

NOTE.  
 1. Rating : Dc 12V, 50mA  
 2. TRAVEL : 0.25 ± 0.1mm  
 3. CONTACT RESISTANCE : 100mΩ  
 4. GENERAL TOLERANCE : ± 0.3  
 5. MANUFACTURING SPECIFICATION WOULD BE ACCORDANCE WITH JTO138

| Models.      | Code No.     | " L " | " I " | Stem color | O/Force     |
|--------------|--------------|-------|-------|------------|-------------|
| JT-1230X     | 130010000044 | 4.3   | 3.5   | DARK GRAY  | 130 ± 30 gf |
| JT-1230A     | 130010000047 | 5.0   | 3.5   | BLACK      | 160 ± 50 gf |
| JT-1230B     | 130010000053 | 9.5   | 3.1   | BLACK      | 160 ± 50 gf |
| △ JT-1230-01 | 130010000081 | 4.5   | 3.5   | LIGHT GRAY | 160 ± 50 gf |
| △ JT-1230-02 | 130010000097 | 6.0   | 3.3   | GREEN      | 160 ± 50 gf |
| △ JT-1230-03 | 130010000098 | 6.5   | 3.3   | LIGHT GRAY | 160 ± 50 gf |
| △ JT-1230    | 130010000048 | 4.3   | 3.5   | BLACK      | 160 ± 50 gf |
| △ JT-1230F   | 130010000049 | 7.0   | 3.34  | BLUE       | 160 ± 50 gf |

|        |                                 |          |           |
|--------|---------------------------------|----------|-----------|
| ③      | 모델 파생                           | 08.12.26 | W.K.JEONG |
| △      | 모델 파생                           | 08.04.04 | W.K.JEONG |
| ①      | JT-1230 Series 도면 사양 정리(QNA 요청) | 06.11.03 | W.K.JEONG |
| RevNo. | Revision note                   | Date     | Signature |

| Itemref        | Quantity   | Title/Name, designation, material, dimension etc |           |            |       | Article No./Reference |
|----------------|------------|--|-----------|------------|-------|-----------------------|
| Designed by    | Checked by | Approved by                                      | File name | Date       | Scale |                       |
| w.k.jeong      |            | t.h.oh   |           | 2006.11.03 |       |                       |
| Model name     |            |  | Part name |            |       |                       |
| TACTILE SWITCH |            |  | ASSEMBLY  |            |       |                       |
| Model no.      |            | Code no.   | Edition   | Sheet      |       |                       |
| JT-1230 SERIES |            | CODE No.   |           | 1          |       |                       |

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1. Temperature range

1.1 Storage Temperature range -25°C to 70°C

1.2 Temperature range for use -15°C to 60°C

2. Test circumstance condition

2.1 Ambient temperature 16°C

2.2 Relative humidity 63% to 74%

2.3 Air pressure 102KPA

3. Appearance, Structure and Dimension




3.1 Appearance : Functionally free from rust, crack and bad plating.

3.2 Structure and Dimension : Reference per attached outline drawing.

4. Rating : DC 12V 50mA

5. Mechanical performance

| Items |              | Test conditions   | Requirements                                     |
|-------|--------------|---|--|
| 5.1   | Press force  | Placing the switch such that the direction of switch operation is vertical, and then gradually increasing the load applied to the center of the knob the maximum load for the knob to come to a stop shall be measured.               | As per individual manufactured Drawing           |
| 5.2   | Travel       | Placing the switch such that the direction of switch Operation is vertical and then applying a static load twice the operating force to the center of the knob, the travel distance for the knob to come to a stop shall be measured. | 0.25±0.1mm                                       |
| 5.3   | Return force | The sample switch is installed such that the direction of switch operation is vertical, and upon depression of knob in its center the whole travel distance, the force of the knob to return to its free position shall be measured.  | 130gf : 50 ±20gf<br>160gf<br>; greater than 40gf |

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|      |      |      |      |      |      |  |  |  | JT-1230 SERIES |
|      |      |      |      |      |      |   |   |   | DOCUMENT NO.   |
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| 5.4 | Actuator strength         | To the press direction 10N until the stop for 5 sec  | Item 5.1, 6.1 to 6.3 shall be satisfied. Without damage of actuator. Function and action is in gear.                    |
| 5.5 | Connection Port Strength  | To any the connection place pull 5N, 10±1sec   | Without damage of connection. Port function and action is in gear   |
| 5.6 | Solder-Ability            | An hour later, the steam ageing. The soldering area of the terminal shall be immersed into molten solder at a temperature of 235±5℃ for 2±0.5sec | More than 90% of the dipping part shall be covered by solder  |
| 5.7 | Soldering heat resistance | The soldering area of the terminal shall be immersed into molten solder at a temperature of 260±5℃ for 5 sec                                     | 1)There shall not be deforming in appearance<br>2)The requirements specified in Item 5.1, 6.1 to 6.3 shall be satisfie. |

6. Electrical performance

|     |                       |   |  |
|-----|-----------------------|---|--|
| 6.1 | Contact Resistance    | Rating : DC 5V      Current : 100±2mA   | 100mΩ (Max)  |
| 6.2 | Insulation Resistance | A voltage of 100V. DC shall be applied for 1 min after which measurement shall be made  | Between terminals  |
|     |                       |   | Between individual terminal and frame  |
| 6.3 | Withstand Voltage     | 250V.AC/50Hz for 1min,  | Between terminals  |
|     |                       |   | Between individual terminal and frame  |
| 6.4 | Librate               | Librate frequency:10-500Hz Swing : Extent cost displacement should be 0.35mm; The accelerated extent cost should be 50m/s <sup>2</sup> . The scan time: 11 minutes once a time. Do it for five times. | Item 6.1 shall be satisfied, the façade of the switch have no abnormity, motion and function is good |

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7. Weatherability

|     | PROPERTY                    | TEST CONDITION  | PERFORMANCE                                      |   |
|-----|-----------------------------|---|--|---|
| 7.1 | Invaria-Blenes<br>Damp Heat | Switch for test shall be Stored at a temperature $40 \pm 2^\circ\text{C}$ , and a relative humidity of 90-95% for 96 hours. Then the switch shall be maintained at standard atmospheric conditions for an hour after which measurement shall be made within 96hour. | Contact resistance.<br>Refer to Item 6.1         | 100mΩ or less   |
|     |                             |   | Insulation resistance.<br>Refer to Item 6.2      | 100MΩ (Max)   |
|     |                             |   | Withstand voltage.<br>Refer to Item 6.3          | No arcing or break down shall occur.  |
|     |                             |   | Operating force and Appearance                   | Item 5.1 shall be satisfied, there shall be no deformation or cracks in molded part or excessive rust and discoloration |
| 7.2 | Dry heat proof              | Switch for test shall be stored at a temperature of $70 \pm 2^\circ\text{C}$ for 72 hours, and at standard atmospheric Conditions for 1 hour then to be measured within 1 hour.   | The Item 3.1, 5.1, 6.1 to 6.3 shall be satisfied |   |
| 7.3 | Cold proof                  | Switch for test shall be stored at a temperature of $-25 \pm 3^\circ\text{C}$ for 16 hours, and at standard atmospheric Conditions for 1hour then to be measured within 1 hour.   |  |   |

8. Durability

|     |           |  |   |                                     |
|-----|-----------|--|---|-------------------------------------|
| 8.1 | Life Test | 100,000 cycles of a knob operation shall be performed continuously at a rate of 2~3 cycles/sec | Press force. Refer to Item 5.1              | $\pm 30\%$ of initial force         |
|     |           |  | Contact resistance.<br>Refer to Item 6.1    | 200mΩ (Max)                         |
|     |           |  | Insulation resistance.<br>Refer to Item 6.2 | 100MΩ or more                       |
|     |           |  | Withstand voltage.<br>Refer to Item 6.3     | No arcing or Break down shall occur |

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9. Soldering conditions

|     |                |  |
|-----|----------------|--|
| 9.1 | Hand soldering | <p>Please practice according to below condition:</p> <p>(1) Soldering temperature: 260°C Max</p> <p>(2) Continuous soldering time: 5s Max</p> <p>(3) Capacity of soldering iron: 20W Max</p> |
|-----|----------------|--|

|     |                          |  |
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| 9.2 | Automatic flow soldering | <p>For the product of SMD, in case an automatic flow soldering apparatus is used for soldering adhere to the following conditions:</p> <p>Copper foil surface temperature</p> <p style="text-align: center;">Time inside soldering equipment</p> |
|-----|--------------------------|--|

|     |                          |  |
|-----|--------------------------|--|
| 9.3 | Automatic flow soldering | <p>(1) Preheat: Temperature on the copper foil surface should reach preheat maximum temperature of 180°C within 2min ± 0.3min after the PWB entered into the soldering equipment.</p> <p>(2) Soldering: Temperature on the copper foil surface should reach the peak temperature of 260°C within 10 seconds max. after the PWB entered into soldering heat zone</p> <p>(3) Caution: The condition mentioned above is a temperature on the PWB surface on which parts are mounted. There are cases where PWB temperature greatly differs from switch's surface temperature depending on PWB material, size, thickness, etc. Care, therefore, should be used not to allow switch's surface temperature to exceed 260°C</p> |
|-----|--------------------------|--|

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