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| <b>TITLE</b><br>PUSH TERMINAL | <b>SPC. NO.</b><br>HSP-1xx /KM05xx | <b>PAGE :</b> 1 OF 4<br><b>DATE :</b> 2002.07.19 |
|-------------------------------|------------------------------------|--|

### SPECIFICATION

#### 1. Standard atmospheric condition :

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows :

Ambient temperature: 15°C to 35°C

Relative humidity : 25% to 80%

Air pressure : 86kPa to 106kPa

If there is any doubt about the results, measurements shall be made within the following limits :

Ambient temperature: 20 ±2°C

Relative humidity : 60% to 70%

Air pressure : 86kPa to 106kPa

Applicable wire : AWG # 16—24

Operating temperature range : -10°C ~ 65°C

Storage temperature range : -20°C ~ ~~75°C~~ Δ70°C

#### 2. Electrical characteristics:

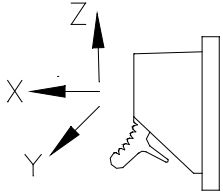
|   | Item                            | Condition  | Specifications |
|---|---------------------------------|--|----------------|
| 1 | Rated voltage/<br>Rated current | With resistive load  | A.C.60V , 7A   |
| 2 | Contact<br>resistance           | Measurement shall be made at with small current 1000 Hz ( 1A or less ) ,contact resistance of between terminals and the soft copper wire (AWG#22) made a closed circuit.<br><br><div style="text-align: center;"> </div> | 30mΩ MAX.      |

| ISSUE | DATE       | WRTN   | CHKD    | APVD | DESCRIPTIONS                        |
|-------|------------|--------|---------|------|-------------------------------------|
|       | 2002.07.19 | STEVEN | KUNG    | KUNG |                                     |
| Δ x4  | 2008.01.30 | LORNA  | JOHNSON | DICK | Modify the item 4.4 and 4.5 and 4.8 |
|       |            |        |         |      |                                     |
|       |            |        |         |      |                                     |

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|-------------------------------|------------------------------------|--|
| <b>TITLE</b><br>PUSH TERMINAL | <b>SPC. NO.</b><br>HSP-1xx /KM05xx | <b>PAGE :</b> 2 OF 4<br><b>DATE :</b> 2002.07.19 |
|-------------------------------|------------------------------------|--|

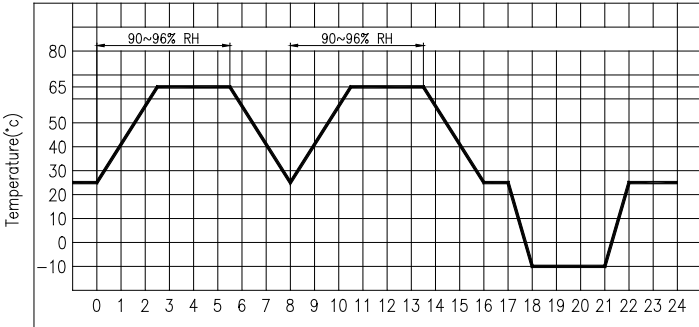
|   | Item                  | Condition  | Specifications                                     |
|---|-----------------------|--|--|
| 3 | Insulation resistance | A voltage of 500V D.C. shall be applied for 1 min. after which measurement shall be made.<br>Between each terminal and insulated metal part. | 100MΩ MIN.   |
| 4 | Dielectric strength   | 1000V A.C. ( 50 Hz to 60 Hz ) for 1 minute.<br>Trip current : 2 mA<br>Between each terminal and insulated metal part.                        | Without damage to parts, arcing or breakdown, etc. |

## 3. Mechanical characteristics

|   | Item                 | Condition  | Specifications   |
|---|----------------------|--|--|
| 1 | Operating force      | Push plate force shall be measured by using a gauge of standard dimensions.  | 19.6N ( 2.0kgf ) MAX.  |
| 2 | Lead wire hold force | This test shall consist of AWG#20 copper wire of deeply inserted operation.<br> | X-axis : 7.84N ( 0.8 kgf )<br>Y-axis : 4.9N ( 0.5 kgf )<br>Z-axis : 9.8N ( 1.0 kgf ) |
| 3 | Input hole           |  | 2.0 mm MIN.  |
| 4 | Terminal strength    | A static load of 29.4N ( 3Kgf ) shall be applied to the terminals for 10 seconds in any direction.   | The terminal shall not be excessive looseness from the housing.                      |

## 4. Endurance characteristics

|   | Item | Condition  | Specifications  |
|---|------|--|---|
| 1 | Cold | The push terminal shall be stored for 96 hours at a temperature of $-25\pm 2^{\circ}\text{C}$ .<br>The push terminal shall be left alone for 30 minutes in a room ambient, before measurement shall be made. | Dimensional requirements and electrical characteristics shall be satisfied. |

| TITLE         |   | SPC. NO.  | PAGE : 3 OF 4     |
|---------------|---|---|-------------------|
| PUSH TERMINAL |   | HSP-1xx /KM05xx   | DATE : 2002.07.19 |
| Item          | Condition   | Specifications  |                   |
| 2             | Dry heat<br>The jack shall be stored for 96 hours at a temperature of $70\pm 2^{\circ}\text{C}$ .<br>The testing terminal shall be left alone for 30 minutes in a room ambient, before measurement shall be made.   | Dimensional requirements, electrical and mechanical characteristics shall be satisfied. |                   |
| 3             | Humidity test<br>Temperature : $40^{\circ}\text{C}\pm 2^{\circ}\text{C}$<br>Relative humidity : 90% ~95% for 96 hours.<br>The testing jack shall be left alone for 30 minutes in a room ambient, before measurement shall be made.<br>But, admit of removing drop of water. | Dimensional requirements and electrical characteristics shall be satisfied.             |                   |
| 4             | Composite temperature / humidity cyclic test<br><br>( 4 cycles ) $\triangle_1$  | Electrical and mechanical characteristics shall be satisfied.                           |                   |
| 5             | Solderability<br>Temperature of solder : <del>245°C</del> $\triangle 250^{\circ}\text{C}\pm 5^{\circ}\text{C}$<br>Time of dip : $3 \pm 0.5$ seconds<br>Length of dip : $2 \pm 0.5\text{mm}$ ( from top of terminal )  | The soldered area shall be covered a minimum of 90% of the surface being immersed.      |                   |
| 6             | Strength of tapping part<br>The tapping part shall be capable of a torque of 98N-cm( 10Kgf-cm ) for 5 seconds by M3X8 tapping tight screw and panel ( t=1 ) .   | The terminal shall not break  |                   |
| 7             | Operating endurance<br>Life test shall consist of 100 cycles of connecting and disconnecting with a soft copper bar of $\phi 1.2$ mm at a rate of 5 – 10 cycles per minute under no load.   | Dimensional requirements, electrical and mechanical characteristics shall be satisfied. |                   |

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|-------------------------------|------------------------------------|--|
| <b>TITLE</b><br>PUSH TERMINAL | <b>SPC. NO.</b><br>HSP-1xx /KM05xx | <b>PAGE :</b> 4 OF 4<br><b>DATE :</b> 2002.07.19 |
|-------------------------------|------------------------------------|--|

| Item  | Condition  | Specifications   |   |  |
|---|--|--|---|--|
| 8<br>△<br>Resistance to Soldering Heat Test   | Wave soldering Process   | Electrical and mechanical characteristics shall be satisfied, and not show remarkable failure. |   |  |
|   | Profile Feature  |  | Pb-Free Assembly  |  |
|   |  |  | Topside PCB   | Padside PCB                                      |
|   | Preheat<br>-Temperature min<br>-Temperature max<br>-Time (ts min to max) |  | 120°C<br>(Ts1 max)  | 110°C<br>(Ts min)<br>150°C<br>(Ts max)<br>75 sec |
|   | Peak/Classification Temperature  |  | 165°C<br>(Tp1)  | 260°C ±5°C<br>(Tp)                               |
|   | Time within 5°C of actual Temperature (tp)                               |  |   | 10 sec (within 2 times every time 2-3 sec)       |
|   | Time 25°C to Peak temperature  |  |   | 3 minutes max                                    |
|   | Wave Soldering Temperature Profile are as below                          |  | <p>Temperature</p> <p>Time</p> <p>----- Topside PCB</p> <p>———— Padside PCB</p> |  |
| Soldering Iron Test<br>Temperature of soldering Iron : 380±10°C<br>Soldering time : 3±1 seconds | Same as Wave soldering Process   |  |   |  |