

# Intelligent Power Module Devices

## Rectifier module with phase-shift voltage regulating controller

1



GVDR 50-120A



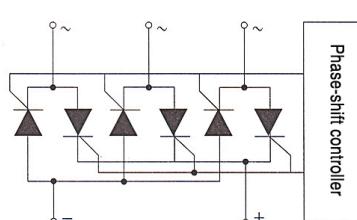
GVDR 200-800A

### GVDR series single phase rectifier module with phase-shift voltage regulating controller

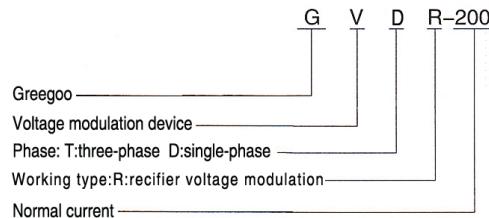
#### 1. Introduction

This product is a multi-functional power module, which integrates thyristor power circuit, SCM-control phase-shift trigger circuit, signals detects and transfer circuit, voltage modulation circuit. It can realize the precise control of the voltage of the load. With built-in linear control circuit, it is highly precise and stabilized. Rated current: 50-500A, rated voltage: 220V, 380V. It is widely used in all kinds of induction and impedance loads, for instance: DC motor, transformer, temperature control, light change, DC voltage modulation.

#### 2. Internal connection, classification and name



Internal circuit connection



Normal current

#### 3. Main technical standards(GVDR-50;70;120;200;250;350;500)

Function	Thyristor AC single-phase commutation							
Input voltage	220V±20% 380V±20%							
Power source	2%							
Controlling voltage	0-10VDC (input resistance 10K )							
Controlling current	4-20mA (input resistance 330 )							
Hand-control potentiometer resistance	10KΩ							
Colling method	Wind-colling radiator, wind speed≥6m/s							
Ambient temperature	-30~+40°C							
Output voltage	0-513DVC							

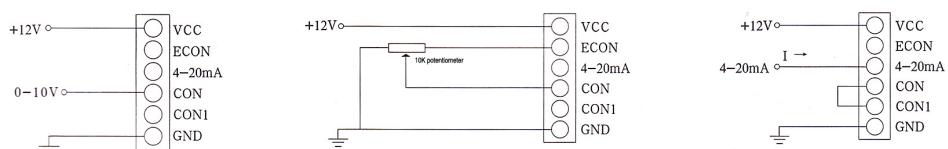
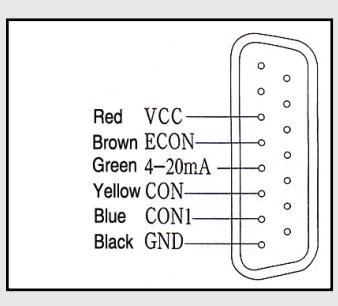
#### Main circuit parameter

Parameter	Unit	Value							
		50	70	100	120	200	250	350	500
Load current	Arms								
Voltage of resistance thyristor	Vpk					800-1200			
Frequency	Hz					50-60			
Off state voltage rising rate	V/sec					500			
On state voltage rising rate	A/sec					100			
Off state leakage current	mArms	≤8	≤10	≤10	≤10	≤10	≤15	≤15	≤20
On state leakage current	Vrms	1.6	1.6	1.6	1.8	1.8	1.8	1.8	1.8
Voltage drop insulating voltage	Vrms					≥2500			
Weight	Kg			0.425				2.2	

#### 4. Exterior and installation dimensions

Connections of control lines (50-120A module)

- 10V voltage control
- 10K potentiometer control
- 4-20mA control



Remarks:the interfaces of 200A—500A modules:VCC(red)、CON1 (blue) 、Econ(orange)、CON(yellow)、4-20mA (green) GND (black) others are blank See the right map connections is the same as above.