

### DESCRIPTION

The MK27 is a magnetically activated Reed Sensor. The sensor is supplied as a set, with the mating M27 actuator magnet. The sensor and the magnet are supplied in a robust aluminum housing, which is designed for screw fastening. The sensor is typically mounted to the fixed surface, while the actuating magnet is mounted on the moving surface. Introduction or removal of the magnetic field determines the closing and opening of the Reed Switch. The robust aluminum housing protects the magnet and sensor from extreme environmental conditions as well as against vandalism or sabotage. Additionally, the cable is insulated with a metal jacket, providing an additional security feature.



### APPLICATIONS

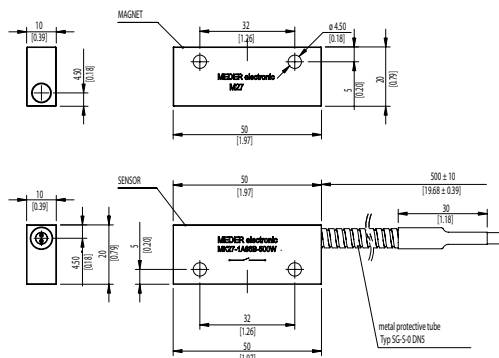
- Position and limit switch
- Door and window contact
- Machinery
- Agricultural engineering
- Utility vehicle technique
- Forestry
- Mining industry
- Construction machinery
- and many others

### FEATURES

- Form A, B, and C available
- High power switches available
- Four operate sensitivities available
- Cable connection in metal protective tube
- High voltage versions upon request
- Power switch version available
- Switching distance up to 40 mm
- Sensor is delivered with magnet as a set

### DIMENSIONS

All dimensions in mm [inch]  
Tolerances acc. to DIN ISO-2768-m



## Reed Sensors for Screw Fastening with Cable Protection

### ORDER INFORMATION

#### Part Number Example

MK27 - 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 |
|---------|--------------|----------------|----------------------|-------------------|-------------|
| MK27 -  | XX           | XX             | X -                  | XXX               | X           |
| Options | 1 Form A     | 52<br>66<br>85 | B, C, D, E           | 500*              | W           |
|         | 1 Form B     | 85<br>90       |                      |                   |             |
|         | 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 |
|----------|---|--|

## CONTACT DATA

| All Data at 20° C   | Switch Model →<br>Contact Form →                                  | Switch 52<br>Form A |      |               | Switch 66<br>Form A   |      |      |       |
|---|---|---------------------|------|---------------|-----------------------|------|------|-------|
| Contact Ratings   | Conditions  | Min.                | Typ. | Max.          | Min.                  | Typ. | Max. | Units |
| Switching Power   | Any DC combination of V & A not to exceed their individual max.'s |                     |      | 50<br>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 & 50mA ,<br>1.5 ms after closure                |                     |      |               |                       |      | 200  | mΩ    |
| Insulation Resistance across<br>Contacts  | 100 volts applied   | 10 <sup>10</sup>    |      |               | 10 <sup>10</sup><br>* |      |      | Ω     |
| Breakdown Voltage across<br>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    |
| <b>Contact Operation **</b>   |   |                     |      |               |                       |      |      |       |
| Must Operate Condition  | Steady state field  | 20                  |      | 65            | 10                    |      | 60   | 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                 |      | 80            | -20                   |      | 85   | °C    |
| Stock Temperature   | 10°C/ minute max. allowable                                       | -35                 |      | 80            | -35                   |      | 85   | °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. |   |                     |      |               |                       |      |      |       |

**Reed Sensors for Screw Fastening  
with Cable Protection**
**CONTACT DATA**

| All Data at 20° C   | Switch Model →<br>Contact Form →                                  | Switch 85<br>Form A / B |      |      | Switch 90<br>Form B / C |      |      |       |
|---|---|-------------------------|------|------|-------------------------|------|------|-------|
| Contact Ratings   | Conditions  | Min.                    | Typ. | Max. | Min.                    | Typ. | Max. | Units |
| Switching Power   | Any DC combination of V & A not to exceed their individual max.'s |                         |      | 100  |                         |      | 20   | W     |
| Switching Voltage   | DC or peak AC   |                         |      | 1000 |                         |      | 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 & 10mA   |                         |      | 150  |                         |      | 150  | mΩ    |
| Dynamic Contact Resistance  | Measured w/ 0.5 V & 50mA ,<br>1.5 ms after closure                |                         |      | 200  |                         |      | 250  | mΩ    |
| Insulation Resistance across<br>Contacts  | 100 volts applied   | 10 <sup>10</sup>        |      |      | 10 <sup>9</sup>         |      |      | Ω     |
| Breakdown Voltage across<br>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    |
| <b>Contact Operation **</b>   |   |                         |      |      |                         |      |      |       |
| Must Operate Condition  | Steady state field  | 20                      |      | 40   | 15                      |      | 40   | 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                     |      | 80   | -20                     |      | 80   | °C    |
| Stock Temperature   | 10°C/ minute max. allowable                                       | -35                     |      | 80   | -35                     |      | 80   | °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. |   |                         |      |      |                         |      |      |       |