# Reed Switch Specifications

# 1. Product Model:

XGH-1

## 2. Standard:

Ensure the quality of products, standardized testing methods and test conditions; implement standardized management of product process.

# 3. Specification:

| 3-1 | Standard appearance size: Reference (figure-1)                          |
|-----|---|
|     | 3-1-1 Crack of sealing part: Less than 1 / 3 of sealing part            |
|     | 3-1-2 Bending range of wire before delivery: within glass tube diameter |

| 3-2      | Contact coating:           | Ru coating   |
|----------|----------------------------|--|
| 3-3      | Conductor coating:         | Ni/Au coating  |
| 3-4      | Test coil:                 | Total length 13mm, turns 5000t, coil resistance 530ohm |
| 3-5      | Electrical characteri      | stics: See the table below,                            |
| 3-6      | Action characteristics:    | See the table below, 3-                                |
| 7        | Mechanical properties:     | See the table below, 3-8                               |
| Envi ron | mental characteristics:See | e the table below, 3-9                                 |
| Life c   | haracteristics:            | See the table below, 3-10                              |
| Precaut  | ions for using             |  |

### 3-5 Electrical characteristics

| Test Item                 | Specifications        | Unit      | Inspection and Test Conditions   |
|---------------------------|-----------------------|-----------|--|
| Closure value             | 10-40                 | AT        | E=5V I=20mA, the switch is consistent with the   |
| Release value             | <b>5mi n</b>          |           | coil center, 100A first, then return to zero,<br>then measure at value 4 terminal resistance |
| contact resistance        | 150max                | mohm      | test: closing value $\times$ 1.5 times current   |
| Insulation impedance      | $1	imes 10^{10}$ mi n | ohm       | Measure after applying voltage dc100v for 1 minute   |
| Contact withstand voltage | <b>250mi n</b>        | V:DC      | Leakage current below 500uA, in 60 seconds   |
| Contact capacity          | 10                    | VA/W      |  |
| Max.Switching Voltage     | 200                   | V · AC/DC |  |
| Max.Switching Current     | 0.5                   | V · DC    |  |
| Max.power on current      | 1.0                   | A         |  |

### 3-6 Action characteristics

| Test Item              | Specifications | Unit | Inspection and Test Conditions            |
|------------------------|----------------|------|---|
| Action time            | 0.4max         | msec | 1.Square wave drive, coil frequency 100Hz |
| Bounce time            | 0.4max         | msec | 2.Voltage 5V, current 20mA                |
| Reset time             | 0.2max         | msec |   |
| Maximum driving cycles | 500            | HZ   |   |
| Resonance cycle number | 5000 $\pm$ 400 | HZ   |   |

#### 3-7 Mechanical properties

| Test Item        | Specifications | Unit   | Inspection and Test Conditions   |
|------------------|----------------|--------|--|
| Tensile strength | 19             | N(kgf) | Apply the specified pulling force is<br>applied vertically for 20 seconds,<br>there is no abnormality in the sealing |
|                  |                |        | part.  |

#### 3-8 Environmental characteristics

| Test Item                       | Specifications  | Unit | Inspection and Test Conditions                          |
|---------------------------------|-----------------|------|---|
| Operating temperature range     | -40 $\sim$ +125 | °C   | Humidity below 90%(RH)                                  |
| Storage temperature range       | -40 $\sim$ +125 | °C   |   |
| Hot and cold shock              | <b>-10~+65</b>  | °C   | MIL-STD-202G  |
| Welding heart-resistant propert | 265             | °C   | Heat for 10 seconds at 2.5mm away from the sealing part |
| Solder tin rate                 | 90              | %    | 260℃, 5s  |
| Impact resistance               | 480             | m/s² | MIL-STD-202G  |
| Vibration resistance            | 10~55           | Hz   | MIL-STD-202G  |

#### 3-9 Life characteristics

| Test Item            | Specifications    | Unit   | Inspection and Test Conditions |
|----------------------|-------------------|--------|--------------------------------|
| Life characteristics | 1×10 <sup>7</sup> | cycles | DC10V-5mA(R)                   |
|                      | 5×10'             | cycles | DC12V-500mA®                   |
|                      |                   |        |                                |

1. The above test standard of (3-5) & (3-6), ensure that the requirements of characteristic specifications are met. 2. The above test standard of (3-7), ensure that the requirements of 3-1-1 are met.

3. The above test standard of (3-8), ensure that the changing of AT is within  $\pm$  2AT.

4. The above test standard of (3-9), ensure that the changing of AT is within 15%, and the contact resistance is less than 1.0ohm.

#### 3-1 Figure-1 XC-14 Appearance Dimenson



#### 3-10 Precautions for using

**3-10-1** Due to the customer's product size requirements, customers will bend and shear the reed switch, so the reed switch must be protected during processing to avoid the change of product characteristics in the process of processing.

**Processing precautions** Fix the fixture up and down, then Bending of coductor wire press the switch and bend it. The width of upper and lower pressing fixture is recommended to be 1.5-2.5mm; if it is too thick, the pressure stress of switch will be large. Cutting of coductor wire Fix the fixture up and down, then press the switch and cut it. 3-10-2 The circuit board will expand of heat and contract of cold when the ambient temperature changes, and the board will move when it is assembled under external force. It is suggested that the glass tube ///// ///// should be more than 0.5mm away from the circuit board to reduce the impact of external force on the switch. The circuit board Suggestions for use on circuit board 3-10-3 Basically, all the reed switch manufacturers are the same: If the reed switch is above a certain height and falls to the ground, the characteristics of the switch will be changed. Please pay attention to it in the use process. More than 30cm 3-10-4 Management of storage place: 1. Avoid direct sunlight. 2. No corrosion environment, air flow environment. **3.Temperature:** 5-35 °C. 4. Humidity: 20-70% RH.