

## High Power Programmable DC Power Supply PWD Series

### Introduction

The PWD Series programmable high power DC power supply are mainly custom made high voltage high current DC power supply. Max rated voltage is up to 5000V and max rated current is up to 10000A (10kA).

IGBT module adjustment and PWM modulation facilitate PWD series with high efficiency, high accuracy and high stability. High gain amplifier circuit design makes PWD series with fast response. Improvement on circuits brings stronger anti-interference performance. Active air duct design and optimized cooling channels effectively reduce temperature rise.

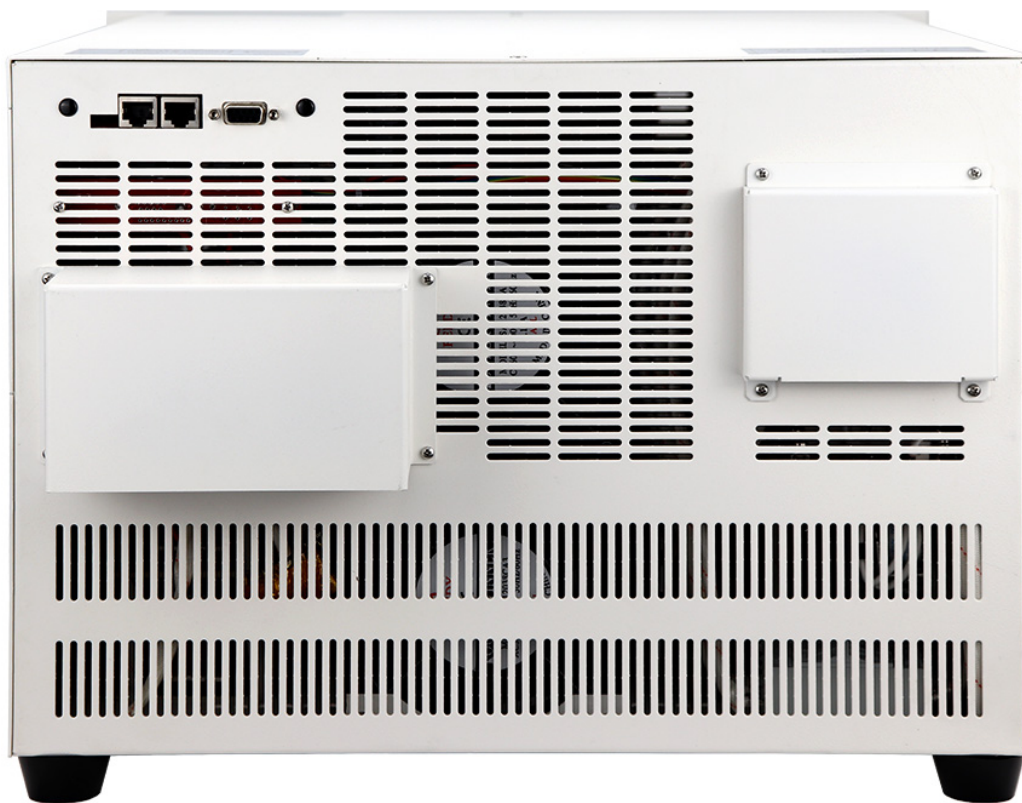
Over Voltage Protection, Over Current Protection and Over Temperature Protection keep the PWD series and their load safe from unexpected conditions. For more complicated applications, the PWD series are available with many optional functions: remote sensing, remote ON/OFF control, timer switch, square waveform output, PV curve output, etc.

### Features

- ✓ Max. output voltage **5000V**, Max. output current **10000A**
- ✓ Applying IGBT module and 19-inch standard size
- ✓ **4 digits LCD display for voltage, current, power and load resistance**
- ✓ Constant voltage and constant current operations, auto CV/CC switch
- ✓ Front panel operation: preset voltage and current, output ON/OFF
- ✓ Multiple protections: OVP, OCP, OTP and OLP
- ✓ **Communication: RS-232 and RS-485 interface**
- ✓ Optional function
  - Remote control: 0-5V, 0-10V or 4-20mA signal to control output voltage and current
  - Remote Sensing: compensate the voltage drop
  - Remote ON/OFF control: using a replay to control the output
  - Timer Switch: turn on or off the output as per preset time
  - Square Waveform Output: output square waveform according to preset time and cycles
  - Reverse current protection: to protect power supply from damage by reverse current from EUT
  - Reverse polarity switch: to allow change of positive and negative output polarity in reverse direction
  - PV curve output for solar panel tests
- ✓ Customized specifications and functions acceptable

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Product photo (12kW frame)



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## Specifications

|                                      |                                                                                                                                              |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Working mode</b>                  | <b>IGBT</b>                                                                                                                                  |
| <b>Input</b>                         | 3 $\phi$ 4W, 380V $\pm$ 10% 50Hz/60Hz                                                                                                        |
| <b>Constant Voltage Operation</b>    |                                                                                                                                              |
| Output voltage                       | DC 0~100% full range adjustable                                                                                                              |
| Line regulation                      | $\leq$ 0.3%FS rms                                                                                                                            |
| Load regulation                      | $\leq$ 0.5%FS rms                                                                                                                            |
| Ripple & Noise                       | $\leq$ 0.3%FS+10mVrms                                                                                                                        |
| Time drift                           | $\leq$ 0.5%FS rms                                                                                                                            |
| Temperature drift                    | $\leq$ 0.1%FS rms/ $^{\circ}$ C                                                                                                              |
| Setting accuracy                     | $\pm$ (0.5% FS +50mV) (25 $\pm$ 5 $^{\circ}$ C)                                                                                              |
| <b>Constant Current Operation</b>    |                                                                                                                                              |
| Output Current                       | DC 0~100% full range adjustable                                                                                                              |
| Line regulation                      | $\leq$ 0.3%FS rms                                                                                                                            |
| Load regulation                      | $\leq$ 0.5%FS rms                                                                                                                            |
| Ripple & Noise                       | $\leq$ 0.5%FS+10mVrms                                                                                                                        |
| Time drift                           | $\leq$ 1%FS rms                                                                                                                              |
| Temperature drift                    | $\leq$ 0.3%FS rms/ $^{\circ}$ C                                                                                                              |
| Setting accuracy                     | $\pm$ (0.5% FS +3 digits) (25 $\pm$ 5 $^{\circ}$ C)                                                                                          |
| <b>Display</b>                       |                                                                                                                                              |
| Voltmeter                            | 4 digits LCD display                                                                                                                         |
| Ammeter                              | 4 digits LCD display                                                                                                                         |
| Voltage resolution                   | 0.000V-9.999V; 0.00V-99.99V; 0.0V-999.9V; 0V-9999V                                                                                           |
| Current resolution                   | 0.000A-9.999A; 0.00A-99.99A; 0.0A-999.9A; 0A-9999A                                                                                           |
| Reading accuracy                     | $\pm$ (0.5% FS +3 digits) (25 $\pm$ 5 $^{\circ}$ C)                                                                                          |
| <b>Protection</b>                    |                                                                                                                                              |
| Over Voltage Protection (O.V.P.)     | Built-in OVP protection with limit of 110% rated voltage.<br>The output will be shut down when OVP is activated.                             |
| Over Current Protection (O.C.P.)     | Built-in OCP protection with limit of 110% rated current.<br>The output will be shut down when OCP is activated.                             |
| Over Temperature Protection (O.T.P.) | Built-in OTP protection with heat sink temperature limit of 80 $^{\circ}$ C $\pm$ 5%.<br>The output will be shut down when OTP is activated. |
| <b>General</b>                       |                                                                                                                                              |
| Cooling method                       | Air cool                                                                                                                                     |
| Operating environment                | 0 $^{\circ}$ C~40 $^{\circ}$ C, 10%~80%RH                                                                                                    |
| Storage environment                  | -20 $^{\circ}$ C~70 $^{\circ}$ C, 10%~90%RH                                                                                                  |
| Input module                         | Power socket or terminal block                                                                                                               |
| Accessories                          | Operation manual: 1EA                                                                                                                        |

# High Power DC Power Supply

## Selection guide

| Model       | Rated voltage | Rated current | Rated Power | Input Voltage |
|-------------|---------------|---------------|-------------|---------------|
| PWD5-2000   | 0~5V          | 0~2000A       | 10KW        | 3P 380Vac     |
| PWD5-3000   | 0~5V          | 0~3000A       | 15KW        | 3P 380Vac     |
| PWD10-1000  | 0~10V         | 0~1000A       | 10KW        | 3P 380Vac     |
| PWD10-2000  | 0~10V         | 0~2000A       | 20KW        | 3P 380Vac     |
| PWD10-3000  | 0~10V         | 0~3000A       | 30KW        | 3P 380Vac     |
| PWD15-1000  | 0~15V         | 0~1000A       | 15KW        | 3P 380Vac     |
| PWD15-2000  | 0~15V         | 0~2000A       | 30KW        | 3P 380Vac     |
| PWD15-3000  | 0~15V         | 0~3000A       | 45KW        | 3P 380Vac     |
| PWD15-4000  | 0~15V         | 0~4000A       | 60KW        | 3P 380Vac     |
| PWD30-1000  | 0~30V         | 0~1000A       | 30KW        | 3P 380Vac     |
| PWD30-2000  | 0~30V         | 0~2000A       | 60KW        | 3P 380Vac     |
| PWD30-3000  | 0~30V         | 0~3000A       | 90KW        | 3P 380Vac     |
| PWD20-300   | 0~20V         | 0~300A        | 6KW         | 1P 220Vac     |
| PWD60-1000  | 0~60V         | 0~1000A       | 60KW        | 3P 380Vac     |
| PWD60-1500  | 0~60V         | 0~1500A       | 90KW        | 3P 380Vac     |
| PWD60-2000  | 0~60V         | 0~2000A       | 120KW       | 3P 380Vac     |
| PWD100-1000 | 0~100V        | 0~1000A       | 100KW       | 3P 380Vac     |
| PWD100-1500 | 0~100V        | 0~1500A       | 150KW       | 3P 380Vac     |
| PWD100-2000 | 0~100V        | 0~2000A       | 200KW       | 3P 380Vac     |
| PWD300-1000 | 0~300V        | 0~1000A       | 300KW       | 3P 380Vac     |
| PWD300-1500 | 0~300V        | 0~1500A       | 450KW       | 3P 380Vac     |
| PWD300-2000 | 0~300V        | 0~2000A       | 600KW       | 3P 380Vac     |
| PWD1000-20  | 0~1000V       | 0~20A         | 20KW        | 3P 380Vac     |
| PWD1000-30  | 0~1000V       | 0~30A         | 30KW        | 3P 380Vac     |
| PWD1000-50  | 0~1000V       | 0~50A         | 50KW        | 3P 380Vac     |
| PWD1000-100 | 0~1000V       | 0~100A        | 100KW       | 3P 380Vac     |
| PWD2000-10  | 0~2000V       | 0~10A         | 20KW        | 3P 380Vac     |
| PWD2000-20  | 0~2000V       | 0~20A         | 40KW        | 3P 380Vac     |
| PWD2000-30  | 0~2000V       | 0~30A         | 60KW        | 3P 380Vac     |
| PWD2000-50  | 0~2000V       | 0~50A         | 100KW       | 3P 380Vac     |

The above models are listed for reference only. Customer specifications are welcome.  
Specifications are subject to change without prior notice.