

IT8500+ Programmable DC Electronic

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Consistent price/Updated performances

Up to 10KHZ transient speed
Adjustable rising/falling slope
updated CW/CR control circuit
Super-speed and accurate digital measurement: up to 40KHZ
High communication speed 200Hz/s

Your Best Power Solution

ITECH ELECTRONIC CO.,LTD.



ITECH ELECTRONICS

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About ITECH

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ITECH is a member of the B+K Precision group, the fourth most recognized instrument brand in the USA. ITECH is devoted to research and develop in the field of power supply's test and measurement. The company specialized over the years and is skilled in producing high power electronic testing systems, high-performance automated testing systems, power supplies and electronic loads.

ITECH products are widely used by enterprises in all fields. Products are well known for high performance & quality and are exported to over thirty countries in Europe, North America and Asia.

Quality Policy

ITECH always insists the principle to research and develop the highest technical products and provide you the best performance through continuously improvement.

Sales and Service

ITECH provides you the best sales and after-sales service in China, America, Europe and Asia.

Vision

ITECH aims at to satisfy the customers different testing requests. We will continuously devote to the manufacturing and R&D of power supply and electronic loads. Meanwhile, we will provide you the best service on the side of excellent technology and worldwide sales network.

Our customer

ITECH products are well known for its excellent performance and quality. Our major customers includes: ABB, Bosch, Intel, LG, Nokia, Siemens, Sony, Fuji, Volkswagen, Ford, General motors, Sony-Ericsson, Emerson, Foxconn, Tsing-Hua university etc.



We have distributors in global and many places of China. If you need local service, please find related informations from our website www.itechate.com or directly contact with us.

IT8500+ Programmable DC Electronic Load



IT8500+

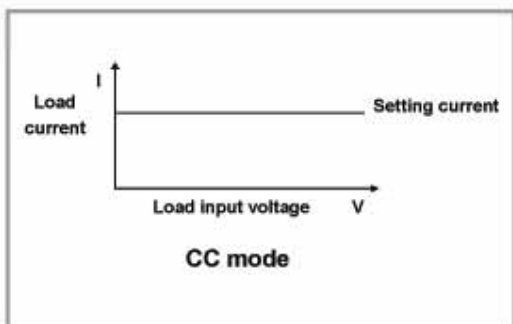
Programmable DC Electronic Load

- VFD display
- Dynamic mode: up to 10KHZ
- Resolution of voltage and current:0.1mV/0.1mA
- Measuring speed of voltage and current: up to 40KHZ
- Adjustable rising and falling slope
- With rotary coding switch
- Remote sense function
- Battery test function
- OCP test
- OPP test
- Short mode
- Memory capacity:100 groups
- Intelligent fans cooling
- Built-in Buzzer alarm
- Set the high-low limits according to the test parameters,judge the test result automatically to see if exceed the specification
- Four working modes: CC/ CV/ CR/ CW
- Support RS232/USB/RS485 communication interface(optional)

IT8500plus series are single-input programmable DC electronic loads,with communication interface.It can provide you multiple solutions depending on different testing requests.Meanwhile,ITECH will offer a monitoring software which will enable your operation easier if the customer purchase optional communication cable.

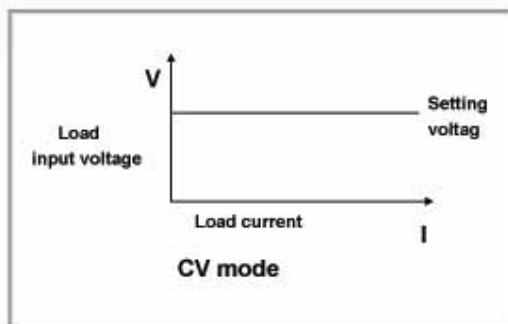
Constant Current Mode(CC)

In CC mode, the electronic load will sink a constant current, regardless of the voltage at its terminals.



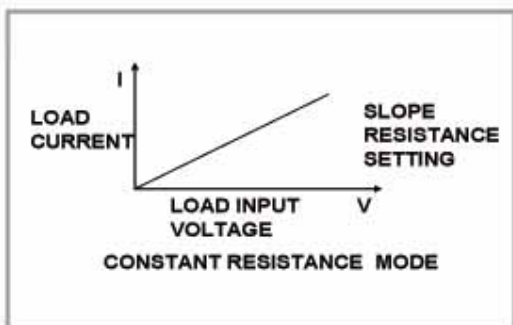
Constant Voltage Mode(CV)

In CV mode, the electronic load will cause a constant voltage to appear at its terminals.



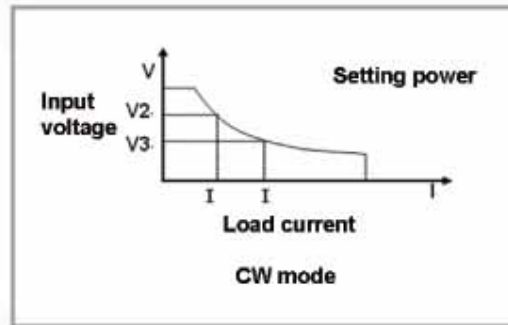
Constant Resistance Mode(CR)

In CR mode, the electronic load will behave as a fixed resistance value. As shown below, the electronic load will linearly change the current according to the input voltage.



Constant Power Mode(CW)

In CW mode, the electronic load will cause a constant power to be dissipated in the load. As shown below, the input current is decreasing with rising of the input voltage, while power value is constant.



Transient operation

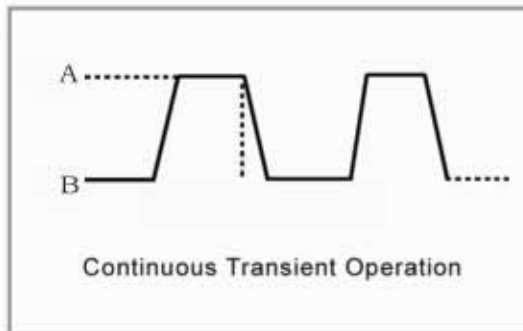
The transient test allows switching between two different load values. A common application is to test the dynamic characteristics of DC source. To active dynamic operation, press +2(tran) on the front panel. Related parameters need to be set: A level, B level, time width (only in pulse mode), frequency, duty and running mode (Continuous/Pulse/Toggled). If in CC dynamic mode, customer also needs to set current rising and falling slope.

There are three different types of transient operation: continuous, pulse, toggled.



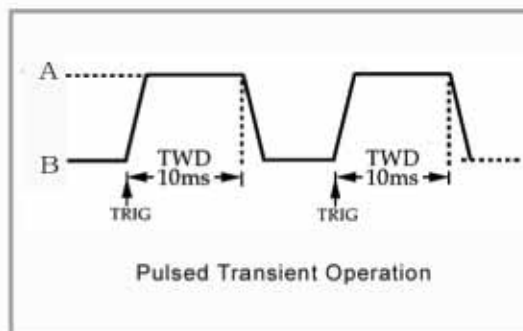
Continuous Mode

In continuous transient operation, the load is continuously switched between two load values. An example is shown in the following figure:



Pulsed Mode

In pulse operation, the load operates at the A value that has been entered until a trigger is received. At the trigger, the load switches to the B value and stays at that level for the B timing value. Then the load switches back to the A value and stays there until another trigger is received.



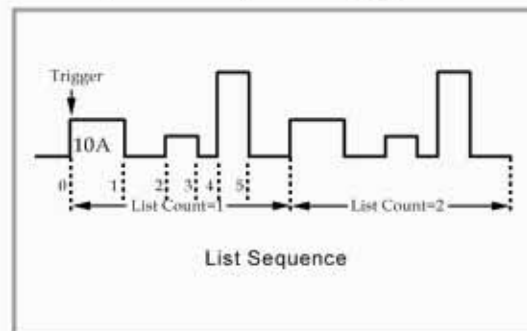
List mode

List mode allows you to generate a complex current sequence. Moreover, the mode change can be synchronized with an internal or external signal, to accomplish dynamic and precise test.

A list file includes following parameters:

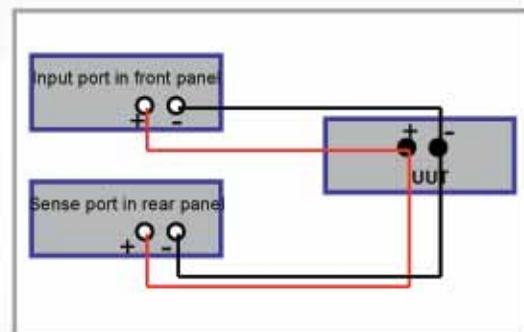
file name, step counts (range 2-84), time width of single step (0.00002s~3600s), step value and slope. The edited list file can be saved in nonvolatile memory, can be recalled easily. The DC load provides 7 nonvolatile registers to save list files setting for recall later.

In list mode, the DC load starts to run the list file once receiving a trigger signal, continues to run once receiving another trigger signal. To illustrate the use of a list, we'll create a list that runs the following constant current profile on a power supply:



Remote sense

In CC, CV, CR and CW mode, when load connects a power supply, it will cause large voltage-drop on the connection lines between tested instrument and terminals of Load. Using remote sensing, you can sense the voltage at the power supply's terminals, effectively removing the effect of the voltage drop in the connection wires. Wire connection diagram is as follows:



Battery test function

IT8500plus series products test the battery capability in cc mode.

Make a program to set the stop voltage. The discharge process of electronic load is terminated if the system checks the battery voltage is equal to the setting stop voltage or under a insecurity state.

In testing procedure, front panel will display the battery voltage, discharge current, discharge time and discharged capability.

IT8511+/IT8512+技术参数表

Model	IT8511+	IT8512+			
Rated value (0~40 C)	Input voltage 0~120V Input current 0~30A Input power 150W Minimum operation voltage 0.14V at 3A	0~120V 0~30A 0~30A 1.4V at 30A	0~120V 0~30A 300W 0.12V at 3A 1.2V at 30A		
CV mode	Range Resolution Accuracy	0~18V 1mV ±(0.05%+0.02%FS)	0~120V 10mV ±(0.05%+0.025%FS)	0~18V 1mV ±(0.05%+0.02%FS)	0~120V 10mV ±(0.05%+0.025%FS)
	Range	0~3A	0~30A	0~3A	0~30A
	Resolution	0.1mA	1mA	0.1mA	1mA
CC mode	Accuracy	±(0.05%+0.05%FS)	±(0.05%+0.05%FS)	±(0.05%+0.05%FS)	±(0.05%+0.05%FS)
	Range	0.05Ω~10Ω	10Ω~7.5KΩ	0.05Ω~10Ω	10Ω~7.5KΩ
CR mode	Resolution		16bit		
	Accuracy	0.01%+0.08S	0.01%+0.0008S	0.01%+0.08S	0.01%+0.0008S
CW mode	Range	150W		300W	
	Resolution		10mW		
	Accuracy		0.1%+0.1%FS		
Transient mode		CC mode		CC mode	
	T1 & T2 Accuracy	50μS~3800S /Res:1 uS 5μS+100ppm			
	Rising/falling slope	0.0001~0.3A/μS	0.001~1.5A/μS	0.0001~0.3A/μS	0.001~1.5A/μS
		Measuring range			
Readback voltage	Range	0~18V	0~120V	0~18V	0~120V
	Resolution	0.1mV(<10V)1mV(>10V)	1mV(<100V)10mV(>100V)	0.1mV(<10V)1mV(>10V)	1mV(<100V)10mV(>100V)
	Accuracy	±(0.025%+0.025%FS)			
Readback current	Range	0~3A	0~30A	0~3A	0~30A
	Resolution	0.1mA	1mA	0.1mA	1mA
	Accuracy	±(0.05%+0.05%FS)			
Readback power	Range	150W		300W	
	Resolution		10mW		
	Accuracy	±(0.1%+0.1%FS)		±(0.1%+0.1%FS)	
		Protection range			
OPP		~160W		~320W	
OCP		~3.3A	~33A	~3.3A	~33A
OVP			~125V		
OTP			~85 C		
		Specification			
short	Current (CC)	~3.3/3A	~33/30A	~3.3/3A	~33/30A
	Voltage (CV)		0V		
Input impedance	Resistance (CR)	~45mΩ		~40mΩ	
		150KΩ		150KΩ	
dimension	214.5mm*88.2mm*354.6mm				

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