

可根據使用環境和用途進行選擇,款式豐富的二迴路限位開關

- SL51系列包括各種微量負載,類型齊全
- 符合UL、CSA、CCC的安全規格

### Two-Circuit Limit Switch w/Wide Selection to the Operating Environment/Application

- Microload models are added to SL51 product lineup.
- Approved by UL, CSA, CCC.

#### ■性能 Characteristics

保護結構 Degree of protection	IP67	
壽命 Durability	機械性 Mechanical	15,000,000 operations (次以上)
	電器性 Electrical	750,000 operations (次以上)
容許操作速度 Operating Speed	1mm-1m/s (SL51-40情況)	
容許操作頻率 Operating Frequency	機械性 Mechanical	120 operations (次) /min
	電器性 Electrical	30 operations (次) /min
額定頻率 Rated Frequency	50/60Hz	
絕緣阻抗(絕緣電阻) Insulation Resistance	100MΩ min 以上 (DC500V)	
接觸阻抗(接點電阻) Contact Resistance	25mΩ max. (initial value)	
耐電壓 Dielectric Strength	同極端子間 Between terminals of same polarity	AC1,000V(600V) 50/60Hz for 1min
	充電金屬部與接地端間 Between current-carrying metal parts and ground	AC2,200V (1,500V) 50/60Hz 1min Uimp 2.5kV
	各端子與非充電金屬部間 Between each terminal and non-current-carrying metal part	AC2,200V (1,500V) 50/60Hz 1min Uimp 2.5kV
額定絕緣電壓 (Ui) Rated insulation voltage (Ui)	250V(EN60947-5-1)	
污染度(使用環境) Pollution degree (Application environment)	3 (EN60947-5-1)	
附帶條件短路電流 Conditional short-circuit current	100A(EN60947-5-1)	
額定封閉熱電流(I <sub>the</sub> ) Rated open thermal current(I <sub>the</sub> )	10A,0.5A(EN60947-5-1)	
觸電保護等級 Degree of protection against electric shock	Class I	
振動 Vibration Resistance	誤動作 Malfunction	10-55 Hz, 1.5 mm double amplitude (雙振幅)
衝擊 Shock Resistance	耐久 Destruction	1,000m/s <sup>2</sup> min.
	誤動作 Malfunction	300m/s <sup>2</sup> min.
使用環境溫度 Ambient operating temperature range	-10~+80°C with no icing (不結冰)	
使用環境濕度 Ambient operating humidity range	35% ~ 95%RH	
包裝說明 Packing	1pc /Box	

★備註 1.以上為初始值 2.上述性能內容將因機種型式而有所不同.請另行洽詢 3.上述壽命值是為周圍溫度5-35度C,周圍濕度40-70%RH時之條件。如您需要其它詳細條件,請另行洽詢。

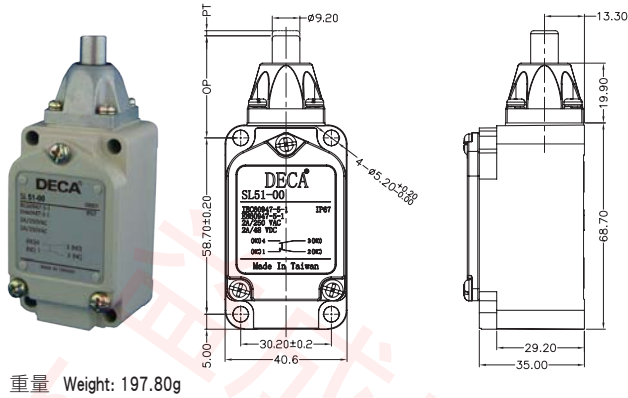
★Note: 1. Above values of these characteristics are initial values. 2. Above values of these characteristics may be depending on different models. If any requirements, pls contact our DECA sales representative. 3. Above durability is for an ambient temperature of 5 to 35°C and ambient humidity of 40% to 70%. If any requirements, pls contact our DECA sales representative.

# SL51

## 二迴路限位開關 Two-Circuit Limit Switch

### SL51-00

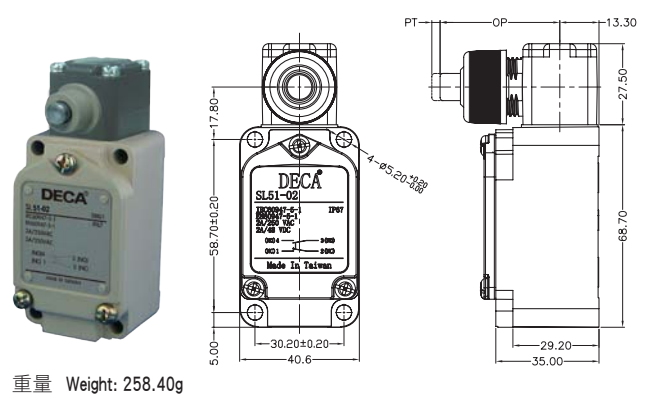
- 標準柱塞型  
Top Plunger



重量 Weight: 197.80g

### SL51-02

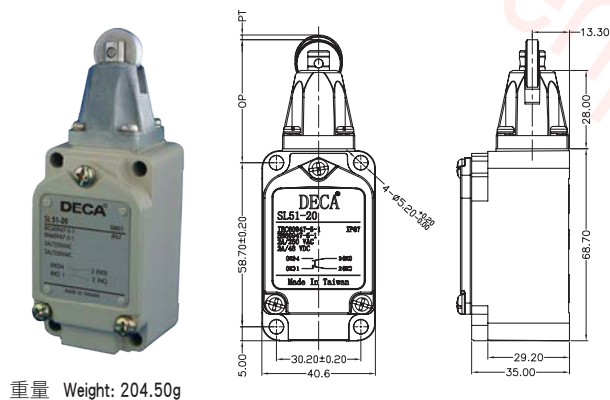
- 側面標準柱塞型  
Horizontal Plunger



重量 Weight: 258.40g

### SL51-20

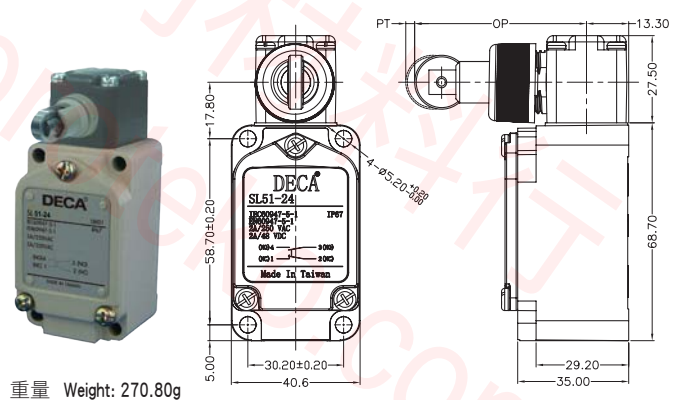
- 頂部滾輪柱塞型  
Top-roller Plunger



重量 Weight: 204.50g

### SL51-24

- 側面垂直滾輪柱塞型  
Horizontal-roller Plunger



重量 Weight: 270.80g

### ■動作特性 Operating Characteristics

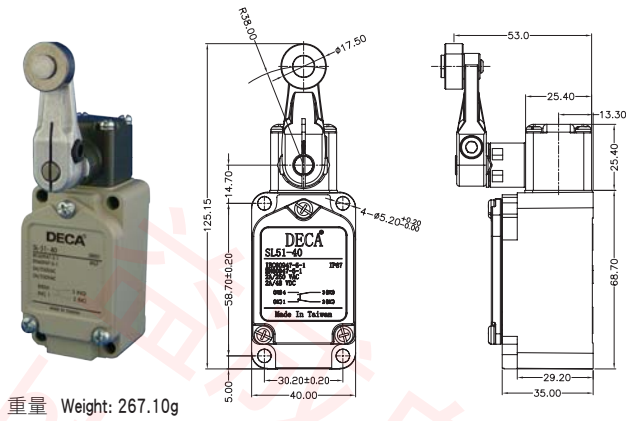
O.Characteristics		Model	SL51-00	SL51-02	SL51-20	SL51-24
動作力	OF	MAX	26.67N	40.03N	26.67N	40.03N
回復力	RF	MIN	8.92N	8.89N	8.92N	8.89N
預行程	PT	MAX	1.7mm	2.8mm	1.7mm	2.8mm
過行程	OT	MIN	6.4mm	6.4mm	5.6mm	5.6mm
應差距離	MD	MAX	1mm	1mm	1mm	1mm
自由位置	OP		34 ± 0.8mm	40.6 ± 0.8mm	44 ± 0.8mm	54.2 ± 0.8mm
總行程位置	TTP	MAX	29.5mm	—	39.5mm	—

# SL51

## 二迴路限位開關 Two-Circuit Limit Switch

### SL51-40

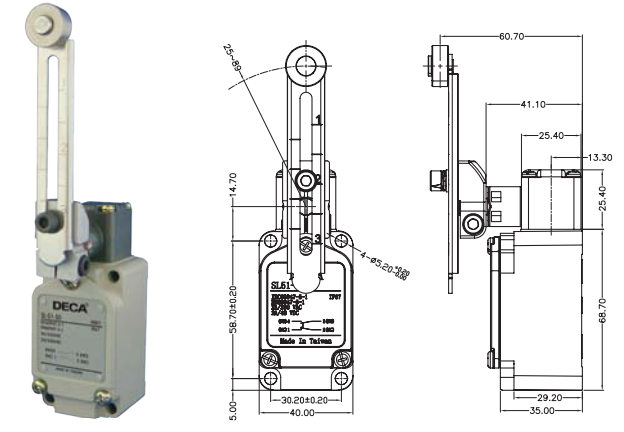
- 站立標準滾輪擺桿型  
Vertical Standard Roller Lever



重量 Weight: 267.10g

### SL51-50

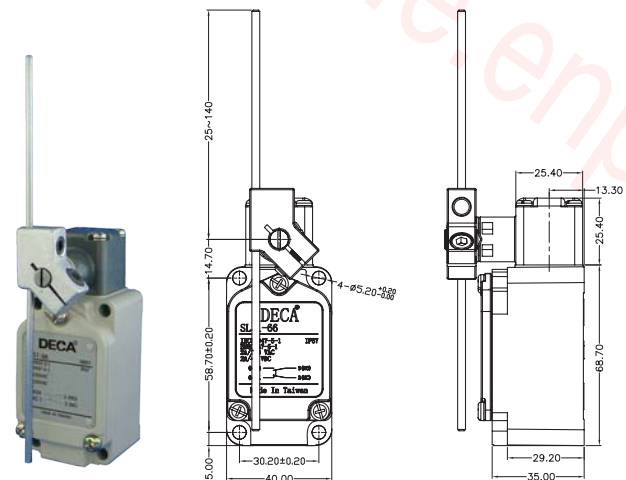
- 可調式滾輪擺桿型  
Adjustable Roller Lever



重量 Weight: 289.30g

### SL51-66

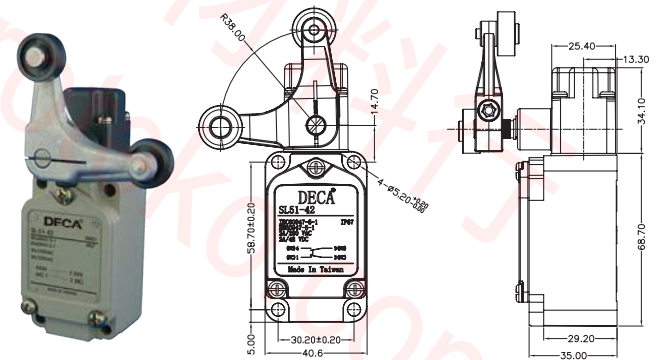
- 可調棒式擺桿型  
Adjustable Rod Lever



重量 Weight: 266.30g

### SL51-42

- 叉式滾輪擺桿型  
Fork Lever Lock



重量 Weight: 277.30g

### ■ 動作特性 Operating Characteristics

O.Characteristics	Model	SL51-40	SL51-50	SL51-66
動作力	OF MAX	13.34N	13.34N	1.39N
回復力	RF MIN	2.23N	2.23N	0.27N
預行程	PT MAX	15 ± 5°	15 ± 5°	15 ± 5°
過行程	OT MIN	30°	30°	30°
應差距離	MD MAX	12°	12°	12°
自由位置	OP	---	---	---
總行程位置	TTP MAX	---	---	---

O.Characteristics	Model	SL51-42
擺桿反轉力	MAX	11.77N
擺桿反轉預行程		50 ± 5°
開關預行程	MAX	55°
開關過距離	MIN	35°

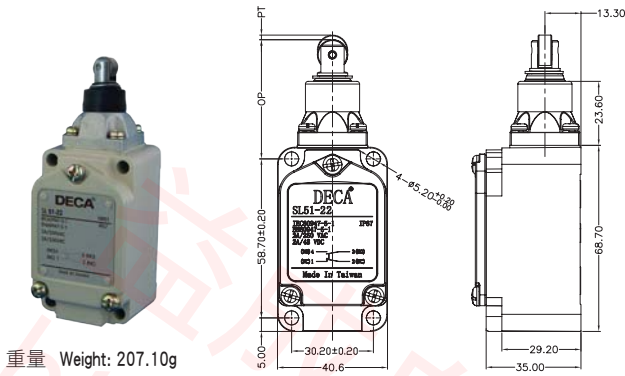
SL51

# SL51

## 二迴路限位開關 Two-Circuit Limit Switch

### SL51-22

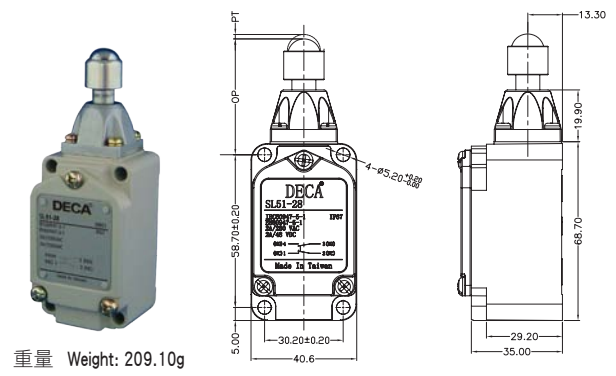
- 密封滾輪柱塞型  
Sealed Top-roller Plunger



重量 Weight: 207.10g

### SL51-28

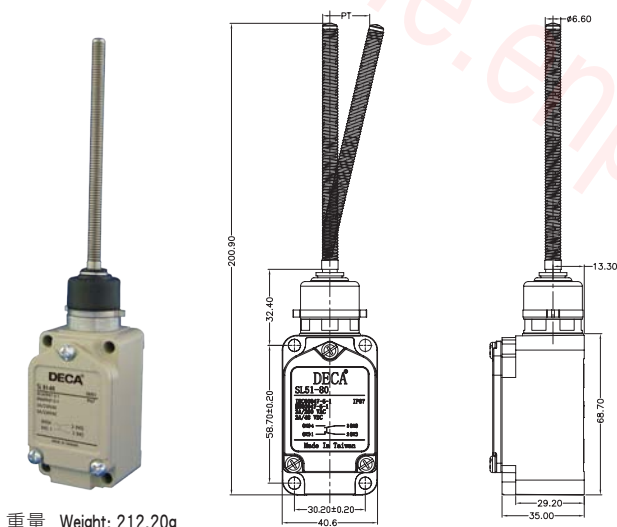
- 頂部球式柱塞型  
Top-ball Plunger



重量 Weight: 209.10g

### SL51-80

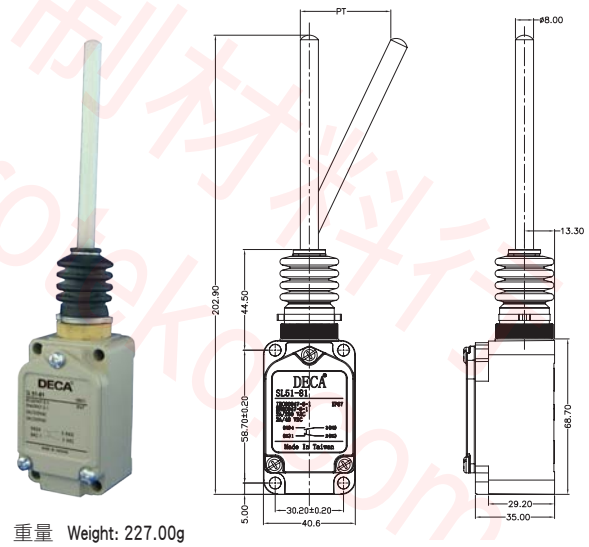
- 盤簧無方向型  
Coil Spring (Stainless Steel)



重量 Weight: 212.20g

### SL51-81

- 塑膠棒無方向型  
Coil Spring (Resin Rod)



重量 Weight: 227.00g

### 動作特性 Operating Characteristics

O.Characteristics		Model	SL51-22	SL51-28	SL51-80	SL51-81
動作力	OF	MAX	16.67N	26.67N	1.47N	1.47N
回復力	RF	MIN	4.41N	8.92N	—	—
預行程	PT	MAX	1.7mm	1.7mm	20 ± 10mm	40 ± 10mm
過行程	OT	MIN	5.6mm	4mm	—	—
應差距離	MD	MAX	1mm	1mm	—	—
動作位置	OP		44 ± 0.8mm	44.5 ± 0.8mm	—	—
總行程位置	TTP	MAX	39.5mm	41mm	—	—

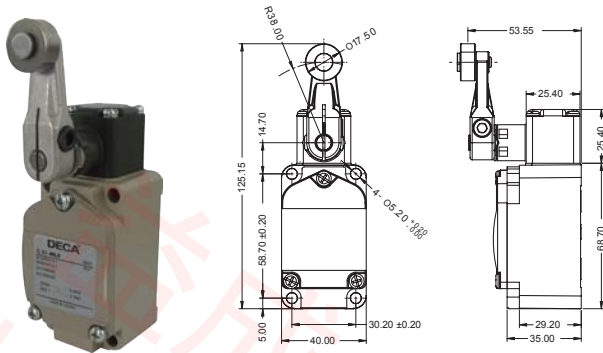


# SL51

## 二迴路限位開關 Two-Circuit Limit Switch

### SL51-40LD

- 站立標準滾輪擺桿型 (LED型)  
Vertical Standard Roller Lever (w/LED)



重量 Weight: 278.80g

#### ■ 動作特性 Operating Characteristics

O.Characteristics		Model	SL51-40LD
動作力	OF	MAX	13.34N
回復力	RF	MIN	2.23N
預行程	PT	MAX	15 ± 5°
過行程	OT	MIN	30°
應差距離	MD	MAX	12°
自由位置	OP		---
總行程位置	TTP	MAX	---

# Manufacturer for Automatic Module and Connection Components



**DECA**

[www.deca-switchlab.com.tw](http://www.deca-switchlab.com.tw)

SL51

## 緊湊型電纜進線孔輕易連結內部的接點模組

- 可利用對叉狀金屬插銷的簡單操作，來輕易更換開關的頭部部件
- 接點部份包括速動與慢動接點，並且包括正向斷開操作與可互換接點部件
- SLKP系列開關產品的電纜進線孔可輕易連結內部的接點模組，所以電纜連接非常簡單
- 開關頭部的三個平面可輕易調節
- 所有開關頭部均可在開關本體360°內，以每15°進行調節

**Easily access to contacts because of the compact cable entry**

- Easily adjustable in 3 planes of switch head.
- Interchanging of switch heads succeeded by easy operation of forked metal latch.
- The cable entry for SLKP switches enable simple cabling due to unrestricted access to contacts.
- In relation to switch body all the switch heads could be adjusted in 15° steps throughout 360°.
- Including snap action and slow break contacts, with positive opening operations and interchangeable connection component.

## ■性能 Characteristics

額定工作特性	SL2KP	~AC-15;B300(U <sub>e</sub> = 240 V, I <sub>e</sub> = 3A);I <sub>the</sub> = 10A ≡ DC-13;Q300(U <sub>e</sub> = 250 V, I <sub>e</sub> = 0.27A), conforming to IEC60947-5-1 Appendix A, EN60947-5-1
Rated operational characteristics	SL3KP	~AC-15;B300(U <sub>e</sub> = 240 V, I <sub>e</sub> = 1.5A);I <sub>the</sub> = 6A ≡ DC-13;R300(U <sub>e</sub> = 250 V, I <sub>e</sub> = 0.1A), conforming to IEC60947-5-1 Appendix A, EN60947-5-1
額定絕緣電壓 (U <sub>i</sub> )	SL2KP	U <sub>i</sub> = 500 V degree of pollution 3 conforming to IEC60947-1 U <sub>i</sub> = 300 V conforming to UL508, CSA C22-2 n° 14
Rated insulation voltage (U <sub>i</sub> )	SL3KP	U <sub>i</sub> = 400 V degree of pollution 3 conforming to IEC60947-1 U <sub>i</sub> = 300 V conforming to UL508, CSA C22-2 n° 14
額定沖擊 耐受電壓	SL2KP	U <sub>imp</sub> = 6 kV conforming to IEC60947-1, IEC60664
Rated impulse withstand voltage	SL3KP	U <sub>imp</sub> = 4 kV conforming to IEC60947-1, IEC60664
肯定斷開操作	Positive operation (Depending on model)	
	N/C contacts with positive opening operation conforming to IEC60947-5-1 Appendix K, EN60947-5-1	
端子電阻	Resistance across terminals	
	≤25mΩ conforming to IEC60255-7 category 3	
短路保護 Electric shock protection	SL2KP	10 A gG(gl)
	SL3KP	6 A gG(gl)
電纜 (螺釘夾接端子)	SL2KP • 151 and XE2S P2141	1 x 0.34mm <sup>2</sup> (max.); 2 x 1.5mm <sup>2</sup> (min.)
Cabling	SL2KP P21 • 1 and XE2N P31 • 1	1 x 0.5mm <sup>2</sup> (max.); 2 x 2.5mm <sup>2</sup> (min.)
	SL3KP P and XE3S P	1 x 0.34mm <sup>2</sup> (max.); 1 x 1mm <sup>2</sup> or 2 x 0.75mm <sup>2</sup> (min.)
最小觸發速度 (直動式操作頭)	Minimum actuation speed (for head with end plunger)	
	SL2KP • 151SL2KP P2141 and SL3KP P:0.01 m/minute SL2KP • 1SL2KP P31 • 1 and SL3KP P:6 m/minute	
電氣壽命	Electrical durability	
	• conforming to IEC60947-5-1 Appendix C • Utilization categories AC-15 and DC-13 • Maximum operating rate:3600 operating cycles/hour • Load factor:0.5	
包裝說明	Packing	
	10pcs /Box	

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# SLKP

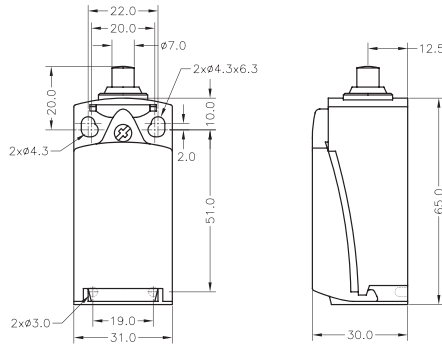
## 立式緊湊型開關 Vertical Compact Switch

### SLKP-00

- 標準柱塞型  
Standard Pin Plunger



重量 Weight: 165.00g



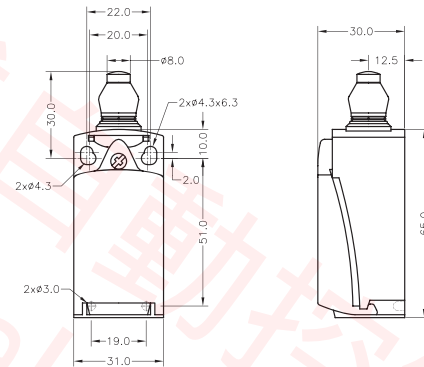
		SLKP-00
OF	MAX	6.5N
RF	MIN	1.5N
PT	MAX	2mm
OT	MIN	4mm
MD	MAX	4mm
OP		18mm
TT		(6mm)
DOT	MIN	3.2mm
DOF	MIN	20N

### SLKP-01

- 密封柱塞型  
Sealed Pin Plunger



重量 Weight: 168.00g



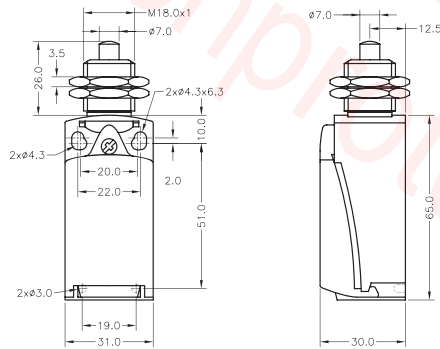
		SLKP-01
OF	MAX	6.5N
RF	MIN	1.5N
PT	MAX	2mm
OT	MIN	4mm
MD	MAX	4mm
OP		28mm
TT		(6mm)
DOT	MIN	3.2mm
DOF	MIN	20N

### SLKP-07

- 面板安裝柱塞型  
Panel Mounting Pin Plunger



重量 Weight: 172.00g



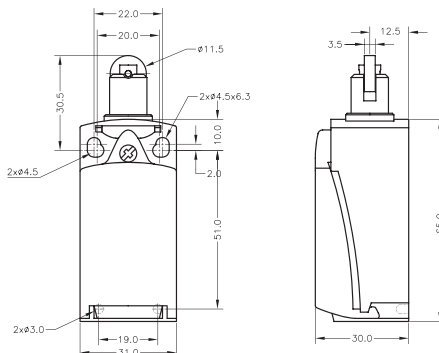
		SLKP-07
OF		6.5N
RF		1.5N
PT		2mm
OT		4mm
MD		1mm
OP		24mm
TT		(6mm)
DOT		3.2mm
DOF		20N

### SLKP-20

- 標準滾輪柱塞型  
Standard Roller Lever



重量 Weight: 170.00g



		SLKP-20
OF		6.5N
RF		1.5N
PT		2mm
OT		4mm
MD		1mm
OP		28.5mm
TT		(6mm)
DOT		3.2mm
DOF		20N

# SLKP

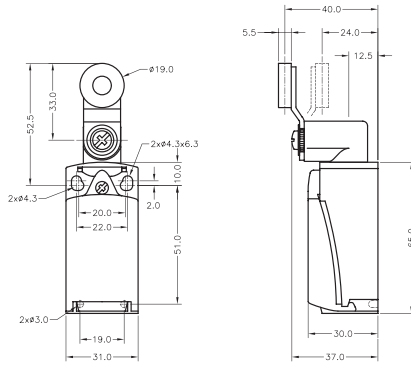
## 立式緊湊型開關 Vertical Compact Switch

### SLKP-40

- 立式標準滾輪擺桿型  
Vertical Standard Roller Lever



重量 Weight: 176.00g



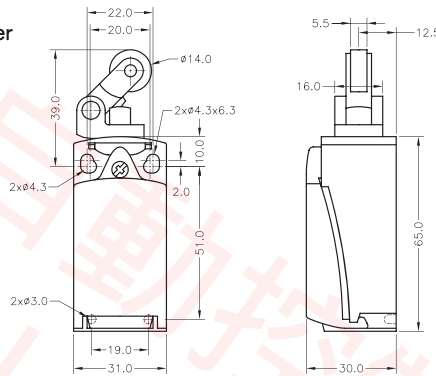
SLKP-40	
OF	5N
RF	0.5N
PT	18~27°
OT	40°
MD	14°
OP	—
TT	(80°)
DOT	50°
DOF	20N

### SLKP-47

- 單向動作滾輪擺桿型  
Unidirectional Action Hinge Roller Lever



重量 Weight: 170.00g



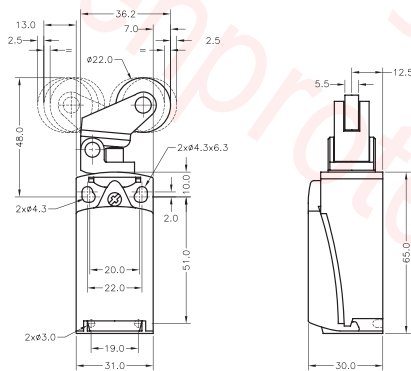
SLKP-47	
OF	5N
RF	0.8N
PT	4mm
OT	5mm
OP	35mm
TT	(9mm)
DOT	5.8mm
DOF	20N

### SLKP-54

- 水平或垂直動作滾輪擺桿型  
Horizontal/Vertical Action Hinge Roller Lever



重量 Weight: 175.00g



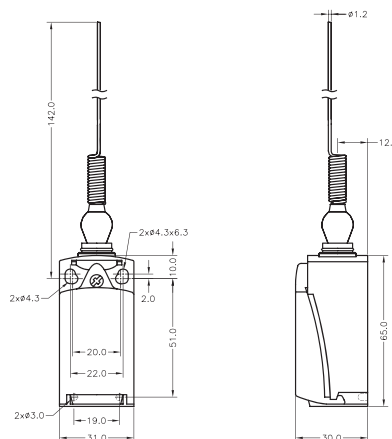
SLKP-54	
OF	5N
RF	0.8N
PT	4mm
OT	5mm
OP	44mm
TT	(9mm)
DOT	4.8mm
DOF	20N

### SLKP-82

- 鋼絲彈簧無方向型  
Non-directional Cat Whisker



重量 Weight: 172.00g



SLKP-82	
OF	1.5N
PT	15°



# SLMD

## 小型金屬開關 Miniature Metal Switch

### 簡單操作，來輕易更換開關的頭部部件

- 所有開關頭部均可在開關本體360°內，以每15°進行調節
- SLMD產品系列也設計可以允許成型接點塊或用其他連接部件替代
- 接點部份包括速動與慢動接點，並且包括正向斷開操作與可互換接點部件

- 開關頭部的三個平面可輕易調節
- 卸掉SLMD本體上的聯接部件只需旋轉1/4圈
- 此SLMD產品系列中的接點部份是集中在開關本體內

### Interchanging of switch heads succeeded by easy operation of forked metal latch

- Easily adjustable in 3 planes of switch head.
- Includes one integral connectors or replaces to other connector solution.
- Various contacts became one integral part of switch head to the SLMD series.
- 1/4 return is only required if remove the connection component of SLMD series.
- In relation to switch body all the switch heads could be adjusted in 15° steps throughout 360°.
- Including snap action and slow break contacts, with positive opening operations and interchangeable connection component.

### 性能 Characteristics

保護結構	Degree of protection	IP66, IP67 and IP68 conforming to IEC60529 IK 06 conforming to EN50102
符合標準 Conforming to standards	產品 Products	IEC60947-5-1, EN60947-5-1, UL508, CSA C22-2 n° 14
	配件 Machine assemblies	IEC60204-1, EN60204-1
材料	Materials	Bodies and heads:Zamak zinc alloy
重複精度	Repeat accuracy	0.05mm on the tripping points, with 1 million operating cycles for head with end plunger
產品認證	Product certifications	UL, CCC, CSA(except products with special cables)
保護處理	Protective treatment	Standard version: "TC"
抗振性	Vibration resistance	XCMD snap action: 5gn. XCMD slow break: 25 gn (10...500Hz)
抗電氣沖擊性能	Electric shock protection	Class I conforming to IEC61-140 and NFC20-030
額定工作特性 Rated operational characteristics	2對觸點開關 Switches with 2 contacts	~AC-15;B300(Ue = 240 V, Ie = 1.5A) ∴ DC-13;R300(Ue = 250 V, Ie = 0.1A), conforming to IEC60947-5-1 Appendix A, EN60947-5-1
	3對和4對觸點開關 Switches with 3 and 4 contacts	~AC-15;B300(Ue = 240 V, Ie = 0.75A) ∴ DC-13;R300(Ue = 250 V, Ie = 0.1A), conforming to IEC60947-5-1 Appendix A, EN60947-5-1
	成型電纜開關 Pre-cabled switches	Ithe = 6 A for 2 contacts, 4 A for 3 contacts, 3 A for 4 contacts
4針 M12 接頭開關 Switches with 4-pin M12 connector	5針 M12 接頭開關 Switches with 5-pin M12 connector	Ui = 250 V, Ie = 3 A maximum, Ithe = 3 A
	帶有 5針 7/8" 16UN連接器開關 Switches with 5-pin 7/8" 16UN connector	Ui = 60 V, Ie = 4 A maximum, Ithe = 4 A
		Ui = 250 V, Ie = 6 A maximum, Ithe = 6a A
額定絕緣電壓 (Ui)	Rated insulation voltage (Ui)	Ui = 400 V degree of pollution 3 conforming to IEC60947-5-1 Ui = 300 V vonforming to UL508, CSA C22-2 n° 14
額定沖擊耐電壓	Rated impulse withstand voltage	U imp = 4 kV conforming to IEC60947-1, IEC60664
肯定斷開操作	Positive operation (Depending on model)	N/C contacts with positive opening operation conforming to IEC60947-5-1 Appendix K, EN60947-5-1
端子絕緣電阻	Resistance across terminals	≤25mΩ conforming to IEC60255-7 category 3
短路保護	Short-circuit protection	6 A cartridge fuse type gG(gl)
最小觸發速度	Minimum actuation speed	Snap action contact: 0.01 m/minute (0.03 ft/minute) Slow break contact: 6 m/minute (19.68 ft/minute)
電氣壽命	Electrical durability	• conforming to IEC60947-5-1 Appendix C • Utilization categories AC-15 and DC-13 • Maximum operating rate:3600 operating cycles/hour • Load factor:0.5
環境溫度 Ambient air temperature	操作 Operation	-25~+70°C(-13~+158°F).
	儲存 Storage	-40~+70°C(-40~+158°F).
包裝說明	Packing	10pcs /Box

★備註 1.以上為初始值 2.上述性能內容將因機種型式而有所不同.請另行洽詢 3.上述壽命值是為周圍溫度5-35度C·周圍濕度40-70%RH時之條件. 如您需要其它詳細條件·請另行洽詢。

★Note: 1. Above values of these characteristics are initial values. 2. Above values of these characteristics may are depending on different models. If any requirements, pls contact our DECA sales representative. 3. Above durability is for an ambient temperature of 5 to 35° and ambient humidity of 40% to 70%. If any requirements, pls contact our DECA sales representative.

# SLMD

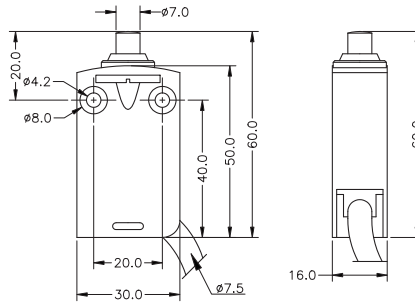
## 小型金屬開關 Miniature Metal Switch

### SLMD-00

- 標準柱塞型  
Pin Plunger



重量 Weight: 200.60g



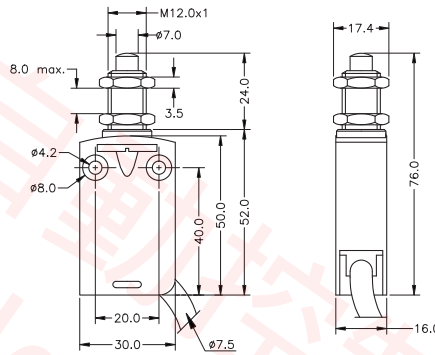
SLMD-00	
OF	12N
RF	1.5N
PT	MAX
OT	1mm(NG)
	3.2mm
OP	19 ± 1mm
TT	(4.5mm)
DOT	1.8mm
DOF	20N

### SLMD-07

- 面板安裝柱塞型  
Short Spring Plunger



重量 Weight: 211.50g



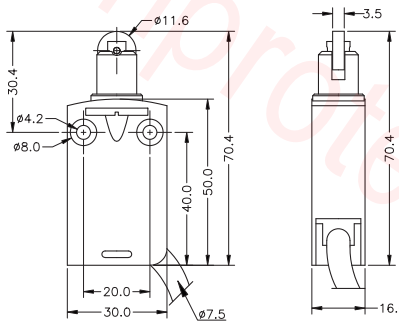
SLMD-07	
OF	12N
RF	1.5N
PT	MAX
OT	1mm(NG)
	3.2mm
OP	23 ± 1mm
TT	(4.5mm)
DOT	1.8mm
DOF	20N

### SLMD-20

- 標準滾輪柱塞型  
Slim Spring Plunger



重量 Weight: 210.30g



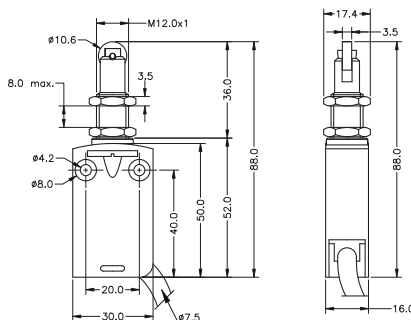
SLMD-20	
OF	12N
RF	1.5N
PT	MAX
OT	1mm(NG)
	3.2mm
OP	29.4 ± 1mm
TT	(4.5mm)
DOT	1.8mm
DOF	20N

### SLMD-26

- 面板安裝滾輪柱塞型  
Panel Mount Plunger



重量 Weight: 218.90g



SLMD-26	
OF	12N
RF	1.5N
PT	MAX
OT	1mm(NG)
	3.2mm
OP	35 ± 1mm
TT	(4.5mm)
DOT	1.8mm
DOF	20N

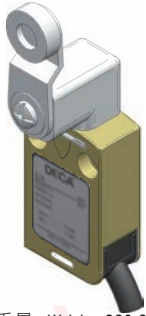
SLMD

# SLMD

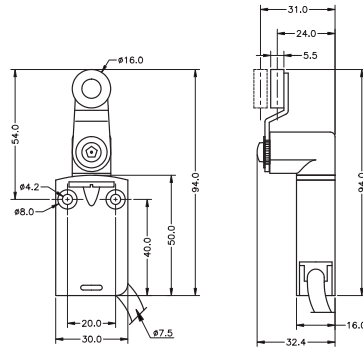
## 小型金屬開關 Miniature Metal Switch

### SLMD-40

- 立式標準滾輪擺桿型  
Vertical Standard Roller Lever



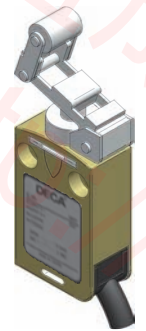
重量 Weight: 220.30g



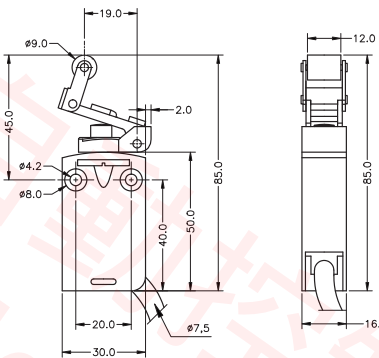
SLMD-40	
OF-1 MAX	5N
RF-2 MIN	0.5N
PT1 (11-12 - 21-22)	$6 \pm 3^\circ$ (NG)
PT1 (31-32 - 41-42)	$9 \pm 3^\circ$ (NG)
PT2-3	( $12^\circ$ )
OT MIN	$40^\circ$
OP (11-12 - 21-22)	—
OP (31-32 - 41-42)	—
TT-3	( $55^\circ$ )
DOT-4 MIN	$18^\circ$
DOF MIN	20N

### SLMD-47

- 單向動作滾輪擺桿型  
Unidirectional Action Hinge Roller Lever



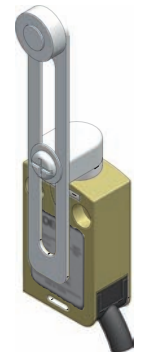
重量 Weight: 220.60g



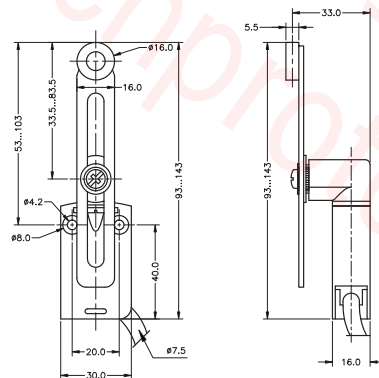
SLMD-47	
OF	5N
RF	0.8N
PT	4mm
OT	5mm
OP	41mm
TT	(9mm)
DOT	5.8mm
DOF	20N

### SLMD-50

- 可調式標準滾輪擺桿型  
Adjustable Roller Lever



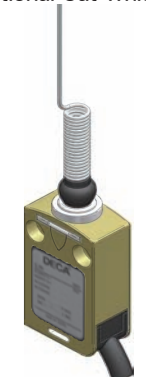
重量 Weight: 225.40g



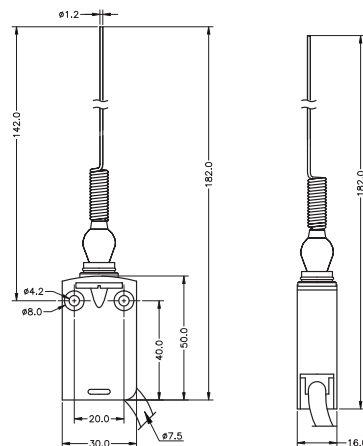
SLMD-50	
OF-1 MAX	5N
RF-2 MIN	0.5N
PT1 (11-12 - 21-22)	$6 \pm 3^\circ$ (NG)
PT1 (31-32 - 41-42)	$9 \pm 3^\circ$ (NG)
PT2-3	( $12^\circ$ )
OT	$40^\circ$
OP (11-12 - 21-22)	—
OP (31-32 - 41-42)	—
TT-3	( $55^\circ$ )
DOT-4 MIN	$18^\circ$
DOF MIN	20N

### SLMD-82

- 鋼絲彈簧無方向型  
Non-directional Cat Whisker



重量 Weight: 220.10g



SLMD-82	
OF	1.5N
RF	$15^\circ$

SLMD

**在SL4N型中新追加拉設式(pullreset)系列產品**

- 可節省工作步驟，讓更新作業更容易進行的M12接頭新上市
- 採用接觸信賴性極高的Au包層接點，無論是一般負荷或是微小負荷均可對應
- 符合 UL、EN(TUV)、CCC認證規格
- 可對應EN115、EN81-1

**Interchanging of switch heads succeeded by easy operation of forked metal latch**

- Easily adjustable in 3 planes of switch head.
- Includes one integral connectors or replaces to other connector solution.
- Various contacts became one integral part of switch head to the SLMD series.
- 1/4 return is only required if remove the connection component of SLMD series.
- In relation to switch body all the switch heads could be adjusted in 15° steps throughout 360° .
- Including snap action and slow break contacts, with positive opening operations and interchangeable connection component.

**■性能 Characteristics**

保護結構	Degree of protection	IP65 conforming to IEC60529 IK 04 conforming to EN50102
符合標準 Conforming to standards	產品 Products	IEC60947-5-1, EN60947-5-1, UL508, CSA C22-2 n° 14
	配件 Machine assemblies	IEC60204-1, EN60204-1
材料	Materials	plastic
重複精度	Repeat accuracy	0.1mm on the tripping points, with 1 million operating cycles for head with end plunger
產品認證	Product certifications	UL, CSA, CCC(pending)
保護處理	Protective treatment	Standard "TC"
抗振性	Vibration resistance	25 gn (10...500Hz)
抗電氣沖擊性能	Electric shock protection	Class II conforming to IEC61140 and NFC20030
額定工作特性	Rated operational characteristics	~AC-15;A300(Ue = 240 V, Ie = 3A);1the = 10A ∴ DC-13;Q300(Ue = 250 V, Ie = 0.27A), conforming to IEC60947-5-1 Appendix A, EN60947-5-1
額定絕緣電壓 (Ui) Rated insulation voltage (Ui)	2-pole contact	Ui = 500 V degree of pollution 3 conforming to IEC60947-1 Ui = 300 V vonforming to UL508, CSA C22-2 n° 14
額定沖擊耐 受電壓 Rated impulse withstand voltage	2-pole contact	U imp = 6 kV conforming to IEC60947-1, IEC60664
肯定斷開操作	Positive operation (Depending on model)	N/C contacts with positive opening operation conforming to IEC60947-5-1 Appendix K, EN60947-5-1
短路保護	Electric shock protection	10 A cartridge fuse type gG(gl)
環境溫度 Ambient air temperature	操作 Operation	-25~+70°C
	儲存 Storage	-40~+70°C
包裝說明	Packing	10pcs /Box

★備註 1.以上為初始值 2.上述性能內容將因機種型式而有所不同.請另行洽詢 3.上述壽命值是為周圍溫度5-35度C，周圍濕度40-70%RH時之條件。如您需要其它詳細條件，請另行洽詢。

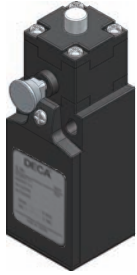
★Note: 1. Above values of these characteristics are initial values. 2. Above values of these characteristics may be depending on different models. If any requirements, pls contact our DECA sales representative. 3. Above durability is for an ambient temperature of 5 to 35° and ambient humidity of 40% to 70%. If any requirements, pls contact our DECA sales representative.

# SLNR

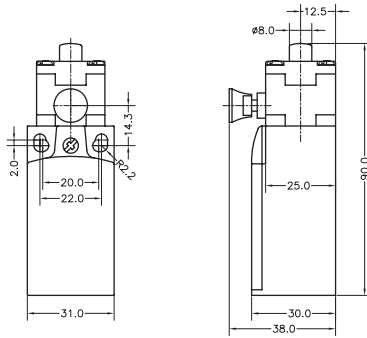
## 手動復位安全開關 Miniature Metal Switch

### SLNR-00

- 標準柱塞型  
Standard Pin Plunger



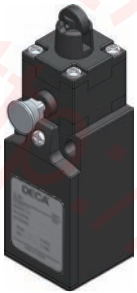
重量 Weight: 80.00g



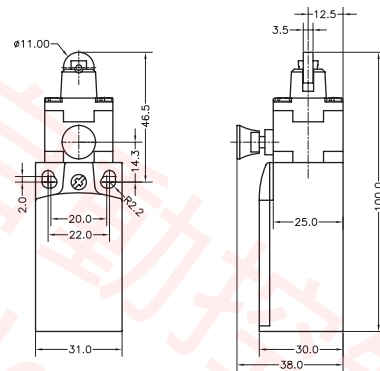
SLNR-00	
LF	10.8N
LT	4.5mm
PT1	2mm
OP (TT)	33.5 ± 0.5mm (6mm)
DOT	3.2mm
DOF	20N

### SLNR-20

- 標準滾輪柱塞型  
Standard Roller Plunger



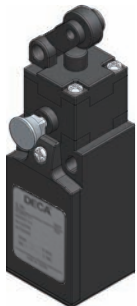
重量 Weight: 81.50g



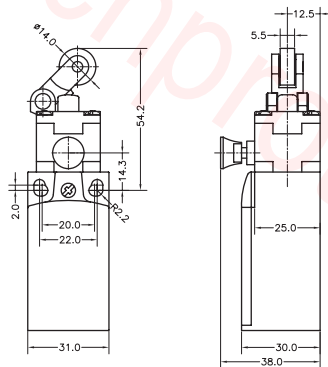
SLNR-20	
LF	10.8N
LT	4.5mm
PT1	2mm
OP (TT)	43.6 ± 0.5mm (6mm)
DOT	3.2mm
DOF	20N

### SLNR-52

- 面板安裝柱塞型  
Unidirectional Horizontal Action Hinge Roller Lever



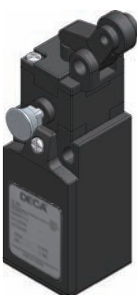
重量 Weight: 80.20g



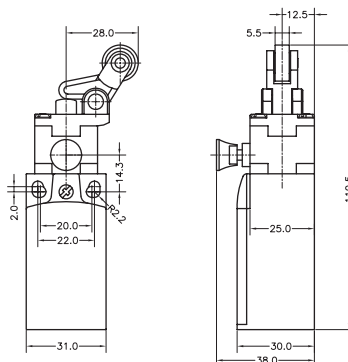
SLNR-52	
LF	7.5N
LT	7mm
PT1	4mm
OP (TT)	50.2 ± 0.8mm (9mm)
DOT	5.8mm
DOF	20N

### SLNR-53

- 面板安裝滾輪柱塞型  
Unidirectional Vertical Action Hinge Roller Lever



重量 Weight: 80.10g



SLNR-53	
LF	7.9N
LT	7mm
PT1	4mm
OP (TT)	52 ± 0.8mm (9mm)
DOT	4.8mm
DOF	20N



觸動器種類豐富之基本型微動開關

- 微動開關之基本型
- 斷路容量15A,且具高精度

- 觸動器種類多可依需求選擇
- 操作速度範圍廣

**Best Microload Switch w/Wide Variety of Actuator Models.**

- Various basic models for Microload Switch.
- A wide variety of actuator for selection.
- Electric shock protection class.
- A large switching capacity of 15A with high repeat accuracy.
- A wide range of operating speed is available.

■性能 Characteristics

保護結構 Degree of protection		IP00
壽命 Durability	機械性 Mechanical	20,000,000 operations min.
	電器性 Electrical	500,000 operations min.
容許操作速度 Operating Speed		0.01mm-1m/s
容許操作頻率 Operating Frequency	機械性 Mechanical	240 operations /min.
	電器性 Electrical	20 operations /min.
額定頻率 Rated Frequency		50/60Hz
絕緣阻抗(絕緣電阻) Insulation Resistance		100MΩ min. (at 500 VDC)
接觸阻抗(接點電阻) Contact Resistance		15mΩ max. (initial value)
耐電壓 Dielectric Strength	同極端子間 Between terminals of same polarity	AC1,000V 50/60Hz 1min
	充電金屬部與接地端間 Between current-carrying metal parts and ground	AC2,000V 50/60Hz 1min
	各端子與非充電金屬部間 Between each terminal and non-current-carrying metal part	AC2,000V 50/60Hz 1min
額定絕緣電壓 (Ui) Rated insulation voltage (Ui)		250VAC
污染度 (使用環境) Pollution degree (Application environment)		3 (EN60947-5-1)
額定開放熱電流(Ith) Rated open thermal current(Ith)		15A
觸電保護等級 Degree of protection against electric shock		Class I
振動 Vibration Resistance	誤動作 Malfunction	10-55 Hz double amplitude (雙振幅) 1.5 mm
	耐久 Destruction	1,000m/s <sup>2</sup> max. (最大)
衝擊 Shock Resistance	誤動作 Malfunction	300m/s <sup>2</sup> max. (最大)
	耐久 Destruction	1,000m/s <sup>2</sup> max. (最大)
使用環境溫度 Ambient operating temperature range		-25~+80°C with no icing (不結冰)
使用環境濕度 Ambient operating humidity range		35~85%RH
包裝說明 Packing		10pcs /Box

★備註 1.以上為初始值 2.上述性能內容將因機種型式而有所不同,請另行洽詢 3.上述壽命值是為周圍溫度5-35度C・周圍濕度40-70%RH時之條件。如您需要其它詳細條件,請另行洽詢。

★Note: 1. Above values of these characteristics are initial values. 2. Above values of these characteristics may be depending on different models. If any requirements, pls contact our DECA sales representative. 3. Above durability is for an ambient temperature of 5 to 35°C and ambient humidity of 40% to 70%. If any requirements, pls contact our DECA sales representative.

# SLZ

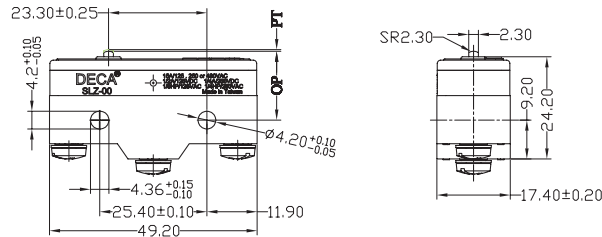
## 微動開關 Microload Switch

### SLZ-00

- 標準柱塞按鈕型  
Standard Pin Plunger



重量 Weight: 28.60g



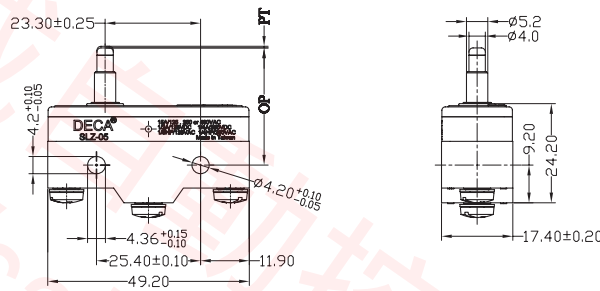
		SLZ-00
OF		2.45 ~ 3.43N
RF	MIN	1.12N
PT	MAX	0.4mm
OT	MIN	0.13mm
MD	MAX	0.05mm
OP		15.9 ± 0.4mm

### SLZ-05

- 彈簧細柱塞按鈕型  
Slim Spring Plunger



重量 Weight: 30.60g



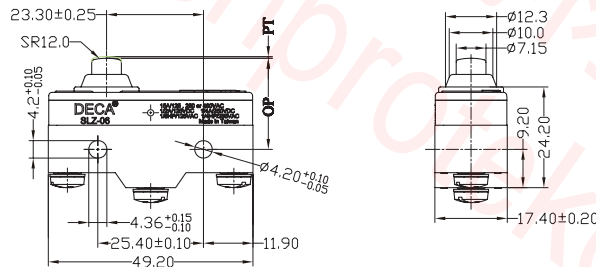
		SLZ-05
OF		2.45 ~ 3.43N
RF	MIN	1.12N
PT	MAX	0.4mm
OT	MIN	1.6mm
MD	MAX	0.05mm
OP		28.2 ± 0.5mm

### SLZ-06

- 彈簧短柱塞按鈕型  
Short Spring Plunger



重量 Weight: 31.10g



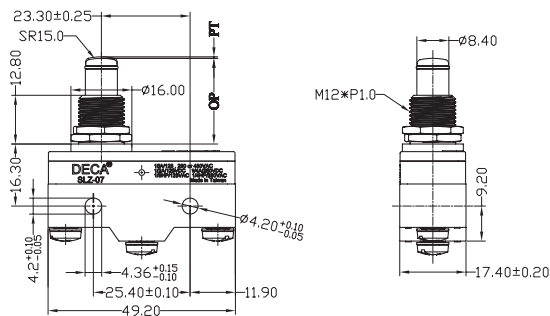
		SLZ-06
OF		2.45 ~ 3.43N
RF	MIN	1.12N
PT	MAX	0.4mm
OT	MIN	1.6mm
MD	MAX	0.05mm
OP		21.5 ± 0.5mm

### SLZ-07

- 面板安裝柱塞按鈕型  
Panel Mount Plunger



重量 Weight: 42.70g



		SLZ-07
OF		2.45 ~ 3.43N
RF	MIN	1.12N
PT	MAX	0.4mm
OT	MIN	5.5mm
MD	MAX	0.05mm
OP		21.8 ± 0.8mm

SLZ

# SLZ

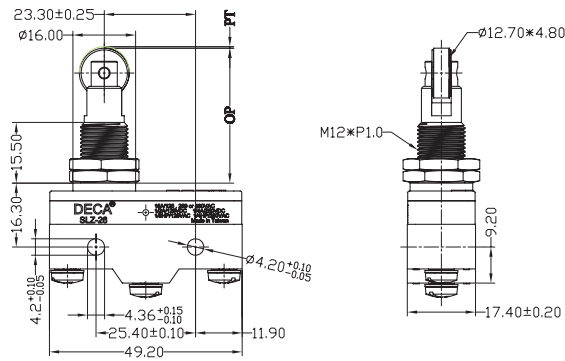
## 微動開關 Microload Switch

### SLZ-26

- 面板安裝滾輪柱塞按鈕型  
Panel Mount Roller Plunger



重量 Weight: 54.00g



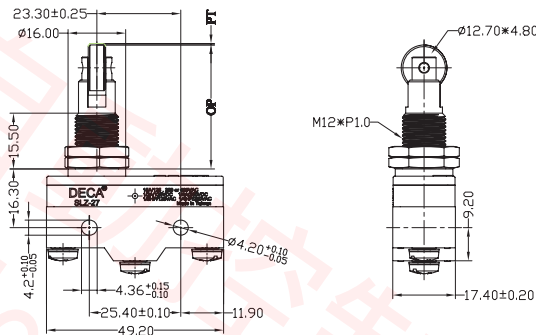
		SLZ-26
OF		2.45 ~ 3.43N
RF	MIN	1.12N
PT	MAX	0.4mm
OT	MIN	3.58mm
MD	MAX	0.05mm
OP		33.4 ± 1.2mm

### SLZ-27

- 面板安裝橫向滾輪柱塞按鈕型  
Panel Mount Cross Roller Plunger



重量 Weight: 54.10g



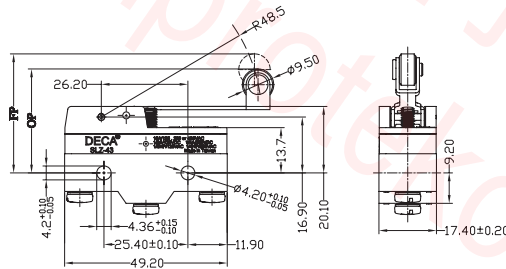
		SLZ-27
OF		2.45 ~ 3.43N
RF	MIN	1.12N
PT	MAX	0.4mm
OT	MIN	3.58mm
MD	MAX	0.05mm
OP		33.4 ± 1.2mm

### SLZ-43

- 臥式標準滾輪擺桿型  
Horizontal Standard Roller Leaf Spring



重量 Weight: 35.20g



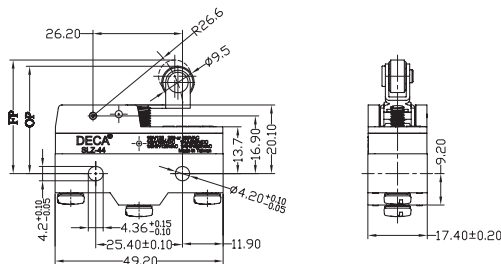
		SLZ-43
OF	MAX	2.35N
RF	MIN	0.55N
OT	MIN	4mm
MD	MAX	0.64mm
FP	MAX	35mm
OP		30.2 ± 0.8mm

### SLZ-44

- 滾輪短擺桿型  
Roller Short Hinge Lever



重量 Weight: 34.30g



		SLZ-44
OF	MAX	1.57N
RF	MIN	0.41N
OT	MIN	2.4mm
MD	MAX	0.5mm
FP	MAX	32.5mm
OP		30.2 ± 0.4mm

# SLZ

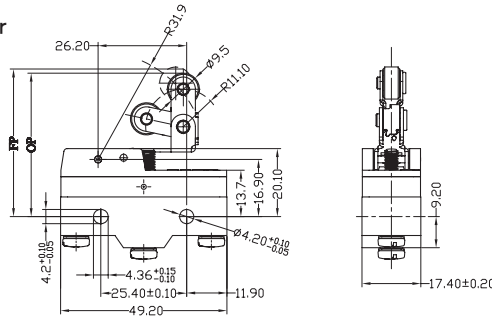
## 微動開關 Microload Switch

### SLZ-48

- 單向動作滾輪短擺桿型  
Unidirectional Short Hinge Roller Lever



重量 Weight: 36.90g



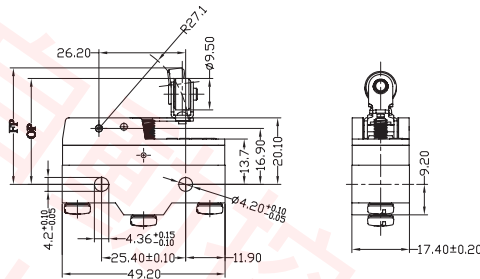
		SLZ-48
OF	MAX	1.67N
RF	MIN	0.41N
OT	MIN	2.4mm
MD	MAX	0.51mm
FP	MAX	43.6mm
OP		41.3 ± 0.8mm

### SLZ-49

- 橫向滾輪擺桿型  
Hinge Cross Roller Lever



重量 Weight: 35.10g



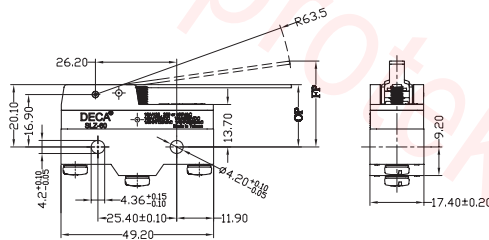
		SLZ-49
OF	MAX	1.67N
RF	MIN	0.41N
OT	MIN	2.4mm
MD	MAX	0.51mm
FP	MAX	33.3mm
OP		31 ± 0.4mm

### SLZ-60

- 標準擺桿型  
Standard Hinge Lever



重量 Weight: 33.20g



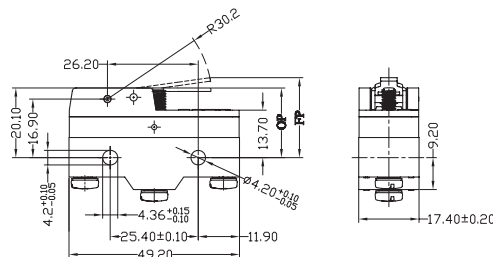
		SLZ-60
OF	MAX	0.69N
RF	MIN	0.14N
OT	MIN	5.6mm
MD	MAX	1.27mm
FP	MAX	28.2mm
OP		19 ± 0.8mm

### SLZ-61

- 短擺桿型  
Short Hinge Lever



重量 Weight: 32.10g



		SLZ-61
OF	MAX	1.57N
RF	MIN	0.27N
OT	MIN	2mm
MD	MAX	1mm
FP	MAX	24.8mm
OP		19 ± 0.8mm

SLZ

## 高精度小型封裝開關

- 內置基本封裝開關，擁有1,000萬次以上之使用壽命且重複精度高之緊湊型封裝開關
- 安裝螺距和SLZ型相同

- 和一般的限位開關相比，動作用力(OF)較小
- 符合EN(TUV)、UL、CSA、CCC的安全規格

## High-precision and Miniature Enclosed Switch

- High-precision and Miniature Enclosed Switch with Built-in Switches for Strong Durability of 10 Million Operations minimum and High -Repetition.
- Same mounting pitch as SLZ Basic Switch.
- Requires less operating force (OF) than general limit switches.
- Approved by EN(TUV),UL,CSA,CCC.

## ■性能 Characteristics

保護結構 Degree of protection		IP67
壽命 Durability	機械性 Mechanical	10,000,000 operations min.
	電器性 Electrical	500,000 operations min.
容許操作速度 Operating Speed		0.05mm/s-0.5m/s
容許操作頻率 Operating Frequency	機械性 Mechanical	120 operations /min.
	電器性 Electrical	20 operations /min.
額定頻率 Rated Frequency		50/60Hz
絕緣阻抗(絕緣電阻) Insulation Resistance		100MΩ min. (at 500 VDC)
接觸阻抗(接觸點電阻) Contact Resistance		15mΩ max. (initial value)
耐電壓 Dielectric Strength	同極端子間 Between terminals of same polarity	1,000VAC 50/60Hz for 1min
	充電金屬部與接地端子間 Between current-carrying metal parts and ground	2,000VAC 50/60Hz for 1min
	各端子與非充電金屬部間 Between each terminal and non-current-carrying metal part	2,000VAC 50/60Hz for 1min
額定絕緣電壓 (Ui) Rated insulation voltage (Ui)		1000VAC
污染度 (使用環境) Pollution degree (Application environment)		3 (IEC947-5-1)
短路保護裝置 Short-circuit protective device		10A-fuse type gG (IEC 60269)
額定開放熱電流(I <sub>th</sub> ) Rated open thermal current(I <sub>th</sub> )		10A
觸電保護等級 Degree of protection against electric shock		Class II
振動 Vibration Resistance	誤動作 Malfunction	10-55 Hz 1.5 mm double amplitude (雙振幅)
	耐久 Destruction	1,000m/s <sup>2</sup> max. (最大)
衝擊 Shock Resistance	誤動作 Malfunction	300m/s <sup>2</sup> max. (最大)
	耐久 Destruction	1,000m/s <sup>2</sup> max. (最大)
使用環境溫度 Ambient operating temperature range		-10~+80°C with no icing (不結冰)
使用環境濕度 Ambient operating humidity range		35%~95%RH
包裝說明 Packing		10pcs /Box

★備註 1.以上為初始值 2.上述性能內容將因機種型號而有所不同,請另行洽詢 3.上述壽命值是為周圍溫度5-35度C、周圍濕度40-70%RH時之條件。如您需要其它詳細條件,請另行洽詢。

★Note: 1. Above values of these characteristics are initial values. 2. Above values of these characteristics may be depending on different models. If any requirements, pls contact our DECA sales representative. 3. Above durability is for an ambient temperature of 5 to 35°C and ambient humidity of 40% to 70%. If any requirements, pls contact our DECA sales representative.

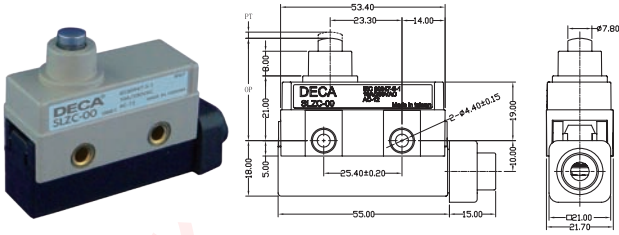


# SLZC

## 緊湊型封裝開關 Compact Enclosed Switch

### SLZC-00

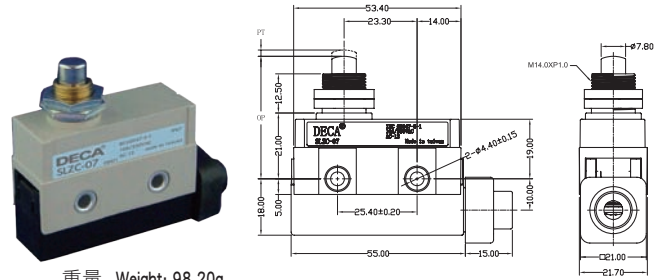
- 標準柱塞型  
Plunger



重量 Weight: 91.10g

### SLZC-07

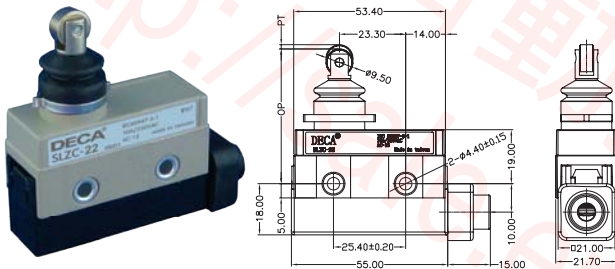
- 面板安裝柱塞型  
Panel Mount Plunger



重量 Weight: 98.20g

### SLZC-22

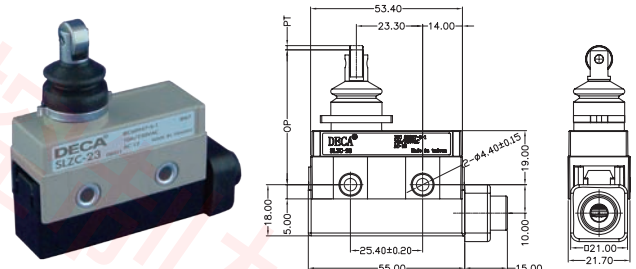
- 密封滾輪柱塞型  
Sealed Roller Plunger



重量 Weight: 98.20g

### SLZC-23

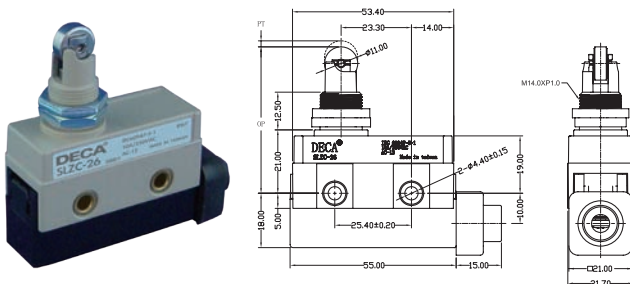
- 密封橫向滾輪柱塞型  
Sealed Crossroller Plunger



重量 Weight: 97.70g

### SLZC-26

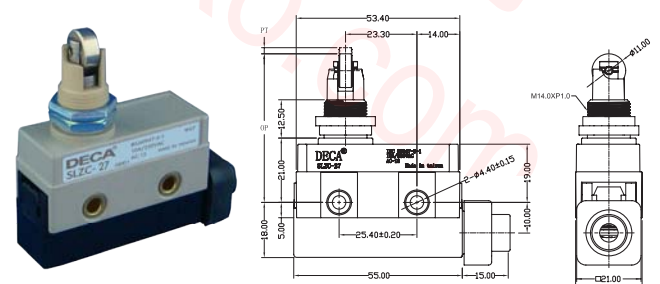
- 面板安裝滾輪柱塞型  
Panel Mount Roller Plunger



重量 Weight: 104.40g

### SLZC-27

- 面板安裝橫向滾輪柱塞型  
Panel Mount Crossroller Plunger



重量 Weight: 104.50g

### 動作特性 Operating Characteristics

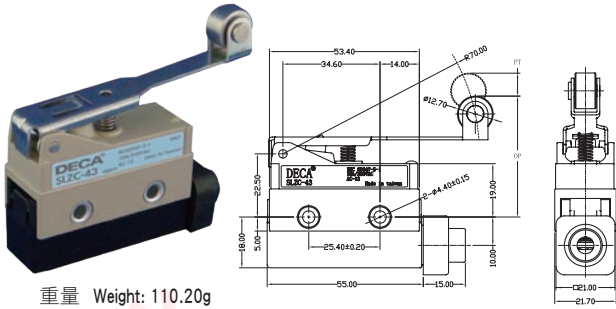
O.Characteristics		Model		SLZC-00	SLZC-07	SLZC-22	SLZC-23	SLZC-26	SLZC-27
動作用力	OF 最大	OF		11.8N	11.8N	6.86N	6.86N	11.8N	11.8N
回復力	RF 最小	RF		4.9N	4.9N	1.67N	1.67N	4.9N	4.9N
預行程	PT 最大	PT		1.5mm	1.5mm	1.5mm	1.5mm	1.5mm	1.5mm
過行程	OT 最小	OT		2.4mm	3mm	2.5mm	2.5mm	3mm	3mm
應差距離	MD 最大	MD		0.2mm	0.2mm	0.2mm	0.2mm	0.2mm	0.2mm
自由位置	FP 最大			--	--	--	--	--	--
動作位置	OP			32.4±0.8mm	38.2±0.8mm	47.4±0.8mm	47.4±0.8mm	47.4±0.8mm	47.4±0.8mm

# SLZC

## 緊湊型封裝開關 Compact Enclosed Switch

### SLZC-43

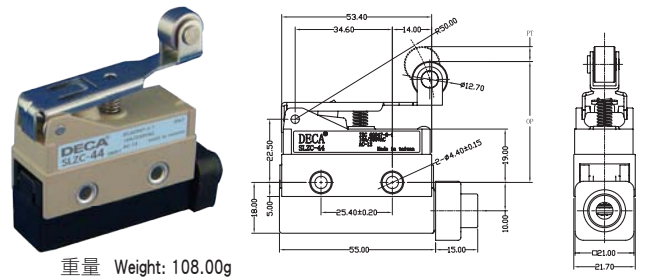
- 臥式標準滾輪擺桿型  
Standard Hinge Roller Lever



重量 Weight: 110.20g

### SLZC-44

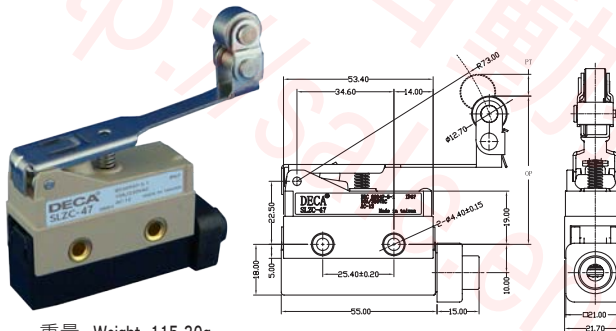
- 滾輪短擺桿型  
Short Hinge Roller Lever



重量 Weight: 108.00g

### SLZC-47

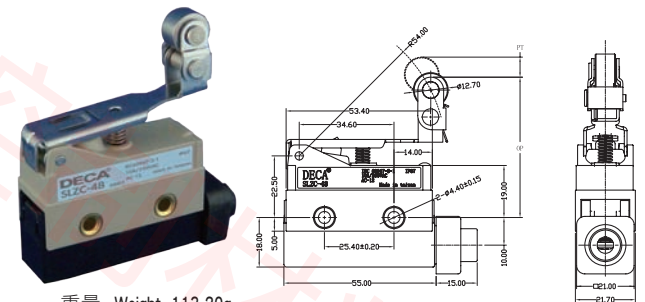
- 單向動作滾輪擺桿型  
One-way Action Hinge Roller Lever



重量 Weight: 115.30g

### SLZC-48

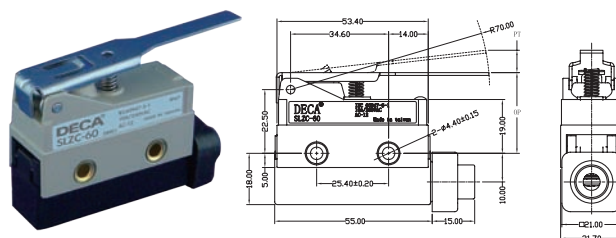
- 單向動作滾輪短擺桿型  
One-way Action Short Hinge Roller Lever



重量 Weight: 113.20g

### SLZC-60

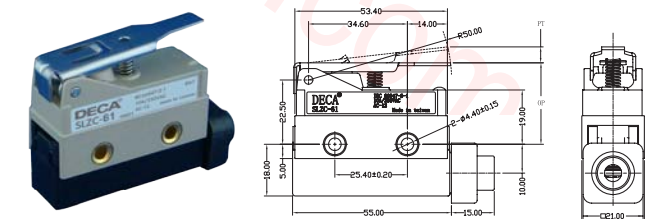
- 標準擺桿型  
Standard Hinge Lever



重量 Weight: 101.60g

### SLZC-61

- 短擺桿型  
Short Hinge Lever



重量 Weight: 100.60g

### 動作特性 Operating Characteristics

O.Characteristics	Model	SLZC-43	SLZC-44	SLZC-47	SLZC-48	SLZC-60	SLZC-61
動作力 OF	最大	2.75N	3.92N	3.92N	2.75N	2.75N	3.92N
回復力 RF	最小	0.59N	0.78N	0.78N	0.59N	0.59N	0.78N
預行程 PT	最大	—	—	—	—	—	—
過行程 OT	最小	8.4mm	6mm	6mm	8.4mm	8.4mm	6mm
應差距離 MD	最大	1.4mm	1mm	1mm	1.4mm	1.4mm	1mm
自由位置 FP	最大	51.3mm	49.2mm	59.2mm	61.2mm	36.7mm	34.7mm
動作位置 OP		43 ± 1.2mm	43 ± 1.2mm	53 ± 1.2mm	53 ± 1.2mm	28.5 ± 1.2mm	28.5 ± 1.2mm

## 高精度小型封裝開關

- SLZE系列內置SLZ型一般用之微動開關
- 安裝方法有側面與側面對角線兩種，觸動器種類也很豐富

- 取下蓋子後，內置開關端子處於正面，易連接
- 符合EN(TUV)、UL、CSA、CCC的安全規格

## High-precision and Miniature Enclosed Switch

- SLZE Enclosed Switches with High Breaking Capacity and High Durability. SLZ general purpose basis switches are built into SLZE switches.
- Two mount methods include side and diagonal side.
- Terminals face the front when the cover is removed for easy connection.
- Approved by EN(TUV),UL,CSA,CCC.

## ■性能 Characteristics

保護結構 Degree of protection		IP65
壽命 Durability	機械性 Mechanical	10,000,000 operations min.
	電器性 Electrical	5,000,000 operations min. for 15A 250VAC resistive load
容許操作速度 Operating Speed		0.01mm/s-0.5m/s Plunger Type(柱塞型) 0.02-0.5m/s Lever Type(擺桿型)
容許操作頻率 Operating Frequency	機械性 Mechanical	120 operations (次) /min
	電器性 Electrical	20 operations (次) /min
額定頻率 Rated Frequency		50/60Hz
絕緣阻抗(絕緣電阻) Insulation Resistance		100MΩ min. (at 500VDC)
接觸阻抗(接點電阻) Contact Resistance		15mΩ max (initial value)
端子溫度上昇 Terminal Temperature Rise		50°C max.
耐電壓 Dielectric Strength	同極端子間 Between terminals of same polarity	1,000 VAC 50/60Hz for 1min
	充電金屬部與接地端間 Between current-carrying metal parts and ground	2,000 VAC 50/60Hz for 1min
	各端子與非充電金屬部間 Between each terminal and non-current-carrying metal part	2,000 VAC 50/60Hz for 1min
觸電保護等級 Degree of protection against electric shock		Class II
振動 Vibration Resistance	誤動作 Malfunction	10-55 Hz 1.5 mm double amplitude (雙振幅)
衝擊 Shock Resistance	耐久 Destruction	1,000m/s <sup>2</sup> min.
	誤動作 Malfunction	100m/s <sup>2</sup> min. 50m/s <sup>2</sup> min.
使用環境溫度 Ambient operating temperature range		-10~+80°C with no icing (不結冰)
使用環境濕度 Ambient operating humidity range		35% ~ 85% RH
包裝說明 Packing		1pc /Box

★備註 1.以上為初始值 2.上述性能內容將因機種型式而有所不同請另行洽詢 3.上述壽命值是為周圍溫度5-35度C、周圍濕度40-70%RH時之條件。如您需要其它詳細條件，請另行洽詢。

★Note: 1. Above values of these characteristics are initial values. 2. Above values of these characteristics may be depending on different models. If any requirements, pls contact our DECA sales representative. 3. Above durability is for an ambient temperature of 5 to 35° and ambient humidity of 40% to 70%. If any requirements, pls contact our DECA sales representative.

# SLZE

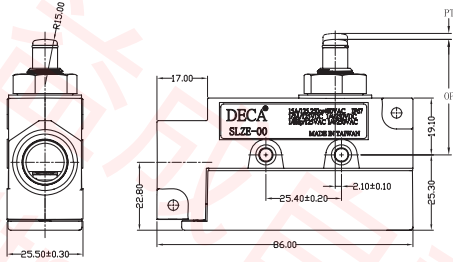
## 通用封裝開關 General-Purpose Enclosed Switch

### SLZE-00

- 標準柱塞型  
Standard Plunger



重量 Weight: 158.00g

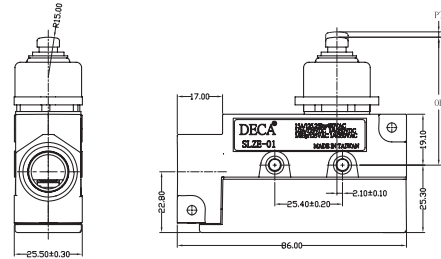


### SLZE-01

- 密封柱塞型  
Sealed Plunger



重量 Weight: 181.60g

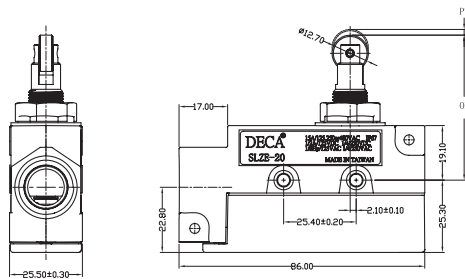


### SLZE-20

- 標準滾輪柱塞型  
Standard Roller Plunger



重量 Weight: 166.60g

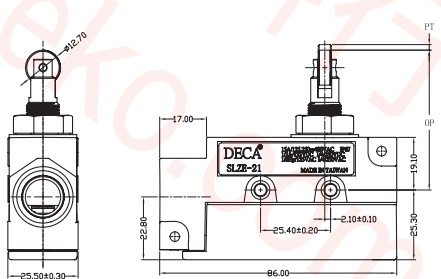


### SLZE-21

- 橫向滾輪柱塞型  
Standard Crossroller Plunger



重量 Weight: 164.80g



### ■動作特性 Operating Characteristics

Model		SLZE-00	SLZE-01	SLZE-20	SLZE-21
O.Characteristics					
動作力	OF	2.45 ~ 3.43N	7.85N	2.45 ~ 3.43N	2.45 ~ 3.43N
回復力	RF MIN	1.12N	2.35N	1.12N	1.12N
預行程	PT MAX	0.4mm	2mm	0.5mm	0.5mm
過行程	OT MIN	5.5mm	5mm	3.6mm	3.6mm
應差距離	MD MAX	0.05mm	0.1mm	0.05mm	0.05mm
動作位置	OP	38.2 ± 0.8mm	45.8 ± 0.8mm	49.7 ± 1mm	49.7 ± 1mm

# SLZE

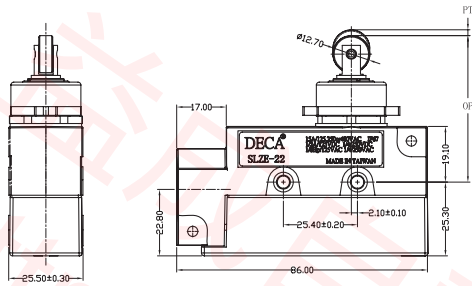
## 通用封裝開關 General-Purpose Enclosed Switch

### SLZE-22

- 密封滾輪柱塞型  
Sealed Roller Plunger



重量 Weight: 184.20g

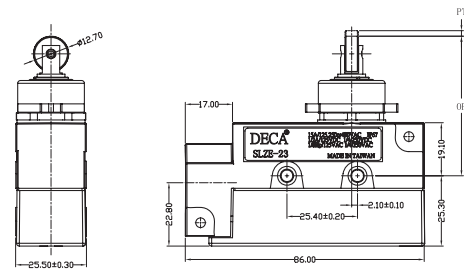


### SLZE-23

- 密封橫向滾珠輪塞型  
Sealed Crossroller Plunger



重量 Weight: 184.20g

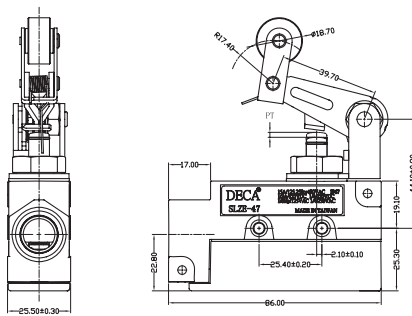


### SLZE-47

- 單向動作滾輪擺桿型  
Unidirectional Action Roller  
Arm Lever



重量 Weight: 231.30g

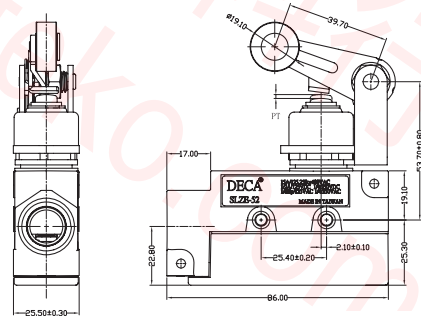


### SLZE-52

- 滾輪懸臂擺桿型  
Roller Arm Lever



重量 Weight: 249.20g



### ■動作特性 Operating Characteristics

Model		SLZE-22	SLZE-23	SLZE-47	SLZE-52
O.Characteristics					
OF	MAX	4.90N	4.90N	5.59N	6.28N max
RF	MIN	0.98N	0.98N	1.67N	2.26N
PT	MAX	1mm	1mm	4mm	5mm
OT	MIN	3.5mm	3.5mm	6mm	6mm
MD	MAX	0.12mm	0.12mm	0.4mm	0.4mm
OP		49.7 ± 0.8mm	49.7 ± 0.8mm	— —	— —

SLZE