

45mm 雙連滑動式磁性位置感測器製品規格書

45mm 2 UNIT SLIDE SENSOR SPECIFICATIONS

1. 一般事項 General

1.1 適用範圍：此規範適用於電子機器之位置感測。

Application : This specification is applied to position detecting used for electronic equipment.

1.2 使用溫度範圍 Operating temperature: $-10\sim+70^{\circ}\text{C}$

1.3 保存溫度範圍 Storage temperature range : -30°C to $+70^{\circ}\text{C}$

1.4 試驗狀態: 若無特別規定限制,則以溫度 $5\sim 35^{\circ}\text{C}$,相對濕度 45~85%,氣壓 860~1060mbar之標準狀態測之.
但對此標準狀態之測定值發生判定疑問或有特別要求則以基準狀態(溫度 $20\pm 2^{\circ}\text{C}$,相對濕度 $65\pm 5\%$,氣壓860~1060mbar)為準測定 .

Test conditions : the standard test conditions shall be $5\sim 35^{\circ}\text{C}$ in temperature ,45~85%RH
and 860~1060mbar in atmospheric , should any doubt arise in judgement ,
tests shall be conducted at $20\pm 2^{\circ}\text{C}$, $65\pm 5\%$ RH and 860~1060mbar .

1.5 使用注意事項 Warning :

1.5.1 本產品使用霍爾原件，請注意電磁波所導致的產品損壞。

This product uses a Hall IC. Be aware of ESD damages.

1.5.2 使用本產品時，請確保該處的磁場小於2800gs。

Be sure of magnetic field intensity less than 2800gs when installed.

1.5.3 使用多個本產品時，請確保每個產品的間距15mm以上。

When using more than one of the products, Be sure of a distance more than 15mm between each product

1.5.4 本產品之電壓輸出會隨供應電壓而改變，請注意供電規格，以減少輸出誤差。

The output voltage will be affected by input voltage. Be aware of input SPEC. to reduce output error.

2. 構造、尺寸 Construction and dimensions : 依組立圖 Refer to attached drawing.

3. 電氣性能 Electrical characteristics

NO.	項 目 Item	試 驗 條 件 Test conditions	規 格 Specifications
3.1	輸入電壓 Input voltage		$5\text{V}\pm 3\%$
3.2	額定電力 Power rating		250mW
3.3	輸出模式 Output type		Voltage(absolute)
3.4	輸出特性 Output characteristic		X type (Refer from Position-Voltage plot below)
3.5	輸出誤差 Output error		3%(MAX)

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3.6	行程解析度 Stroke resolution		5 points/mm
3.7	絕緣阻抗 Insulation resistance	施加500V 之直流電壓，1分鐘後測試。 測試位置：端子和外蓋間、端子和把柄間。 Test voltage：500V D.C measure after 1 min. Test position：Between terminal and frame. Between terminal and lever.	100MΩ以上 (MIN)
3.8	耐電壓 Voltage proof	以1000V 之交流電壓，測試1分鐘。 測試位置：端子和外框間、端子和把柄間。 Applying 1000V A.C measure for 1 min Applied position：Between terminal and frame. Between terminal and lever.	不可有損傷、電弧、 絕緣破壞 Without damage to parts arcing or breakdown.

4. 機械性能 Mechanical characteristic

NO.	項 目 Item	試 驗 條 件 Test conditions	規 格 Specifications
4.1	把柄移動距離 Lever travel		45±0.5mm
4.2	動作力 Operating force	移動速度：20mm/秒 操作位置：把柄前端5mm處 Traveling speed：20mm/sec. Operating position：5mm from lever end.	20gf以下 (MAX)
4.3	把柄止動強度 Lever travel stop strength	把柄置於兩末端，外框上面起5mm位置施加5Kgf靜負荷10秒鐘。 A static load of 5Kgf shall be applied at the point 5mm from top surface of the case for both ends in the direction of lever travel for 10 sec.	不可產生明顯之鬆動。 Without excessive play.
4.4	把柄偏心 Lever deviation	相對於螺絲孔中心,測定把柄的中心到螺絲孔中心的距離 After sliding lever as far as it will go in each direction, the distance from the center of the lever to the middle of the mounting screw hole shall be measured at the both ends.	單側0.5mm以下。 0.5mm MAX on each end.
4.5	把柄擠壓 引張強度 Thrust and tensile lever	把柄的擠壓方向和引張方向施加5Kgf靜負荷10秒鐘。 Thrust and tensile static load of 5Kgf shall be applied to the potentiometer in the lever direction for 10 sec.	不可產生破損、滑動不平順， 電氣性能需滿足。 Without damage such as bed sliding and braking or play in the lever. Electrical characteristics shall be satisfied.

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4.6	把柄橫振幅 Displacement of lever	在把柄移動方向的垂直方向施加250gf-cm， 在把柄的前端測定。 A torsion moment of 250gf-cm shall be applied at the lever in a direction perpendicular to the axial direction and then the displacement shall be measured.	2(2 x L/20) mm p-p以下。 L=把柄長度 2(2 x L/20) mm p-p MAX. L=Length of lever
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5. 耐久性能 Enduranc

5.1	滑動壽命 Sliding life	無負荷狀態,把柄滑動速度 600回/小時,有效回 移動距離的90%以上,總次數4,000,000回以上。 The moving contact, without electrical load, shall be slided form one end stop to the other end returned to its original position extend over 90% or more effective distance. Slide speed : 600 cycle / hour . Total cycles : 4,000,000 cycles .	1.動作力:3~60gf 2.輸出誤差：6%(MAX) 3.其它需滿足(3項).(4項) 1.Operating force:3~60gf 2.Output error : 6%(MAX) 3.Clause (3).(4) shall be satisfied.
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ROHS COMPLIANCE

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輸出特性圖
OUTPUT CHARACTERISTIC DIAGRAM

