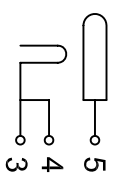
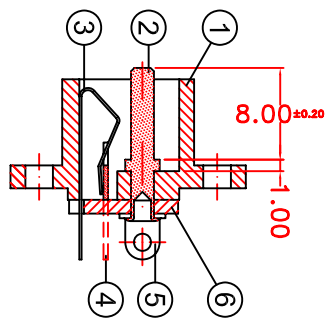


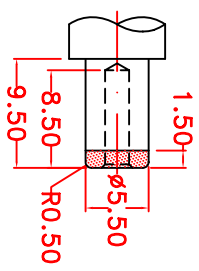
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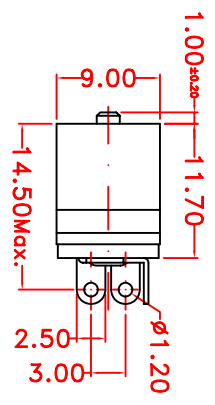
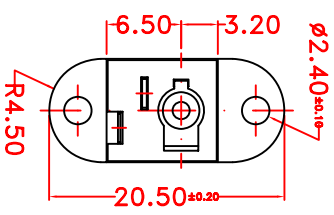
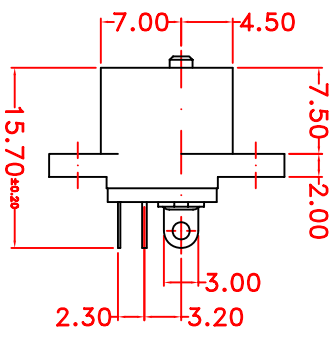
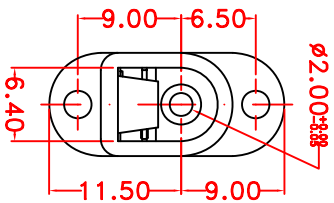
**SCHEMATIC**



**PARTS DETAIL**



**MATE PLUG**



|     |               |      |              |               |
|-----|---------------|------|--------------|---------------|
| 6   | COVER BOARD   | 1    | P. L. SHEET  | NATURAL COLOR |
| 5   | PIN TERMINAL  | 1    | BRASS        | Ag PLATED     |
| 4   | SLEEVE BREAK  | 1    | BRASS        | Ag PLATED     |
| 3   | SLEEVE SPRING | 1    | SPRING ALLOY | Ag PLATED     |
| 2   | PIN SHAFT     | 1    | BRASS        | Ni PLATED     |
| 1   | HOUSING       | 1    | ABS          | BLACK COLOR   |
| No. | PARTS         | QTY. | MATERIAL     | TREATMENT     |



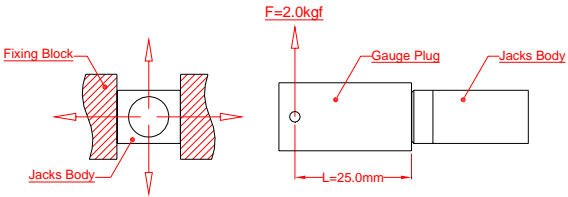
**THE 3rd ANGLE PROJECTION**

ALL DIMENSIONS TOLERANCE ARE IN ABOVE, UNLESS OTHERWISE SPECIFIED.



|                        |                           |             |   |
|------------------------|---------------------------|-------------|---|
| SCALE : 2.0:1.0        | DESIGN BY : So Chung Choi | 10-JAN-1990 | DESCRIPTION : CHASSIS MOUNT DC POWER JACK |
| UNIT : MILLIMETER (mm) | DRAWN BY : So Chung Choi  | 20-AUG-2012 | MODEL NO. : DC-050-003-00-CN              |
| TOLERANCE : ±0.20      | CHECKED BY :              |             | CAD FILE : C:\JACK DRAWING\DC05000300-CN  |
| ANGLE TOL. : 0° 30'    | APPROVED BY :             |             | DRAWING FILE : D2K12093                   |

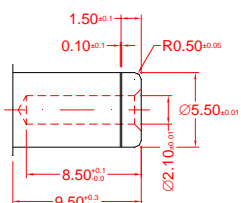
| 1. General (一般規格)    |                               |  |  |
|----------------------|-------------------------------|--|--|
| 1-1                  | Scope<br>範圍                   | This specification covers <b>Sun Rise</b> standard small size wiring type DC power jacks.<br>此規格書適用於日高標準小型線路焊接線型直流插座。  |  |
| 1-2                  | Type of Mounting<br>裝置類型      | Horizontal Chassis Mount.<br>水平機殼底盤裝置。   |  |
| 1-3                  | Pin Shaft Diameter<br>柱芯直徑    | Ø2.00mm<br>直徑 2.00 毫米  |  |
| 1-4                  | Gauge Plug<br>測試插頭            | The gauge plug should be as shown in Fig.1 or equivalent.<br>測試插頭必須如圖 1 或相等。   |  |
| 1-5                  | Measurement Condition<br>測試條件 | All measurement should be done at room ambient temperature and relative humidity 45%-85%.<br>所有測試皆在正常溫度及相對濕度 45-85%進行。   |  |
| 1-6                  | Packing<br>包裝                 | Bulk Pack<br>散袋包裝  |  |
| 2. Mechanical (機械特性) |                               |  |  |
| No.                  | Item 項目                       | Test conditions 測試條件   | Performance 結果   |
| 2-1                  | Insertion Force<br>插入力        | Insertion and withdrawal force shall be measured after inserting and withdrawing 3 times by using the standard dimension gauge plug.<br>插入力或拔出力必須使用標準尺寸之測試插咀，並經 3 周次插拔後方可量度。   | 0.5kgf~3.0kgf  |
| 2-2                  | Withdrawal Force<br>拔出力       |  |  |
| 2-3                  | Terminal Strength<br>端子強度     | A static load of 0.5kgf shall be applied to the tip of the terminals for 1 min in any direction.<br>0.5kgf 靜負荷，施加于端子頂端的任何方向持續 1 分鐘。  | Neither damage caused by crack nor omission of terminals shall be existent. However, warps and bends, which do not affect mechanical and electrical characteristics, will be considered acceptable.<br>端子沒有擊穿和損壞，只有不影響機械和電氣特性的變型和彎曲，則為可容許接受。 |
| 3. Electrical (電氣特性) |                               |  |  |
| 3-1                  | Rating 額定值                    |  | DC12V@1A   |
| 3-2                  | Contact Resistance<br>接觸阻抗    | Measurement shall be made at 1kHz with micro current (100mA or less). Using a gold plated probe shall make measurement between the contact spring and the gold plated plug.<br>測試須於 1kHz 微電流及(100mA 或以下)電壓下進行，並使用鍍金探針於接觸彈片與鍍金插頭之間測量。 | 30m Ω or less (Initial)<br>30 毫歐或以下 (最初值)  |
| 3-3                  | Insulation Resistance<br>絕緣阻抗 | Measurement shall be applied voltage of DC 500V, and make measurement between terminals and insulated mate plug for 1 minute. (Mate Plug Fig.1)<br>測試須於接上 DC500V 電壓下進行，量度端子與絕緣插頭間，持續 1 分鐘測量。(絕緣插頭如圖 1)                               | 100M Ω or more (Initial)<br>100 兆歐或以上 (最初值)  |
| 3-4                  | Dielectric Strength<br>耐電壓    | Measurement shall be applied voltage of AC 500V (50~60Hz) and make measurement between terminals and insulated mate plug for 1 minute. (Mate Plug Fig.1)<br>測試須於接上 AC 500V (50~60Hz)電壓下進行，量度端子與絕緣插頭間，持續 1 分鐘測量。(絕緣插頭如圖 1)            | There shall be no burn caused by short circuit and insulation destruction.<br>沒有因短路或絕緣損壞而引起燒。  |

| 4. Durability (耐久性) |                               |   |  |
|---------------------|-------------------------------|---|--|
| 4-1                 | Solder-ability<br>可焊性         | The terminal shall be immersed in the solder bath at a temperature of $235^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for $2 \pm 0.5\text{sec}$ . Immersion depth: Up to 2mm from the terminal tip.<br>端子浸入 $235^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 溶錫槽 $2 \pm 0.5$ 秒<br>浸入深度：離端子頂端 2 毫米。   | A new uniform coating of solder shall be cover a minimum of 85% of the surface being immerse<br>全新錫層覆蓋 85%以上於端子表面。   |
| 4-2                 | Cold Test<br>耐寒性測試            | The jack shall be left at temperature of $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 48 hours. And then it shall be kept under standard atmospheric condition for 1 hour after which measurement shall be made.<br>於 $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ 的環境中放置 48 小時，然後取出放置於正常環境中 1 小時後進行測試。   | The following items shall be satisfied:<br>2-1, 3-3, 3-4.<br>Withdrawal force:<br>0.3kgf~3.0kgf<br>Contact resistance: 50m $\Omega$ or less  |
| 4-3                 | Heat Test<br>耐熱性測試            | The jack shall be left at a temperature of $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 48 hours. And then it shall be kept under standard atmospheric condition for 1 hour after which measurement shall be made.<br>於 $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 的環境中放置 48 小時，然後取出放置於正常環境中放置 1 小時後進行測試。   | 符合下列項目: 2-1, 3-3, 3-4.<br>拔出力量:<br>0.3kgf~3.0kgf<br>接觸抵抗: 50 毫歐以下  |
| 4-4                 | Humidity Test<br>耐濕性測試        | The jack shall be left at a temperature of $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ relative humidity of 90% to 95% for 48 hours. And then it shall be kept under standard atmospheric conditions for 1 hour after which measurement shall be made.<br>於 $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 及相對濕度 90~95%的環境中放置 48 小時，然後取出放置於正常環境中 1 小時後進行測試。                                    |  |
| 4-5                 | Life Test Condition<br>壽命測試條件 | Life test shall be done at (15~18 cycles / minute) <u>Unloaded</u> . Before the test, apply contact grease to the sliding surface of the gauge plug in order to prevent the part from over-heating and wearing due to friction.<br>壽命測試於沒有負載下完成，每分鐘 15~18 周次。<br>為了防止過熱和磨損，在測試前需加上潤滑油在測試插頭表面。   | The following items shall be satisfied:<br>3-3, 3-4<br>Insertion force:<br>0.3kgf~3.0kgf<br>Withdrawal force:<br>0.3kgf~3.0kgf   |
| 4-6                 | Life of Jacks<br>插座的壽命        | After 5,000 cycles of continuous insertion and withdrawal.<br>5,000 周次連續插入及拔出。  | Contact resistance: 50m $\Omega$ or less<br>符合下列項目: 3-3, 3-4.<br>插入力量:<br>0.3kgf~3.0kgf<br>拔出力量:<br>0.3kgf~3.0kgf<br>接觸抵抗: 50 毫歐以下   |
| 4-7                 | Bending Strength<br>彎曲強度      | The housing of jack shall be fixed after which the standard dimension gauge shall be inserted. And then a load with torque of approx. 2.0kgf shall be applied to horizontal and vertical directions to the jack for 5 cycles in 5 sec. each.<br>固定插座後，插入標準尺寸插頭，施加約 2.0kgf 拉力負荷于插座的任何方向 5 次持續 5 秒。<br> | The following items shall be satisfied:<br>2-1, 3-3, 3-4.<br>Withdrawal force:<br>0.3kgf~3.0kgf<br>Contact resistance: 50m $\Omega$ or less<br>符合下列項目: 2-1, 3-3, 3-4.<br>拔出力量:<br>0.3kgf~3.0kgf<br>接觸抵抗: 50 毫歐以下 |

## 5. Test conditions (測試條件)

### 5-1 Applicable mate plug and gauge plug Fig.1

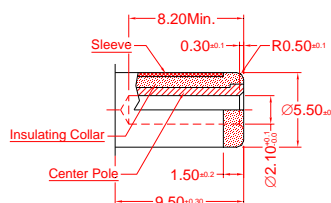
適用插頭及測試插頭



Gauge Plug

**Note:**

1. Roughness of the surface : 0.8s
2. Material : Standard dimension gauge  
Stainless steel (SUS) or alloy tool steel (SKS2)  
Insulated gauge  
Teflon (PETE) or Delrin (POM)



Mate Plug

**Note:**

1. : Matt. part are insulation collar.
2. : Net part are sleeve contact.
3. : Section part are center pole contact.

## 6. Precautions in Handling (處理過程中的預防)

### 6-1 Operating temperature and humidity range (應用溫度和濕度範圍)

Temperature: -25°C~70°C / Humidity: 70% R.H. or less.

溫度 -25°C~70°C / 相對濕度 70% R.H. 或以下

### 6-2 Recommended to **Manual Soldering** conditions (by solder iron)

建議手焊條件(烙鐵)

Solder iron bit temperature: 350°C ± 5°C

烙鐵咀溫度: 350°C ± 5°C

Operating time: 3 ± 0.5 second

操作時間: 3 ± 0.5 秒

Load on terminal: approx. 50gf or less

端子負荷: 約 50gf 或以下

### 6-3 Storage (貯存方法)

This jack is silver-plated. Therefore, this jack should not be left with the package open, In case plating sulfurous soldering trouble or contact trouble will happen. The shelf life remains 6 months under the formal condition.

此插座為鍍銀產品，因此這插座不能外露於包裝外，以防氧化問題或接觸不良發生。保質期於正常條件下可保持 6 個月。

### 6-4 Washing (清洗方法)

This jack shall not be washed. In case this jack is washed contact trouble will happen.

此插座不能作清洗處理。若清洗插座會發生接觸不良問題。

### 6-5 Other necessary item (其他項目)

Please consult with **Sun Rise** before using the unit or performing tests under conditions other than those listed in these specifications.

在使用此產品或執行以上說明內列舉的條件測試前，請與日高電子零件有限公司聯絡。

\*\*\*\* END \*\*\*\*