

SCR POWER REGULATOR

Operation Guide

Denki Seigyo
DSPR Series Standard Thyristor
without Display

1 Product feature

◆ Appearance



◆ Product feature

- ◆ Faceplate indicating lamps: shows importation. Exports and breakdown information.
- ◆ Abnormal status take place. Ats once stop exportation .Protect inside SCR.
- ◆ Soft starting time:5s. Soft stop time:5s.
- ◆ Exportation stability. Linear good.

2 Pays attention to item



Dangerous

1. Main circuit: Power line- Air circuit breaker- Contactor-Load.
2. All connecting nuts must be locking, to avoid arcing burned connector.
3. Air Switch: Can cut off the power, to protect the equipment and personal safety in the repair and maintenance.
4. Contactor: Can cut off power supply automatically to protect the equipment and avoid accidents, when the power regulator fails.



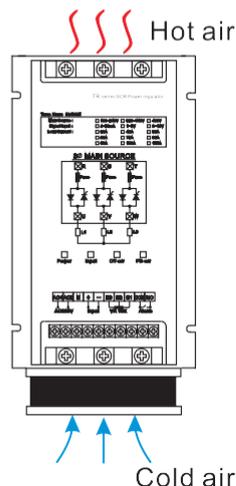
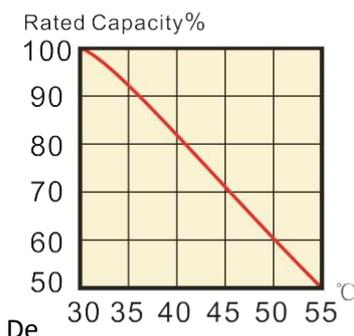
Admonition

1. Power regulator will produce internal heat during operation. Please install it vertically and both sides of the gap to be set aside to avoid the rapid aging and damage of power module caused by adverse thermal.
2. Air flow vents is required to control cabinet. Please follow the principle of hot air from bottom to top to install exhaust vents or install convection fan. Cabinet air-conditioning cooling can be considered if conditions allow.
3. Do not install it in high-temperature environments and poorly ventilated situations, otherwise use it less than 70% of rated capacity.
4. Avoid installing It in a steam or acid, alkali, corrosive gases and so on situations.
5. Humidity: 90% RH or less. (No condensation)
6. Ambient temperature: 0°C~+40°C.

3 Installation notes and terminal wiring

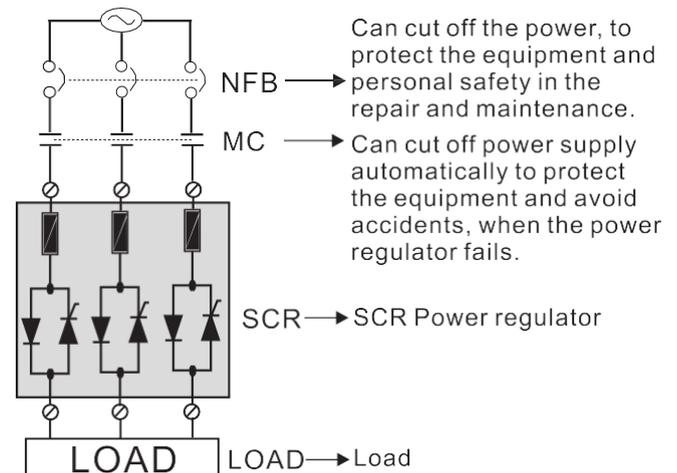
■ Installation notes

SCR Power regulator will produce internal heat during operation. Please install it vertically and both sides of the gap to be set aside to avoid the rapid aging and damage of power module caused by adverse thermal.



■ Main circuit wiring

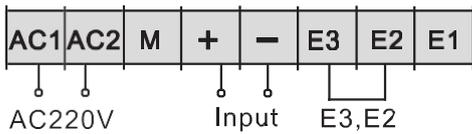
Three-phase main source



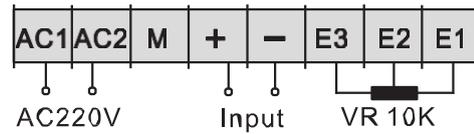
4 Terminal wiring

30A~40A Terminal wiring

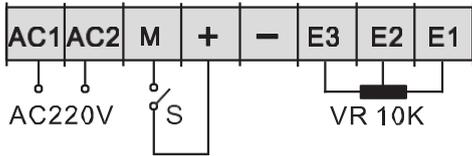
1, Analog volt current input



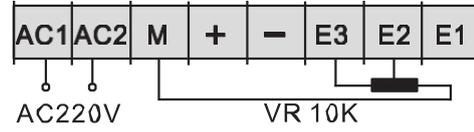
2, Analog volt current input with adjustable external VR



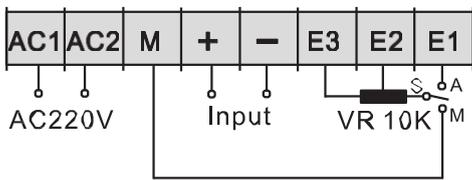
3, Contact input



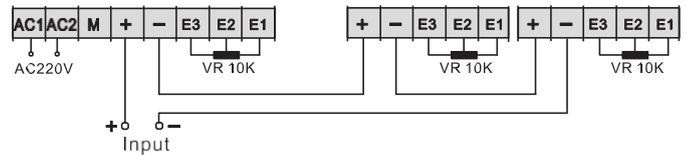
4, Manual input with adjustable external VR



5, Manual and Automatic input, M: manual, A: automatic

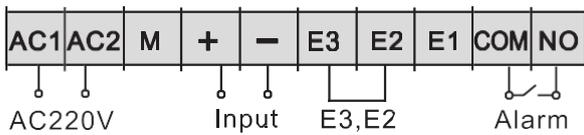


6, Multiple unit connecting

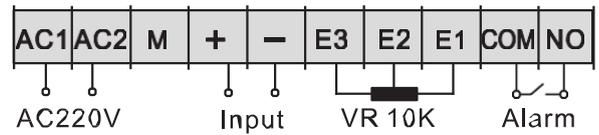


50A~400A Terminal wiring

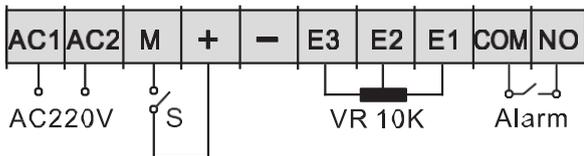
1, Analog volt current input



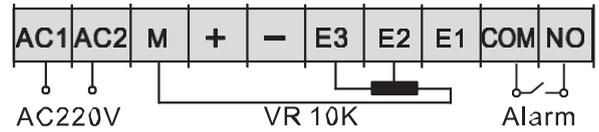
2, Analog volt current input with adjustable external VR



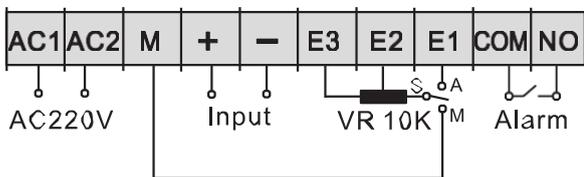
3, Contact input



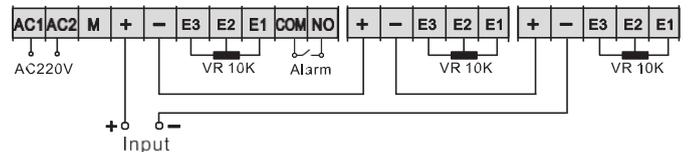
4, Manual input with adjustable external VR



5, Manual and Automatic input, M: manual, A: automatic



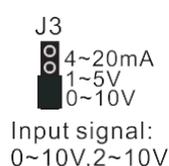
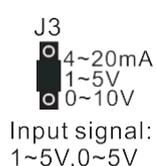
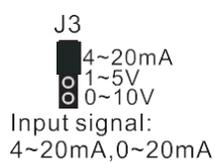
6, Multiple unit connecting



5 Input mode and adjustable functions

Input mode

J3 pin can selected three input modes.



Adjustable functions

MAX VR and BIAS VR can adjustable the max output and basic output.



6 LED description of indicating lamp

Name	Color	Function	Description
Power indicator	Red	PCB power supply indicating lamp	Lamp on:working order. Lamp off:error. 1,Make sure AC1,AC2 pcb power sources have power output. 2,Make sure the OT-err lamp has off. 3,Control board is broken,replace new one or repair.
Input indicator	Green	Input signal indicating lamp	Lamp light and dark based on the input:working order. Lamp off:error 1,Please check control signal to see if there is input,check the connection and the wiring. 2,Check two VR to see if any one of them is set to zero. 3,Control board is broken,replace new one or repair.
OT-err indicator FB-err indicator	Red	Over-temp of SCR lamp	Lamp off:working order. Lamp on:error 1,Fan is not operating,check the power,fan damage,or if the fan is stuck by any object and get rid off it if necessary. 2,Change the installation place or improve the ventilation.
L1 L2 L3 indicator	Red	Power supply trouble lamp	Lamp off:working order. Lamp on:error 1,Check the main power is on. 2,Check the L1,L2,L3 lamps to see if any one of them is on,replace the same spec. Fuse and check the shortage and ground of the loading before restoring the power.
L1 L2 L3 indicator	Orange	RST-output signal indicating lamp	Lamp light and dark based on the output:working order. Lamp off:RST phase is error. 1,Check the RST phase if the fuse is broken.

7 Type distinguishing

➤ Model Code Explanation

Code Section	Options	Description
Series	DSPR	Denki Seigyo Power Regulator
Phase Type	1	Single Phase (1Φ)
	3	Three Phase (3Φ)
Current Rating	100A	30Ampere- 400 Ampere
Control Mode	Z	Zero fixed frequency wave (Zero-cross control)
	P	Open loop phase-shift control
	C	Constant current control
	V	Constant voltage control
	CV	Constant power control

➤ Standard Configuration Table (100A Rating)

Model Code	Phase	Rated Current	Control Mode
DSPR-1-100A-P	1Φ	100A	Phase shift (Open loop)
DSPR-1-100A-Z/CV	1Φ	100A	Zero-cross, Constant power
DSPR-3-100A-C/V	3Φ	100A	Constant current, Constant voltage

➤ Dimension

Current	Load(KW)		Dimensions(MM)			Installation(MM)		Weight(KG)	Lock compact new force		Cooling mode
	220V	380V	L	W	H	L	W				
30A	9.5	16.5	160	110	150	95	105	1.8	M6	40kgfcm	Natural
40A	12.5	22	200	110	150	95	105	2.3	M6	40kgfcm	Fan
50A	15.5	27	250	140	185	170	135	3.5	M6	50kgfcm	Fan
60A	19	33	250	140	185	170	135	3.5	M6	50kgfcm	Fan
75A	23.5	41	250	140	185	170	135	3.9	M6	70kgfcm	Fan
80A	25.5	44	250	140	185	170	135	3.9	M6	75kgfcm	Fan
90A	28.5	49	250	140	185	170	135	3.9	M6	85kgfcm	Fan
100A	32	55	250	140	185	170	135	3.9	M6	85kgfcm	Fan
125A	40	68.5	290	140	185	170	135	5.1	M6	95kgfcm	Fan
150A	45	75	340	140	185	170	135	5.7	M6	170kgfcm	Fan
175A	53	88	340	140	185	170	135	5.7	M6	200kgfcm	Fan
200A	60	100	250	440	205	170	430	13	M10	220kgfcm	Fan
225A	68	113	250	440	205	170	430	13	M10	250kgfcm	Fan
250A	80	130	290	440	205	170	430	15	M10	250kgfcm	Fan
300A	89	160	290	440	205	170	430	18	M10	250kgfcm	Fan
400A	120	220	330	440	205	170	430	22	M12	250kgfcm	Fan

