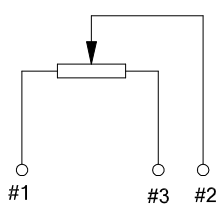


Mounting Hole Details



Circuit

No Indication Tolerance	
Less than 10	±0.3
above 10--30	±0.5
above 30--100	±1.0
angular dimension	±5°

5			Projection		Unit	mm	File name	
4			Drawn by	Checked by	Approved by		Article No.	
3			chen.				Designed No.	Scale
2			Jan.5th,2006					
1								

HUNG-CHI-E&P-INC.

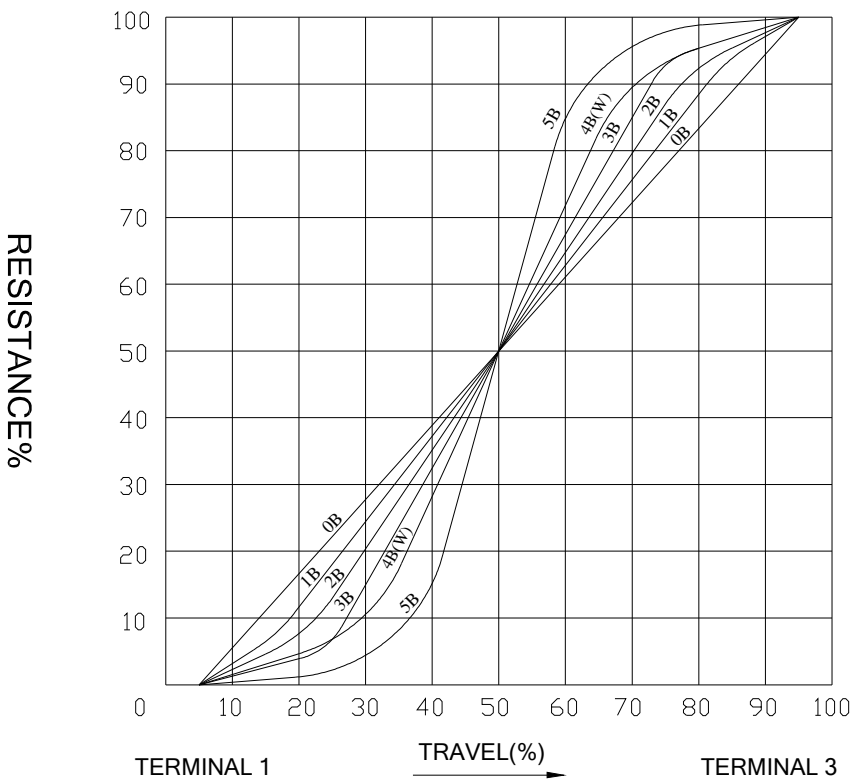
10 - 1 - 25

Drawing-Number	Edition	Sheet
DN2006010503		/

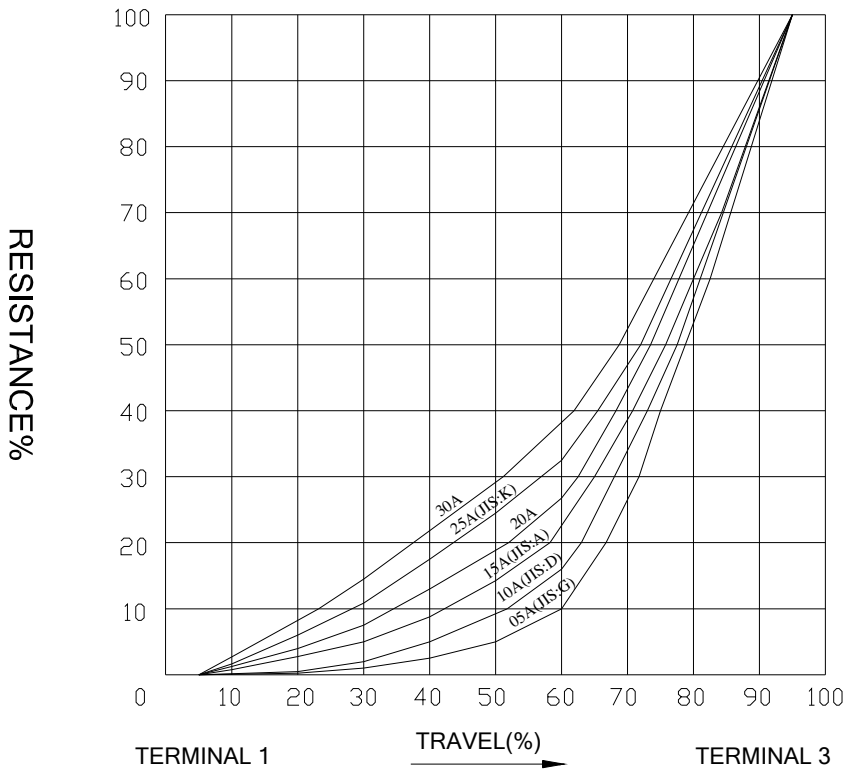
## 10φ Series

- ◆ TOTAL RESISTANCE ..... 100Ω~5MΩ
  - ◆ TOTAL RESISTANCE TOLERANCE.....+\_10% ±20% +\_30%
  - ◆ RESISTANCE TAPER ..... A.B.C
  - ◆ MAX. OPERATION VOLTAGE ..... LINEAR TAPER AC 200V
  - ◆ RATED POWER ..... LINEAR TAPER 0.15W
  - ◆ ..... OTHER TAPER G: 0.1W
  - ◆ INSULATION RESISTANCE ..... MORE THAN 100MΩ AT DC 500V
  - ◆ WITHSTAND VOLTAGE ..... 1 MINUTE AT AC 500V
  - ◆ RESIDUAL RESISTANCE ..... TERM. 1~2: LESS THAN < 1% or 10Ω  
 TERM. 1~3: LESS THAN < 1% or 10Ω
  - ◆ TOTAL ROTATIONAL ANGLE ..... 220° ±20°
  - ◆ ROTATIONAL TORQUE ..... 40gf.cm ~ 250gf.cm
  - ◆ ROTATIONAL STOPPER STRENGTH ..... 0.5kgf.cm MAX.
  - ◆ PUSH-PULL STRENGTH ..... 0.5kgf MAX
  - ◆ ROTATIONAL LIFE ..... 500 CYCLES
  - ◆ OPERATION LIFE ..... 1,000 CYCLES
- RESISTANCE VALUE ±20%

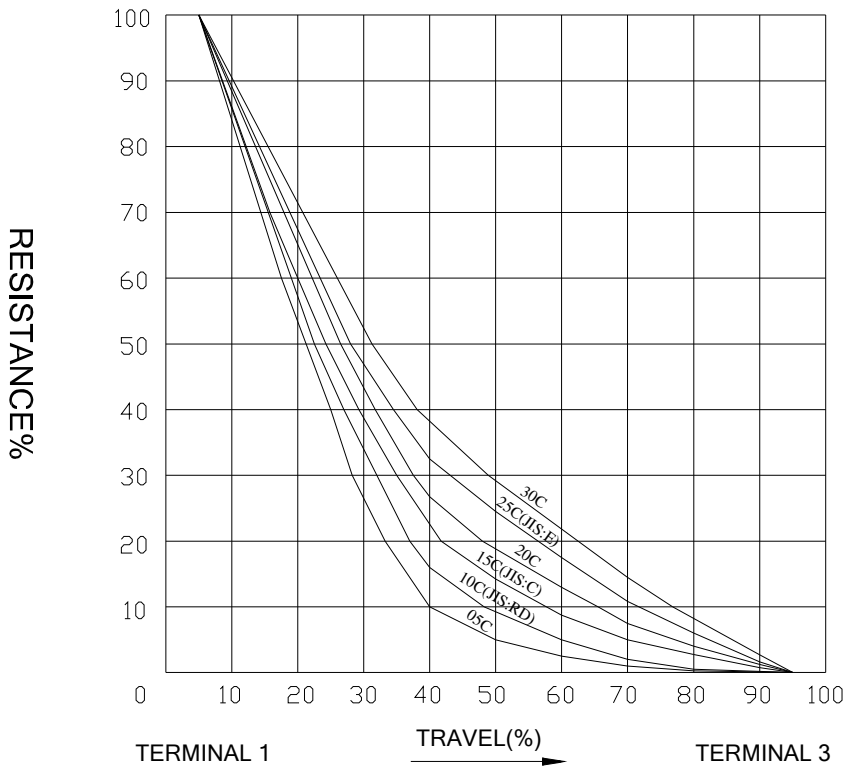
TAPERS B SERIES



### TAPERS A SERIES



### TAPERS C SERIES



# 10mm Electrical characteristics

# 電氣性能

Total resistance 總阻值	B taper 100Ω ~ 5MΩ (Lin)
Total resistance tolerance 總阻值容許差	+_20% 500Ω or ≥500KΩ +_30%
Rated power 定格電力	0.15W/40°C 0W/70°C
Temperature range 環境溫度範圍	- 25 ~ 70°C (附圖一) Rated power % <p style="text-align: center;">周圍溫度 (°C)</p>
Max. Operating Voltage 最高耐電壓	200V A C E: $\sqrt{P \cdot R}$ E: Operating voltage P: Rated power R: Total resistance
Residual Resistance 殘留阻值	Term 1~2 : Less than 10Ω or <1% Term 2~3 : Less than 10Ω or <1%
Rotational noise 轉動噪音	150mv max.
Resistance temperature coefficient 電阻溫度係數	850ppm/°C

## 10mm 電氣性能 Electrical Characteristics

序號 NO	項目 ITEM	測試條件 TEST CONDITION	規格 SPECIFICATIONS
1.1	絕緣阻抗 Insulation resistance	以 DC 500V 之電壓，測試 1 分鐘測試位置端子與主軸 Test voltage: DC 500V Test position: Between terminals and the shaft for 1minute ± 5 seconds.	100MΩ min
1.2	耐壓電 Withstand voltage	以 AC 500V(50~60Hz2mA)壓電，測試 1 分鐘測試位置端子與主軸 Test voltage: AC 500V (50~60Hz2mA)，measured for 1minute Test position: Between terminals and the shaft 1 minute ± 5seconds	不可有絕緣破壞 No dielectric breakdown shall be occurred

## 機械性能 Mechanical Characteristics

序號 NO	項目 ITEM	測試條件 TEST CONDITION	規格 SPECIFICATIONS
2.1	操作力矩 Operating torque	-25~70°C	40~250gf.cm
2.2	止擋強度 Shaft stopper strength	將主軸轉到起點或終點處，施力力矩 0.5kgf.cm(5N.m)，保持 15 秒鐘 The shaft shall be rotated to one end or the other end with pull torque 0.5kgf.cm(5N.m) for 15 seconds	操作部和關連部不有變形破損 Without deformation or breads in the operating part and contact part
2.3	端子強度 Strength of terminals	於端子尖端各方向施加 300gf(3N)之力，保持 1 秒鐘 When 300gf( 5N) are weighted on top of terminal in every direction for minute	無端子鬆動損壞，端子基板破裂等 Loose stale of terminal and damage on stator board should not exist
2.4	焊接性能 Solder ability	焊接溫度 Soldering temperature: 240±5°C 浸漬時間 Dipping time: 3±0.5 seconds	除切割面外，75%以上浸焊部位被焊料覆蓋 More than 75% of the dipping part shall be covered by solder， excluding the cutting surface
2.5	耐焊接	260°C 3±1 seconds	無端子鬆動損壞，端子基板破裂等 Loose stale of terminal and damage on stator board should not exist

## 10mm 耐候性 Weather Performance

序號 NO	項目 ITEM	測試條件 TEST CONDITION	規格 SPECIFICATIONS
3.1	耐濕度 Humidity Test	置於溫度 $40\pm 2^{\circ}\text{C}$ ，溼度 90~95%RH，500 小時後，放於正常環境下 1 小時，然後 1 小時內測試 Testing switch being kept in the conditions at $40\pm 2^{\circ}\text{C}$ and 90~95%RH for 500 hours in a normal ambient condition for 1 hour. Then to be measured within 1 hour.	絕緣電阻在 $10\text{M}\Omega$ 以上，500V DC，耐壓 AC500V 持續 1 分鐘操作力舉變化在 30%之內各部位無損壞，無機械性能異常電阻值變化 $\pm 10\%$ 以內 Insulation resistance: more than $10\text{M}\Omega$ for 500VDC Withstand voltage: 500Vac for 1 minute Operating torque: within $\pm 30\%$ of initial value Every parts should not defected in appearance and mechanical performance. Resistance $< \pm 10\%$
3.2	耐熱性 Heat Test	置於溫度 $70\pm 2^{\circ}\text{C}$ ，500 小時後，放於正常環境下 1 小時，然後在 1 小時內測試 Testing switch being kept in the conditions at $70\pm 2^{\circ}\text{C}$ in temperature for 500 hours in a normal ambient condition for an hour. The to be measured within hour.	
3.3	低溫特性 Cold Test	置於溫度 $-25\pm 2^{\circ}\text{C}$ ，500 小時後，放於正常環境下 1 小時，然後在 1 小時內測試 Testing switch should be kept in the condition in the temperature of $-25\pm 2^{\circ}\text{C}$ for 500 hours in a norma 1 bient condition for an hour. Then be measured within an hour.	

### 耐久性 Durability

序號 NO	項目 ITEM	測試條件 TEST CONDITION	規格 SPECIFICATIONS
4.1	壽命(無負荷) Life Test (Without Load) performance. Resistance $< \pm 20\%$	無負荷狀態連續測試，速度為 6~10 回/分，總次數為 500 500cycles of operation shall be performed continuously at the rate of 6 ~ 10 cycles/minute without load.	絕緣電阻在 $10\text{M}\Omega$ 以上，500VDC，耐壓 AC500V 持續 1 分鐘，操作力矩變化在 30%之內各部無損壞，無機械性能異常 Insulation resistance: more than $10\text{M}\Omega$ for 500VDC. Withstand voltage: 500VAC for 1 minute Operating torque: within $\pm 30\%$ of initial value Eery parts should not defected in appearance and mechanical performance