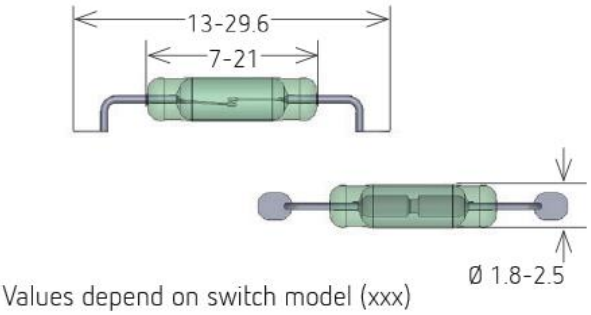
# MK23 Series Reed Sensors

- **Features: Miniature, Close Differential, Long Life Expectancy**
- **Applications: Air Conditioning, Gas Metering , Barcode Scanner, Security Panel, Water Flow Gauge & Others**
- **Markets: Automotive, Telecommunication, Security, Test & Measurement, Household, Medical & Others**




Values depend on switch model (xxx)

Part Description: MK23-00-X-0

| Switch Model | Magnetic Sensitivity | Lead Design |
|---|---|---|
| 35, 46, 52, 66, 80, 85, 87, 90, 501 | B, C, D, E, F, G | 1, 2, 4, Helix |

| Customer Options | Switch Model | | | | | | | | | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| Contact Data | 35 | 46 | 52 | 66 | 80 | 85 | 87 | 90 | 501 | |
| Lead Design | 1, 2, 4 | 4 | 1, 2 | 1, 2 | 1, 2 | 1, 2 | 1, 2 | 1, 2 | Helix | |
| Rated Power (max.)<br>Any DC combination of V&A not to exceed their individual max.'s | 20 | 10 | 50 | 10 | 10 | 100 | 10 | 10 | 10 | W |
| Switching Voltage (max.)<br>DC or peak AC | 200 | 200 | 350 | 180 | 170 | 1000 | 200 | 175 | 200 | V |
| Switching Current (max.)<br>DC or peak AC | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 0.4 | 0.5 | 0.5 | A |
| Carry Current (max.)<br>DC or peak AC | 1.25 | 1.0 | 2.5 | 1.0 | 0.5 | 2.5 | 0.5 | 1.0 | 1.0 | A |
| Contact Resistance (max.)<br>@ 0.5V & 50mA | 150 | 150 | 150 | 150 | 200 | 150 | 150 | 150 | 100 | mOhm |
| Breakdown Voltage (min.)<br>According to EN60255-5 | 0.22 | 0.2 | 0.5 | 0.2 | 0.21 | 1.5 | 0.23 | 0.2 | 0.25 | kVDC |
| Operating Time (max.)<br>Incl. Bounce; Measured with w/ Nominal Voltage | 0.5 | 0.5 | 1.1 | 0.5 | 0.6 | 1.1 | 0.6 | 0.7 | 0.5 | ms |
| Release Time (max.)<br>Measured with no Coil Excitation | 0.1 | 0.05 | 0.1 | 0.05 | 0.05 | 0.05 | 0.05 | 1.5 | 0.1 | ms |
| Insulation Resistance (typ.)<br>Rh<45%, 100V Test Voltage | $10^{12}$ | $10^{9}$ | $10^{10}$ | $10^{10}$ | $10^{9}$ | $10^{10}$ | $10^{9}$ | $10^{9}$ | $10^{10}$ | Ohm |
| Capacitance (typ.)<br>@ 10kHz across open Switch | 0.3 | 0.3 | 0.5 | 0.3 | 0.4 | 0.5 | 0.2 | 1.5 | 0.3 | pF |



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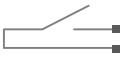
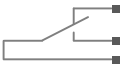
| Dimensions (mm) and Lead Specifications | |
|---|---|
| Overall Length | 13.0 – 29.6 |
| Glass Length | 7.0 – 21.0 |
| Glass Dia. | 1.8 – 2.75 |
| Lead Dia. | 0.3 – 0.6 |
| Lead Design 1 | Flat, straight leads for PCB slot mounting |
| Lead Design 2 | Flat, bent SMD leads (Gull-wing) |
| Lead Design 4 | Round, bent SMD leads for PCB slot mount |

| Environmental Data | | Unit |
|---|---|---|
| Shock Resistance (max.)<br>1/2 sine wave duration 11ms | 30 | g |
| Vibration Resistance (max.) | 20 | g |
| Operating Temperature | -40 to 130 | °C |
| Storage Temperature | -55 to 130 | °C |
| Soldering Temperature (max.)<br>5 sec. max. | 260 | °C |

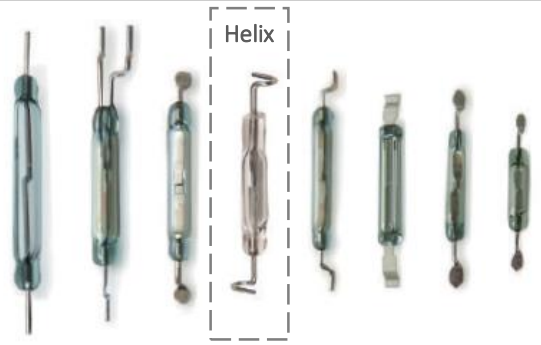
| Glossary Contact Form | | |
|---|---|---|
| Form A | NO = Normally Open Contacts<br>SPST = Single Pole Single Throw |  |
| Form B | NC = Normally Closed Contacts<br>SPST = Single Pole Single Throw |  |
| Form C | Changeover<br>SPDT = Single Pole Double Throw |  |

## Layout

Top View

| Glossary Magnetic Sensitivity | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sens. | A | B | C | D | E | F | G |
| AT | 05-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30-35 | 35-40 |

## MK23 Reed Sensor




## Handling & Assembly Instructions

- Use proper lead clamping or heat sinking techniques to prevent mechanical and/or heat stress during, soldering, and welding
- Mechanical shock as the result of dropping the reed sensor typically from a distance of greater than 12" may change it's magnetic sensitivity and/or destroy the sensor
- Reflow Soldering Conditions according to JEDEC norm J-STD-020D.1



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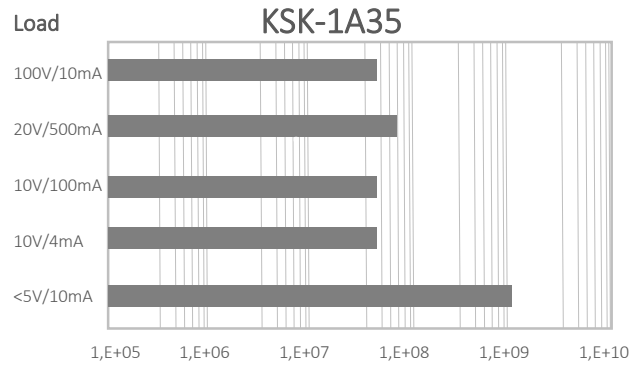
# MK23 Series Reed Sensors

## Life Test Data

*Load increase reduces life expectancy of Reed Switches

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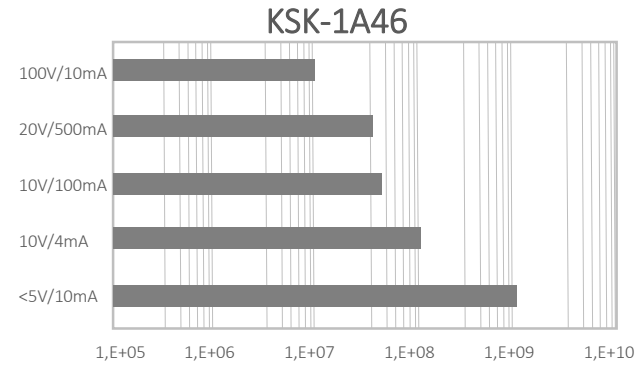


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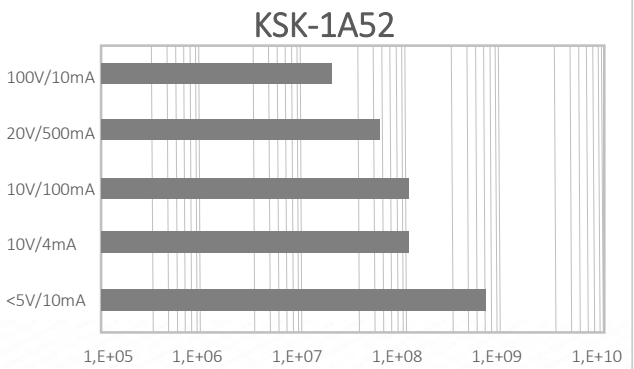


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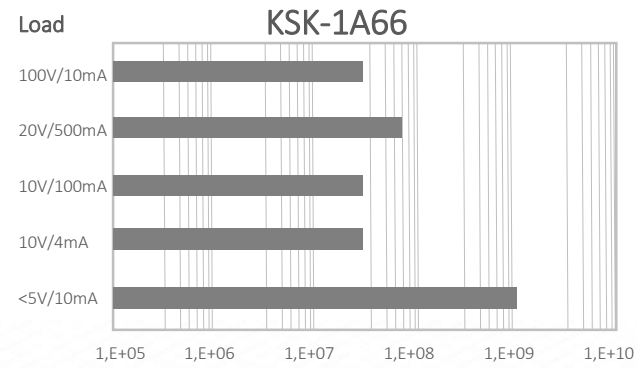


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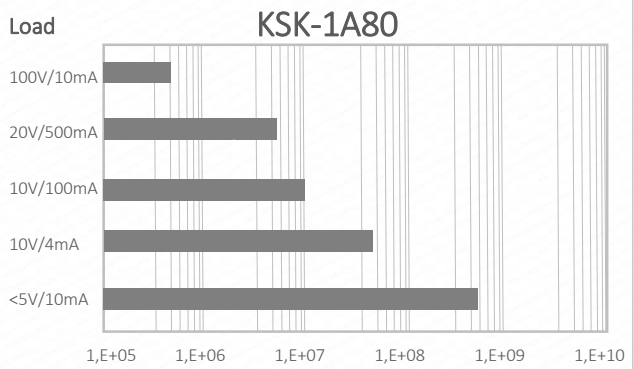


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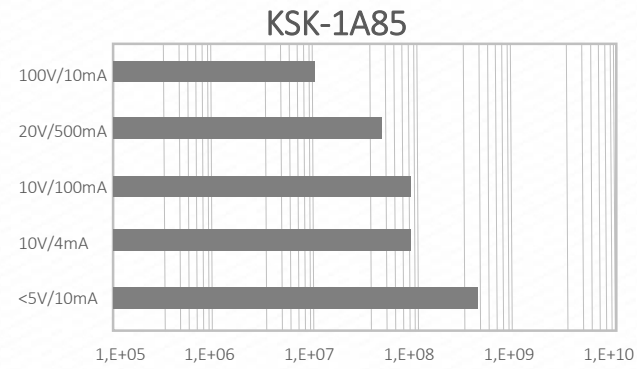




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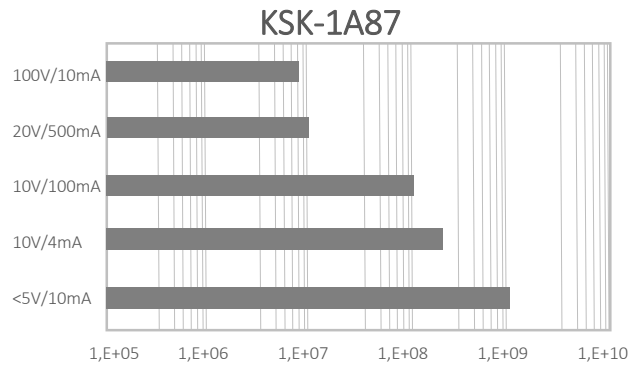


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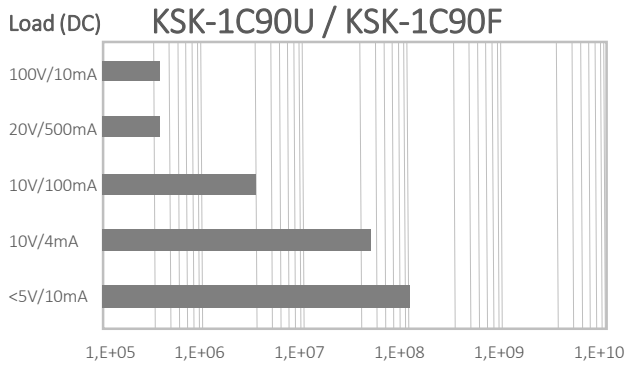






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