

DC Power Supply

Programmable Switching DC Power Supply TPS-Series

Product description:

TPS-Series are high accuracy programmable DC power supply with single output. Using MPU control, RS232/RS485/USB interface for PC control, TPS-Series facilitates auto test and auto control. The commands are compliant with SCPI commands. Users can easily develop programs to facilitate different applications in auto test and auto control. Users can also store or recall data via the USB host on front panel. 4.3-inch TFT LCD display gives full display for parameters and output waveforms. Digital input fulfilled by rotary dial and keypad input makes input fast and accurate. Voltage and current regulations by software, avoids human error and makes more accurate.



TPS-Series

Features

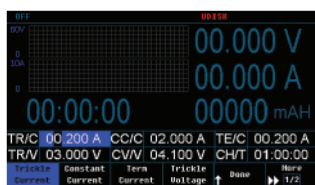
- ◆ High accuracy, high resolution
- ◆ High speed rotary dial and keypad input
- ◆ Current limit and voltage limit alarm
- ◆ Battery curved charge mode
- ◆ Data record software
- ◆ Ram output
- ◆ Communication interface: RS232, RS485 and 0-5V analog interface
- ◆ 5 Digits 4.3-inch TFT LCD display
- ◆ CV/CC priority setup
- ◆ USB host interface for data storage and recall from external USB flash driver
- ◆ List mode function, 300 sets save & recall for voltage, current and time setups
- ◆ Multiple protections: OVP, OCP, OLP, OTP and reverse polarity protections
- ◆ Support SCPI & ModBus-RTU commands, support Labview
- ◆ Load resistance measurement
- ◆ Remote sense function

Specifications

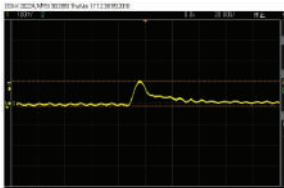
Model		TPS-3010	TPS-2030	TPS-3020	TPS-6010	TPS-8008	TPS-1560	TPS-2045
Rate Output	Power	300 W	600 W	600 W	600 W	640W	900 W	900 W
	Voltage	0 ~ 31 V	0 ~ 20.5 V	0 ~ 31 V	0 ~ 60.5 V	0 ~ 80.5 V	0 ~ 15.5 V	0 ~ 20.5 V
	Current	0 ~ 10.5 A	0 ~ 30.5 A	0 ~ 21 A	0 ~ 10.5 A	0 ~ 8.0 A	0 ~ 60.5 V	0 ~ 45.5 A
Line Regulation	Voltage	≤0.01%+4mV						
	Current	≤0.1%+3mA						
Load Regulation	Voltage	≤0.1%+5mV						
	Current	≤0.1%+5mA						
Setting Accuracy	Voltage	±(0.03% of Reading + 10mV)						
	Current	±(0.1% of Reading + 0.1% of FS)						
Setting Resolution	Voltage	1mV						
	Current	1mA						
Reading Accuracy	Voltage	±(0.02% of Reading + 5mV)						
	Current	±(0.1% of Reading + 0.1% of FS)						
Reading Resolution	Voltage	1mV						
	Current	1mA						
Ripple&Noise (20Hz~20MHz)	Voltage	≤2mVrms, 30mVpp						
	Current	≤10mArms						
Rise Time	Empty Load	≤500ms					≤200ms	≤300ms
	Full Load	≤1s					≤300ms	≤1s
Fall Time	Empty Load	≤1.5s	≤1.5s	≤1.5s	≤3s	≤4s	≤2s	
	Full Load	≤3ms	≤2ms	≤3ms	≤8ms	≤10ms	≤2ms	
Recovery Time	≤1.5ms (50% load change)							
Temp. Coefficient	≤1000ppm/°C							
Efficiency	80% typical							
Power Factor	0.98							
Protection	Over load, over voltage, over current, over temperature and reverse polarity protections							
O.V.P Setting Range	0.1 ~ 34 V		0.1 ~ 24 V	0.1 ~ 34 V	0.1 ~ 64 V	0.1 ~ 88 V	0.1 ~ 18 V	0.1 ~ 24 V
O.C.P Setting Range	0.1 ~ 24 A		0.1 ~ 34 A	0.1 ~ 24 A	0.1 ~ 12 A	0.1 ~ 8.8 A	0.1 ~ 62 A	0.1 ~ 50 A
Remote Sense Function	Maximum compensation voltage 5% of FS							
Battery Charge	Lithium battery curue charge							
Digital Interface	RS232 & RS485 interface, Support SCPI & ModBus commands							
Analog Interface	0-5V analog control for output ON/OFF, voltage & current control & monitor							
Memory	300 sets							
Insulation	Between base and terminal : ≥20MΩ/500VDC							
	Between base and AC line : ≥30MΩ/500VDC							
Operation Environment	Indoor use			Aititube : ≤2000m		Ambient tempertaure : 0 ~ 40°C		
	Relative humidity : 80%RH			Installation category : II		Pollution degree : 2		
Storage Environment	-10°C ~ 70°C, ≤70%RH							
Power Input	AC 220V±10%, 50/60Hz							
Dimension (WxHxD)	215x89x352 mm.						215x89x412 mm.	
Weight	45kg						55kg	

Applications / Functions

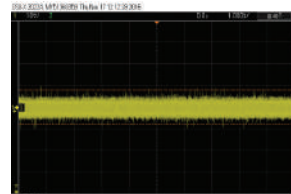
Battery curved Charge



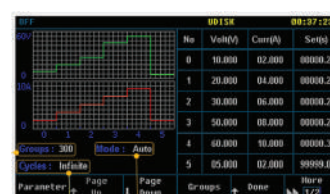
Fast Transient Response Time



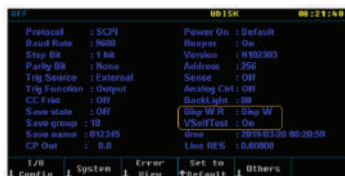
Low Ripple, Pure Output



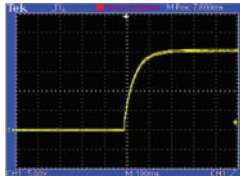
Timing Output



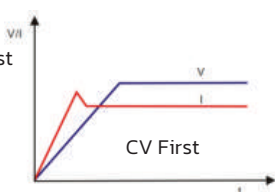
Low Resistance Meas. & Voltage Self Check



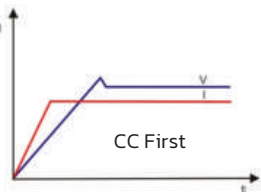
No Overshoot



CC First



CV First



Ramp Output

Rack Mount Compatible

Remote Sense

Ordering Information

TPS-3010 : 300W/30V/10A

TPS-3020 : 600W/30V/20A

TPS-8008 : 640W/80V/8A

TPS-2045 : 900W/20V/45A

TPS-3625 : 900W/36V/25A

TPS-12007 : 900W/120V/7.5A

TPS-2030 : 600W/20V/30A

TPS-6010 : 600W/60V/10A

TPS-1560 : 900W/15V/60A

TPS-3030 : 900W/30V/30A

TPS-4520 : 900W/45V/20A

TPS-15006 : 900W/150V/6A

Standard Accessories :

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

Specifications

Model	TPS-3030	TPS-3625	TPS-4520	TPS-6015	TPS-8011	TPS-12007	TPS-15006
Power	900 W	900 W	900 W	900 W	900W	900 W	900 W
Rate Output							
Voltage	0 ~ 31 V	0 ~ 36.5 V	0 ~ 45.5 V	0 ~ 60.5 V	0 ~ 80.5 V	0 ~ 121 V	0 ~ 151 V
Current	0 ~ 31 A	0 ~ 25.5 A	0 ~ 20.5 A	0 ~ 15.5 A	0 ~ 11.5 A	0 ~ 7.6 A	0 ~ 6.1 A
Line Regulation	≤0.01%+4mV						
Current	≤0.2%+3mA			≤0.1%+3mA			
Load Regulation	≤0.1%+5mV						
Current	≤0.1%+5mA						
Setting	Voltage	±(0.03% of Reading + 10mV)					
Accuracy	Current	±(0.1% of Reading + 0.1% of FS)					
Setting	Voltage	1mV				10mV	
Resolution	Current	1mA					
Reading	Voltage	±(0.02% of Reading + 5mV)					
Accuracy	Current	±(0.1% of Reading + 0.1% of FS)					
Reading	Voltage	1mV				10mV	
Resolution	Current	1mA					
Ripple&Noise (20Hz~20MHz)	Voltage	≤2mVrms, 30mVpp				≤5mVrms, ≤50mVpp	
Current	≤10mArms						
Rise Time	Empty Load	≤500ms		≤1s		≤15s	
Full Load	≤1s		≤1.5s		≤2s		
Fall Time	Empty Load	≤2s	≤3s	≤3s		≤8s	
Full Load	≤2ms	≤3ms		≤4ms	≤9ms	≤12ms	
Recovery Time		≤15ms (50% load change)					
Temp. Coefficient		≤100ppm/°C					
Efficiency		80% typical					
Power Factor		0.98					
Protection		Over load, over voltage, over current, over temperature and reverse polarity protections					
O.V.P Setting Range	0.1 ~ 34 V	0.1 ~ 40 V	0.1 ~ 55 V	0.1 ~ 64 V	0.1 ~ 88 V	0.1 ~ 132 V	0.1 ~ 160 V
O.C.P Setting Range	0.1 ~ 34 A	0.1 ~ 27.5 A	0.1 ~ 22 A	0.1 ~ 17 A	0.1 ~ 12 A	0.1 ~ 8 A	0.1 ~ 6.6 A
Remote Sense Function		Maximum compensation voltage 5% of FS					
Battery Charge		Lithium battery curve charge					
Digital Interface		RS232 & RS485 interface, Support SCPI & ModBus commands					
Analog Interface		0-5V analog control for output ON/OFF, voltage & current control & monitor					
Memory		300 sets					
Insulation		Between base and terminal : ≥20MΩ/500VDC					
		Between base and AC line : ≥30MΩ/500VDC					
Operation Environment		Indoor use	Aititude : ≤2000m		Ambient tempertaure : 0 ~ 40°C		
Storage Environment		Relative humidity : 80%RH	Installation category : II		Pollution degree : 2		
Power Input		AC 220V±10%, 50/60Hz					
Dimension (WxHxD)		215x89x412 mm.					
Weight		5.5kg					