

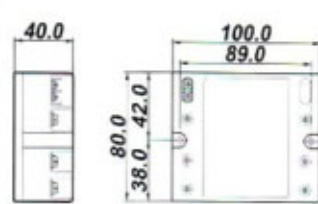
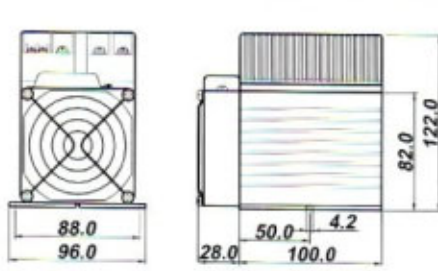
◆ Specification [Rated current corresponding to Resistive load]

Type	型式	Standard type / 標準型				
Model	型號	ESR-25DA	ESR-40DA	ESR-60DA	ESR-80DA	ESR-100DA
Rated current	額定電流	25A max	40A max.	60A max.	80A max.	100A max.
I ² t for fuse	熔斷電流	259A ² s	664A ² s	1800A ² s	3200A ² s	7200A ² s
Surge current	耐突波電流	275A	410A	850A	1200A	1750A
Peak voltage	耐突波電壓	1200VAC	1200VAC	1200VAC	1200VAC	1200VAC
Output voltage	輸出電壓	24 ~ 380VAC				

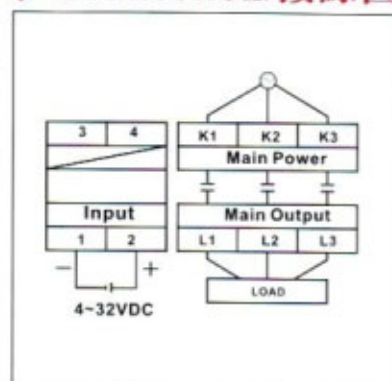
Type	型式	High voltage type / 高壓型				
Model	型號	ESR-25DA-H	ESR-40DA-H	ESR-60DA-H	ESR-80DA-H	ESR-100DA-H
Rated current	額定電流	25A max	40A max.	60A max.	80A max.	100A max.
I ² t for fuse	熔斷電流	259A ² s	664A ² s	1800A ² s	3200A ² s	7200A ² s
Surge current	耐突波電流	275A	410A	850A	1200A	1750A
Peak voltage	耐突波電壓	1200VAC	1200VAC	1200VAC	1200VAC	1200VAC
Output voltage	輸出電壓	90 ~ 480VAC				

General specification / 共同規格		
Input voltage	輸入電壓	4 ~ 32 VDC
Turn off voltage	關閉電壓	<3.0 VDC
Input current	輸入電流	30mA max.
Control method	控制方式	Zero cross switching
Leakage current	洩漏電流	5 mA
Response time	反應時間	8.3 ms (60Hz)
Over heat protection	過熱保護	Turn off output over 120°C ; Reset below 110°C
Input immunity	輸入耐突波	2 KV (EN61000-4-4)
Isolation strength	電介強度	4 KVrms (EN60950/VDE0805)
Insulation strength	絕緣強度	100MΩ / 500VDC (EN60950/VDE0805)
Circumstance	工作環境	-40°C ~ +80°C ; 35 ~ 85%RH

◆ Outline dimension / 外形尺寸

ESR-xxDA / ESR-xxDA-H	ESR-□□□+ Heat sink (HS-ESR-100) + Fan
	

◆ Connection / 接線圖



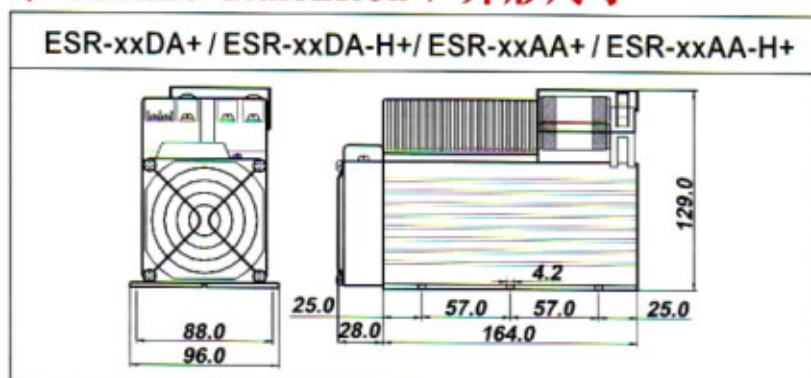
◆ Specification 【Rated current corresponding to Resistive load】

Type	型式	Standard type / 標準保險絲型			
Model	型號	ESR-40DA+	ESR-60DA+	ESR-80DA+	ESR-100DA+
Rated current 額定電流		40A max.	60A max.	80A max.	100A max.
I ² t for fuse 熔斷電流		664A ² s	1800A ² s	3200A ² s	7200A ² s
Protection fuse 保險絲		40A /600VAC	63A /600VAC	80A /600VAC	100A /600VAC
Surge current 耐突波電流		410A	850A	1200A	1750A
Peak voltage 耐突波電壓		1200VAC	1200VAC	1200VAC	1200VAC
Output voltage 輸出電壓		24 ~ 380VAC			

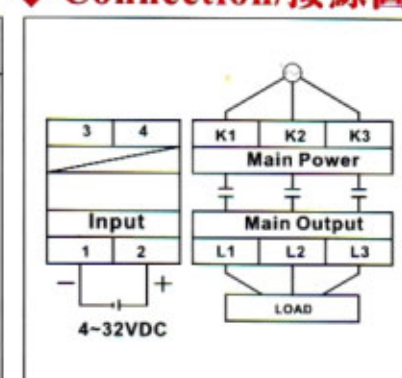
Type	型式	High voltage fuse type / 高壓保險絲型			
Model	型號	ESR-40DA-H+	ESR-60DA-H+	ESR-80DA-H+	ESR-100DA-H+
Rated current 額定電流		40A max.	60A max.	80A max.	100A max.
I ² t for fuse 熔斷電流		664A ² s	1800A ² s	3200A ² s	7200A ² s
Protection fuse 保險絲		40A /600VAC	63A /600VAC	80A /600VAC	100A /600VAC
Surge current 耐突波電流		650A	850A	1200A	1750A
Peak voltage 耐突波電壓		1200VAC	1200VAC	1200VAC	1200VAC
Output voltage 輸出電壓		90 ~ 480VAC			

General specification / 共同規格	
Input voltage 輸入電壓	4 ~ 32 VDC
Turn off voltage 關閉電壓	<3.0 VDC
Input current 輸入電流	30mA max.
Control method 控制方式	Zero cross switching
Leakage current 洩漏電流	5 mA
Response time 反應時間	8.3 ms (60Hz)
Over heat protection 過熱保護	Turn off output over 120°C ; Reset below 110°C
Input immunity 輸入耐突波	2 KV (EN61000-4-4)
Isolation strength 電介強度	4 KVrms (EN60950/VDE0805)
Insulation strength 絕緣強度	100MΩ / 500VDC (EN60950/VDE0805)
Circumstance 工作環境	-40°C ~ +80°C ; 35 ~ 85%RH

◆ Outline dimension / 外形尺寸



◆ Connection/接線圖



ESR Series

High Power Three Phase AC to AC Solid State module

◆ Specification 【Rated current corresponding to Resistive load】

Type	型式	Standard type / 標準型				
Model	型號	ESR-25AA	ESR-40AA	ESR-60AA	ESR-80AA	ESR-100AA
Rated current	額定電流	25A max	40A max.	60A max.	80A max.	100A max.
I ² t for fuse	熔斷電流	259A ² s	664A ² s	1800A ² s	3200A ² s	7200A ² s
Surge current	耐突波電流	275A	410A	850A	1200A	1750A
Peak voltage	耐突波電壓	1200VAC	1200VAC	1200VAC	1200VAC	1200VAC
Output voltage	輸出電壓	24 ~ 380VAC				

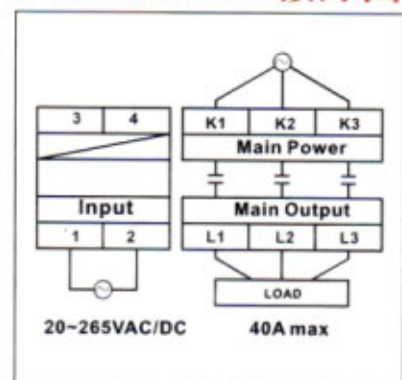
Type	型式	High voltage type / 高壓型				
Model	型號	ESR-25AA-H	ESR-40AA-H	ESR-60AA-H	ESR-80AA-H	ESR-100AA-H
Rated current	額定電流	25A max	40A max.	60A max.	80A max.	100A max.
I ² t for fuse	熔斷電流	259A ² s	664A ² s	1800A ² s	3200A ² s	7200A ² s
Surge current	耐突波電流	275A	410A	850A	1200A	1750A
Peak voltage	耐突波電壓	1200VAC	1200VAC	1200VAC	1200VAC	1200VAC
Output voltage	輸出電壓	90 ~ 480VAC				

General specification / 共同規格	
Input voltage	輸入電壓 20 ~ 265 VAC/DC
Turn off voltage	關閉電壓 <10 VAC/DC
Input current	輸入電流 3VA max.
Control method	控制方式 Zero cross switching
Leakage current	洩漏電流 5 mA
Response time	反應時間 49.8 ms (60Hz)
Over heat protection	過熱保護 Turn off output over 120°C ; Reset below 110°C
Input immunity	輸入耐突波 2 KV (EN61000-4-4)
Isolation strength	電介強度 4 KVrms (EN60950/VDE0805)
Insulation strength	絕緣強度 100MΩ / 500VDC (EN60950/VDE0805)
Circumstance	工作環境 -40°C ~ +80°C ; 35 ~ 85%RH

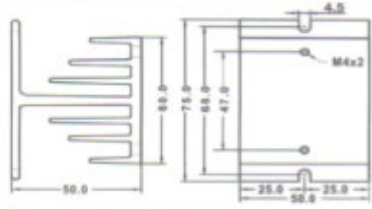
◆ Outline dimension / 外形尺寸

ESR-xxAA / ESR-xxAA-H	ESR-□□□+ Heat sink (HS-ESR-100) + Fan

◆ Connection/接線圖




◆ How to use Heat sink & Cooling Fan for HPR series / 如何使用散熱器及冷卻風扇

Line current (Average current / 平均電流)	Heat sink	Cooling fan	Heat sink (HS-50H) 
IL < 5 Amps	Non-required	Non-required	
IL < 12 Amps	HS-50H	Non-required	
IL < 25 Amps	HS-ESR-60	Non-required	
IL > 25 Amps	HS-ESR-60	Required	

◆ Notice of use / 使用注意事項

- 1> To protect the solid state module against a short-circuit of the load, please use a fuse with a I²t value < 1/2 I²t value specified.
請加裝快速保險絲(I²t value 小於額定值的一半), 以防止因負載短路而造成固態模組燒毀。
- 2> The thermal conductive silicone rubber or thermal grease is required
When the solid state module is mounted on a heat sink
本固態模組加裝散熱器時務必墊高導熱系數的矽膠片或散熱膏【導熱系數(K)>4.5】。
- 3> The rated current is corresponding to a resistive load,
if the solid state module is applied in other loads,
Please consider the inrush current at turn on and the surge voltage at turn off.
本固態模組所標示的額定電流是以電阻性負載為準, 如果使用在其他負載上須考慮起動電流及關機突波。
 - * **Electric discharge lamps** : Those loads have the 「inrush current」 at turn on and the 「surge voltage」 at turn off, please use 「high voltage type」 on 220VAC mains.
電子起動式燈具(如日光燈) : 須考慮起動電流及關機突波, 220VAC電源系統請選用「高壓型」。
 - * **Incandescent lamp** : The rated current of the module must be over 4 times of the incandescent lamp current.
炙熱燈泡(如IR燈管) : 須考慮起動電流, 固態模組的額定電流須大於炙熱燈泡電流的「四倍」。
 - * **Three phase motors** : The rated current of the module must be over 4 times of the three phase motor average current.
三相馬達 : 須考慮起動電流, 固態模組的額定電流須大於三相馬達平均電流的「四倍」。
 - * **Transformer loads** : The rated current of the module must be over 10 times of the transformer current.
變壓器負載 : 須考慮反電動電流, 固態模組的額定電流須大於變壓負載電流的「十倍」。
 - * **Capacitor loads** : the rated current of the module must be over 3 times of the capacitor current.
電容性負載 : 須考慮充電瞬間電流, 固態模組的額定電流須大於電容性負載電流的「三倍」。

◆ Notice of safety / 安全注意事項

	Warning Potentially hazardous situation, if mishandling, may result in death or serious injury. 潛在危險, 如果操作失當可能導致死亡或嚴重傷害。
<ol style="list-style-type: none"> 1> Please do not touch any terminal of this module while power supply is supplied, if do, it may result in electronic shock. 送電中, 請勿碰觸本固態模組任何接線端子以避免觸電。 2> 「Power supply system」 must to be shutdown before renew the fuse, if not, it may result in electronic shock. 更換保險絲前, 請務必關閉電源系統以避免觸電。 3> Please rated the load current within the specified value, if not, it may result to burn up this module or fuse. 負載電流請勿超過額定電流, 以避免保險絲或本固態模組燒毀。 4> Please tighten the screw terminal over 80kg-cm, if not, it may result to burn up this module or fuse. 請務必鎖緊端子螺絲, 扭力須超過80kg-cm, 否則可能導致本固態模組或保險絲燒毀。 5> If this module is burned up, it may be in short circuit condition or malfunction, Please settle an independent alarm system to ensure safety protection, if not, it may result in a serious accident. 本固態模組燒毀後可能是短路或失控狀態, 請加裝獨立警報系統以確保安全, 否則可能造成嚴重意外事故。 	

Specification may be modified without notice in advance.
規格變更恕不事先通知