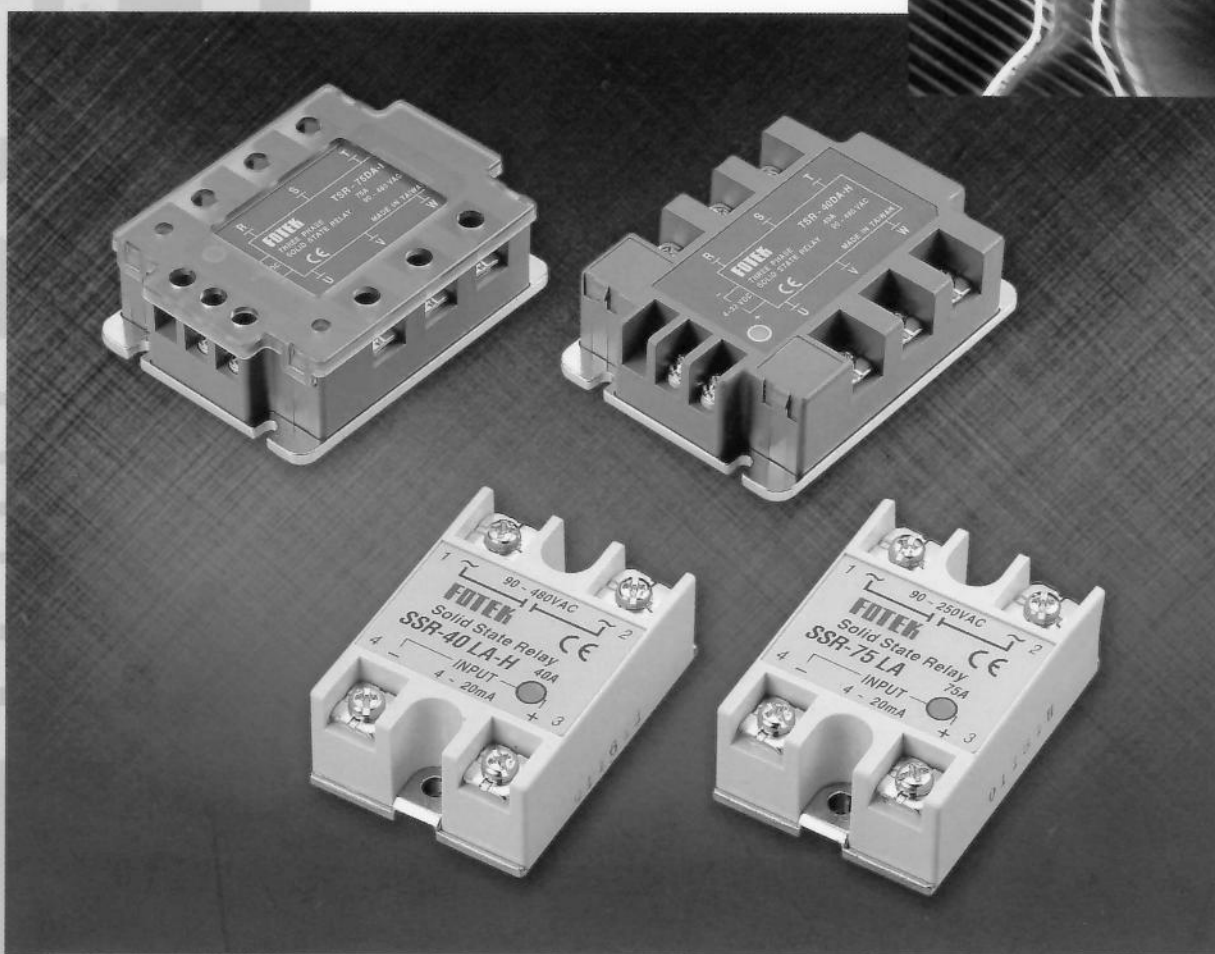


FOTEK[®]

LINEAR & THREE PHASE

SOLID STATE RELAY



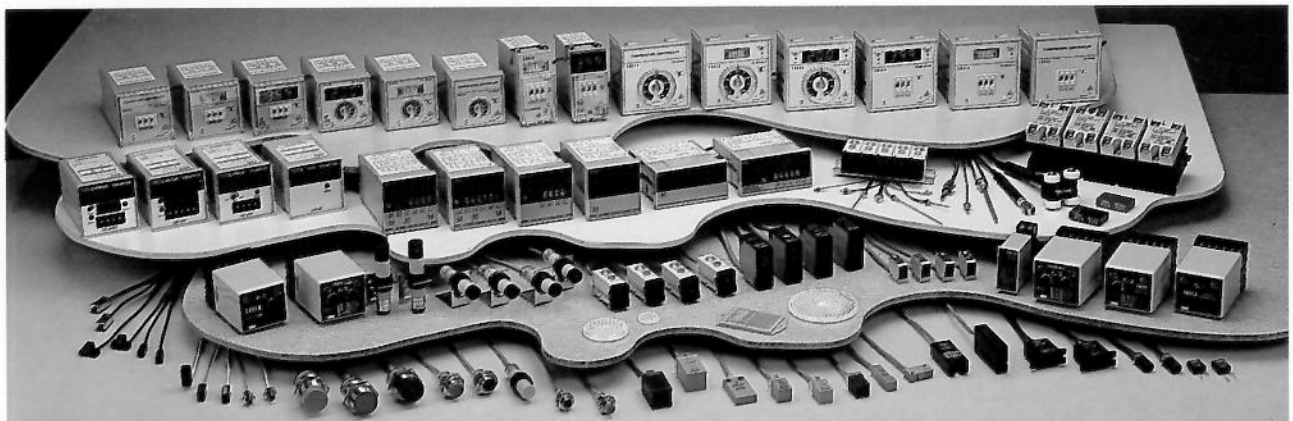
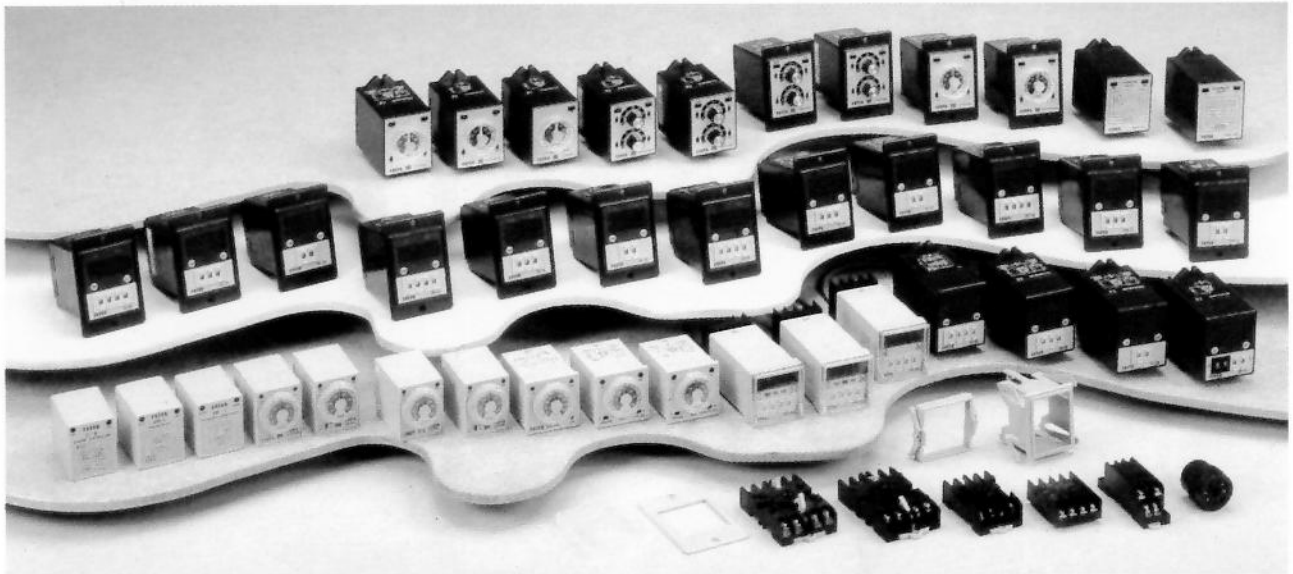
陽明電機股份有限公司
FOTEK CONTROLS CO., LTD.

FOTEK LINEAR & THREE PHASE SOLID STATE RELAY



經營理念

- 追求永續經營
- 客戶是永遠的朋友
- 堅持品牌、追求至善
- 不斷研發生產物超所質的產品
- 責任、務實、創新、邁向未來



成立1985年

主要產品

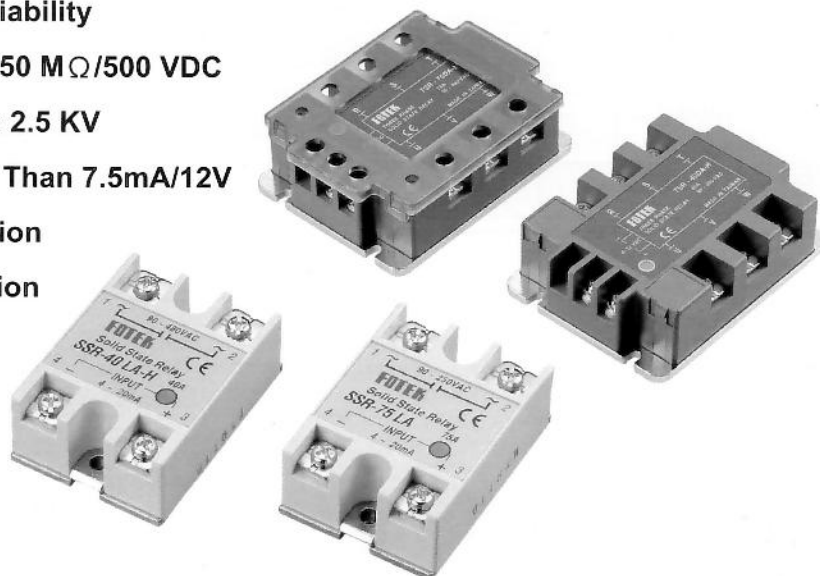
- 計時器
- 轉速表
- 電壓表
- 光電開關
- 磁簧開關
- 溫度控制器
- 欠逆相保護器
- 計數器
- 線速表
- 電流表
- 近接開關
- 固態繼電器
- 液位控制器
- 馬達起動器

Established 1985

Main product

- Timer
- Tachometer
- Voltage Meter
- Photo Sensor
- Reed Sensor
- Temperature Controller
- Phase Relay
- Counter
- Line Speed Meter
- Current Meter
- Proximity Sensor
- Solid State Relay
- Floatless Level Relay
- Y- Δ Starter

- ★ High Compact & High Reliability
- ★ High Isolation Over Than 50 M Ω /500 VDC
- ★ High Dielectric Over Than 2.5 KV
- ★ Low Enable Current Less Than 7.5mA/12V
- ★ High Surge Current Duration
- ★ High Surge Voltage Duration



■ Guiding of Model

Ex. SSR - 25 L A - H
 ① ② ③ ④ ⑤

① Product 產品

SSR=Single Phase Solid State Relay
 單相固態繼電器

TSR=Three Phase Solid State Relay
 三相固態繼電器

② Output Current 輸出電流

25=25A

40=40A

50=50A

75=75A

③ Input Method 輸出方式

L=4~20mA<Linear>

D=4~32 DCV<ON/OFF>

④ Output Voltage 輸出電壓

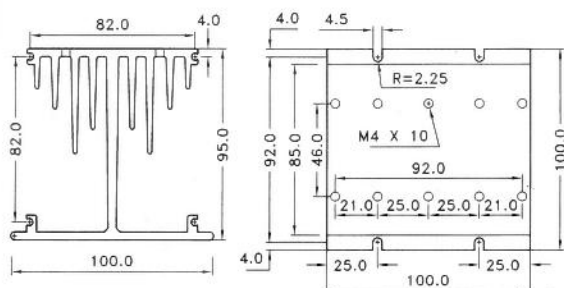
A=AC Voltage

⑤ Output Voltage Range 輸出電壓範圍

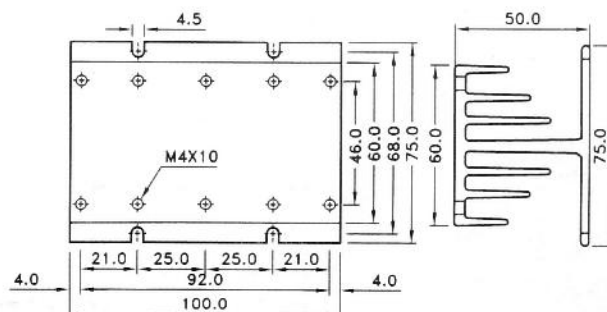
H=High Voltage Type

Non=Standard Type

Heat Sink HS-100(TSR)



Heat Sink HS-100H(TSR)

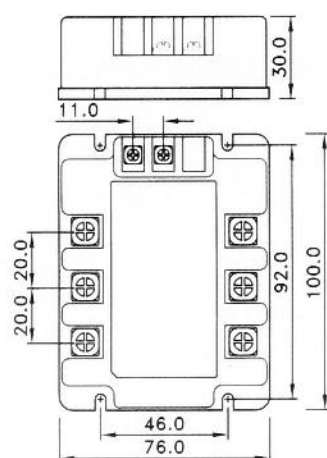


FOTEK TSR SERIES THREE PHASE SOLID STATE RELAY

■ Specification

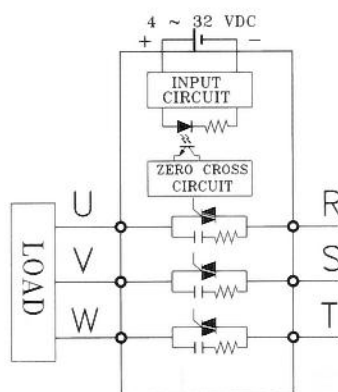
Type 型式	Standard Type 基本型			High Voltage Type 高壓型		
Model 型號	TSR-25DA	TSR-40DA	TSR-75DA	TSR-25DA-H	TSR-40DA-H	TSR-75DA-H
Rated Load Current 輸出額定電流	25A	40A	75A	25A	40A	75A
Input Voltage 輸入電壓	4~32VCD					
ON/OFF Voltage 動作/復歸電壓	ON > 3.6V/OFF < 2.4V					
Trigger Current 觸發電流	7.5A/12V					
Control Method 控制方式	Zero Cross Trigger 零點觸發					
Operating Voltage 工作電壓	24~380VAC			90~480VAC		
Min. Block Voltage 最低耐壓	600 VAC < Repetitive >					
Peak Voltage 耐突波	Over 1200V					
Max. One Cycle Surge 最大承受電流/一週期	275A	410A	800A	275A	410A	820A
Leakage Current 洩漏電流	12.5mA @ 380V			15.5mA @ 440V		
Response Time 動作應答時間	ON < 20ms/OFF < 20ms					
Dielectric Strength 耐壓強度	Over 2.5KVAC/1min.					
Isolation Strength 絕緣強度	Over 50M Ω/ 500VDC					
Circumstance 工作環境	-20℃~+80℃					
Weight 重量	Appr.390g					

■ Dimension 外型尺寸圖

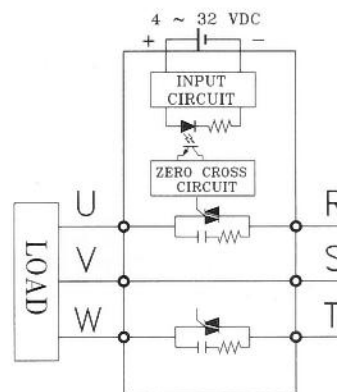


■ Connection Diagram 接線圖

TSR-25DA(H) ; TSR-40DA(H)



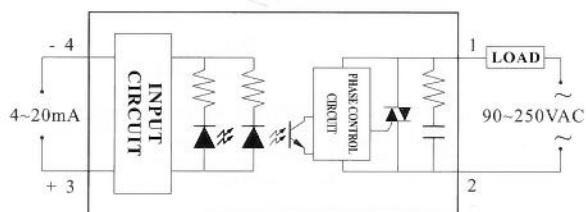
TSR-75DA(H)



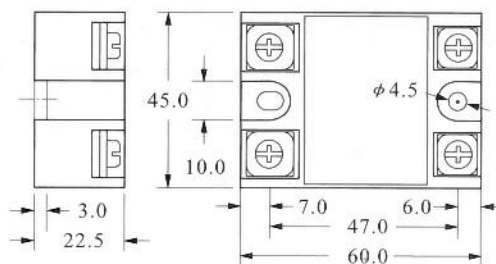
■ Specification

Type	Standard Type			
Model	SSR-25LA	SSR-40LA	SSR-50LA	SSR-75LA
Rated Load Current	25A	40A	50A	75A
Input Data				
Input	4~20mA			
Input Resistance	Appr.1.2KΩ			
Control Method	Phase Control			
Operating Data				
Operating Voltage	90~250 VAC			
Min. Blocking Voltage	600 VAC < Repetitive >			
Max. Duration Current	275A	410A	550A	820A
Leakage Current	≤0.5% of Full Load			
Peak Voltage	Over 1200VAC			
General Data				
Dielectric Strength	Over 2.5KVAC/1min.			
Isolation Strength	Over 50M Ω/ 500VDC			
Operating Temperature	-20℃~+80℃			
Housing Material	Intensive ABS			
Weight	Appr.105g		Appr.110g	

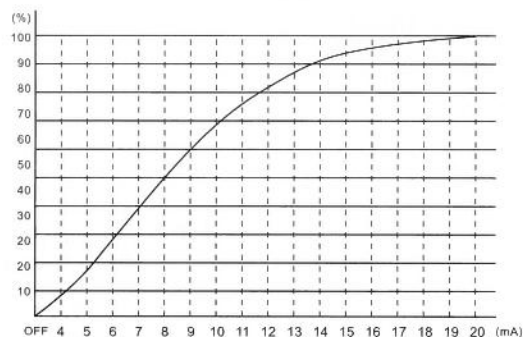
Connection Diagram



Dimension



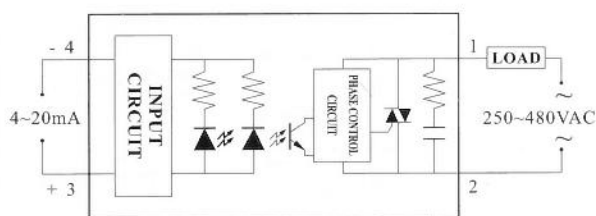
Input Current VS Output Current



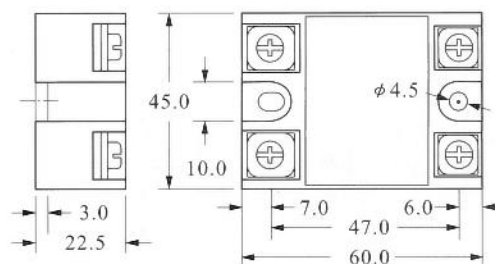
■ Specification

Type	Standard Type			
Model	SSR-25LAH	SSR-40LAH	SSR-50LAH	SSR-75LAH
Rated Load Current	25A	40A	50A	75A
Input Data				
Input	4~20mA			
Input Resistance	Appr.1.2KΩ			
Control Method	Phase Control			
Operating Data				
Operating Voltage	250~480 VAC			
Min. Blocking Voltage	600 VAC < Repetitive >			
Max. Duratde Current	275A	410A	550A	820A
Leakage Current	≤0.5% of Full Load			
Peak Voltage	1200V			
General Data				
Dielectric Strength	Over 2.5KVAC/1min.			
Isolation Strength	Over 50M Ω/ 500VDC			
Operating Temperature	-20℃~+80℃			
Housing Material	Intensive ABS			
Weight	Appr.105g		Appr.110g	

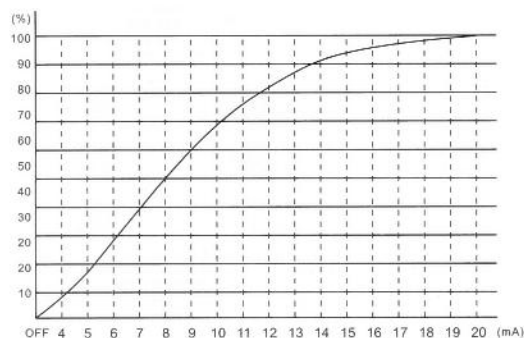
Connection Diagram



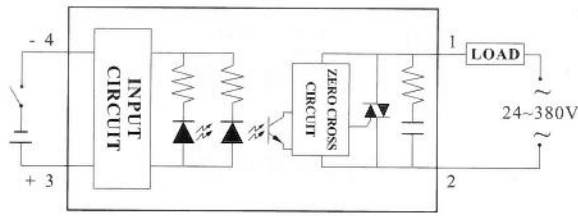
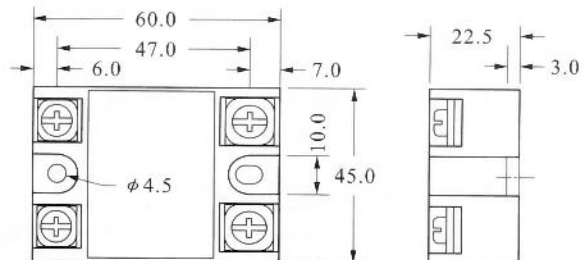
Dimension



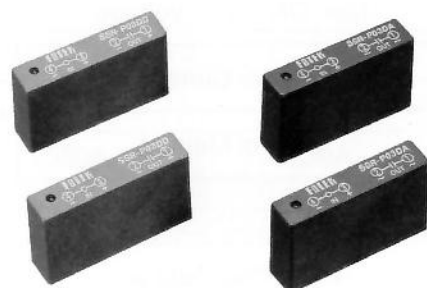
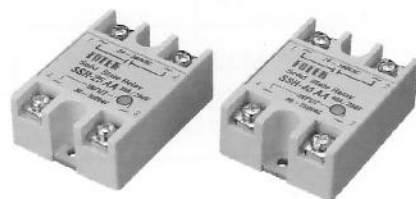
Input Current VS Output Current



■ Specification

Type	Terminal Type			
Model	SSR-50DA	SSR-75DA	SSR-50DA-H	SSR-75DA-H
Rated Load Current	50A	75A	50A	75A
Input Data				
Operating Voltage	3~32VDC			
Min. ON / OFF Voltage	ON>2.4V , OFF<1.0V			
Trigger Current	7.5mA / 12V			
Control Method	Zero Cross Trigger			
Operating Data				
Operating Voltage	24~380VAC		90~480VAC	
Min. Blocking Voltage	600 VAC<Repetitive>			
Voltage Drop	1.6V / 25℃			
Max. Duratde Current	550A	820A	550A	820A
Leakage Current Max.	6.0mA	6.0mA	6.0mA	6.0mA
Response Time	ON<10ms , OFF<10ms			
General Data				
Dielectric Strength	Over 2.5KVAC/1min.			
Isolation Strength	Over 50M Ω/ 500VDC			
Operating Temperature	-20℃ ~+80℃			
Housing Material	Intensive ABS			
Weight	Appr.125g			
Connection Diagram/Dimension				
				

- ★ High Reliability by S.M.T. & TQC.
(Surface Mounting Technology)
- ★ High Isolation over than 50MΩ / 500VDC
- ★ High Dielectric over than 2.5KV
- ★ Low Enable Current less than 7.5mA / 12VDC
C MOS IC or TTL Compatible.
- ★ Low EMI / EMI & Surge by Zero Cross Trigger Method.
- ★ High Surge Current Duration Over 410A / One Cycle (60Hz)
- ★ High Surge Voltage Duration by Snubber Circuit.
- ★ 表面貼焊技術及全面品質管，提供最可靠的 SSR
- ★ 高絕緣阻抗超過 50MΩ / 500VDC
- ★ 高耐壓超過 2.5KV
- ★ 低觸發電流小於 7.5mA / 12VDC，可與 CMOS IC及 TTL 匹配
- ★ 零點觸發方式避免電磁 / 高頻干擾
- ★ 高耐過電流，超過 410A / 一週期
- ★ 具緩衝迴路可吸收瞬間突破



■ Guiding of Model

Terminal Type

Ex. SSR-40DA-H

① ② ③ ④ ⑤

① Product

SSR = Solid State Relay

② Output Current

05 = 5A
10 = 10A
25 = 25A
40 = 40A

③ Input Voltage

D = DC 3 ~ 32V
A = AC 80 ~ 250V
V = Trimmer

④ Output Voltage

D = DC 5 ~ 60V
A = AC 24 ~ 380V or AC 90 ~ 480V

⑤ Output Voltage Range

H = High Voltage Type < AC 90 ~ 480V >
Non = Standard Type < AC 24 ~ 380V >

PCB Type

Ex. SSR-P03DA

① ② ③ ④ ⑤

① Product

SSR = Solid State Relay

② Mounting Method

P = PCB Type

③ Output Current

03 = 3A
05 = 5A

④ Input Voltage

D = DC 3 ~ 32V

⑤ Output Voltage

D = DC 5 ~ 60V
A = AC 24 ~ 280V

■ Control Method

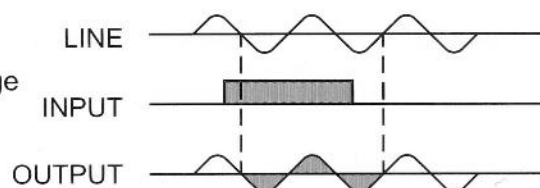
Zero Cross Trigger Method

Output TURN ON or TURN OFF

only on Zero Cross Point of sine wave , may avoid surge or EMI / RFI occurring.

Specially suited to control resistive , capacitive and Non - saturated inductive loads.

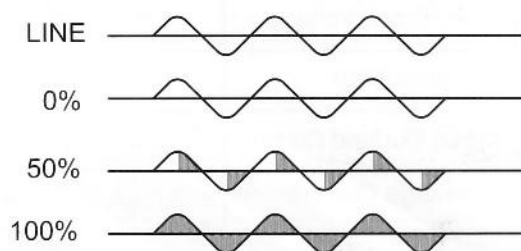
輸出只在正弦波的零點才會動作或復歸，可避免生突波或 EM / RFI，特別適於控制阻抗性，電容性和不飽和感抗性等負載。



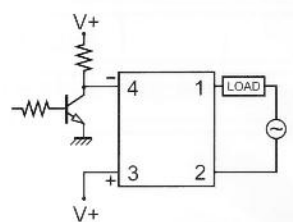
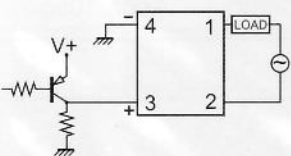
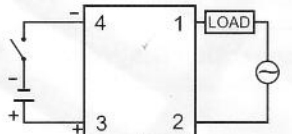
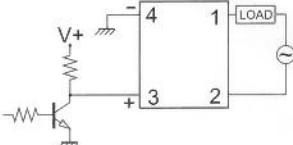
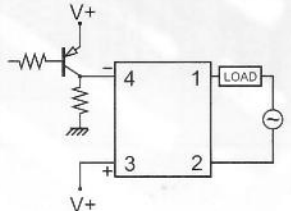
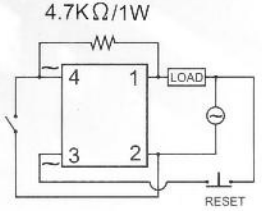
Variable Resistance Control Method

< Trimmer Control / Method >

Power Output is Controlled by the Trigger Angle of Triac with Variable Resister 250K Ω /110VAC, 500K Ω /220VAC
輸出功率以可變電阻 250K Ω /110VAC, 500K Ω /220VAC 控制 Triac 觸發角決定輸出功率。

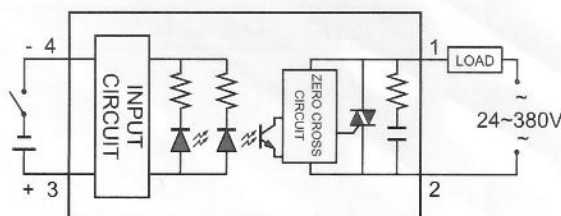


■ Application Hints

Input	NPN	Output	NO	Input	PNP	Output	NO	Input	L.S.	Output	NO
											
Input	NPN	Output	NC	Input	PNP	Output	NC	Latch Circuit (AC to AC)			
											

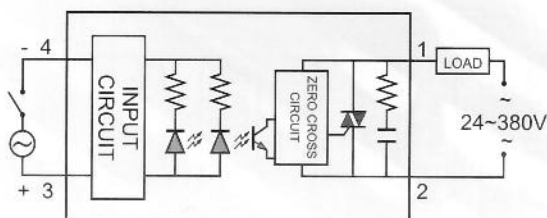
■ Specification

Type	Terminal Type					PCB Type
Model	SSR-10DA	SSR-25DA	SSR-40DA	SSR-25DA-H	SSR-40DA-H	SSR-P03DA
Rated Load Current	10A	25A	40A	25A	40A	3A
Input Data						
Operating Voltage	3~32VDC					
Min. ON / OFF Voltage	ON > 2.4V , OFF < 1.0V					
Trigger Current	7.5mA / 12V					
Control Method	Zero Cross Trigger					
Output Data						
Operating Voltage	24~380VAC			90~480VAC		24~480VAC
Min. Black Voltage	600 VAC < Repetive >					
Voltage Drop	1.6 V / 25 C					
Max. Durated Current	135A	275A	410A	275A	410A	135A
Leakage Current	3.0mA	3.0mA	3.0mA	5.0mA	5.0mA	3.0mA
Response Time	ON < 10ms , OFF < 10ms					
General Data						
Dielectric Strength	Over 2.5KVAC / 1min.					
Isolation Strength	Over 50MΩ / 500VDC					
Operating Temperature	-20 C ~+80 C					
Housing Material	Intensive ABS					
Weight	Appr. 105g					Appr. 15g
Connection Diagram						



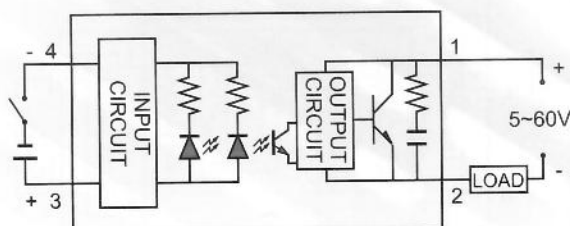
■ Specification

Type	Terminal Type				
Model	SSR-10AA	SSR-25AA	SSR-40AA	SSR-25AA-H	SSR-40AA-H
Rated Load Current	10A	25A	40A	25A	40A
Input Data					
Operating Voltage	80~250VAC 50 / 60Hz				
Min. ON / OFF Voltage	ON > 45V , OFF < 35V				
Trigger Current	5.0mA / 110VAC max.				
Control Method	Zero Cross Trigger				
Output Data					
Operating Voltage	24~380VAC			90~480VAC	
Min. Black Voltage	600 VAC < Repetive >				
Voltage Drop	1.6 V / 25 C				
Response Time	ON < 20ms , OFF < 20ms				
Max. Durated Current	135A	275A	410A	275A	410A
Leakage Current	3.0mA	5.0mA	3.0mA	5.0mA	5.0mA
General Data					
Dielectric Strength	Over 2.5KVAC / 1min.				
Isolation Strength	Over 50MΩ / 500VDC				
Operating Temperature	-20 C ~+80 C				
Housing Material	Intensive ABS				
Weight	Appr. 110g				
Connection Diagram					



■ Specification

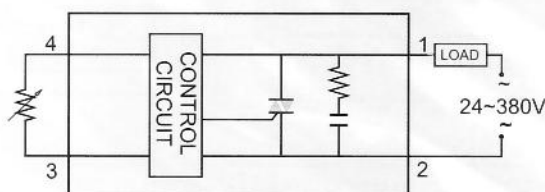
Type	Terminal Type			PCB Type
Model	SSR-05DD	SSR-10DD	SSR-10DD-H	SSR-P03DD
Rated Load Current	5A	10A	10A	3A
Input Data				
Operating Voltage	3~32VDC			
Min. ON / OFF Voltage	ON > 2.4V , OFF < 1.0V			
Trigger Current	7.5mA / 12V			
Control Method	Isolated by photocouple			
Output Data				
Operating Voltage	5~60VDC		5~200VDC	5~60VDC
Min. Black Voltage	300VDC			
Voltage Drop	1.6 V / 25 C			
Response Time	1ms < ON+OFF >			
Max. Durated Current	15A	30A	30A	15A
Leakage Current	< 0.8mA			
General Data				
Dielectric Strength	Over 2.5KVAC / 1min.			
Isolation Strength	Over 50M Ω / 500VDC			
Operating Temperature	-20 C ~+80 C			
Housing Material	Intensive PBT			
Weight	Appr. 105g			Appr. 15g
Connection Diagram				



■ Specification

Type	Terminal Type		
Model	SSR-10VA	SSR-25VA	SSR-40VA
Rated Load Current	10A	25A	40A
Input Data			
Variable Resistance	Trimmer / 250k Ω to 110V , 500k Ω to 220V		
Control Method	Phase Control		
Output Data			
Operating Voltage	24~380VAC		
Min. Black Voltage	600 VAC < Repetive >		
Voltage Drop	1.6 V / 25 C		
Max. Durated Current	135A	275A	410A
Leakage Current	5.0mA	5.0mA	5.0mA
General Data			
Dielectric Strength	Over 2.5KVAC / 1min.		
Isolation Strength	Over 50M Ω / 500VDC		
Operating Temperature	-20 C ~+80 C		
Housing Material	Intensive PBT		
Weight	Appr. 105g		
Connection Diagram			

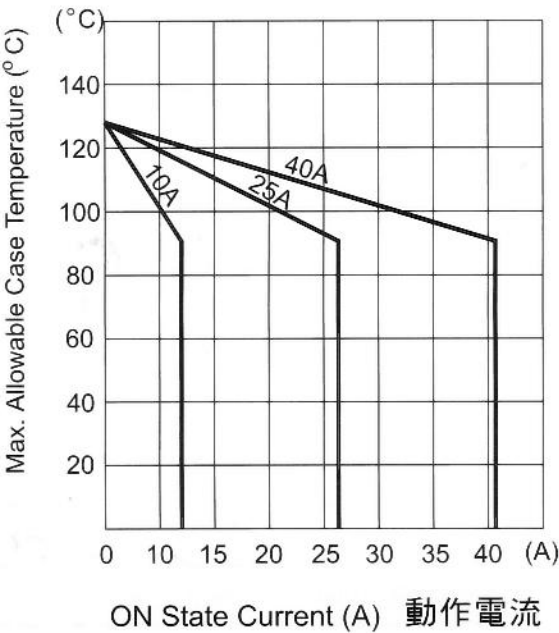
Adjustable SSR



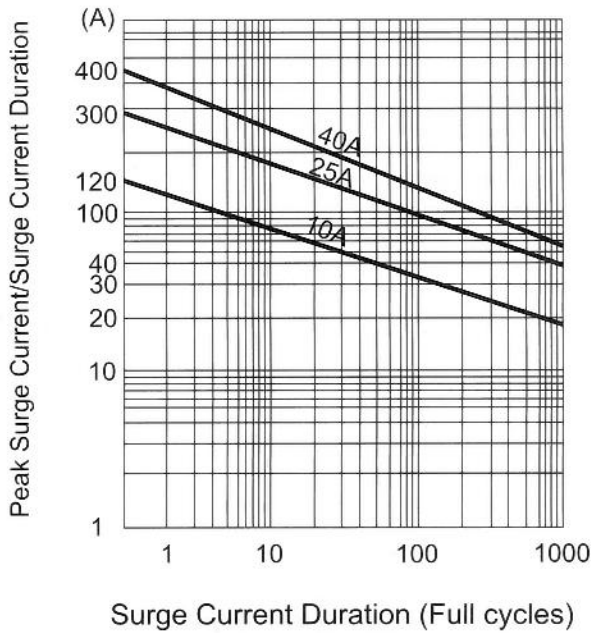
VR : 250K Ω /110VAC, 500K Ω /220VAC

Curve of Characteristic

Max. Allowable Case Temperature
最高容許表面溫度



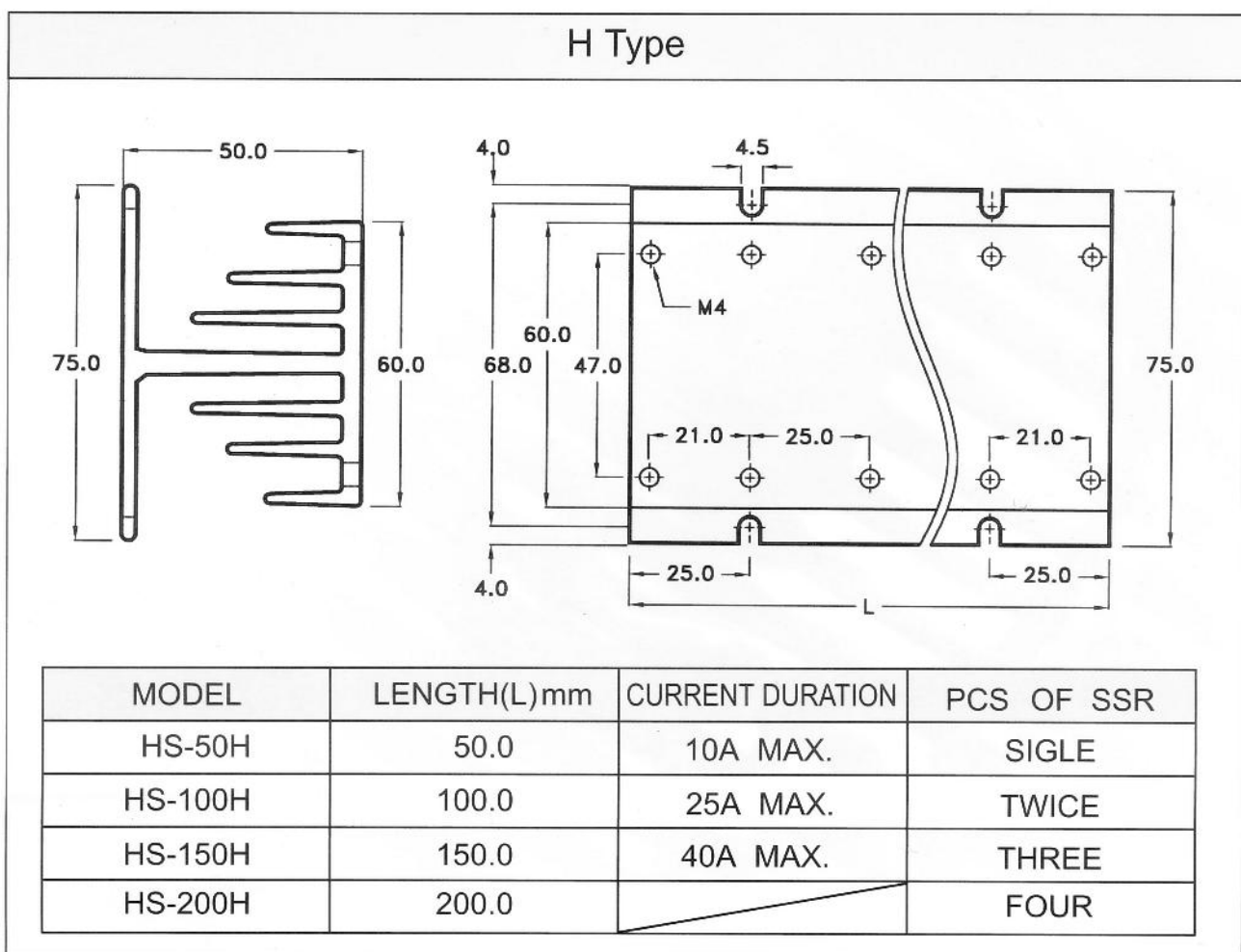
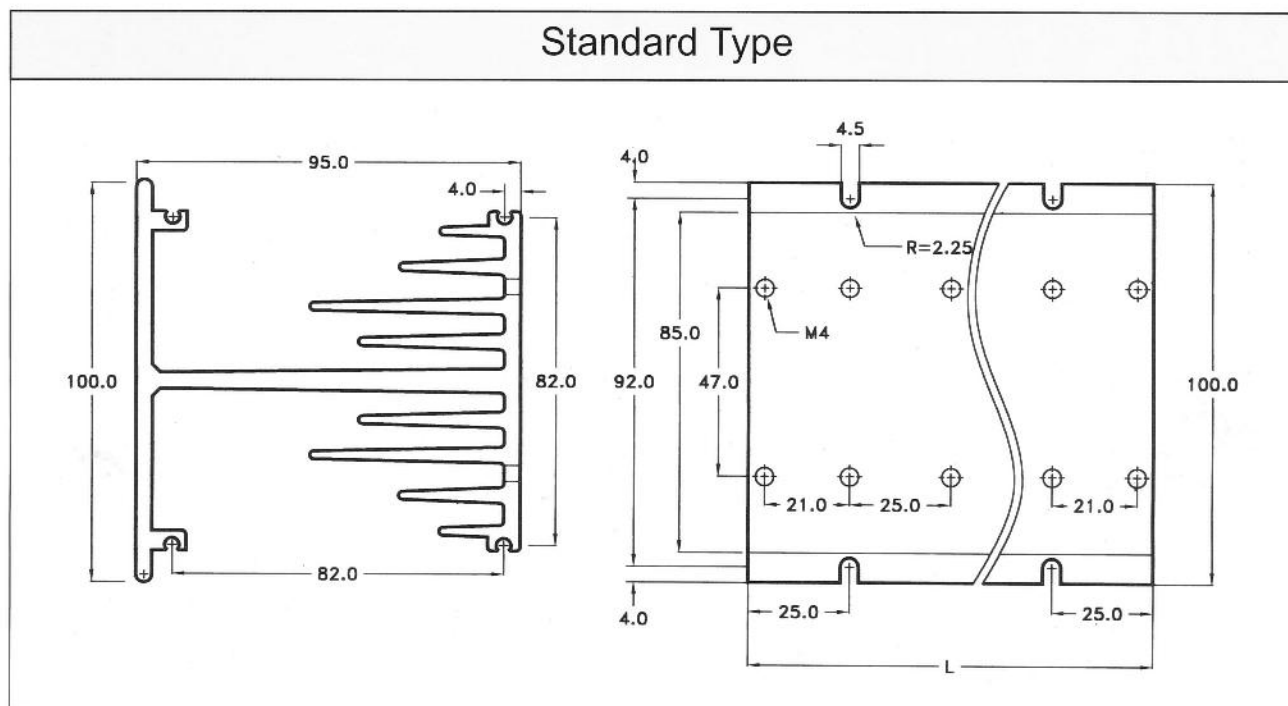
Peak Surge Current/Surge Current Duration
衝擊電流／承受次數



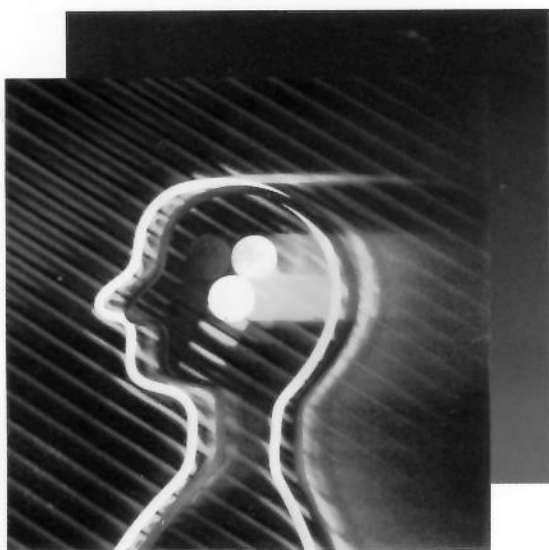
Dimension

Terminal Type	PCB Type

■ Dimension < Heat Sink >



FOTEK[®] CONTROLS



陽明電機股份有限公司
FOTEK CONTROLS CO., LTD.

ServoTech
伺服科技

伺服科技有限公司

<http://www.servo.com.cn>

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