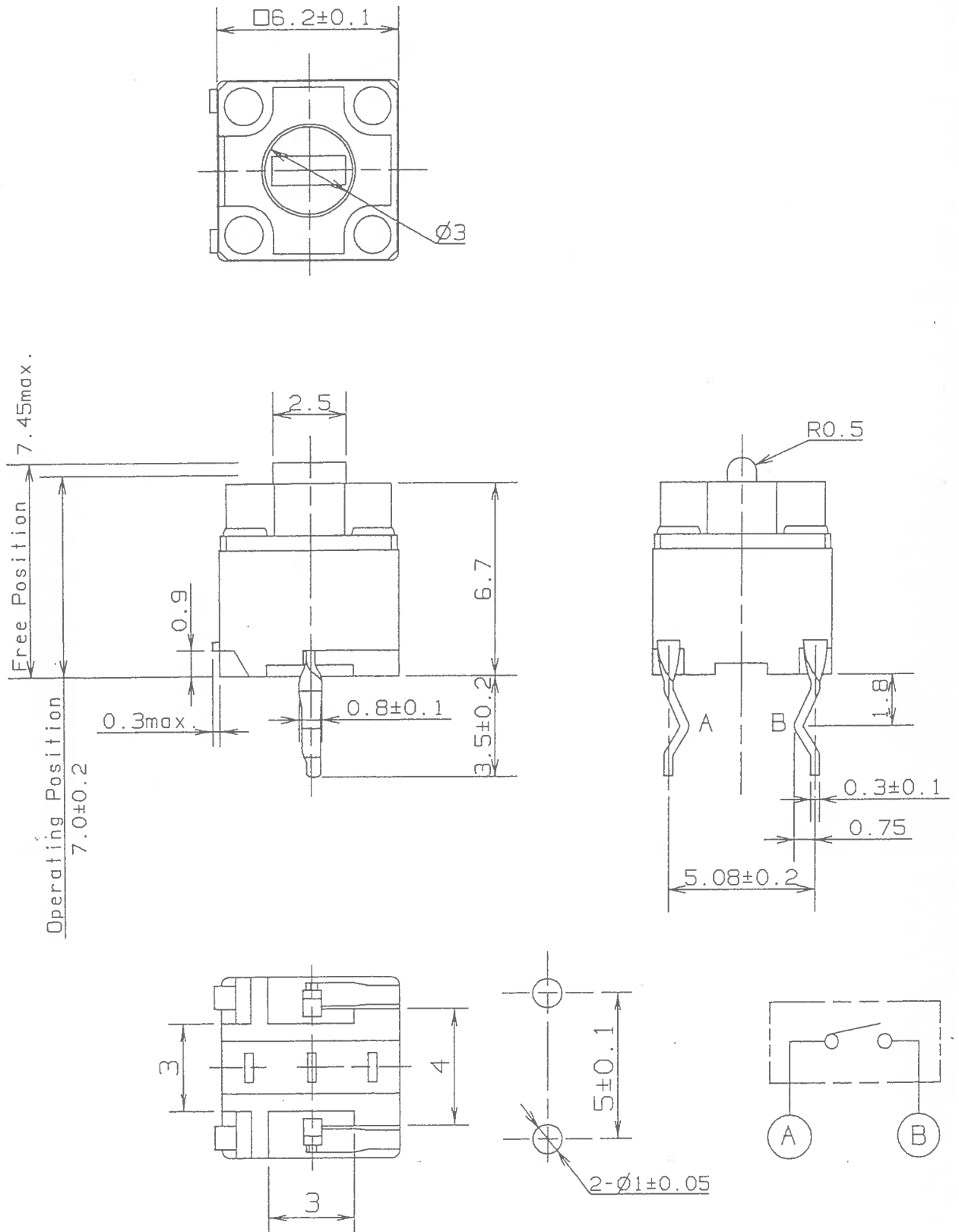


THIRD ANGLE PROJECTION

ALL DIMENSIONS ARE IN MILLIMETERS. DO NOT SCALE DRAWING

General dimension tolerance : ± 0.2



DESIGN		NAME	Switches	ISSUE	REVISIONS	DATE
DRAW		TYPE NO.	EVQ POE07K	DRAWING NO.	R V - II -	1/4
CHECK						
APPROVAL						

1. Construction

- 1-1 Functional type : Snap action
- 1-2 Configuration : Single pole single throw
- 1-3 Terminal form : For P. W. B. (t=1.6mm) assembly

2. Operating characteristics

- 2-1 Operating Force OF 0.74 (N) max. 0.41 (N) min.
- 2-2 Release Force RF 0.10 (N) min.
- 2-3 Pre Travel PT 0.5 (mm) max.
- 2-4 Movement Differential MD 0.12 (mm) max.
- 2-5 Over Travel OT 0.2 (mm) min.
- 2-6 Operating Position OP 7.0±0.2 (mm)
- 2-7 Free Position FP 7.45 (mm) max.

3. Electrical characteristics

- 3-1 Contact resistance (Initial value at Total Travel Position = TTP) 100 (mΩ) max.
- 3-2 Insulation resistance and withstand voltage

No.	Item	Insulation resistance (100 VDC)	Withstand voltage (50 to 60Hz)
1	Measuring parts Between each terminals	100 (MΩ) min.	600 VAC for 1 min

- 3-3 rating 50 mA, 30 VDC : Resistive Load

4. Mechanical characteristics

4-1 Vibration

- (1) Malfunction : Contact not to be more than 1 ms.
- (2) Conditions (at TTP)
 - Vibration frequency range : 10 to 55 Hz
 - Amplitude : 1.5 mm
 - Time : 2 hours

4-2 Shock

- (1) Malfunction : Contact not to be more than 1 ms.
- (2) Conditions (at TTP) 300 m/s² min.

4-3 Strength

- (1) Actuator strength Apply force of 7.35 N for 1 min to the actuator vertically 10 times.

5. Environment and environmental test

- 5-1 Temperature range -45°C ~ +85°C (Relative humidity : under 60%RH)
- 5-2 Humidity range 95%RH max. (0°C ~ 35°C)
- 5-3 Test condition
 - Ambient Temperature : 60±5°C
 - Relative humidity : 90%RH ~ 95%RH
 - Shelf time : 240 hours

6. Operation life

- 6-1 Allowable operating frequency 300 times/min max.
- 6-2 Allowable operating speed 1 ~ 5 mm/s
- 6-3 Operation life

Item	The number of operations	Displacement of actuator
Electrical	5,000,000 min.	DC 5 V 1 mA 2 ~ 3 operations/s
Mechanical	5,000,000 min.	TTP

After test

- Contact resistance : 1000 (mΩ) max.
- Operating force : within ±30% of initial force

NAME	LIGHT TOUCH SWITCH	ISSUE	REVISIONS	DATE
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7. Marking Date code

8. Precaution

8-1 Soldering condition

Item	Condition
Preheat temperature	120°C max. (temperature of soldering surface of P.W.B.)
Preheat time	60s max.
Height of flux	1/2 max. of P.W.B. thickness
Temperature of soldering	260°C max.
Time of immersion	Within 5s
Soldering time	Within 2 times (Bringing down the heat after first soldering)
Printed wiring board	Single sided copper-clad laminates

9. Notes

9-1 Measuring condition : Unless otherwise specified, these standard range of atmospheric conditions for measuring and testing shall be as follows.

Standard temperature : 20°C

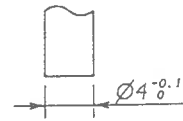
Standard humidity : 65%RH

When criteria have no doubts, test is done at temperature of 5°C to 35°C and humidity of 45%RH to 85%RH.

9-2 Recommendable tip for mechanical test :

The tip shown in the right figure is the recommended dimension.

Tip point shall be kept vertically at center-line of the switch.



9-3 Precaution for handling

- Please be cautious not to apply over specified static load or shock to actuator of the switch.
- Re-soldering by soldering iron shall be allowed under 280°C max. 3 sec. max. 1 time. Soldering iron for re-soldering have to be 20W max.
- Storage under high temperature, high humidity and corrosive gas should be avoided. Especially, when long period preservation is needed, do not open the carton.
- After mount to P.W.B., a switch has be stored not to apply over specified load.
- Please be careful not to clean switches with water and solvent.

NAME LIGHT TOUCH SWITCH			
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Prohibitions and precaution for handling

1) Prohibited items on fire and smoking

- Absolutely avoid use of a switch beyond its rated range because doing so may cause a fire. If misuse or abnormal use may result in conditions in which the switch is used out of its rated range, take proper measures such as current interruption using a protective circuit.
- The grade of nonflammability for resin used in Light Touch Switches is "94HB," which is based on UL94 Standards (flammability test for plastic materials). Prohibit use in a location where a spreading fire may be generated or prepare against a spreading fire.

2) For use in equipment for which safety requested

- Although care is taken to ensure potentiometer quality, inferior characteristics, short circuits, open circuits are some problems that might be generated. To design a set which places maximum emphasis on safety, review the effect of any single fault of a potentiometer in advance and perform virtually fail-safe design to ensure maximum safety by:
 - preparing a protective circuit or a protective device to improve system safety, and
 - preparing a redundant circuit or improve system safety so that the single fault of a switch does not cause a dangerous situation.

3) Attentions Required for Storage Condition

- When this product is to be stored in the following circumstances and conditions, it may affect on the performance deteriorations and solderability etc., avoid storing in the following conditions.
 - (1) A place where the temperature is -10°C max., $+40^{\circ}\text{C}$ min. and the humidity is 85% min.
 - (2) In the corrosive gas atmosphere.
 - (3) Long-term storage for 6 months min.
 - (4) A place where the product is exposed to direct sunlight.
- Store in packed condition so that the load stress is not applied.
- Please use this product as soon as possible, our recommendation is within 3 months and the limitation is 6 months.
- If any remainder left after packing is opened, store it with proper moistureproofing and gasproofing, etc.,

Handling of approval specification

- This specification form specifies this item only. Please perform your approval test in the actual application conditions beforehand.
- Please return one copy of this specification form with your approval stamp or signature to us. Otherwise, it might be happened that the item can not be supplied. The terms to return back us after receipt of this product specification shall be one year from the issued date. In case more than one year past, please request us new specifications again before ordering this product.
- Writings in this specification form are subject to change through precautions.

Information of Chemical Substances and Environmental Hazardous Substances.

- This product has not been manufactured with ozone depleting chemical controlled under the Montreal Protocol.
- This product complies with the RoHS Directive (Restriction of the use of certain Hazardous Substance) in electrical and electronic equipment (DIRECTIVE 2002/95/EC).
- All the materials used in this part are registered material under the Law Concerning the Examination and Regulation of Manufacture etc. or Chemical Substances.

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