CONTACT DATA

| All Data at 20° C | Switch Model → Contact Form → | Switch 52 Form A | | | Switch 66 Form A | | | Unit |
|---|---|---------------------|------|---------------|---------------------|------|------|------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Contact Ratings | Conditions | | | | | | | |
| Switching Power | Any DC combination of V & A not to exceed their individual max.'s | | | 50 70 (VA) | | | 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 | mΩ |
| Dynamic Contact Resistance | Measured w/ 0.5 V & 50 mA , 1.5 ms after closure | | | | | | 200 | mΩ |
| Insulation Resistance across Contacts | 100 volts applied | 10 ¹⁰ | | | 10 ¹⁰ * | | | Ω |
| Breakdown Voltage across Contact | Voltage applied for 60 sec. 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 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. 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 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. | | | | | | | | |

CONTACT DATA

| All Data at 20° C | Switch Model → Contact Form → | Switch 85 Form A | | | Switch 90 Form B / C | | | Unit |
|--|---|-----------------------------|-------------|-------------|---------------------------------|-------------|-------------|-------------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Contact Ratings | Conditions | | | | | | | |
| 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 | mΩ |
| Dynamic Contact Resistance | Measured w/ 0.5 V & 50 mA , 1.5 ms after closure | | | 200 | | | 250 | mΩ |
| Insulation Resistance across Contacts | 100 volts applied | 10 ¹⁰ | | | 10 ⁹ | | | Ω |
| Breakdown Voltage across Contact | Voltage applied for 60 sec. 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°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. dwell | | | 260 | | | 260 | °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. | | | | | | | | |