

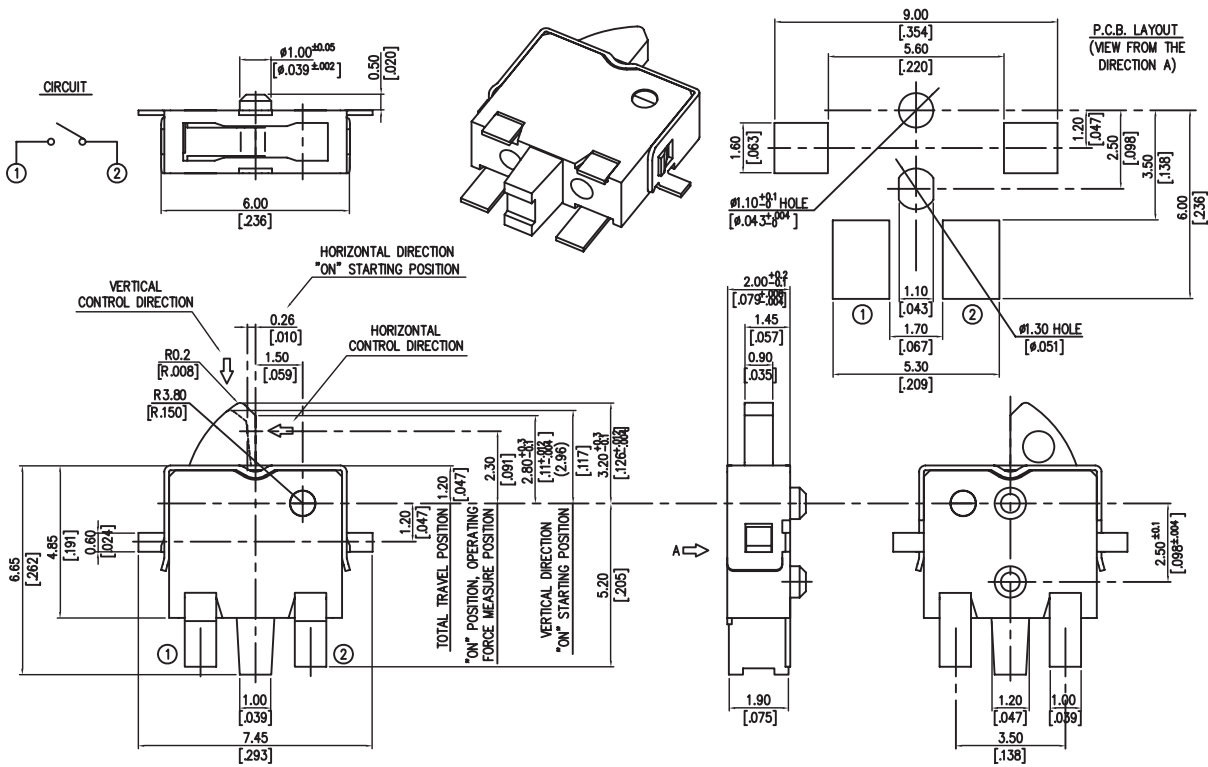
Detect Switch

RoHS
Compliant

Specification

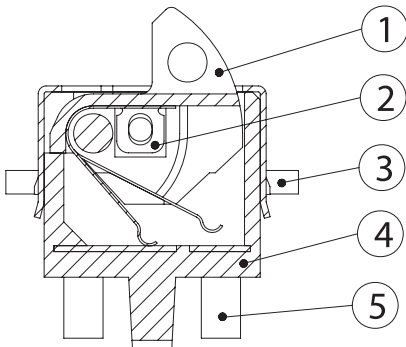
General tolerances : ±0.2mm

Diagram



Dimensions : Millimetres (Inches)

Item	Description	Q'ty	Materials	Treatment
1	Stem	1	High-Temp Thermoplastic Nylon UL94V - 0	None
2	Contact		Stainless Steel	With Silver Cladding
3	Cover		Nickel Silver	None
4	Base		High-Temp Thermoplastic Nylon UL94V - 0	None
5	Terminal		Brass	With Silver Plating



1. Style

This specification describes "DETECTOR SWITCH", mainly used as signal switch of electric devices, with the general requirements of mechanical and electrical characteristic.

1.1 Operating Temperature Range: -10C to +60°C

1.2 Storage Temperature Range : -20°C to +70°C

2. **Current Range:** 50mA , 20V DC

3. **Type of Actuation:** Auto Return

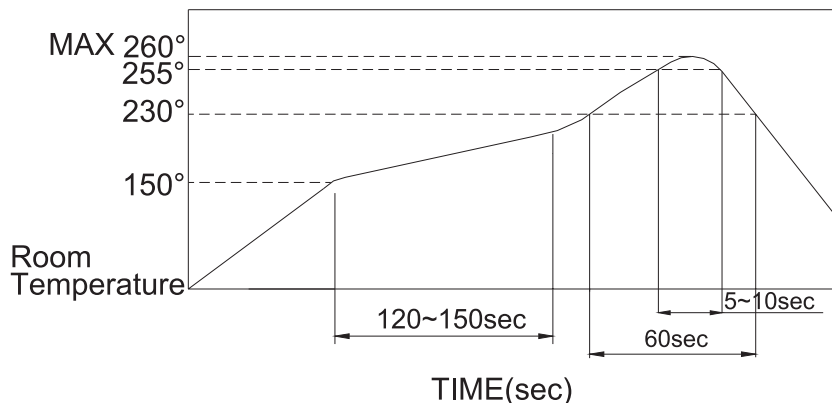
4. **Test Sequence:**

Item	Description	Test Conditions	Requirements
Appearance			
1	Visual Examination	By visual examination check without any out pressure & testing.	There shall be no defects that affect the serviceability of the product.
Electric Performance			
2	Contact Resistance	Applying a static load 2.3mm times the operating force to the center of the stem, measurements shall be made with a 1 kHz small current contact resistance meter	1Ω Max
3	Insulation Resistance	Measurements shall be made following application of 100 V DC potential across terminals and cover for 1 minute ± 5 seconds	100MΩ min
4	Dielectric Withstanding Voltage	100V AC (50Hz or 60Hz) shall be applied across terminals and cover for 1 minute	There shall be no breakdown or flashover
5	Capacitance	MHz ±10 kHz	5 pF max.
6	Operation Force	As the specification shows operating force is measured	50gf MAX (.49N MAX)
Mechanical Performance			
7	ON start position	--	As the specification shows ON start position

Detect Switch

8	Stop Strength	Placing the switch such that the direction of switch operation is vertical, a static load of 2 kgf shall be applied in the direction of stem operation for a period of 60 seconds	As shown item 2~7
9	Solder Heat Resistance	SMT Type ~MPTE-MRLC-V-T/R Series(4/4)	1. Shall be free from pronounced backlash and falling-off or breakage terminals 2. As shown in item 4, 5 3. Contact Resistance: 10Ω Max 4. Insulation Resistance: 10MΩ min
10	Vibration	Shall be vibrated in accordance with 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 4,5 2. Contact Resistance: 10Ω Max 3. Insulation Resistance: 10MΩ min
11	Shock	Shall be shocked in accordance with 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	Ditto
Durability			
12	Operating Life	Measurements shall be made following the test forth below: 1. 5mA,20V DC resistive load 2. Applying a static load the operating force to the center of the stem in the direction of operation Static Load = OF Max. 3. Rate of Operation: 20~25 operation per minute 4. Cycle of Operation: 100,000 cycles min.	1. As shown in item 4,5 2. Contact Resistance: 10Ω Max 3. Insulation Resistance:10MΩ min
Weather-Proof			
13	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	Ditto
14	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	Ditto
15	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±2°C 2) Relative Humidity: 90~95% 3) Time: 96 hours	1) As shown in item 4~8 2) 4)Insulation Resistance: 10MΩ min

Soldering Conditions



- The condition mentioned above is the temperature on the Cu foil of the PCB surface. There are cases where board's temperature greatly differs from switch's surface be used not to allow switch's surface temperature to exceed 260°C.
- Manual Soldering
 - Soldering Temperature : Max.350°C
 - Continuous Soldering Time : Max. 3 seconds

Part Number Table

Description	Part Number
Detect Switch, Right side With G Pin	MPTE-MRLC-V-T/R

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