



長新科技股份有限公司  
ARICO TECHNOLOGY CO., LTD.

# 固態繼電器

## Solid State Relay



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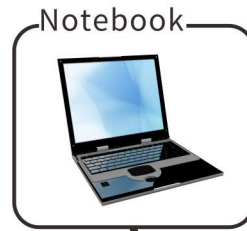
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# 長新科技塑膠機械產品解決方案

## ARICO TECHNOLOGY Total Solutions for Plastic Machine



桌上型電腦



筆記型電腦

乙太網路  
Ethernet



射/押出機控制系統 Plastic Machine Controllers



固態繼電器  
Solid State Relays



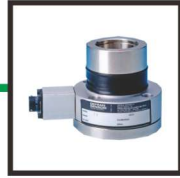
溫度控制器  
Temperature Controllers



電熱調整器  
Heater Power Regulators



位移傳感器  
Displacement Transducers



荷重元 Load Cells



壓力傳感器  
Pressure Transducers



耐高溫高壓熔體壓力計  
Melt Pressure Transducers



變頻器 Inverters



指示警報器  
Indicators/Alarm units



壓力控制器  
Pressure Controllers



熱澆道溫度控制器  
Hot Runner  
Temperature Controllers

MODBUS

MODBUS





















































# 產品總覽 (Products Overview)

義大利 GEFRAN 公司及其它代理產品 Agent products

壓力傳感器 Pressure Transducers																				
	K3 Series		KE Series		KN Series															
	M3 Series		ME Series		MN Series															
M5 Series		M6 Series		KS/TK																
位移傳感器 Displacement Transducers																				
	LT/LT67/LTC		PC		PK		PA1		PY1/PY2/PY3											
	PZ12/PZ34		PC67/PZ67A/PZ67S		PMA12/PME12/PMI12		PMI-SL/PMI-SLE													
	IC		PR65		PS		PCIR													
WPG-A			WPP/WPA Series			WRP/WRA/WRG Series														
溫度/壓力/顯示/警示 控制儀表 Controller/Alarm unit/ Programmer/Indicator																				
	4T48		4T96		40TB		40B96		400-401		450		600		650		2400		2500	
功率控制器/固態繼電器 Power Controller/ Solid State Relay																				
	GRM-H		GRP		GRP-H		GRS		GRS-H		GRZ		GRZ-H		GQ					
陶瓷電熱片 Ceramic Band Heater																				
	一般式 Ceramic Band Heater			保溫式 Insulation Plus Ceramic Band Heater						氣冷式 Air Cooled Ceramic Band Heater										



# 產品總覽 (Products Overview)

溫度控制器 Temperature Controllers V Series							
	V100	V200	V300	V400	V500		
溫度控制器 Temperature Controllers C Series							
	C100	C200	C300	C400	C500		
溫度控制器 Temperature Controllers A Series							
							
	A3DA	A3DD	A4AA	A4AD	A4AN	A4DA	A4DD
溫度控制器 Temperature Controllers TC Series							
							
	TC3DO	TC4AA	TC4AO	TC4DA	TC4DO		
熱澆道溫度控制器 Hot Runner Temperature Controllers							
					閥門控制器 Valve Gate Controller		
	TC5200	TC5100	TC50	TC5V			
橡塑膠機控制系統 (射出機/押出機/吹瓶機等...) Plastic Machine Controllers							
	AR800/AR810/AR1280/AR2000/AR2010/AR2100				AR/FT Series - HMI		
固態繼電器 Solid State Relay							
	ARD24 Series	ARD48 Series	SY Series	SV Series	SW Series		
電熱調整器 Heatsoft			訊號轉換器 Signal Transmitter				
	SB Series			TR100/TR200			

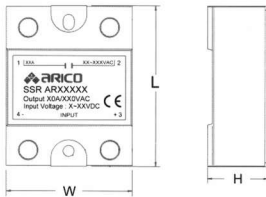
# 固態繼電器

## Solid State Relay DC-AC-220/380 V Series



### 尺寸 Dimension

L-W-H (mm)



### 特色

- (1) 固態光耦合電路設計，輸出入端絕緣強度可達 2500 Vac
- (2) 以積體電路控制
- (3) 內設衝擊電流保護迴路
- (4) LED 顯示運轉狀況
- (5) 適合長時間使用和高可靠性

### Features

- (1) All solid state, optically coupled for 2500 Vac isolation between input and output circuit
- (2) Able to be driven by IC such as TTL & CMOS
- (3) Internally mounted snobbier circuit protection for huge current application
- (4) A LED can indicate the operating of devices
- (5) Long services life and high reliability

型號 Model	ARD2425	ARD2440
尺寸/重量 Dimension/Weight (Approx.) L × W × H 單位 Unit: mm	56.5 × 44 × 26.2/100 g	
反應時間 Response Time	1/2 cycle + 1 m sec.	
輸入出絕緣阻抗 IN to OUT Dielectric Strength	> 100 MΩ	
輸入出絕緣電壓 IN to OUT Isolation Voltage	2500 Vrms	
輸出入端對鋁片絕緣電壓 Input/Output to Base Plate Isolation Voltage	2500 Vrms	
操作溫度 Operating Temperature	-20 ~ 80°C	
儲存溫度 Storage Temperature	-40 ~ 100°C	
<b>輸入規格 Input Specification</b>		
控制電壓範圍 Control Voltage Range	4 ~ 32 Vdc	
最大電流 Maximum Current (at Vmax)	15 mA	
最小觸發電壓 Minimum Pickup Voltage	4 Vdc	
最小複歸電壓 Minimum Dropout Voltage	2 Vdc	
<b>輸出規格 Output Specification</b>		
電壓範圍 Voltage Range	70 ~ 380 Vac	
峰值電壓 Peak Voltage (t = 1 min)	600 Vac	
最大電流 Maximum Current	25 A	40 A
單周最大承受電流 Maximum 1 - Cycle Surge (50 Hz)	210 A	250 A
OFF 狀態洩漏電流 Maximum OFF - state Leakage	8 mA rms	
ON 狀態飽和壓降 (T = 25°C) Maximum ON - state Voltage Drop	1.6 Vac	
熱阻抗 Thermal Resistance	1.5	1.3

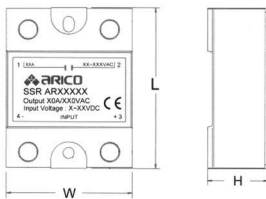
# 固態繼電器

## Solid State Relay DC-AC-480 V Series



### 尺寸 Dimension

L-W-H (mm)



### 特色

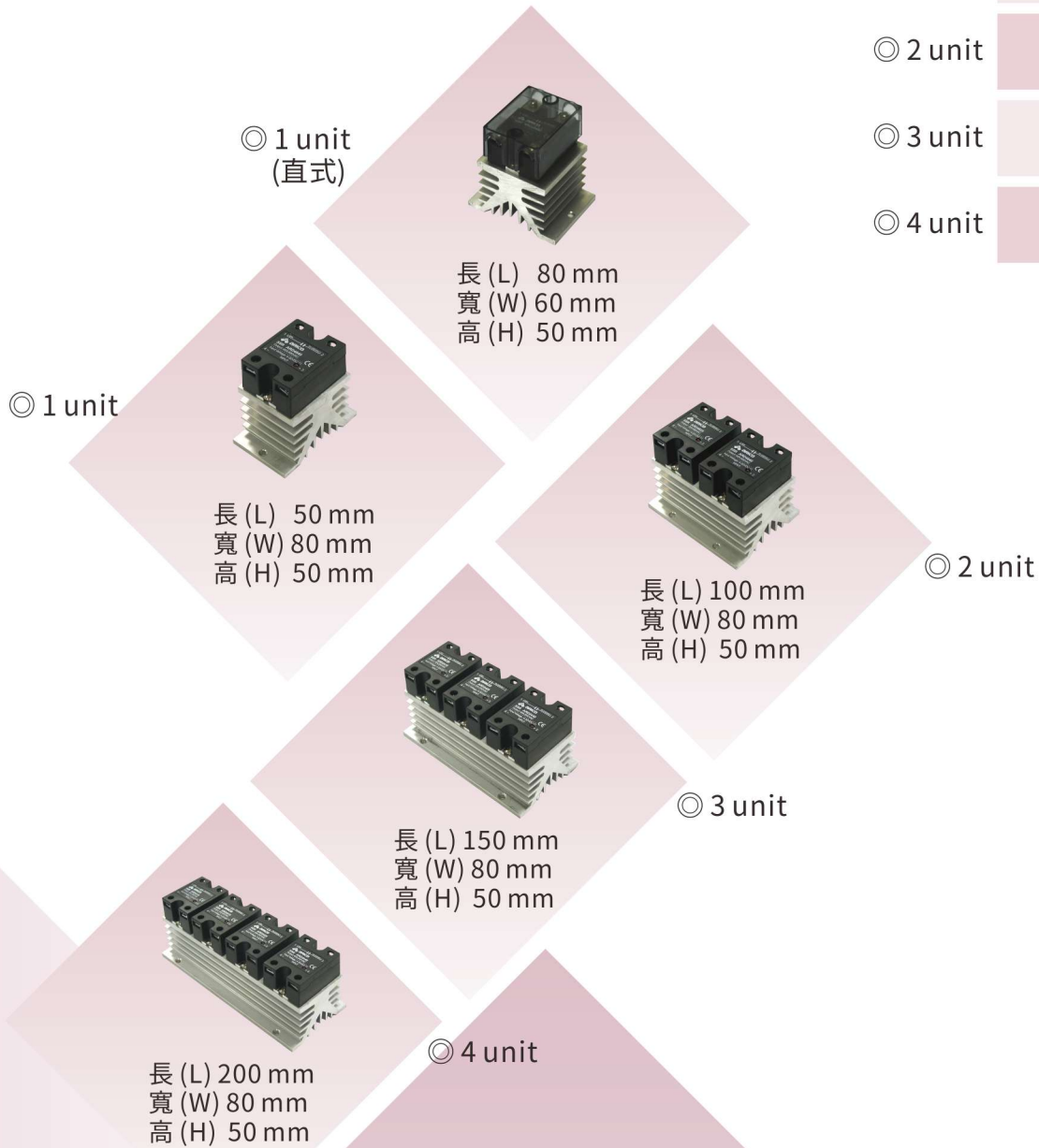
- (1) 固態光耦合電路設計，輸出入端絕緣強度可達 2500 Vac
- (2) 以積體電路控制
- (3) 內設衝擊電流保護迴路
- (4) LED 顯示運轉狀況
- (5) 適合長時間使用和高可靠性

### Features

- (1) All solid state, optically coupled for 2500 Vac isolation between input and output circuit
- (2) Able to be driven by IC such as TTL & CMOS
- (3) Internally mounted snobbier circuit protection for huge current application
- (4) A LED can indicate the operating of devices
- (5) Long services life and high reliability

型號 Model	ARD4825	ARD4840	ARD4850	ARD4875
尺寸/重量 Dimension/Weight (Approx.) L × W × H 單位 Unit: mm	56.5 × 44 × 26.2/100 g		59.8 × 45 × 30/110 g	
反應時間 Response Time	1/2 cycle + 1 m sec.			
輸入出絕緣阻抗 IN to OUT Dielectric Strength	> 100 MΩ			
輸入出絕緣電壓 IN to OUT Isolation Voltage	2500 Vrms			
輸出入端對鋁片絕緣電壓 Input/Output to Base Plate Isolation Voltage	2500 Vrms			
操作溫度 Operating Temperature	-20 ~ 80°C			
儲存溫度 Storage Temperature	-40 ~ 100°C			
<b>輸入規格 Input Specification</b>				
控制電壓範圍 Control Voltage Range	4 ~ 32 Vdc			
最大電流 Maximum Current (at Vmax)	15 mA			
最小觸發電壓 Minimum Pickup Voltage	4 Vdc			
最小複歸電壓 Minimum Dropout Voltage	2.5 Vdc		3 Vdc	
<b>輸出規格 Output Specification</b>				
電壓範圍 Voltage Range	70 ~ 480 Vac			
峰值電壓 Peak Voltage (t = 1 min)	1200 Vac			
最大電流 Maximum Current	25 A	40 A	50 A	75 A
單周最大承受電流 Maximum 1 - Cycle Surge (50 Hz)	210 A	290 A	600 A	630 A
OFF 狀態洩漏電流 Maximum OFF - state Leakage	16 mA rms			
ON 狀態飽和壓降 (T = 25°C) Maximum ON - state Voltage Drop	1.6 Vac			
熱阻抗 Thermal Resistance	1.5	1.3	0.9	0.75





訂購碼  
Order Code

◎ 1 unit (直式) 060

◎ 1 unit 050

◎ 2 unit 100

◎ 3 unit 150

◎ 4 unit 200



# 電熱調整器

## Heat Power Regulators SB Series



### 特色

- (1) 可選擇輸出方式：純相位控制/相位啟動零位運轉，為世界首創優異功能
- (2) 微電腦數位化控制，超高解析度
- (3) 內建散熱片超溫保護及指示
- (4) 2 Thyristor 設計、高耐電壓、高耐電流
- (5) 充足散熱能力，可承受 100% 連續輸出
- (6) 內建 FUSE 保護
- (7) 超薄外型，節省盤體空間
- (8) 安全歐規接線端，免壓著端子，配線簡易
- (9) 可選擇 6 種輸入訊號：DC 4 ~ 20 mA、0 ~ 20 mA、1 ~ 5 V、0 ~ 5 V、2 ~ 10 V、0 ~ 10 V

### Features

- (1) Selection of output modes: Phase angle control/Phase angle soft start & zero cross working (World's leading excellent function)
- (2) Micro-computer digital control with extra high resolution
- (3) Built - in overheat indicator & protection of cooling fin
- (4) 2 Thyristor design, high voltage-resistant and high current-resistant
- (5) Full heat radiating capability allowing 100% continuous output
- (6) Built-in fuse protection
- (7) Super slim figure, saving body's space
- (8) Secure CE wiring terminal, no need of ring terminals, easy for wiring
- (9) Selection of 6 input signals: DC 4 ~ 20 mA, 0 ~ 20 mA, 1 ~ 5 V, 0 ~ 5 V, 2 ~ 10 V, 0 ~ 10 V

### 輸出方式及應用 Output Modes & Applications

- 純相位控制 Phase Angle 適用於定電阻發熱體、變電阻發熱體、燈光調控。

10%  50%  90% 

先以低電壓漸進輸出緩衝啟動後，自動切換成快速模式敏捷調整溫度，每半波觸發時會產生一諧波干擾。

- 相位啟動零位運轉適用於定電阻發熱體、不可用於阻抗隨溫度急遽變化之發熱體。



以相位方式低電壓漸進輸出緩衝啟動後，自動切換成零位輸出模式敏捷調整溫度。零位控制以全波為單位，無半波成份，可達最高之功率因數  $\text{COS}\theta$ ，省電，不產生諧波干擾，輸出時電流表呈抖動狀態。本控制模式兼具相位/零位控制之優點，可相位緩啟動、保護發熱體，並具零位省電無干擾之特性。以上兩種控制方式輸出範圍均可達 0-99%，且具極高之解析度(可達 0.4%)及 IN/OUT 線性(可達 1%)

- Phase angle control can be applied to fixed resistor heater, variable resistor heater and light control.

10%  50%  90% 

After progressive soft start under low voltage, high-speed mode automatically activates to swiftly adjust the temperature. Every half wave intriguing produces a noise of harmonics.

- Phase angle soft start & zero cross working can be applied to fixed resistor heater, but not suitable to heater with steep resisting fluctuation under temperature effect.



After progressive output soft start under low voltage in phase angle mode, automatically switched to the zero position output mode to swiftly adjust temperature. Zero position control is in the unit of a whole wave. Without component of half wave, highest power factor  $\text{COS}\theta$  can be reached, saving power and no noise of harmonics. Ampere meter shows shivering status when output. This control mode combines the advantages of phase angle and zero position control, enabling phase angle soft start to protect heater and also featuring low power consumption and noise free in zero position.

\*Control accuracies of the above two outputs are precisely calculated under CPU. Outputs are with very high linearity at 1%, resolution within 0.4%, output range of 0 ~ 99%.

## 型號識別 Model Identification

SB	SLIM TYPE 電熱調整器，單相零位、相位雙功能 Heater Power Regulator Twin Functions of Zero Crossing & Phase Angle				
額定電壓 Rated Voltage	1	AC 75-135 V			
	2	AC 180-260 V			
	3	AC 260 V-440 V			
	4	AC 330 V-530 V			
額定電流 Rated Current (N1)	016	16 A	選用 Use	FWC-25A10F(25 A)以下	<p>額定電流 Rated Voltage (%)</p> <p>周圍溫度 Ambient Temperature °C</p>
	025	25 A		FWC-32A10F(32 A)以下	
	033	33 A	FUSE (N1)	50 LET / 45 ET(50 A)以下	
	044	44 A		63 LET / 63 ET(63 A)以下	
	058	58 A		80 LET / 80 ET(80 A)以下	

\*(N1) Fuse 代號為美國 BUSSMANN 產品，客戶亦可以用等品代替。

\*以上數據係在散熱片，無腐蝕、無油污、無覆蓋，且按熱對流方向安裝之情況下。

\*(N1) The fuse codes are BUSSMANN products from the United States, but customers may also use substitutes.

\*Above values available when the cooling fin is free from erosion, oil smudge and clad and has been installed in the direction of heat convection.

## 輸出方式及應用輸入訊號及輸出模式設定代碼 Codes to set Input Signal and Output Mode

客戶可以由 PC 板上之 JUMP 點改變功能

Functions can be changed at JUMP point on the PC board.

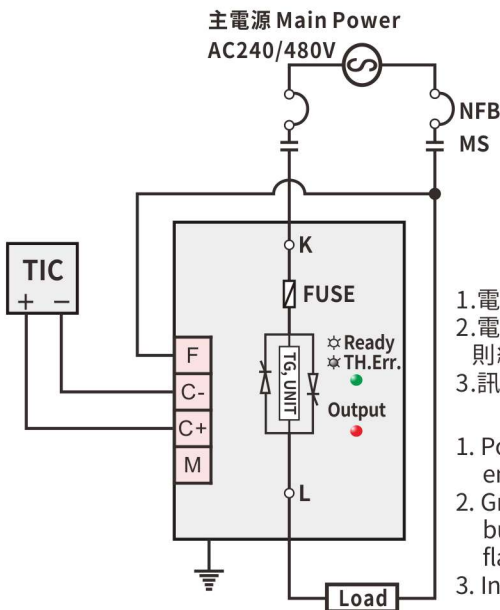
Output Mode	代碼 Code	Input Signal	J10	J20	J30	J40	
相位啟動 零位運轉 Phase Angle Soft Start & Zero Cross working	AY	DC 4 ~ 20 mA	●	○	○	○	○ OFF
	BY	DC 1 ~ 5 V	○	○	○	○	
	CY	DC 2 ~ 10 V	○	●	○	○	
	DY	DC 0 ~ 20 mA	●	○	●	○	
	EY	DC 0 ~ 5 V	○	○	●	○	
	FY	DC 0 ~ 10 V	○	●	●	○	
純相位 控制輸出 Phase Angle Control	AP	DC 4 ~ 20 mA	●	○	○	●	● ON
	BP	DC 1 ~ 5 V	○	○	○	●	
	CP	DC 2 ~ 10 V	○	●	○	●	
	DP	DC 0 ~ 20 mA	●	○	●	●	
	EP	DC 0 ~ 5 V	○	○	●	●	
	FP	DC 0 ~ 10 V	○	●	●	●	



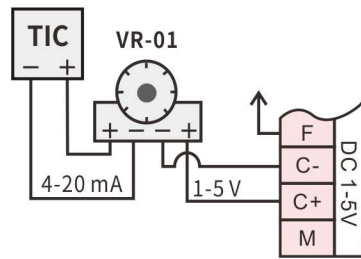


## 配線圖及操作說明 Wiring Diagram & Operation Instruction

- 電源及輸入訊號  
Power and Input Signal



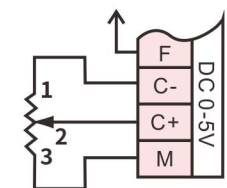
- DC 4-20 mA 輸入 + 最大輸出量限制 VR  
DC 4-20 mA Input + Max. Output Limit VR



1. 電源須由 K 端輸入，L 端接至負載，電源直通至負載之直通線須接線至 F 端。
2. 電源投入時綠燈長亮，當 FUSE 熔斷時綠燈熄滅，當散熱片溫度  $>80\pm 3^{\circ}\text{C}$  時，則綠燈閃亮，輸出停止， $<75\pm 3^{\circ}\text{C}$  自動復歸。
3. 訊號輸入時，紅燈亮開始輸出。

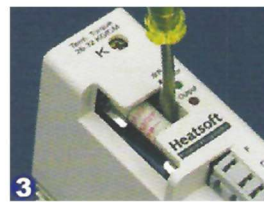
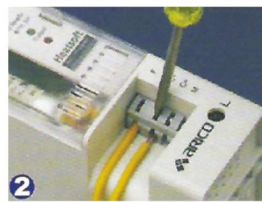
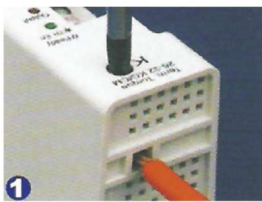
1. Power is input at K and connected to load at L. Wire the straight line connecting two ends of power and load to F.
2. Green light continues to light on when power input and light off when fuse was burned out. When temperature of cooling fin is higher than  $80\pm 3^{\circ}\text{C}$ , green light flashes. Output stops and will resume after temperature lowers to less than  $75\pm 3^{\circ}\text{C}$ .
3. In signal input, when red light is on, output starts.

- 純手動 VR 調整  
Manual VR Adjustment



VR103 (2 K-10 K $\Omega$  均可)  
(2 K-10 K $\Omega$ , both acceptable)

## 共通規範 Common Norms



1. 電源端接線時，導線不必壓著端子，直接插入鐵束環內，即可鎖緊。
2. 控制端配線(  $\Rightarrow$  AWG16-20 Wire Strip 5 mm)，以一字起子下壓(如圖)即可插入配線。
3. 16-25 A 機種更換 FUSE 時，以一字起子向外翹開(如圖)即可取出。
4. 33-58 A 機種更換 FUSE 時，將上蓋內壓上拉。

1. Wiring in power terminal, lead wire hasn't to be pressed on terminal. Insert it into the iron clip and lock tight.
2. Insert the wire by pressing the console with a slotted screwdriver (see detail)(  $\Rightarrow$  AWG16-20 Wire Strip 5 mm).
3. Changing FUSE in model 16-25 A, push it outward by a slot screwdriver and take it out.
4. Changing FUSE in model 33-58 A, push the upper cover inward and pull it up.

## 外型尺寸及固定方式 Dimensions & Install Ways

電流 Current	長 Length mm	寬 Width mm	高 Height mm	重量 Weight kg	電源端線徑 & 鎖緊扭力 Wire Dia. & Locking Torque In Power terminal		剝線長度 Wire Stripping Length
					2.0 ~ 3.5 mm <sup>2</sup>	26 ~ 32 kgf·cm	
16 A	107	38	102	0.45	5.5 ~ 8.0 mm <sup>2</sup>	38 ~ 45 kgf·cm (With Fuse Screws) (含 FUSE 螺絲)	10 mm 免壓著端子 crimp-free terminal
25 A	107	38	140	0.53			
33 A	158	52	127	1.0	5.5 ~ 8.0 mm <sup>2</sup>	38 ~ 45 kgf·cm (With Fuse Screws) (含 FUSE 螺絲)	15 mm 免壓著端子 crimp-free terminal
44 A	158	52	158	1.3			
58 A	158	52	198	1.8			

\*可選擇雙螺絲固定或軌道式固定 Install options can be of double screws or by DIN rail mount.

## 周圍環境 Environment

1. 周圍溫濕度：-10/+50 $^{\circ}\text{C}$ ；90% RH 以下(無結露)
  2. 絕緣阻抗：20 M $\Omega$  以上 (500 Vdc) 訊號輸入端與電源端及電源端與外殼間
  3. 耐壓強度：1000 Vac 1 分 (訊號輸入端與電源端) 2000 Vac 1 分 (電源端與外殼)
1. Ambient temperature & humidity: -10/+50 $^{\circ}\text{C}$ : below 90% RH (No dew allowed)
  2. Insulation-resistance: > 20 M $\Omega$  (500 Vdc) control terminal & power terminal & case
  3. Electronic strength: 1000 Vac/1 minute (Control terminal & power terminal)  
2000 Vac/1 minute (Power terminal & case)

# 固態繼電器

## Slim Strong Relay SV/SW Series



### 特色

- (1) 2 Thyristor 設計、高耐電壓、高耐電流
- (2) 充足散熱能力，可承受 100% 連續輸出
- (3) 內建 FUSE 保護
- (4) 超薄外型，節省盤體空間
- (5) 安全歐規接線端，免壓著端子，配線簡易
- (6) 2 檔次訊號輸入端，低輸入電流

### Features

- (1) 2 Thyristor design, high voltage-resistant and high current resistant
- (2) Full heat radiating capability allowing 100% continuous output
- (3) Built-in fuse protection
- (4) Super slim figure, saving body's space
- (5) Secure CE wiring terminal, no need of ring terminals, easy for wiring
- (6) 2-Level of signal inputs, low input current

### 型號識別 Model Identification

SV	SLIM TYPE		固態繼電器	INPUT	4 ~ 30 Vdc
SW	ZERO CROSS		TURN-ON	SIGNAL	70 ~ 280 Vac
額定電壓 Rated Voltage	2	AC 50 V ~ 280 V			
	4	AC 100 V ~ 500 V			
額定電流 Rated Current	016	16 A	選用 Use	FWC-16A10F(16 A)以下	
	025	25 A		FWC-25A10F(25 A)以下	
	033	33 A	FUSE (N1)	35 LET / 35 ET(35 A)以下	
	044	44 A		50 LET / 45 ET(50 A)以下	
	058	58 A		63 LET / 63 ET(63 A)以下	

額定電流  
Rated Voltage (%)

\*(N1) Fuse 代號為美國 BUSSMANN 產品，客戶亦可以用等品代替。

\*以上數據係在散熱片，無腐蝕、無油污、無覆蓋，且按熱對流方向安裝之情況下。

\*(N1) The fuse codes are BUSSMANN products from the United States, but customers may also use substitutes.

\*Above values available when the cooling fin is free from erosion, oil smudge and clad and has been installed in the direction of heat convection.

### 輸入訊號規範 Signal Input Norms

機型 Model	檔次 Level	電壓範圍 Voltage Range	停止輸出電壓 Must Release Voltage	輸入電流 Input Current
SV	LV	DC 4 ~ 8 V	< 1 V	4.5 ~ 35 mA
	HV	DC 8 ~ 30 V	< 2 V	4.5 ~ 28 mA
SW	LV	AC 70 ~ 140 V	< 20 V	4.8 ~ 12 mA
	HV	AC 140 ~ 280 V	< 40 V	4.8 ~ 12 mA

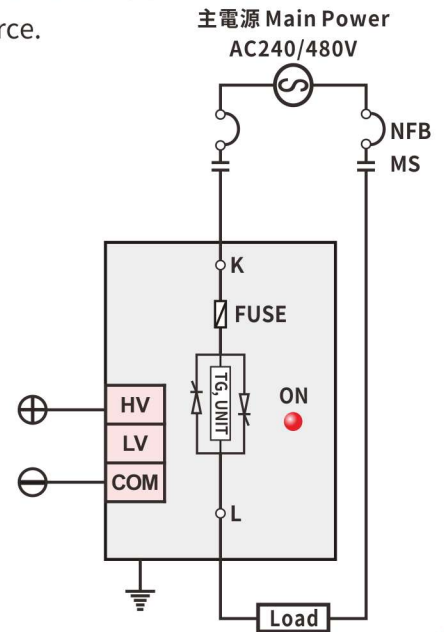
\*輸入訊號端採 2 檔次設計可降低訊號輸入電流。

\* The input signal terminal uses a 2-level design to reduce signal input current..

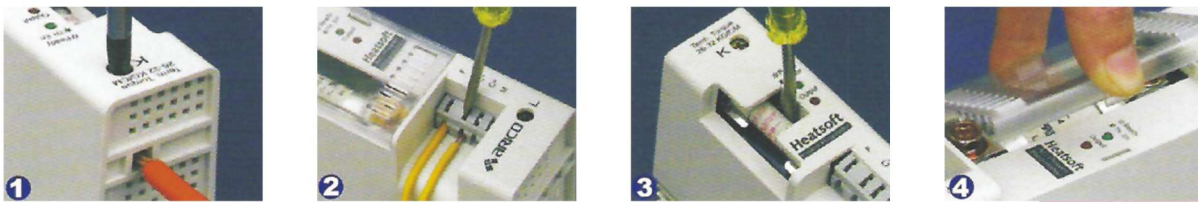


## 配線圖 Wiring Diagram

- 請依訊號源電壓高低，選擇其中一項合適之檔次(HV或LV)，當訊號輸入時 ON LED 長亮
- Choose a suitable shift (HV or LV) in according to voltage in signal source. ON LED continues to light on when signal in.



## 共通規範 Common Norms



1. 電源端接線時，導線不必壓著端子，直接插入鐵束環內，即可鎖緊。
2. 控制端配線(≡ AWG16-20 Wire Strip 5 mm)，以一字起子下壓(如圖)即可插入配線。
3. 16-25 A 機種更換 FUSE 時，以一字起子向外翹開(如圖)即可取出。
4. 33-58 A 機種更換 FUSE 時，將上蓋內壓上拉。
1. Wiring in power terminal, lead wire hasn't to be pressed on terminal. Insert it into the iron clip and lock tight.
2. Insert the wire by pressing the console with a slotted screwdriver (see detail)(≡ AWG16-20 Wire Strip 5 mm).
3. Changing FUSE in model 16-25 A, push it outward by a slot screwdriver and take it out.
4. Changing FUSE in model 33-58 A, push the upper cover inward and pull it up.

## 外型尺寸及固定方式 Dimensions & Install Ways

電流 Current	長 Length mm	寬 Width mm	高 Height mm	重量 Weight kg	電源端線徑 & 鎖緊扭力 Wire Dia. & Locking Torque In Power terminal		剝線長度 Wire Stripping Length
16 A	107	38	102	0.45	2.0 ~ 3.5 mm <sup>2</sup>	26 ~ 32 kgf·cm	10 mm 免壓著端子 crimp-free terminal
25 A	107	38	140	0.53			
33 A	158	52	127	1.0	5.5 ~ 8.0 mm <sup>2</sup>	38 ~ 45 kgf·cm (With Fuse Screws) (含 FUSE 螺絲)	15 mm 免壓著端子 crimp-free terminal
44 A	158	52	158	1.3			
58 A	158	52	198	1.8			

\*可選擇雙螺絲固定或軌道式固定 Install options can be of double screws or by DIN rail mount.

## 周圍環境 Environment

1. 周圍溫濕度：-10/+50°C；90% RH 以下(無結露)
2. 絕緣阻抗：20 MΩ 以上 (500 Vdc) 訊號輸入端與電源端及電源端與外殼間
3. 耐壓強度：1000 Vac 1 分 (訊號輸入端與電源端) 2000 Vac 1 分 (電源端與外殼)
1. Ambient temperature & humidity：-10/+50°C: below 90% RH (No dew allowed)
2. Insulation-resistance: > 20 MΩ (500 Vdc) control terminal & power terminal & case
3. Electronic strength: 1000 Vac/1 minute (Control terminal & power terminal)  
2000 Vac/1 minute (Power terminal & case)

# 固態繼電器

## Slim Strong Relay SY Series



### 特色

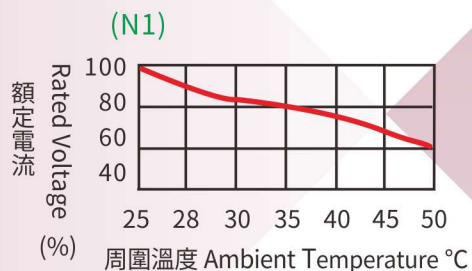
- (1) 2 Thyristor 設計、高耐電壓、高耐電流
- (2) 內附散熱片，無外加安裝之麻煩及品質問題
- (3) 新穎超薄外型，節省盤體空間 (寬 25 mm)
- (4) 採用光耦合隔離 IN/OUT 絕緣耐壓 4000 Vac
- (5) 內建 dv/dt 保護
- (6) 2 檔次訊號輸入端，低輸入電流
- (7) 適用於射押出機、烘烤爐、實驗爐

### Features

- (1) 2-Thyristor design, high voltage and current resistance
- (2) Built-in thermal pad that avoids installation problems or quality concerns
- (3) Super slim figure that takes minimal space in the frame
- (4) Photo coupler isolation for IN/OUT, maximum 4000 Vac
- (5) Built-in dv/dt protection
- (6) 2-Level signal inputs, low current input
- (7) Designed for injection/extrusion machine, baking oven and experiment furnace

### 型號識別 Model Identification

SY	SY TYPE		固態繼電器					
	ZERO CROSS		TURN-ON					
額定電壓 Rated Voltage	2	AC 50 V-280 V	VRRM-800 V					
	4	AC 100 V-500 V	VRRM-1200 V					
額定電流 Rated Current (N1)	025	MAX. 25 A	Continued 16 A	$I_{TSM} = 300 \text{ A}$	$I^2t = 450 \text{ A}^2\text{S}$	選用 FUSE	FWC-25A10F (25 A) 以下	
	040	MAX. 40 A	Continued 25 A	$I_{TSM} = 500 \text{ A}$	$I^2t = 1250 \text{ A}^2\text{S}$		FWC-32A10F (32 A) 以下	
輸入訊號 Signal Input	D	4-30 Vdc INPUT					(N2)	
代碼Code	A	70-280 Vac INPUT						



\*以上數據係在散熱片，無腐蝕、無油污、無覆蓋，且按熱對流方向安裝之情況下。  
\*Above values available when the cooling fin is free from erosion, oil smudge and clad and has been installed in the direction of heat convection.

### (N2)

Fuse 代號為美國 BUSSMANN 產品，客戶如以同等品代替時，應注意  $I^2t$  值需相符。  
The fuse models shown above are BUSSMANN products (USA).  
When using alternative fuses, please note that the  $I^2t$  value should be identical.



## 輸入訊號 Signal Input

代號 Code	檔次 Level	電壓範圍 Voltage Range	停止輸出電壓 Must Release Voltage	輸入電流 Input Current
D	LV	DC 4 ~ 8 V	< 1 V	4.5 ~ 35 mA
	HV	DC 8 ~ 30 V	< 2 V	4.5 ~ 28 mA
A	LV	AC 70 ~ 140 V	< 20 V	4.8 ~ 12 mA
	HV	AC 140 ~ 280 V	< 40 V	4.8 ~ 12 mA

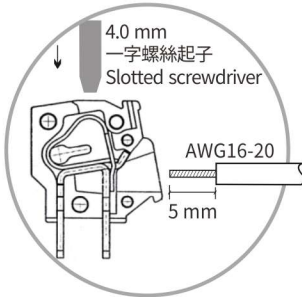
\*輸入訊號端採 2 檔次設計可降低訊號輸入電流。

\*2-Level signal inputs design can reduce current of input signal.

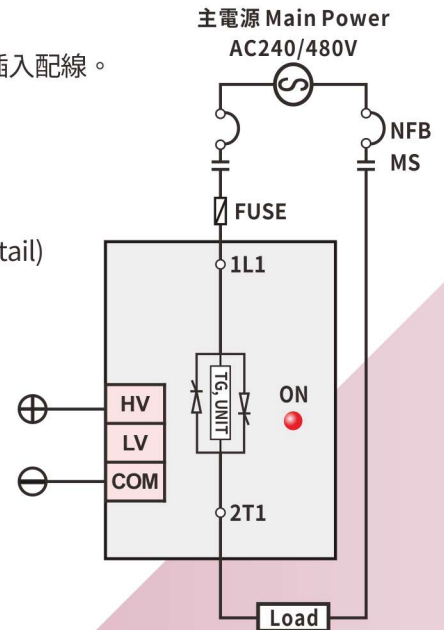
## 配線與安裝 Wiring & Installation

1. 請按熱對流 (UP) 方向安裝，否則連續電流 (Continued) 將減少 20%。
2. 控制端配線(  $\Rightarrow$  AWG16-20 Wire Strip 5 mm)，以一字起子下壓(如圖)即可插入配線。
3. 可選擇雙螺絲固定或軌道式固定。

1. Install the relay in line with convective heat transfer(UP), or the continued current will decrease by 20%.
2. Insert the wire by pressing the console with a slotted screwdriver (See detail) ( $\Rightarrow$  AWG16-20 Wire Strip 5 mm).
3. Fixing the wire with 2 screws or a din rail.



- 請依訊號源電壓高低，選擇其中一項合適之檔次(HV或LV)，當訊號輸入時ON LED長亮。



## 周圍環境 Ambient Conditions

- 周圍溫溼度：-10/+50°C；90% RH以下 (無結露)
- 絕緣阻抗：20 MΩ以上 (500 Vdc) 訊號輸入端與電源端及電源端與外殼間
- 絕緣強度：1000 Vac 1 分 (訊號輸入端與電源端)，2000 Vac 1 分 (電源端與外殼)
- Ambient temperature/humidity: -10/+50°C, below 90% RH (no condensation)
- Insulation resistance: Above 20 MΩ (500 Vdc) between signal input and power terminals, and between power terminals and the cover.
- Dielectric strength: 1000 Vac within 1 min (between signal input & power), and 2000 Vac within 1 min (between power & cover shell)

## 外型尺寸 Specification

電流 Current	長 Length mm	寬 Width mm	高 Height mm	重量 Weight kg	電源端線徑 & 鎖緊扭力 Wire Dia. & Locking Torque In Power terminal	
25 A	136	25	120	0.27	2.0 ~ 3.5 mm <sup>2</sup>	26 ~ 32 kgf·cm
40 A	136	25	140	0.33	5.5 ~ 8.0 mm <sup>2</sup>	38 ~ 45 kgf·cm

## 三年保固 3-year Warranty

可享 3 年內自然故障之免費維修服務。

(若因安裝或使用不當或天災及意外災害...等造成故障，須酌收材料費及維修費)

3-year free maintenance for natural malfunction.

In case of improper installation and application, or problems caused by nature disasters or accidents, material and maintenance charge may apply.

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