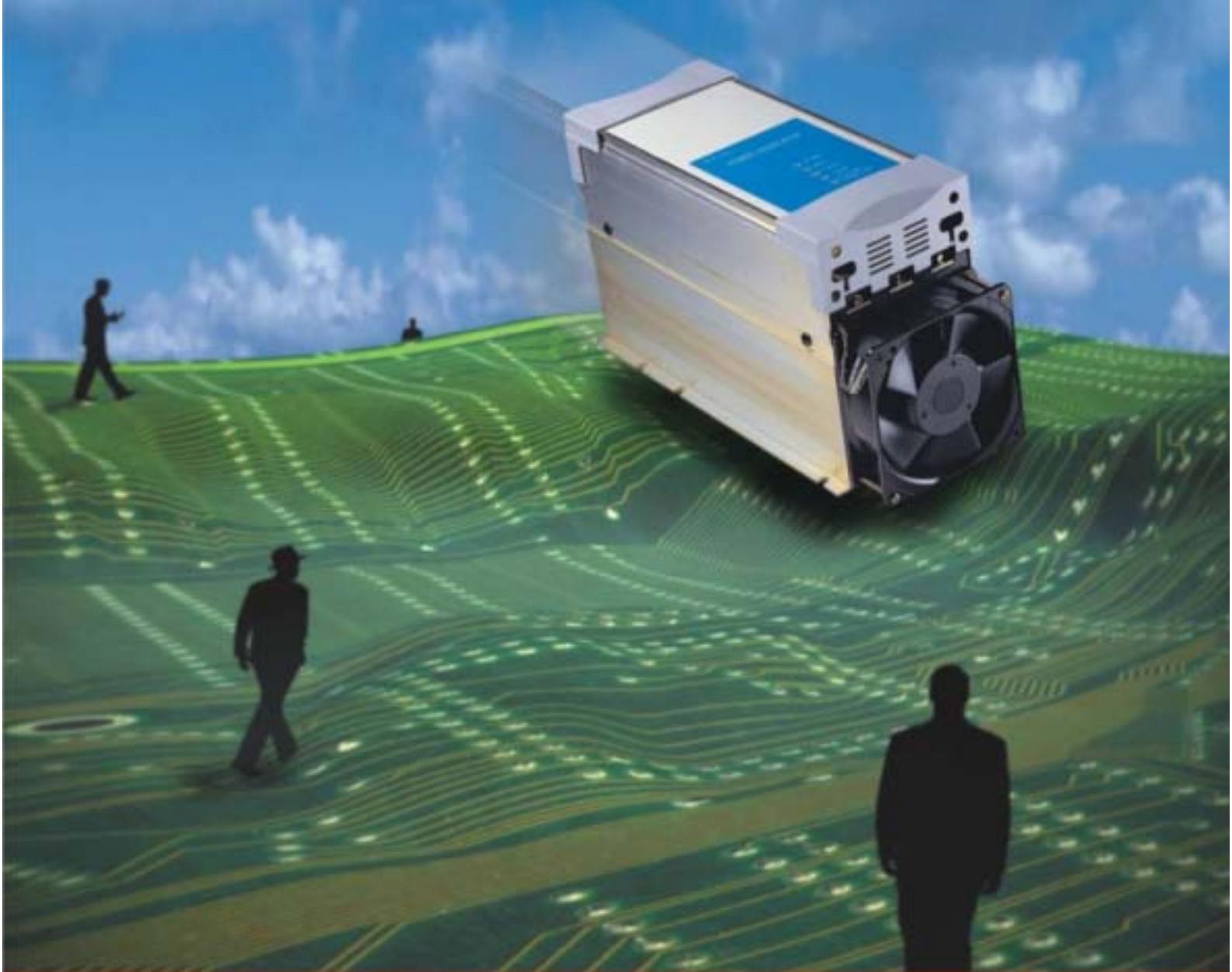


THYRISTOR 電力調整器 POWER REGULATOR



W3-SERIES

專業製造、全系列開模成型、高品質、省能源、精密溫控利器

Specialized manufacturing

packaged construction for all models

High efficient

Energy conservative

High accuracy temperature controller



30A



50A/75A/100A



125A/150A

THYRISTOR POWER REGULATOR

產品特點 Product features

- › 全系列加裝高速保險絲，防止短路電流（di/dt）對SCR造成損害。
The SCR unit attached with high speed fuse in order to prevent the damage of SCR due to the shortage current (di/dt).
- › 全系列開模成型，體積小、安裝、配線容易。
The unit is packaged onstruction with less dimension ,easy for installation and wiring.
- › 盤面集中多只LED燈顯示，遇有狀況可立即判斷故障原因，迅速排除。
The causes of malfunction can be indicated by individual LED lamp, easy for trouble shooting.
- › 輸出特性呈線性，控溫最精準。
Less non-linearity output provides accurate control of temperature.
- › 高品質，高技術產品，絕無干擾現象。
High quality and high technical productions with no electrical interference.
- › 加裝護蓋，安全性增加。
Attached with protecting cover, Securities accession.
- › 訊號端子採用歐式可分離式子母端子，更換時可免拆訊號線。
Signal terminator adoption Europeanism dissociable form front/top wire inlet type, Change Shih can no tear open signal line.
- › 觸發基板採分離設計，可免去高壓備及主機板。
Initiation board pick abruption compose, Avertible high voltage detriment host board
- › 具有保險絲熔斷、電源異常、SCR超溫指示及異常接點輸出。
Have fuse break、main source error、scr over temperature and alarm contact output.

使用環境 Operation environment

- › -10℃~45℃ 90%RH以下，不結露。
Ambient temperature;-10~45℃、Relative humidity,Max90%

安裝 Installation

- › 電力調整器，內部均會產生熱量，安裝時請依安裝方向安裝
The SCR unit will produce heat itself during operation,please erect it upward accrding to the instruction.
- › 控制箱須有空氣對流通風孔，請依熱空氣由下往上之原理裝置通風孔。（或加裝抽風扇）
The panel must be upward ventilated for hot air.We reccomand mounting a ventilating fan in the control panel.
- › 請勿安裝於高溫或通風不佳之處所，否則請低於額定之70%使用。
Do not install the unit in the space with high temperature and poor ventilating,
Do not operate the unit exceed 70% of rated output in case of above mentioned poor ambient conditions.



負載測試 Load test

- › 負載未接或電流太小（0.6A以下）SCR維持電流（Ih）不足，無法正常導通，測試時請接0.6A以上之負載。
The SCR unit will not well funtioned in case of less output load (0.6Amp) .
Please connect the load at least 0.6Amp.

控制方式及輸出波形比較 *Comparative of control mode and output wave*

控制方式 Control mode	輸出量 Output		
	10% Output	50% Output	90% Output
相位控制 Phase angle control			
零位控制 Zero crossing control	 1cycle ON and 9cycle OFF	 1cycle ON and 1cycle OFF	 9cycle ON and 1cycle OFF

零位控制採平均分配方式，輸出均勻，線性佳。

The output signal of zero crossing control mode is distributed averagely, the output is average and always maintains good linearity.

LED燈顯示狀況及故障排除 *LED lamp indication and trouble shooting*

編號 Pos. NO	顏色 Color	顯示狀況 Indicating condition	異常故障原因 Causes of malfunction	處理對策 Treatment and trouble shooting
PL (L1)	綠 Green	電源指示燈不亮 No indication of power supply lamp. (燈亮表示正常) Lamp lighting means normal.	<ul style="list-style-type: none"> 輔助電源未送電 No power of Aux. source. PCB基板故障 Malfunction on PCB board SCR超溫 Over temperature of SCR 	<ul style="list-style-type: none"> 檢查輔助電源電路 Check the Aux. power supply. 更換PCB基板或送修 Repair or replace the PCB board. 檢查SCR超溫情形 Check the SCR temperature
IN (L2)	綠 Green	輸入指示燈不亮 No indication of input lamp. (燈亮表示正常) Lamp lighting means normal.	<ul style="list-style-type: none"> TIC輸出訊號未輸出 No output signal from TIC. TIC輸出訊號極性相反 Output signal from TIC is reverse. 內部MAX VR或外部VR歸零 Max value of internal output or external VR is zero setted. 	<ul style="list-style-type: none"> 檢查TIC輸出訊號 Check the output signal of TIC. 檢查TIC輸出接線 Reverse the connect wiring of TIC 檢查內部MAX VR和外部VR Check the setting of internal and external VR output
OUT (L3)	紅 Red	輸出指示燈不亮 No indication of output lamp. (相位-燈亮表示正常) Phase angle control- Lamp lighting means normal. (零位-燈閃爍表示正常) Zero crossing control- Lamp blinks means normal.	<ul style="list-style-type: none"> 無TIC訊號或反接 No output signal from TIC or reverse the connecting of output signal IN燈有亮OUT燈不亮 Lamp IN lighting and lamp OUT no indication OUT燈亮，無電流輸出 Lamp OUT lighting but no current output. 	<ul style="list-style-type: none"> 檢核IN燈，燈未亮表示TIC無輸出訊號或反接 Check the lamp IN, NO indication means no output signal from TIC or reverse wired. PCB基板故障，更換或送修 Repair or replace the PCB board in case of the malfunction from the board. 檢查主電源或保險絲 Check main power supply or fuse.
TH (L4)	黃 Yellow	SCR超溫指示燈亮 Over-temp of SCR lamp light. (燈亮表示異常) Lamp lighting means SCR over temp.	<ul style="list-style-type: none"> SCR散熱風扇故障或卡住 Malfunction or dirt blocking on the ventilation fan. 周圍環境溫度過高或通風不良 High ambient temperature or poor ventilation. 	<ul style="list-style-type: none"> 更換風扇或清除異物 Replace or clean the dirt of the impeller. 改善通風條件 Improve the ventilation condition.
FB (L5)	黃 Yellow	保險絲熔斷/電源異常指示燈亮 Fuse break or main source error lamp light. (燈亮表示異常) Lamp lighting means error.	<ul style="list-style-type: none"> 保險絲熔斷 Fuse break. 主電源未送電 No power of main source. 	<ul style="list-style-type: none"> 更換保險絲，檢查HEATER是否短路或接地 Replace Fuse. 檢查主電源 Check the main source supply

使用說明 Operation instruction

一、型號識別 Model number and specification

機型代號 Series	W3	W3 系列
控制方式 Control mode	TP	三相相位控制 3 ϕ phase angle control
	TZ	三相零位控制 3 ϕ Zero crossing control
主電源電壓 Main source	2V	3 ϕ 200-240VAC
	4V	3 ϕ 340-480VAC
額定電流 Current rating	030	30A
	060	60A
	075	75A
	100	100A
	125	125A
	150	150A
拉序碼 Dash	—	
輔助電源 Aux. source	1	1 ϕ 110VAC
	2	1 ϕ 220VAC
輸入訊號 Input signal	0	0-5VDC
	1	1-5VDC
	2	2-10VDC
	3	0-10VDC
	4	4-20mA
	M	手動 Manual
緩衝代碼 Soft Start code	C	軟緩衝 Soft Start 2sec (出廠值 Out factory value.)
	S	軟緩衝 Soft Start 30sec
	N	無緩衝 NO Soft Start

選購時請考慮電源變動率及heater誤差，或加大一級訂購。

Make choice of purchase please cogitate power fluctuant rate and heater error, or order aggrandize a grade.

二、調整功能 Ad justable functions:

BIAS VR 基準電壓輸出量調整 (6mA) output adjustment of basic voltage (6mA)

MAX VR 最高輸出量調整 (0~100%) Max output adjustment (0~100%)

三、輸入訊號選擇 Selection of input signal:

4~20mA 請將P1短路片置於S1位置 (輸入阻抗249 Ω) Jump P1 and S1

1~5VDC、MANUAL 請將P1短路片置於S2位置 (輸入阻抗30K Ω) Jump P1 and S2

2~10VDC、0~10VDC 請將P1短路片置於S3位置 (輸入阻抗12K Ω) Jump P1 and S3

四、指示燈功能說明 Description of indicating lamp:

PL(L1) : 電源指示 (輔助電源通電時亮)

Indication of power supply (Lighting when Aux. power switched on)

IN(L2) : 溫度錶訊號指示 (隨溫度錶輸出訊號大小明滅)

Indication of transfer signal from TIC(Lamp illuminating acc .to the output signal of TIC)

OUT(L3) : 輸出中指示 (隨輸出量大小明滅)

Output signal transferring(Lamp illuminating acc. To the output)

TH(L4) : 超溫指示 (SCR超溫時指示)

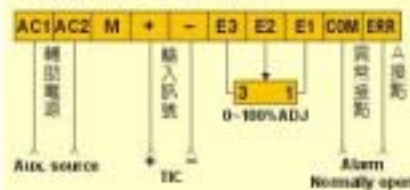
Over temp(Lamp lighting in case of SCR over temp)

FB(L5) : 熔絲熔斷/電源異常指示 (熔絲熔斷/電源欠相時指示)

Fuse break/main source error(Lamp lighting in Fuse break or main source error)

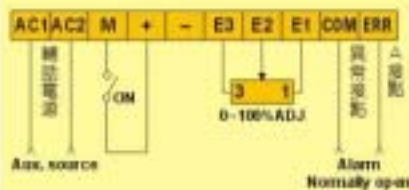
接線範例 Examples of connecting circuit

(1) 電壓、電流訊號源輸入且外部VR可調
Analog volt ,current input with adjustable external VR



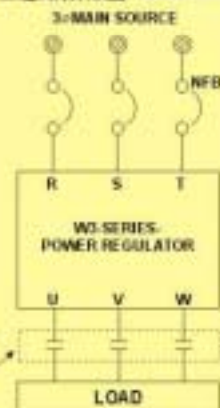
(外部VR不使用時請將E3,E2短路)
(Please jump E3 and E2 when external VR not be used)

(2) 接點訊號輸入且外部VR可調
Contact input with adjustable external VR

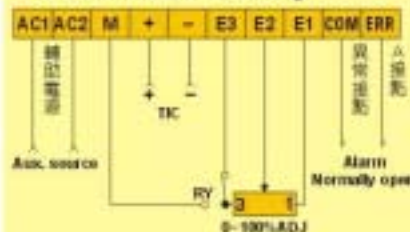


加電磁開關時請置於負載側
The magnetic switch must be installed for load output

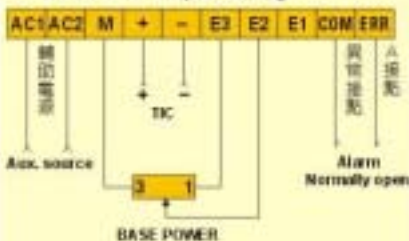
主迴路接線圖 Main circuit



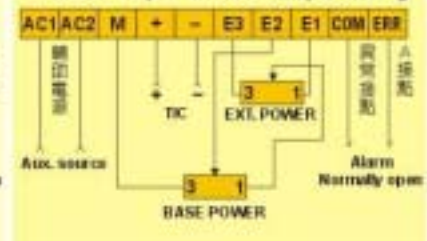
(3) 手動-自動·RY切換
Manual-Auto,RY switching



(4) 基本輸出量設定
Basic load output setting



(5) 基本及最高輸出量設定
Basic output and max output setting



(6) 多台連接，一只外部VR設定
Multiple unit connecting with 1set external VR setting



(7) 多台連接，各自外部VR設定
Multiple unit connecting with individual external VR setting



- ◎本串聯接法最多只限三台
The connecting method is only suitable for less than 3 installations.
- ◎其他特殊接線方式請洽本公司
For the other special connecting , please contact with the manufacturer.

電力調整器

外型及固定尺寸 Outline and mounting dimensions

