

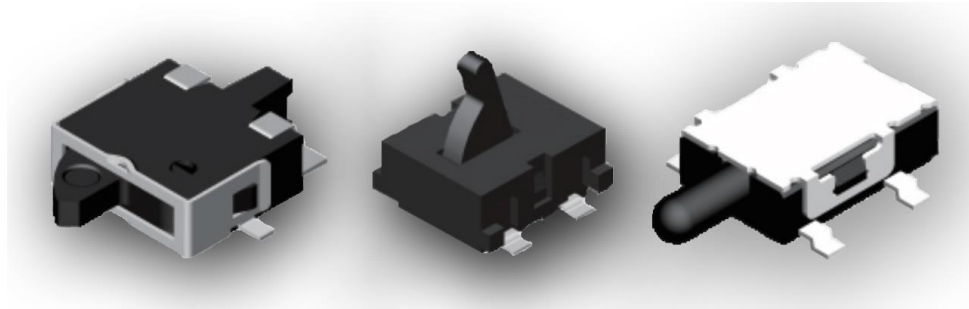
Applications

- Automotive
- Instrumentation
- White goods
- Telecommunications

Benefits

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

JJ Series – Detector Switches



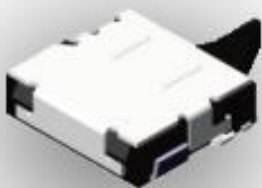
TE Connectivity is pleased to introduce its JJ Series of Detector Switches, suitable for a wide variety of applications given their several presentations ranging from horizontal or vertical actuated options as well as Gull-winged, J-leaded and Through-Hole mounting possibilities.

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

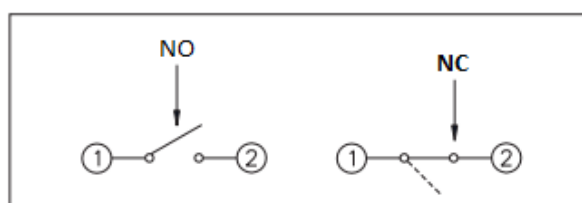
Series	Body Size
JJA	3.5x2.8 mm
JJB	3.5x2.98 mm
JJC	3.5x3.3 mm
JJD	4.2x3.6 mm
JJE	4.7x3.5 mm
JJF	4.7x3.8 mm
JJG	5.7x4.0 mm (High-Rating)
JJH	5.7x4.0 mm (Standard-Rating)
JJI	5.0x4.4 mm
JJJ	6.0x4.85 mm / 5.5x4.7 mm
JJK	6.3x3.0 mm
JJL	6.5x3.9 mm
JJM	5.7x4.0 mm
JJN	5.7x4.0 mm (Wedge)
JJO	10.0x3.8 mm
JJP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

JJC Family – 3.4x3.3 mm

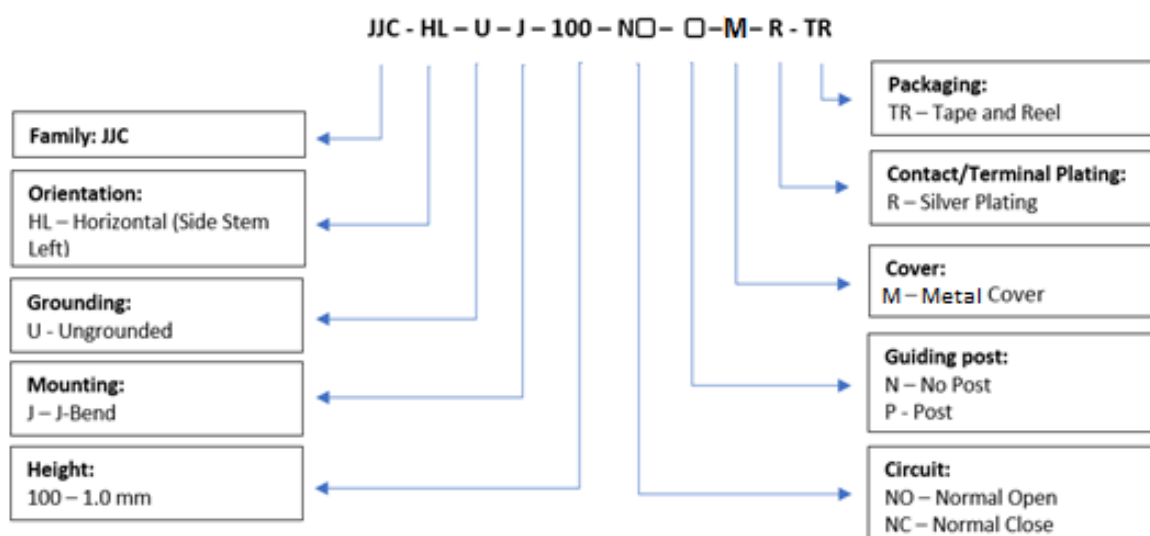
	Contact Rating	50μA, 3VDV Min. 1mA, 5VDC Max.
	Contact Resistance	2Ω Max.
	Insulation Resistance	100MΩ Min. 100VDC
	Dielectric Strength	100VAC/1 minute
	Operating Force	35gF Max.
	Travel	1.15mm
	Operating Life	50,000 cycles
	Operating Temperature	-10°C to 60°C
	Storage Temperature	-40°C to 85°C

Features	Applications
• Compact size • Tow-way operation • Halogen Free	• Digital camera • Notebook • Automotive

Circuit

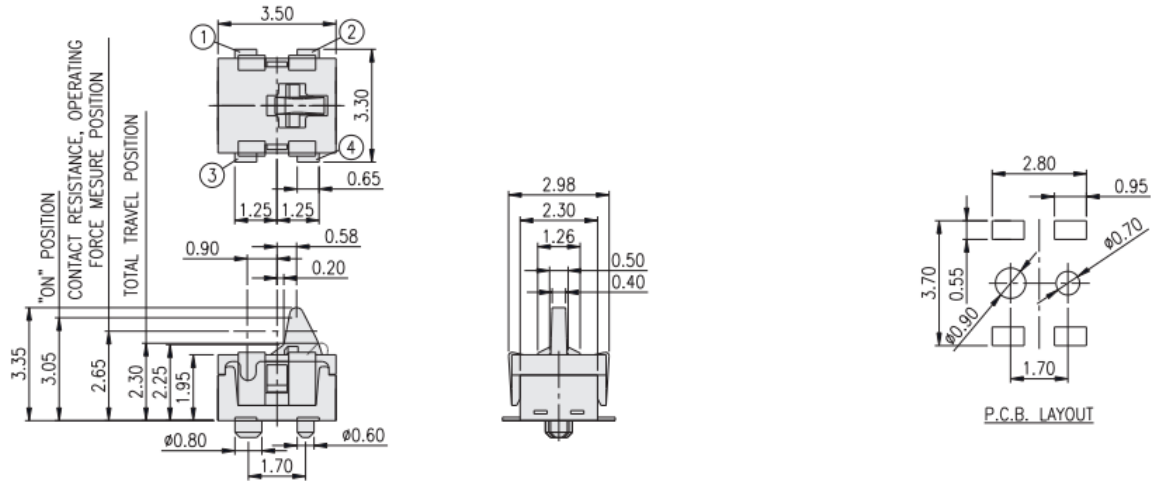


How To Order



Diagrams

-Posted



PN List

Smart PN	Orientation	Grounding	Mounting	Height	Circuit	Guiding Post	Cover	Plating	Packaging	MOQ	TE PN
JJCHLUJ100NCPMRTR	Horizontal (Side Stem Left)	Ungrounded	J-Bend	1.0mm	NC	Post	Metal	Silver	Tape and Reel	3,500	2331384-1
JJCHLUJ100NCNMRTR	Horizontal (Side Stem Left)	Ungrounded	J-Bend	1.0mm	NC	No Post	Metal	Silver	Tape and Reel	3,500	2331386-1
JJCHLUJ100NOPMRTR	Horizontal (Side Stem Left)	Ungrounded	J-Bend	1.0mm	NO	Post	Metal	Silver	Tape and Reel	3,500	2331387-1
JJCHLUJ100NONMRTR	Horizontal (Side Stem Left)	Ungrounded	J-Bend	1.0mm	NO	No Post	Metal	Silver	Tape and Reel	3,500	2331388-1

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: -10 °C to 60°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: Min. 50μA, 3VDC // Max. 1mA, 5VDC

3. Type of Actuation: Momentary

4. Test Sequence:

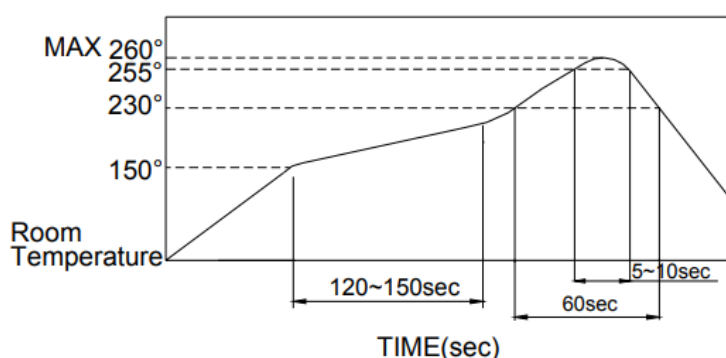
	Item	Description	Test Conditions	Requirements
Appearance	1	Visual Examination	Physical inspection without applying any external forces.	There shall be no defects that affect the serviceability of the product.
Electric Performance	2	Contact Resistance	Actuate the switch (2.3mm) and measure contact resistance using a micro-Ohmmeter.	2Ω Max
	3	Insulation Resistance	Measurements shall be made at 100 VDC potential between terminals and cover.	100MΩ Min
	4	Dielectric Withstanding Voltage	Apply 100 VAC (50Hz or 60Hz) between terminals and cover for 1 minute.	There shall be no breakdown or flashover
	5	Operating Force	Applying force to the center of the stem for 2.3mm.	35gf Max. (.34N Max.)
	6	OFF start position	-----	As the specification shows OFF start position

Mechanical Performance	7	Stop Strength	Static load of 500gf (4.9N) can be vertical applied for 15 seconds. While 100gf (0.98N) /15 seconds horizontal.	As shown in items 2 to 6
	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 4 to 5 3) Contact Resistance: 5Ω Max. 4) Insulation Resistance: 10MΩ Min.
	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 items 4 to 5 2) Contact Resistance: 2Ω Max. 3) Insulation Resistance: 10MΩ Min.
	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 items 4 to 5 2) Contact Resistance: 2Ω Max. 3) Insulation Resistance: 10MΩ Min.
Durability	11	Operating Life	Measurements shall be made following the test forth below: 1) 1mA,5 VDC resistive load 2) Applying a static load in the direction of operation equal to the operation force to the center of the stem. 3) Rate of Operation: 15 to 20 operations per minute. 4) Cycle of Operation: 50,000 cycles Min.	1) As shown in items 4 to 5 2) Insulation Resistance: 10MΩ Min. 3) Contact Resistance: 5Ω 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±2°C 2) Time: 96 hours	1) As shown in items 4 to 7 2) Insulation Resistance: 10MΩ Min 3) Contact Resistance: 5Ω Max.
	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±2°C 2) Time: 96 hours	1) As shown in items 4 to 7 2) Insulation Resistance: 10MΩ Min 3) Contact Resistance: 5Ω Max.

Weather Proof	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 to 95% 3) Time: 96 hours	1) As shown in items 4 to 7 2) Insulation Resistance: $10\text{M}\Omega$ Min 3) Contact Resistance: 5Ω Max.
	15	Salt Spray	The switch shall be subjected to fine mist of solution at a temperature of $35 \pm 2^{\circ}\text{C}$ for 48 hours continuously (salt solution concentration $5 \pm 1\%$ by weight.) EIA-364-26	Without excessive rust
	16	Change of Temperature	After 5 cycles of following conditions, the switch shall be allowed to stand under normal room temperature, and Humidity condition for an hour, and measurement shall be made within an hour after that.	1) As shown in items 4 to 5 2) Insulation Resistance: $10\text{M}\Omega$ min 3) Contact Resistance: 5Ω Max
	17	Moisture Sensitivity levels	$2a \leq 30^{\circ}\text{C}$ to 60% RH 4 Weeks	1) As shown in items 1 to 7

5. Soldering Conditions:

■ Recommended Soldering Profile for the JJC 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: $350^{\circ}\text{C} \pm 5^{\circ}\text{C}$

Continuous Soldering Time: Max. 5 seconds

■ 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