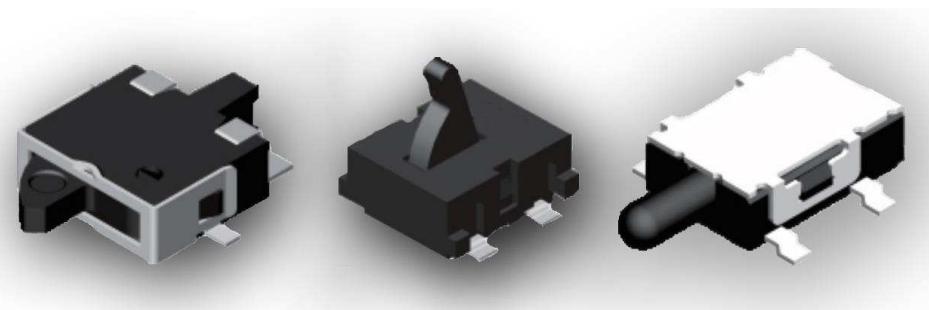


Applications

- Automotive
- Instrumentation
- White goods
- Telecommunications

JJ Series – Detector Switches**Benefits**

- RoHS Compliant
- Halogen and Lead Free
- Sharp detection feeling
- Compact Size



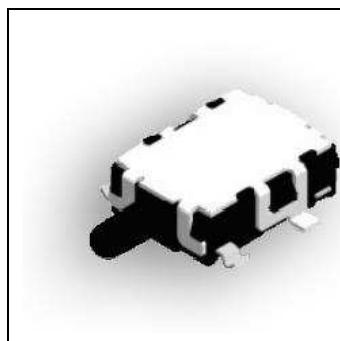
TE Connectivity is pleased to introduce its JJ Series of Detector Switches, suitable for a wide variety of applications given their several presentations ranging from horizontal or vertical actuated options as well as Gull-winged, J-leaded and Through-Hole mounting possibilities.

The Detector Switches will be offered in a wide range of sizes giving the possibility for countless applications going from automotive to telecommunications.

JJ Series – Family Classification

| Series | Body Size |
|--------|------------------------------|
| JJA | 3.5x2.8 mm |
| JJB | 3.5x2.98 mm |
| JJC | 3.5x3.3 mm |
| JJD | 4.2x3.6 mm |
| JJE | 4.7x3.5 mm |
| JJF | 4.7x3.8 mm |
| JJG | 5.7x4.0 mm (High-Rating) |
| JJH | 5.7x4.0 mm (Standard-Rating) |
| JJI | 5.0x4.4 mm |
| JJJ | 6.0x4.85 mm / 5.5x4.7 mm |
| JJK | 6.3x3.0 mm |
| JJL | 6.5x3.9 mm |
| JJM | 5.7x4.0 mm |
| JJN | 5.7x4.0 mm (Wedge) |
| JJO | 10.0x3.8 mm |
| JJP | 10.6x10.0 mm |

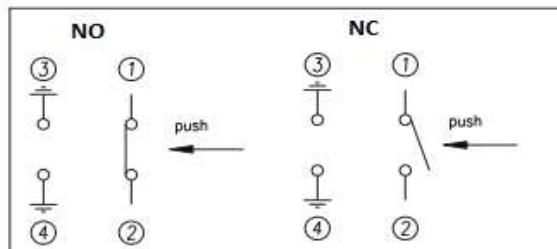
JJH Family – 5.7x4.0 mm (Standard-Rating)



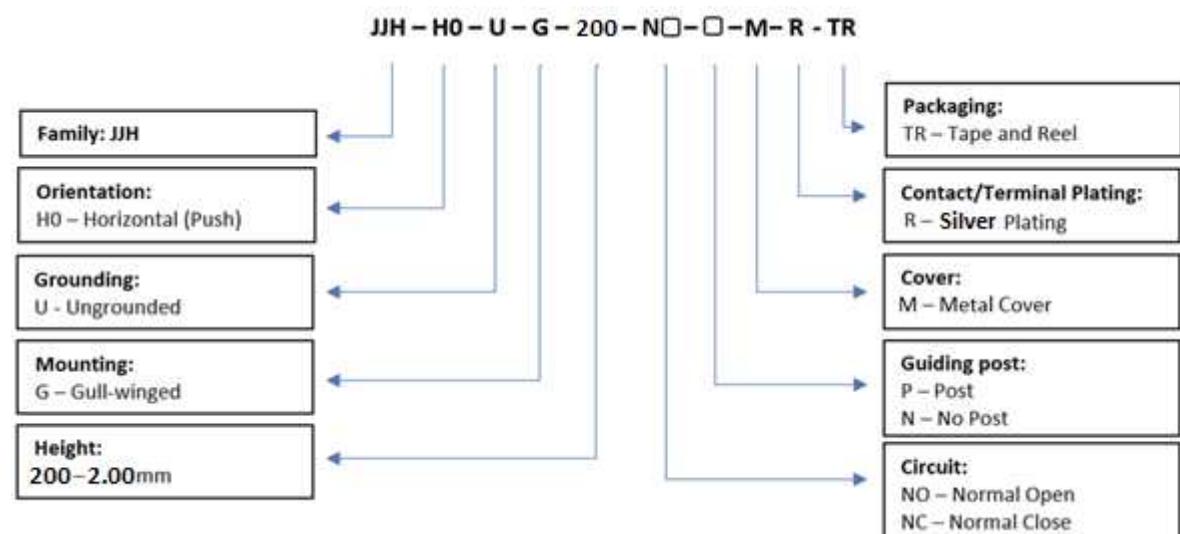
| | |
|-----------------------|-------------------|
| Contact Rating | 10mA, 5VDC |
| Contact Resistance | 1Ω Max. |
| Insulation Resistance | 100MΩ Min. 100VDC |
| Dielectric Strength | 100VAC/1 minute |
| Operating Force | 150gF Max. |
| Travel | 2.0mm |
| Operating Life | 100,000 cycles |
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -40°C to 85°C |

| Features | Applications |
|---|---|
| <ul style="list-style-type: none"> Easy orientation offered by guiding post. Ultra-low profile with 2.0mm. NO and NC circuit availability. | <ul style="list-style-type: none"> Notebooks. Detection of car audio mechanisms. Smoke detectors. Industrial application. |

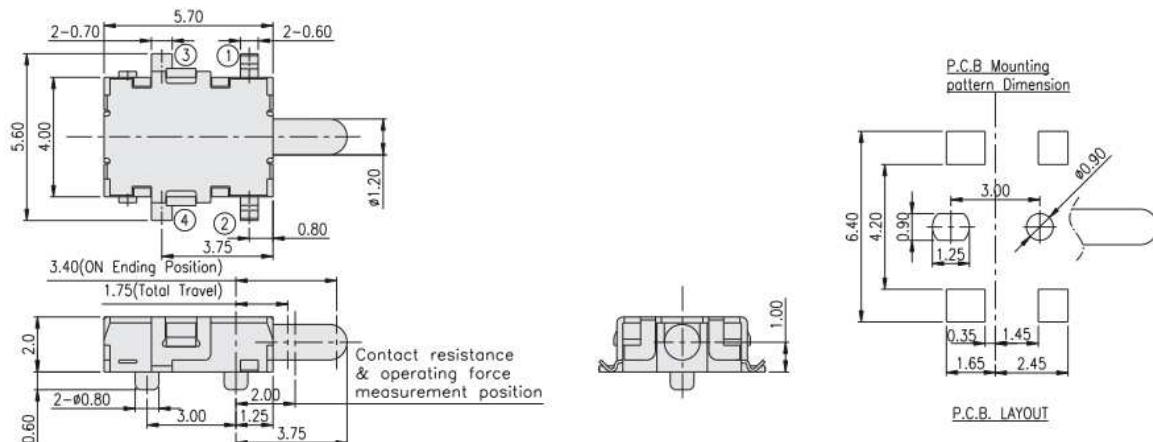
Circuit



How To Order



Diagrams



PN List

| Smart PN | Orientation | Grounding | Mounting | Height | Circuit | Guiding Post | Cover | Plating | Packaging | MOQ | TE PN |
|-------------------|-------------------|------------|-------------|--------|---------|--------------|-------|---------|---------------|-------|-----------|
| JJHH0UG200NCPMRTR | Horizontal (Push) | Ungrounded | Gull-winged | 2.00mm | NC | Post | Metal | Silver | Tape and Reel | 3,000 | 2331390-1 |
| JJHH0UG200NCNNRTR | Horizontal (Push) | Ungrounded | Gull-winged | 2.00mm | NC | No Post | Metal | Silver | Tape and Reel | 3,000 | 2331391-1 |
| JJHH0UG200NOPMRTR | Horizontal (Push) | Ungrounded | Gull-winged | 2.00mm | NO | Post | Metal | Silver | Tape and Reel | 3,000 | 2331392-1 |
| JJHH0UG200NONMRTR | Horizontal (Push) | Ungrounded | Gull-winged | 2.00mm | NO | No Post | Metal | Silver | Tape and Reel | 3,000 | 2331393-1 |

2331390-1 Rev A
06/2018

Dimensions in
millimetres unless
otherwise specified

Dimensions Shown for
reference purposes only.
Specifications subject to
change

For Email, phone or
live chat, go to:
www.te.com/help

1. Style

“Detector Switches” are mainly used as signal switches of electric devices, with the general requirements of mechanical and electrical characteristic.

1.1 Operating Temperature Range: -40°C to 85°C

1.2 Storage Temperature Range: -40°C to 85°C

1.3 The shelf life of product is within 6 months.

2. Current Range: 10mA, 5 VDC

3. Type of Actuation: Momentary

4. Test Sequence:

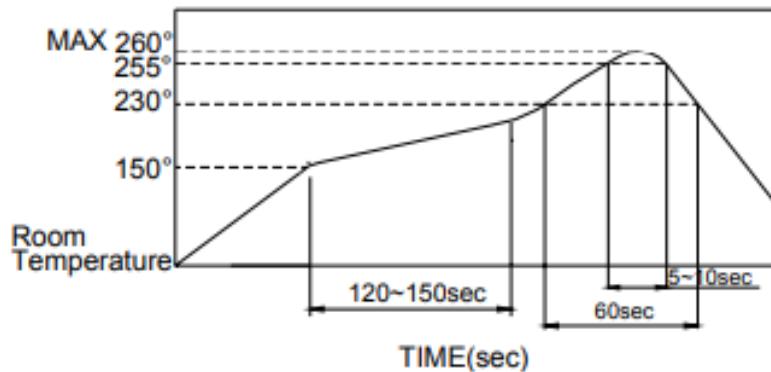
| | Item | Description | Test Conditions | Requirements |
|----------------------|------|---------------------------------|---|--|
| Appearance | 1 | Visual Examination | Physical inspection without applying any external forces. | There shall be no defects that affect the serviceability of the product. |
| | 2 | Contact Resistance | Actuate the switch and measure contact resistance using a micro-Ohmmeter. | 1Ω Max. |
| Electric Performance | 3 | Insulation Resistance | Measurements shall be made at 100 VDC potential between terminals and cover. | 100MΩ Min. |
| | 4 | Dielectric Withstanding Voltage | 100 VAC (50Hz or 60Hz) shall be applied across terminals and cover for 1 minute | There shall be no breakdown or flashover |

| | | | | |
|------------------------|----|------------------------|---|---|
| Mechanical Performance | 5 | Operating Force | As the specification shows operating force is measured | 150gF Max. (1.5N Max.) |
| | 6 | Contact (On) point | ----- | As the specification shows ON start position |
| | 7 | Stop Strength | 1) Operation direction: 0.5KgF static operation force applies on the center of the actuator for 15 seconds. 2) Non-operation direction: 0.1KgF static operation force applies on any direction for 15 seconds. | 1) As shown in item 2 to 7. |
| | 8 | Solder Heat Resistance | (See chart below) | 1) Shall be free from pronounced backlash and falling-off or breakage terminals 2) As shown in item 2 to 7 |
| | 9 | Vibration | Test per Method 201A of MIL-STD-202F 1) Swing distance=1.5mm 2) Frequency: 10-55-10Hz in 1-min/cycle. 3) Direction: 3 vertical directions including the directions of operation 4) Test time: 2 hours each direction | 1) As shown in item 2 to 7. |
| | 10 | Shock | Test per Method 213B condition A of MIL-STD-202F 1) Acceleration; 50G 2) Action time: 11±1m seconds 3) Testing Direction: 6 sides 4) Test Cycle: 3 times in each direction | 1) As shown in item 2 to 8. |
| | 11 | Operating Life | Tested as follows: 1) 1mA, 5 VDC resistive load 2) Apply a static load in the direction of operation equal to the operating force to the center of the stem. 3) Rate of Operation: 15 operations per minute. 4) Cycle of Operation: 100,000 cycles Min. | 1) As shown in item 4 to 5 2) Insulation Resistance: 100MΩ Min. 3) Contact Resistance: 10Ω Max. |

| | | | | |
|-------------------|----|-------------------------------|---|--|
| Weather- Proof | 12 | Resistance Low Temperature | Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: 1) Temperature: $-40 \pm 2^\circ\text{C}$ 2) Time: 96 hours | 1) As shown in item 2 to 7. |
| | 13 | Heat Resistance | Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: 1) Temperature: $85 \pm 2^\circ\text{C}$ 2) Time: 96 hours | |
| | 14 | Humidity Resistance | Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: 1) Temperature: $40 \pm 2^\circ\text{C}$ 2) Relative Humidity: 90~95% 3) Time: 96 hours | 1) As shown in item 4~7 2) Insulation resistance: 2) Insulation Resistance: 10MΩ Min. |

5. Soldering Conditions:

■ Recommended Soldering Profile for the JJH Series



■ The temperatures defined above are the temperatures measured on the surface of the Printed Circuit Board. There are cases where the printed circuit board's temperature differs greatly from the temperature of the switch. Critical note: the switch's surface temperature must not exceed 260°C.

■ Manual Soldering

Soldering Temperature: 350°C Max.

Continuous Soldering Time: 5 second Max.

■ Precautions in Handling

1. Care must be taken to ensure excess flux on the top surface of the printed circuit board does not adhere to the switch.
2. Do not wash the switch.

■ Recommended storage conditions:

Store the products in the original packaging material. After opening the package, the remaining products must be stored in the appropriate moisture-proof & airtight environment.

Do not store the switch in the following environment or it may affect performance and solderability:

1. temperatures below -10° C to 40°C & humidity at 85% (min)
2. environment with corrosive gas
3. storage over 6 months
4. place in direct sunlight