

DC Power Supply

1.2kW-15kW High-Power Programmable DC Power Supply TWS-Series

Product description:

TWS-series is a high-performance DC power supply independently developed and produced by the company for scientific research, industrial applications. This series of products has the characteristics of simple operation, small size, high efficiency, high precision, high stability, etc. and has perfect protection functions, allowing users to use the products more assured, more stable and more reliable.



Size: 3U Input : 3 ϕ 3W, 380Vac
12kW/15kW



Size: 2U Input : 1 ϕ 2W, 220Vac
3.6kW/6kW/7.5kW



Size: 1U 1/2, Input : 1 ϕ 2W, 220Vac
1.2kW/1.8kW



Features

- ◆ Power range 0-15000W, parallel expansion can reach 120KW.
- ◆ Standard 1U $\frac{1}{2}$, 2U, 3U sizes, easy to use on racks.
- ◆ Voltage and current display, working status is clear at a glance.
- ◆ Automatic switching of CV/CC working modes.
- ◆ RS232, RS485, LAN are standard, and CAN port is optional.
- ◆ It has remote compensation function to compensate for the voltage drop on the line.
- ◆ Multiple protection functions including overvoltage, overcurrent and short circuit.
- ◆ Additional functions:
 - Remote control, 0-5V, 0-10V or 4-20mA signal to control voltage and current output
 - Remote Sensing: Compensate for voltage drop
 - Remote ON/OFF control: Use replay to control the output
 - Timing switch: Turn on or off the output at a preset time
 - Square wave output: Output square wave according to the preset time and cycle
 - Reverse polarity protection: To protect the power supply from being damaged by reverse current from the DUT
 - PV curve output for testing solar panels
 - LAN and BUS system interface
- ◆ Can be produced according to the required specifications and functions

General Informations

Operation Mode

Line regulation	Voltage : $\leq 0.1\%$ FS rms	Current : $\leq 0.1\%$ FS rms
Lod regulation	Voltage : $\leq 0.1\%$ FS rms	Current : $\leq 0.1\%$ FS rms
Ripple & Noise (20Hz ~ 20MHz)	Voltage : $\leq 0.3\%$ FS + 50mVrms	Current : $\leq 0.1\%$ FS + 10mArms
Time drift	Voltage : $\leq 0.5\%$ FS rms	Current : $\leq 1\%$ FS rms
Temperature drift	Voltage : $\leq 0.1\%$ FS rms	Current : $\leq 0.3\%$ FS rms
Setting Accuracy	Voltage : $\leq 0.1\%$ FS + 20mV ($\leq 100V$) Current : $\leq 0.3\%$ FS + 10mA	$\leq 0.1\%$ FS + 100mV (300V) $\leq 0.1\%$ FS + 300mV ($\geq 600V$)
Setting Resolution	Voltage : 0.01V / 0.1V / 1V	Current : 0.001A / 0.01A / 0.1A / 1A
Readback Accuracy	Voltage : $\leq 0.1\%$ FS + 20mV ($\leq 100V$) Current : $\leq 0.3\%$ FS + 10mA	$\leq 0.1\%$ FS + 100mV (300V) $\leq 0.1\%$ FS + 300mV ($\geq 600V$)
Readback Resolution	Voltage : 0.01V / 0.1V / 1V	Current : 0.001A / 0.01A / 0.1A / 1A
Response Time	$\leq 5mS$ (10% ~ 90% Adj. Load)	
Protection	OVP, OCP, OTP and short-circuit	
O.V.P Setting Range	0.1V ~ 110% of rate voltage	
O.C.P Setting Range	0.1A ~ 110% of rate current	
Interface	RS-232, RS-485 and support ModBus-RTU commands	
Analog Output (Option)	Select : 0-5V, 0-10V or 4-20mA interface voltage/current for control and feedback	
Cooling Method	Force ir cool	
Operating environment	0 ~ 40°C, 10% ~ 80%RH	
Storage environment	-20 ~ 70°C, 10% ~ 90%RH	
Input Power	$\leq 6k$: 1 ϕ 2W, 220V $\pm 10\%$ 50/60Hz $> 6k$: 3 ϕ 4W, 380V $\pm 10\%$ 50/60Hz	
Input Module	Power scket or Terminal box	

Specifications

◇ Output Max : 1800W (Cabinet size: 1U half-width & Input: 220Vac)



Model (1.0~1.8kW)	Output			Read value Resolution		Ripple & Noise 20Hz ~ 20MHz	Setting/Readback Accuracy	
	Voltage	Current	Power	Voltage	Current		Voltage	Current
TWS30-40	0 ~ 30V	0 ~ 40A	1.2kW	0.01V	0.01A	≤0.3%FS+50mVrms	≤0.1%FS+20mV	≤0.3%FS+30mA
TWS30-60	0 ~ 30V	0 ~ 60A	1.8kW	0.01V	0.01A			
TWS60-20	0 ~ 60V	0 ~ 20A	1.2kW	0.01V	0.01A			
TWS60-30	0 ~ 60V	0 ~ 30A	1.8kW	0.01V	0.01A			
TWS100-12	0 ~ 100V	0 ~ 12A	1.2kW	0.1V	0.01A	≤0.3%FS+100mVrms	≤0.1%FS+100mV	≤0.3%FS+10mA
TWS100-18	0 ~ 100V	0 ~ 18A	1.8kW	0.1V	0.01A			
TWS150-10	0 ~ 150V	0 ~ 10A	1.5kW	0.1V	0.001A			
TWS300-4	0 ~ 300V	0 ~ 4A	1.2kW	0.1V	0.001A			
TWS300-6	0 ~ 300V	0 ~ 6A	1.8kW	0.1V	0.001A			
TWS600-2	0 ~ 600V	0 ~ 2A	1.2kW	0.1V	0.001A			
TWS600-3	0 ~ 600V	0 ~ 3A	1.8kW	0.1V	0.001A			
TWS1000-1	0 ~ 1000V	0 ~ 1A	1.0kW	1V	0.001A			
Input Power	1P2W, 220V±10% 50/60Hz							
Dimension	218(W) * 44(H) * 435(D) mm. (1U half-width frame)							
Weight	About 4.5 kg							

◇ Output Max : 3600W (Canibet size 2U & Input 220Vac)



Model (3600W)	Output			Read value Resolution		Ripple & Noise 20Hz ~ 20MHz	Setting/Readback Accuracy	
	Voltage	Current	Power	Voltage	Current		Voltage	Current
TWS30-120	0 ~ 30V	0 ~ 120A	3.6kW	0.01V	0.1A	≤0.3%FS+50mVrms ≤0.3%FS+10mA Arms	≤0.1%FS+20mV	≤0.3%FS+10mA
TWS60-60	0 ~ 60V	0 ~ 60A	3.6kW	0.01V	0.01A			
TWS100-36	0 ~ 100V	0 ~ 36A	3.6kW	0.1V	0.01A			
TWS120-30	0 ~ 120V	0 ~ 30A	3.6kW	0.1V	0.01A			
TWS300-12	0 ~ 300V	0 ~ 12A	3.6kW	0.1V	0.01A			
TWS600-6	0 ~ 600V	0 ~ 6A	3.6kW	0.1V	0.001A			
TWS1000-3	0 ~ 1000V	0 ~ 3A	3.0W	1V	0.001A		≤0.1%FS+300mV	
Input Power	1P2W, 220V±10% 50/60Hz							
Dimension	430(W) * 88(H) * 520(D) mm. (2U frame)							
Weight	About 18 kg							

◇ Output Max : 6000W (Canibet size 2U & Input 220Vac)



Model (6kW)	Output			Read value Resolution		Ripple & Noise 20Hz ~ 20MHz	Setting/Readback Accuracy	
	Voltage	Current	Power	Voltage	Current		Voltage	Current
TWS20-300	0 ~ 20V	0 ~ 300A	6kW	0.01V	0.1A	≤0.3%FS+50mVrms ≤0.3%FS+10mA Arms	≤0.1%FS+20mV	≤0.3%FS+10mA
TWS30-200	0 ~ 30V	0 ~ 200A	6kW	0.01V	0.1A			
TWS60-100	0 ~ 60V	0 ~ 100A	6kW	0.01V	0.01A			
TWS100-60	0 ~ 100V	0 ~ 60A	6kW	0.1V	0.01A			
TWS300-20	0 ~ 300V	0 ~ 20A	6kW	0.1V	0.01A			
TWS600-10	0 ~ 600V	0 ~ 10A	6kW	0.1V	0.01A			
TWS1000-6	0 ~ 1000V	0 ~ 6A	6kW	1V	0.001A		≤0.1%FS+300mV	
Input Power	1P2W, 220V±10% 50/60Hz							
Deminsion	430(W) * 88(H) * 520(D) mm. (2U frame)							
Weight	About 18 kg							

◇ Output Max : 8000W (Size 2U & Input 220Vac)



Model (7.2 ~ 8kW)	Output			Read value Resolution		Ripple & Noise	Setting/Readback Accuracy	
	Voltage	Current	Power	Voltage	Current	20Hz ~ 20MHz	Voltage	Current
TWS30-250	0 ~ 30V	0 ~ 250A	7.5kW	0.01V	0.1A	≤0.3%FS+100mVrms ≤0.3%FS+10mA Arms	≤0.1%FS+20mV	≤0.5%FS+100mA
TWS60-125	0 ~ 60V	0 ~ 125A	7.5kW	0.01V	0.1A			≤0.5%FS+100mA
TWS150-50	0 ~ 150V	0 ~ 50A	7.5kW	0.01V	0.01A			≤0.5%FS+100mA
TWS100-7.5	0 ~ 100V	0 ~ 7.5A	7.5kW	0.1V	0.01A		≤0.1%FS+100mV ≤0.2%FS+300mV	≤0.3%FS+10mA
TWS300-25	0 ~ 300V	0 ~ 25A	7.5kW	0.1V	0.01A			
TWS600-12	0 ~ 600V	0 ~ 12A	7.2kW	0.1V	0.01A			
TWS1000-8	0 ~ 1000V	0 ~ 8A	8kW	1V	0.001A			
Input Power	1P2W, 220V±10% 50/60Hz							
Dimension	482(W) * 88(H) * 520(D) mm. (2U frame)							
Weight	About 15 kg.							



◇ Output Max : 12kW (Cabinet size: 3U & Input: 380Vac)

Model (12kW)	Output			Read value Resolution		Ripple & Noise 20Hz ~ 20MHz	Setting/Readback Accuracy	
	Voltage	Current	Power	Voltage	Current		Voltage	Current
TWS10-500	0 ~ 10V	0 ~ 500A	12kW	0.01V	0.1A	≤1%FS+100mVrms ≤0.3%FS+10mArms	≤0.1%FS+20mV	≤0.5%FS+200mA
TWS10-1000	0 ~ 10V	0 ~ 1000A	12kW	0.01V	0.1A			
TWS20-600	0 ~ 20V	0 ~ 600A	12kW	0.01V	0.1A			
TWS30-400	0 ~ 30V	0 ~ 400A	12kW	0.01V	0.1A	≤0.3%FS+100mVrms ≤0.3%FS+10mArms	≤0.1%FS+100mV	≤0.3%FS+100mA ≤0.3%FS+30mA
TWS60-200	0 ~ 60V	0 ~ 200A	12kW	0.01V	0.1A			
TWS100-120	0 ~ 100V	0 ~ 120A	12kW	0.1V	0.1A			
TWS200-60	0 ~ 200V	0 ~ 60A	12kW	0.1V	0.1A			
TWS300-40	0 ~ 300V	0 ~ 40A	12kW	0.1V	0.01A			
TWS400-30	0 ~ 400V	0 ~ 30A	12kW	0.1V	0.01A			
TWS600-20	0 ~ 600V	0 ~ 20A	12kW	0.1V	0.01A			
TWS800-15	0 ~ 800V	0 ~ 15A	12kW	0.1V	0.01A	≤0.2%FS+300mV	≤0.5%FS+200mA	
TWS1000-12	0 ~ 1000V	0 ~ 12A	12kW	1V	0.01A			
Input Power	3P4W, 380V±10% 50/60Hz							
Dimension	482(W) * 132(H) * 570(D) mm. (3U frame)							
Weight	About 28 kg							



◇ Output Max : 15kW (Cabinet size: 3U & Input: 380Vac)

Model (15kW)	Output			Read value Resolution		Ripple & Noise 20Hz ~ 20MHz	Setting/Readback Accuracy	
	Voltage	Current	Power	Voltage	Current		Voltage	Current
TWS30-500	0 ~ 30V	0 ~ 500A	15kW	0.01V	0.1A	≤1%FS+100mVrms ≤0.3%FS+10mArms	≤0.1%FS+20mV	≤0.5%FS+200mA
TWS50-300	0 ~ 50V	0 ~ 300A	15kW	0.01V	0.1A			
TWS60-250	0 ~ 60V	0 ~ 250A	15kW	0.01V	0.1A			
TWS100-150	0 ~ 100V	0 ~ 150A	15kW	0.01V	0.1A			
TWS150-100	0 ~ 150V	0 ~ 100A	15kW	0.1V	0.1A	≤0.5%FS+100mVrms ≤0.3%FS+10mArms		≤0.3%FS+100mA
TWS200-75	0 ~ 200V	0 ~ 75A	15kW	0.1V	0.01A			
TWS300-50	0 ~ 300V	0 ~ 50A	15kW	0.1V	0.01A			
TWS500-30	0 ~ 500V	0 ~ 30A	15kW	0.1V	0.01A		≤0.1%FS+100mV	≤0.3%FS+30mA
TWS600-25	0 ~ 600V	0 ~ 25A	15kW	0.1V	0.01A			
TWS800-18	0 ~ 800V	0 ~ 18A	15kW	0.1V	0.01A			
TWS1000-15	0 ~ 1000V	0 ~ 15A	15kW	1V	0.01A		≤0.2%FS+100mV	≤0.3%FS+10mA
TWS1500-10	0 ~ 1500V	0 ~ 10A	15kW	1V	0.01A			
Input Power	3P4W, 380V±10% 50/60Hz							
Dimension	482(W) * 132(H) * 570(D) mm. (3U frame)							
Weight	About 28 kg.							

Ordering Information

TWSXXX@-XXX@ : Programmable DC Power Supply

Remark : XXX@ : Output voltage rate

XXX@ : Output current rate

Standard Accessories :

- User Manual
- Power cord
- RS-232 cable
- Software CD