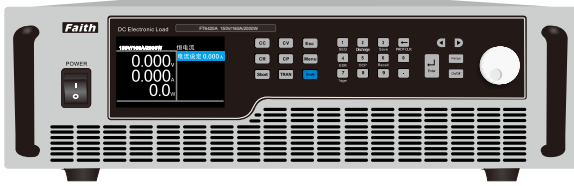


FT6400A Series

Medium power electronic load

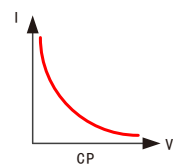
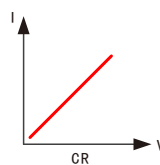
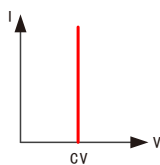
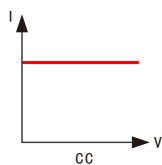


Characteristic

- Power range: 1200W/2000W/3000W;
- Voltage range: 150V, 600V;
- Battery capacity and internal resistance test function;
- Analog short-circuit function;
- Convenient and practical OCP test function;
- Support analog programming function;
- 20kHz dynamic test function, can set up and down slope;
- Time measurement, (Vpk+/-) measurement function;
- Powerful sequence test function, support a variety of mode test, single step test time up to 24 hours;
- Over voltage/over current/over power/over temperature/polarity reverse and other all-round intelligent protection functions;
- Rich SCPI commands, convenient for the establishment of intelligent test platform and secondary development;
- Istandard with complete functions of the upper computer software;
- Intelligent fan control to reduce noise;
- Provides RS232, LAN communication interface.

Constant state function

FT6400 series electronic load has four test modes of constant current, constant voltage, constant resistance and constant power, which can meet a wide range of test requirements. For example, constant current and constant resistance modes can be used to test whether the output voltage of a voltage source maintains a stable output under different load conditions. For battery chargers and car charging piles, the constant voltage mode can change the output voltage of the charger and charging pile to check whether the output current is correct.



Summary

The FT6400 series adopts a modular design with rich features and strong adaptability, featuring high reliability and high maintainability. Mainly used in: power battery, medium and high power DC power supply, DC generator and other power electronic testing field.

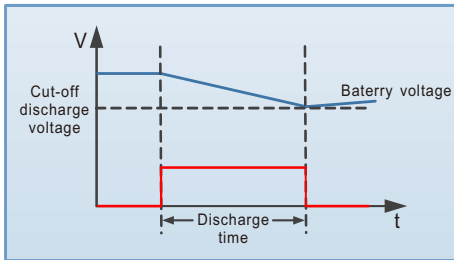
The FT6400 electronic load provides a series of protection functions for over current, over voltage, over power, over temperature, and voltage inverse equality, as well as Von, Voff and programmable protection functions for the device under test. These features greatly improve the reliability of the product and are a trusted product for the integration of engineering test and automated test systems.

Application field

- Discharge test of power batteries, lead-acid batteries and fuel cells;
- BMS and battery protection device test;
- Testing of DC charging piles, charging modules, vehicle chargers, A/D power converters and other power electronic power devices;
- Test high-power switching power supplies, UPS power supplies, communication power supplies, and server power supplies;
- Virtual load test of solar arrays and industrial motors.

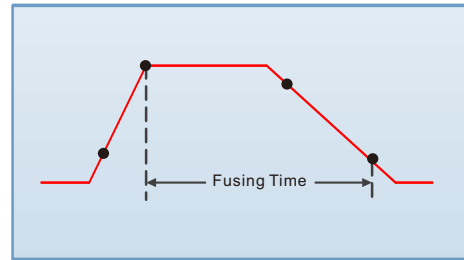
Time measurement

FT6400 series electronic load with time measurement function. By capturing the external switching signal, combined with the switching signal and the voltage and current signal, the response and operation time of the system and the pulse width of the pulse current can be measured. It is mainly used to measure the on-off time, holding time, rising edge and falling edge time of the power supply, as well as the fuse fuse time and circuit breaker response time.



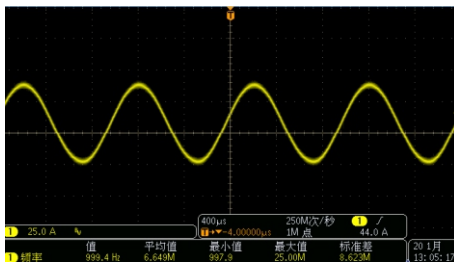
Battery test

The internal resistance and capacity of battery are important indexes for evaluating battery parameters. To facilitate testing, the FT6400 series loads provide battery testing capabilities, including battery resistance testing and battery capacity testing. This function uses constant current discharge. During the discharge process, the discharge quantity, discharge capacity and discharge time are recorded.

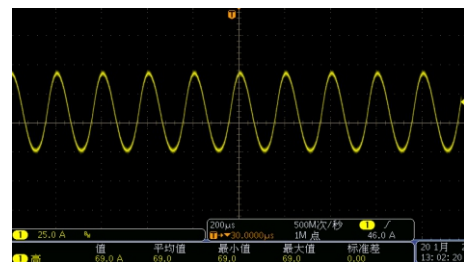


External simulation programming

The FT6400 series has external analog programming capabilities. Other devices can continuously control the load via an external voltage signal (DC or AC). The external voltage signal of 0 ~ 10V corresponds to 0 ~ 100% full scale on-load current. This function can also be used for various complex band carrier shape tests.



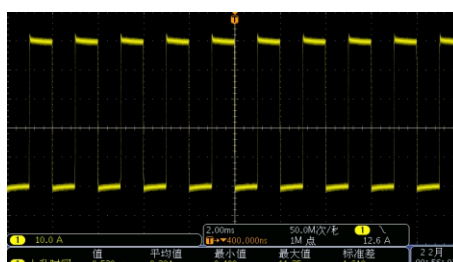
1kHz sine wave



5kHz sine wave

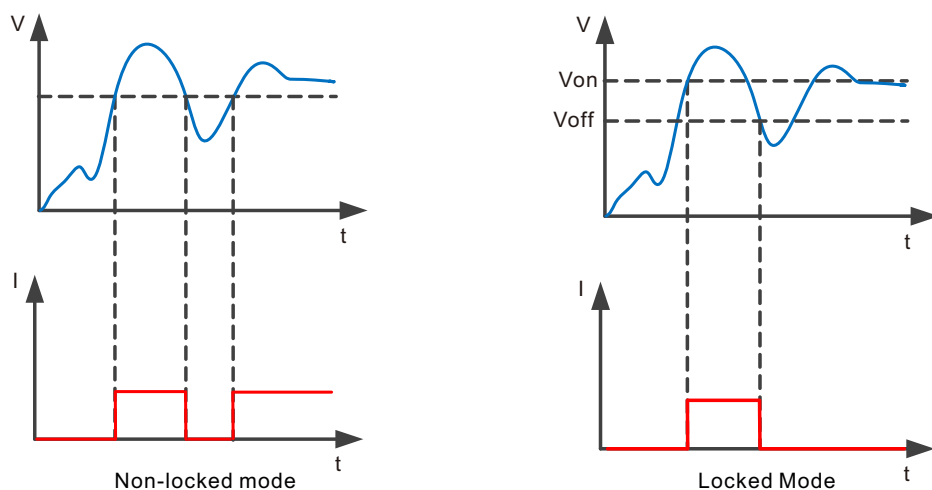
Dynamic function

To meet the growing demand for high-speed testing, the FT6400 series of electronic loads offers high-speed programmable dynamic testing capabilities (current dynamic and resistance dynamic testing). Dynamic testing allows users to set load high/low level, T1/T2 time and switch slope up to 10A/us. This function is often used to test the dynamic characteristics of the power supply. In order to adapt to the needs of different occasions, the dynamic function includes three modes: continuous, pulse and flip. Continuous mode provides on-load frequencies up to 20kHz; In pulse and flip modes, trigger signals can be received to produce on-load changes, allowing you to test at will.

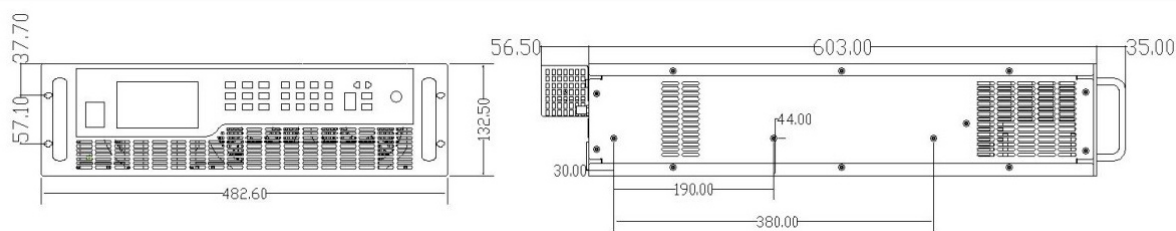


Protection function

FT6400 series provides over voltage, over current, over power, over temperature, voltage inverse equality protection function. In addition, the user can set the voltage, current, power protection value according to the need. When the output voltage of the device under test rises or falls slowly, the Von and Voff functions can be enabled. To meet more test requirements, Von on-load voltage supports both locked and non-locked modes. The full range of protection functions ensure the reliability of the product, which is a reliable product for engineering testing and automatic testing systems.



Dimension picture



Dimension of FT6412A~FT6431A models

Ordering information

Model	Specification	Height
FT6412A	150V/120A/1200W	3U
FT6413A	600V/30A/1200W	3U
FT6420A	150V/160A/2000W	3U
FT6421A	600V/60A/2000W	3U
FT6430A	150V/240A/3000W	3U
FT6431A	600V/90A/3000W	3U

* Height does not include footrest height;

* Optional test cables and other optional parts, the relevant specifications and models are detailed in the "Optional Accessories" section of this manual.

Specification parameters

Model	FT6412A	FT6413A	FT6420A	FT6421A	FT6430A	FT6431A
Voltage	150V	600V	150V	600V	150V	600V
Current	120A	30A	160A	60A	240A	90A
Power	1200W	1200W	2000W	2000W	3000W	3000W
Minimum operating voltage	2V@120A	5V@30A	2V@160A	5V@60A	2V@240A	5V@90A
Constant current						
Range	12A/120A	3A/30A	16A/160A	6A/60A	24A/240A	9A/90A
Resolution	0.2mA/2mA	0.05mA/0.5mA	0.3mA/3mA	0.1mA/1mA	0.4mA/4mA	1.5mA/15mA
Low precision	0.1%+0.15%F. S.					
High precision	0.1%+0.15%F. S.					
Constant voltage						
Range	30V/150V	120V/600V	30V/150V	120V/600V	30V/150V	120V/600V
Resolution	0.5mV/2.5mV	2mV/10mV	0.5mV/2.5mV	2mV/10mV	0.5mV/2.5mV	2mV/10mV
Low precision	0.05%+0.1%F. S.					
High precision	0.05%+0.1%F. S.					
Constant power *2						
Range	0~1200W	0~1200W	0~2000W	0~2000W	0~3000W	0~3000W
Resolution	20mW	20mW	40mW	40mW	60mW	60mW
Precision	0.5%+1%F. S.					
Constant resistance *2*3						
Low range	0.1~75Ω	1.5~1200Ω	0.08~50Ω	0.8~600Ω	0.05~35Ω	0.55~400Ω
High range	0.48~375Ω	7.5~6000Ω	0.4~250Ω	4~3000Ω	0.24~180Ω	2.6~2000Ω
Resolution	16 bits					
Low precision	0.35%+0.05S	0.35%+0.003S	0.35%+0.08S	0.35%+0.006S	0.35%+0.1S	0.35%+0.009S
High precision	0.35%+0.01S	0.35%+0.0004S	0.35%+0.02S	0.35%+0.0008S	0.35%+0.03S	0.35%+0.0016S
Slope						
Range	0.0003~3A/us	0.0001~1A/us	0.0004~4A/us	0.0002~2A/us	0.0006~6A/us	0.0003~3A/us
Precision	(1±35%)* Setting value					
Measurement						
Voltage						
Range	30V/150V	120V/600V	30V/150V	120V/600V	30V/150V	120V/600V
Resolution	0.5mV/2.5mV	2mV/10mV	0.5mV/2.5mV	2mV/10mV	0.5mV/2.5mV	2mV/10mV
Precision	0.05%+0.05%F. S.					
Current measurement						
Range	12A/120A	3A/30A	16A/160A	6A/60A	24A/240A	9A/90A
Resolution	0.2mA/2mA	0.05mA/0.5mA	0.3mA/3mA	0.1mA/1mA	0.4mA/4mA	1.5mA/15mA
Precision	0.1%+0.1%F. S.					
Temperature						
Protection temperature	85℃					
Operating temperature	0~40℃					
Full power operating temperature	0~25℃					
Other specification						
Weight	20kg	20kg	24kg	24kg	28kg	28kg
Communication interface	RS232、LAN					
Display interface	TFT Chinese and English display					
Dimension(mm)	483(W)×133(H)×600(D)					