

FTP3000 series Wide range low power programmable DC power source



| Sketch

FTP3000 series small power supply is a power supply with high cost performance, super practicality and versatility. It can be widely used in laboratory test, vehicle equipment test, solar inverter test, DC/DC converter and inverter test, engine start test, battery automatic charging, electronic product life cycle and other test links. Product configuration with color screen and Chinese and English menu interface, easy to operate intuitive, is the common configuration of power electronics engineers desk.

| Characteristic

- Single-machine range:
 - Voltage: 0 ~ 600V
 - Current: 0 ~ 80A
 - Power: 900W, 1500W
- 24-bit high resolution ADC measurement;
- Power factor greater than 0.98;
- Stable output, low ripple noise;
- Voltage and current slope can be set;
- Remote line loss compensation;
- Support constant power output;
- Sequence editing function, support cycle and link;
- OPP, OCP, OVP, OTP and other comprehensive protection functions;
- Quick call, one-key call test parameters;
- Isolated composite signal terminal (optional) with strong external control and internal monitoring capabilities;
- Intelligent fan control, reduce noise;
- TFT color LCD display, Chinese and English menu interface;
- Equipped with RS232, LAN, CAN(optional) communication port, support SCPI, ModBus, CAN-OPEN protocol;
- Upper computer software and SDK development kit, convenient for customers to carry out secondary development.

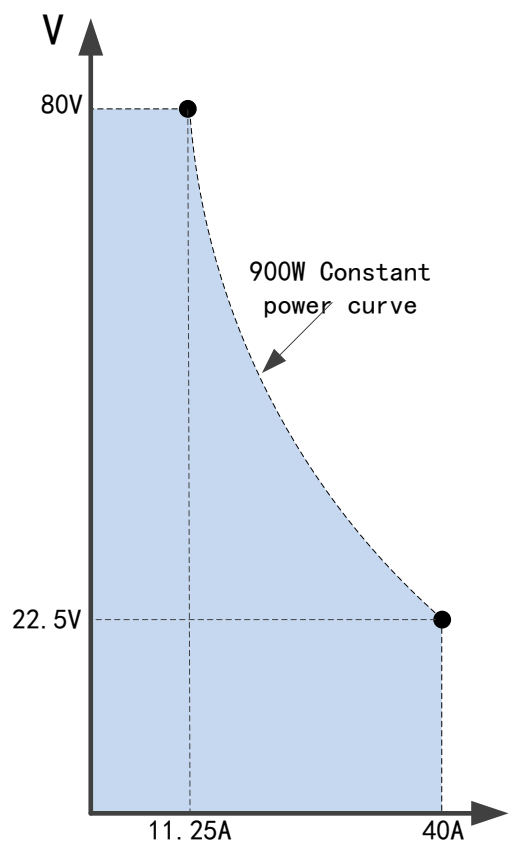
| Voltage and current slope setting

FTP3000 series supports voltage slope setting and current slope setting. The

adjustment of the slope slows down the rise and fall of the voltage (or current), which can effectively avoid the damage of the inrush current on the DUT. The voltage slope is measured in V/s and the current slope is measured in A/s.

| Constant power, wide range output

FTP3000 series has an output range of more than 3.5 times wide range and supports constant power output function. After the output is turned on, the power supply constantly adjusts the output voltage or output current to keep the output power constant. If the load exceeds the power supply's adjustment range, the output will be maintained at the maximum set value. (Note: The constant power output function is mainly applied to the load with a response speed of more than 10ms.)

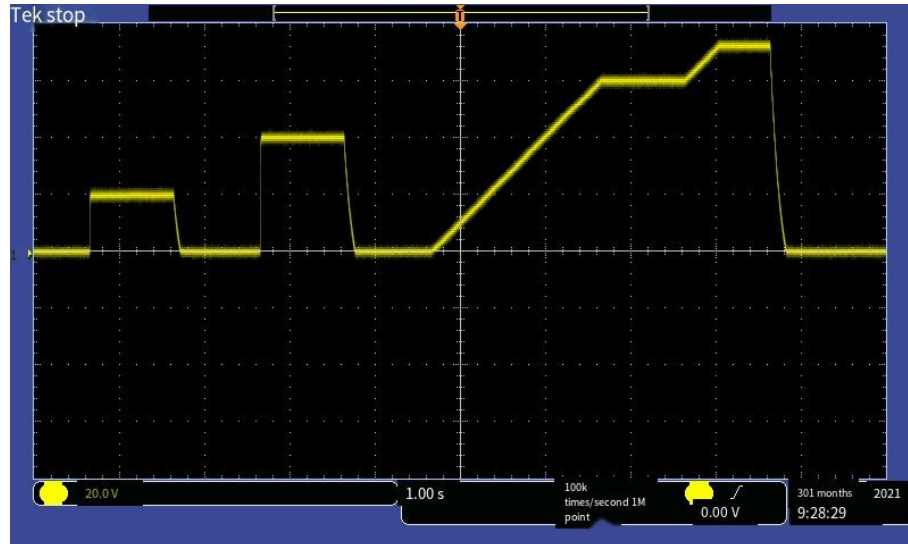


FTP3000 series provides wider operation in constant power range

| serial function

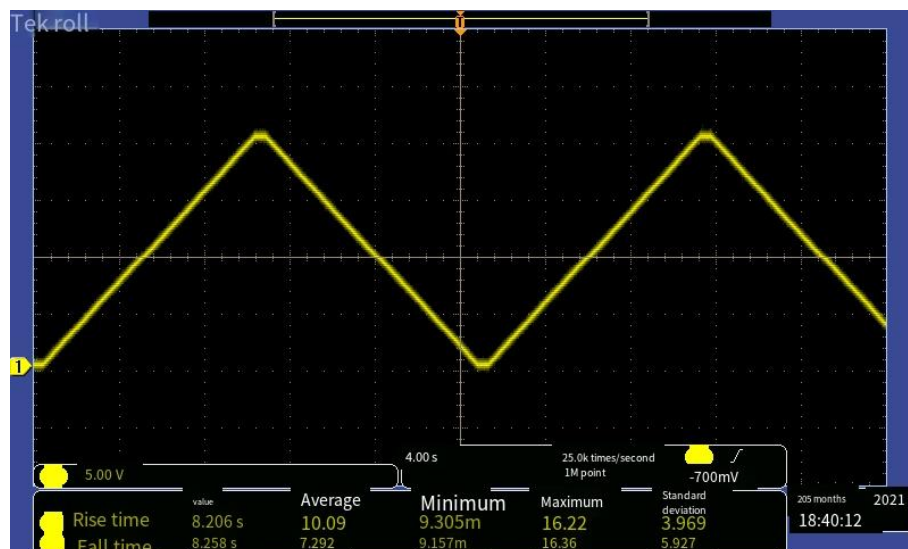
The sequence function allows users to edit their own voltage and current waveforms. The FTP3000 series offers 20 sequence files, each supporting up to 20

running steps. In the run steps, you can set the output voltage, output current, and delay. Sequence function support, support cycle, link and other attributes, to facilitate the realization of complex waveform output.



| Voltage RAMP output function (RAMP)

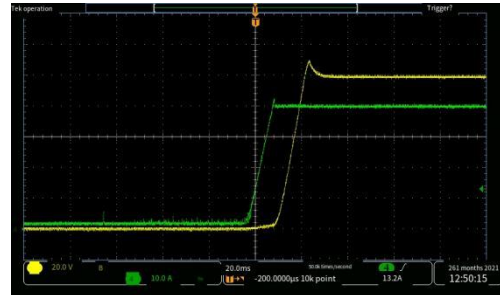
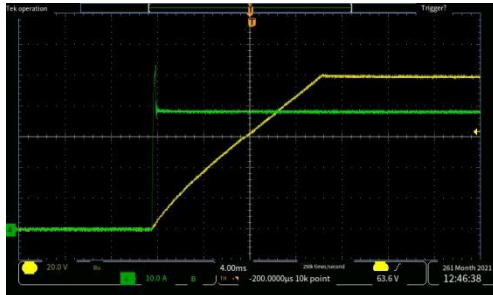
The FTP3000 series supports the voltage RAMP function, which can make the output voltage slowly increase from the low point to the high point, or make the output voltage slowly drop from the high point to the low point. The RAMP function has three working modes: Continuous (Continuous), Pulse (Pulse) and Toggle.



|CV and CC are preferred

When the power output is connected to the inductive or capacitive load, the

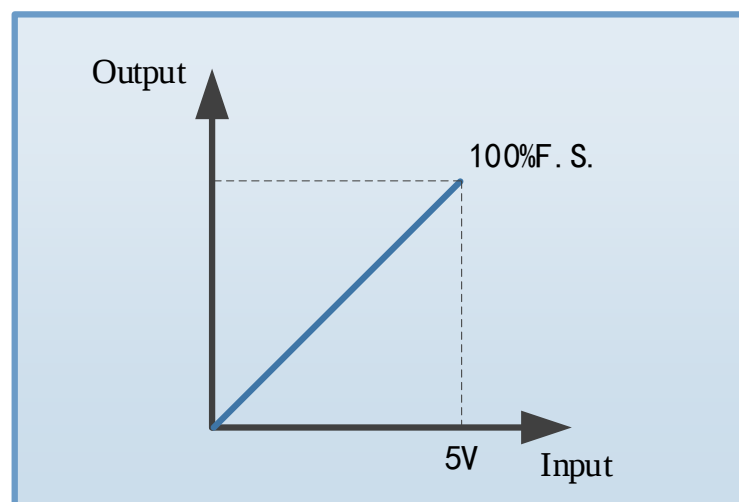
output current or voltage will overshoot to a certain extent, which will trigger the protection of the device under test, or even damage the device under test. FTP3000 series with CV, CC output priority function to effectively inhibit the output overshoot and the impact.



CV priority (high speed build voltage, current overshoot) CC priority (high speed build current, voltage overshoot)

| Analog programming functions

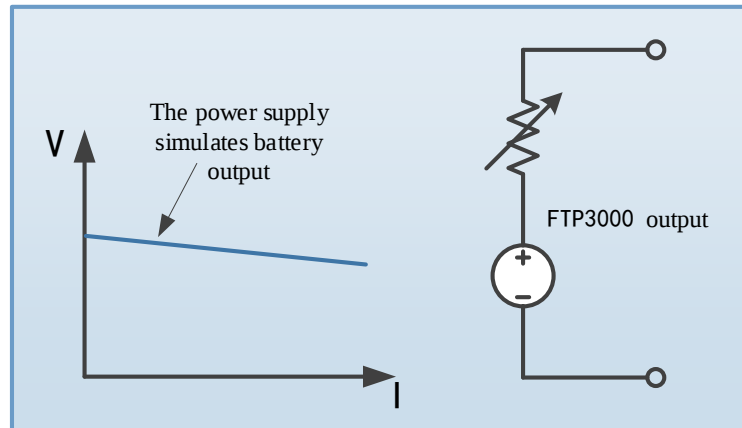
FTP3000 series has two analog input ports, voltage programming and current programming, which can respectively control the output voltage and output current. The analog programming signal is 0 ~ 5V DC voltage signal. The programming signal corresponds to the output voltage and output current of 0 ~ 100%F. S.



| battery internal resistance simulation function

FTP3000 series power supply has the function of simulating the battery internal resistance output. When the output current of the power supply increases, the output

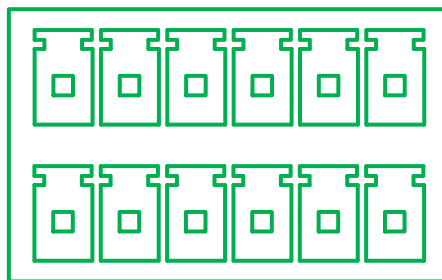
voltage can be adjusted according to the preset internal resistance value.



| Composite signal port (optional)

FTP3000 series can be optional composite signal port, which has the following functions:

- READY power supply working status indicator;
- Output mode indication;
- Compound external control (which can be used as a trigger or ON/OFF control signal);
- Voltage and current output monitoring;
- Voltage, current programming control.



| Multi-interface and multi-protocol

The FTP3000 series is equipped with multiple communication interfaces: RS232, LAN, CAN (optional), SCPI and Modbus communication protocols. The user can configure in the menu according to the demand, which makes the system integration more flexible.



The screenshot displays the NI-MAX software interface for a power supply system. The main window features a graph titled "Current (A)" on the y-axis (ranging from 0 to 20) and "Seconds (s)" on the x-axis (ranging from 0 to 200). The graph shows a green line representing current, which is at 0 A until approximately 100 seconds, where it steps up to 20.000 A. A blue line represents voltage, which remains constant at 20.000 V throughout the entire duration. The right-hand panel contains several sections: "Measurements" with checkboxes for "Current" and "Voltage"; "Setpoints" with input fields for "Set the voltage" (20.000 V), "Set the current" (20.000 A), and "Protection voltage" (20.000 V); "Limits" with checkboxes for "Limit" and "Warning"; and "Status" with checkboxes for "Error" and "Warning". The bottom status bar shows "Current setpoint: 20.000 A", "Current: 20.000 A", "Voltage setpoint: 20.000 V", "Voltage: 20.000 V", and "Device input status: OK".



| Ordering information

VOLTAGE	Model	Current	Power	Voltage	Model	Current	Power
40V	FTP3009-40-80	80A	900W	80V	FTP3009-80-40	40A	900W
	FTP3015-40-80	80A	1500W		FTP3015-80-40	40A	1500W
Voltage	Model number	Current	Power	Voltage	Model number	Current	power
150V	FTP3009-150-20	20A	900W	300V	FTP3009-300-10	10A	900W
	FTP3015-150-20	20A	1500W		FTP3015-300-10	10A	1500W
Voltage	Model number	Current	Power	Voltage	Model number	Current	Power
600V	FTP3009-600-5	5A	900W	---	---	---	---
	FTP3015-600-5	5A	1500W			---	---

| Purchase information

Options 1

Name	Model or specification	Instructions
Composite signal port option	Suffix F	
CAN interface option	Suffix N	
Battery load anti-backfilling device option	Suffix D	Models other than 40V
GPIO interface	FT7130	RS232 to GPIO

| specification Table

Specification Table -1

Specification Table -1					
Model	FTP3009-40-80	FTP3009-80-40	FTP3009-150-20	FTP3009-300-10	FTP3009-600-5
Voltage	0 to 40V	0 to 80V	0 to 150V	0 to 300V	0 to 600V
Current	0 to 80A	0 to 40A	0 to 20A	0 to 10A	0 ~ 5A
Power	900W				
Model number	FTP3015-40-80	FTP3015-80-40	FTP3015-150-20	FTP3015-300-10	FTP3015-600-5
voltage	0 to 40V	0 to 80V	0 to 150V	0 to 300V	0 to 600V
Current	0 to 80A	0 to 40A	0 to 20A	0 to 10A	0 ~ 5A
Power	1500W				
Voltage Programming					
Resolution	16Bits				
Precision	0.1% + 0.1% F.S.				
Current Programming					
Resolution	16Bits				
Precision	0.1%+0.2% F.S.				
External analog programming					
Control voltage	0 to 5V corresponds to 0 to 100%F.S.				
Voltage accuracy	0.2% F.S.				
Current accuracy	0.5% F.S.				
Analog output					
Output voltage	0 ~ 100%F.S corresponds to 0 ~ 5V.				
Voltage accuracy	0.5% F.S.				
Current accuracy	0.5% F.S.				
Linear adjustment rate					
Voltage	0.01% + 0.01% F.S.				
Current	0.02% + 0.01% F.S.				
Load adjustment rate					
Voltage	0.01% + 0.05% F.S.				
Current	0.02% + 0.1% F.S.				
Voltage measurement					
Resolution	16Bits				
Precision	0.1% + 0.1% F.S.				
Current measurement					
Resolution	16Bits				
Precision	0.1% + 0.2% F.S.				
Output noise & Ripple					

Ripple voltage (p-p)	60mV	60mV	80mV	150mV	300mV
Ripple voltage (rms)	10mV	20mV	20mV	30mV	60mV
Slope					
Voltage	5V/ms (max)				
Current	2A/ms (max)				
OVP Settings					
Scope	0 to 110%F. S.				
Precision	1%F. S.				
Transient response	Typical value 1ms, load change 50%, time required for voltage to return to accuracy range				
Efficiency	0.9 (Typical)				
Communication interface	RS232 and LAN				
Input	190VAC ~ 265VAC, frequency 47Hz ~ 63Hz, PF: 0.99 (Typical)				
Operating temperature	0℃ ~ 40℃				
Storage temperature	-20℃ ~ 70℃				
Use altitude	< 2000m				
Dimension	215 (W) x 88 (H) x 452.5 (D)mm				
Weight	7kg				

| Dimension Drawing

