



IT8700 ELECTRONIC LOAD



Feature

- Removable channels: increase system flexibility
- Dynamic Power distribution function for dual channels, save your cost
- Dual-channel module displays every channel information simultaneously
- Measure short-circuit peak current value
- Up to 25KHZ transient mode and 100KHZ List mode
- Measurement resolution :0.1mV,0.01mA(10uA)
- Measurement speed: up to 1KHZ
- Auto-test function
- Adjustable slew rate
- Support several electronic loads working at the same time
- A unit with single mainframe can take up to 8 channels, with extended mainframe up to 16 channels
- Output resolution up to 16 bits ,voltmeter and ammeter reach 5 1/2 bits
- Constant current(CC),constant voltage(CV),constant resistance(CR) mode
- Highlight VFD display for both mainframe and modules
- Support USBTMC/SCPI communication protocol
- Output terminals on the rear panel make wiring easy and keep front panel clean
- Simulate the transient response and export measured values in time
- Built-in waveform generator and LIST mode
- Ethernet ,GPIB ,USB ,RS232 interfaces

IT8700 Electronic Load

IT8700 series programmable DC electronic load can take 1-16 channel loads with a single unit. Sampling rate is up to 25KHZ, which improves your test efficiency. With high resolution and accuracy, IT8700 ensure you test accurately. CC, CV, CR, remote sensing, short-circuit and transient mode make your make tests conveniently.





IT8700 programmable DC electronic loads, applied in: test of AC/DC power supply with one or more output, DC/DC converter, chargers, Batteries and power category electronic components. It supply efficient means for researching, manufacturing, quality control and so on. Modular design make you can install different modules into the mainframe, and control via front panel keypad, Ethernet, USB, RS232 and GPIB standard interface.

IT8700 programmable DC electronic load have 6 models of modules, with power (from 150W to 600W), current (up to 120A), voltage (up to 500V). Every load module is grounded separately to avoid short circuit damage. 5 1/2 digit current and voltage measurement function. Master/slave design allows all modules to work together. All loads can work in CC, CV, CR mode.

IT8700 programmable DC electronic load can simulate many kinds of transient condition. You can edit load waveform by editing voltage, current, slew rate and width. With the capacity of saving up to 100 groups test parameters and status, the system can recall at any time.

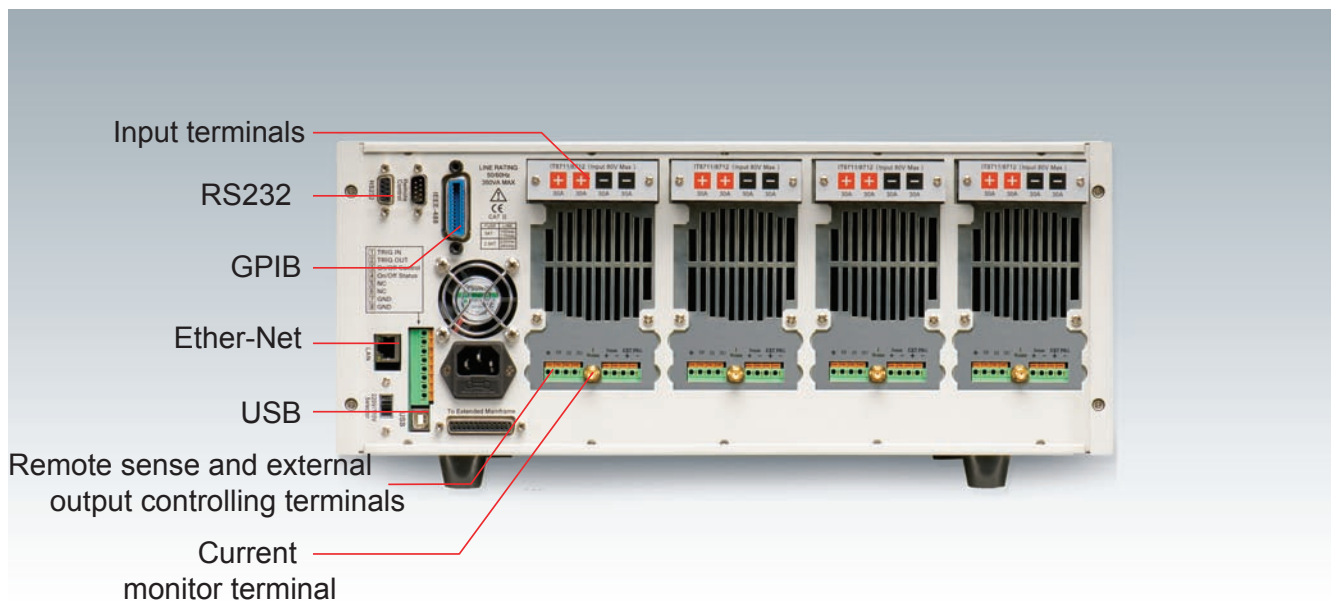
IT8700 programmable DC electronic load applies high-precision circuit with multi-range and 5 1/2 digit. you can test and adjust line-voltage, and simulate short-circuit testing easily via front panel keyboard. Moreover, IT8700 provide optional remote controller for the automatic production line.

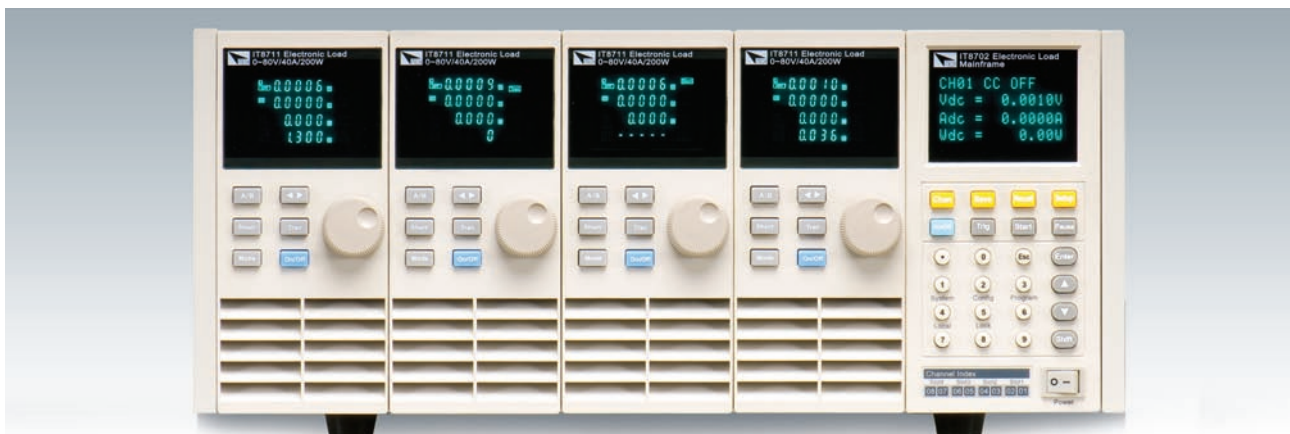
IT8700 programmable DC electronic load have self-test system as well as OCP, OVP, OPP, OTP and reverse voltage protection to ensure the reliability for engineering-test and auto-test systems.

IT8700 Electronic load

IT8711	80V/40A/200W
IT8712	80V/60A/300W
IT8732B	500V/15A/300W
IT8733	80V/120A/600W
IT8733B	500V/30A/600W
IT8722	80V/30A/Max200W-CH1 80V/40A/Max200W-CH2 *1
IT8702	Mainframe(include 4 interfaces)
IT8703	Extended mainframe (include 4 interface)

*1: the total power of dual channel for IT8722 is 300W.





1. Freely-configured system structure

IT8700 programmable DC electronic load, there is a High-performance microprocessor in every modules and mainframe. It has high measurement speed because of parallel architecture. The system controls modules synchronously, and can also test multi-output batteries synchronously.

2. Module design

With removable module design, you can choose suitable load modules to combine or recombine the system according to your requirement. This design suits testing power supply with many outputs especially.

3. Auto-test

When applied in automatic production testing, you can judge whether the test parameters of tested objects are within the Specification limits and adjust according to the GO/NG output states.

4. Powerful communication interfaces

IT8702/IT8703 mainframe has GPIB/Ethernet/USB/RS232 complete communication interfaces. In appliance of the automatic testing system, you can carry out data communication through SCPI/VISA/USB TMC standard communication protocols to control modules' testing.

5. The best resolution and accuracy

Compared to similar products, IT8700 series have the best feature (0.1mV/0.01mA) which help you get high accuracy data. Moreover, up to 1KHZ measurement speed help you test rapidly and accurately.

Firstly apply the dynamic power distribution function

IT8722 firstly apply the technology that one module takes two channels with dynamic distribution power. User can adjust the power of the two channels according to the testing requirement (total power $\leq 300W$).

6. High-speed transition and LIST mode

LIST mode (up to 100KHZ) with many built-in waveforms lets you generate complex sequences of input changes.

7. Dynamic power distribution mode

Usually, one module dissipates high power while another dissipates low power in battery testing. IT8722 allows you to distribute the power among all slots arbitrarily (150W/150W)-(100W/200W) within the total power (300W) helping you make full use of the load's power.

IT8712B and IT8713B can measurement voltage up to 500V.

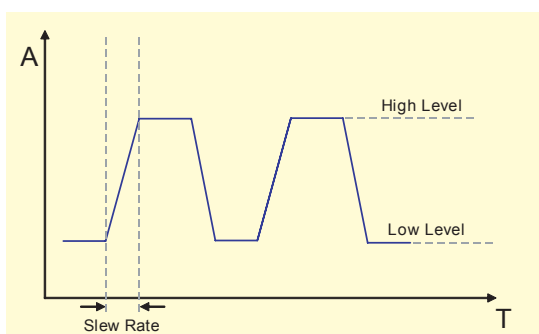
IT8713 sinks current max to 120A which is the most effective testing instrument in high power testing.



Transient operation:

Transient operation enables the module to periodically switch between two load-levels. A power supply's regulation, transient characteristic can be evaluated by monitoring the supply's output voltage under varying combinations of load levels, frequency, duty cycle and slew rate. IT8700 can supply transient operation not only in CC mode, but also in CV, CR mode.

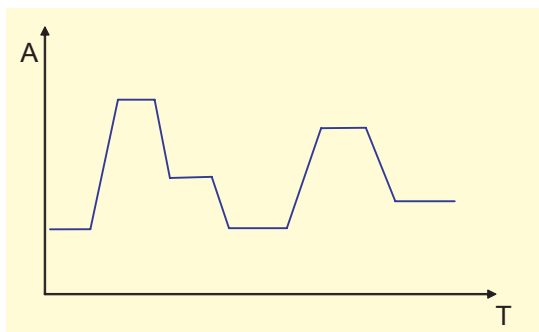
Transient operation can be used in test integral response of the circuit, e.g. the current changes when the disk driver run and stop. Transient operation can simulate these condition.



IT8700 transient operation not only works in CC mode but also in CR

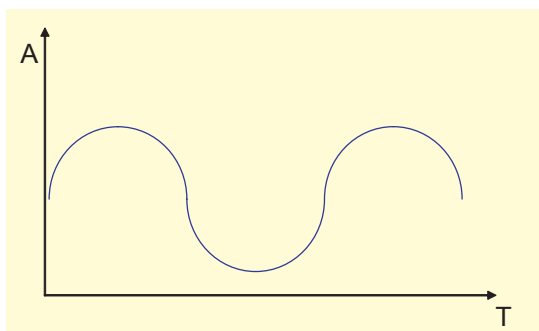
LIST mode:

Compared to transient mode, LIST mode can help you to rapidly complete any complex current changes mode, not just between two levels. IT8700 has LIST mode, it can actually complete complex test with several levels.



IT8700 transient mode and LIST mode has measurement speed up to 100KHZ.

Built-in waveform mode



IT8700 have many built-in load waveforms which help you to complete complex tests rapidly.



		IT8711		IT8712		IT8732B		IT8733	
Input Rating	Power	200W		300W		300W		600W	
	Current	0-40A		0-60A		0-15A		0-120A	
	Voltage	0-80V		0-80V		0-500V		0-80V	
CC Mode	Range	0-4A	0-40A	0-6A	0-60A	0-3A	0-15A	0-12A	0-120A
	Resolution	0.1mA	1mA	0.1mA	1mA	0.1mA	1mA	0.1mA	1mA
	Accuracy	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.1%FS	0.1%+0.1%FS
CV Mode	Range	0-18V	0-80V	0-18V	0-80V	0-18V	0-500V	0-18V	0-80V
	Resolution	1mV	10mV	1mV	10mV	1mV	10mV	1mV	10mV
	Accuracy	0.05%+0.02%FS	0.05%+0.025%FS	0.05%+0.02%FS	0.05%+0.025%FS	0.05%+0.02%FS	0.05%+0.025%FS	0.05%+0.02%FS	0.05%+0.025%FS
CR Mode	Range	<18Ω	<7.5Ω	<18Ω	<7.5Ω	<18Ω	<7.5Ω	<18Ω	<7.5Ω
	Resolution	16bit	16bit	16bit	16bit	16bit	16bit	16bit	16bit
	Accuracy	0.01%+0.0008S	0.01%+0.0008S	0.01%+0.0008S	0.01%+0.0008S	0.01%+0.0008S	0.01%+0.0008S	0.01%+0.0008S	0.01%+0.0008S
V Measurement	Voltage	0-18V	0-80V	0-18V	0-80V	0-18V	0-500V	0-18V	0-80V
	Resolution	0.1mV	1mV	0.1mV	1mV	1mV	10mV	0.1mV	1mV
	Accuracy	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS
I Measurement	Current	0-4A	0-40A	0-6A	0-60A	0-3A	0-15A	0-12A	0-120A
	Resolution	0.01mA	0.01mA	0.01mA	0.1mA	0.01mA	0.1mA	0.1mA	1mA
	Accuracy	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.1%FS	0.1%+0.1%FS
W Measurement	Watt	100W	200W	100W	300W	100W	300W	100W	600W
	Resolution	1mW	10mW	1mW	10mW	1mW	10mW	1mW	10mW
	Accuracy	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS
Transition	T1&T2(CC)	10uS~16383uS/Res:1uS		10uS~16383uS/Res:1uS		10uS~16383uS/Res:1uS		10uS~16383uS/Res:1uS	
		1mS~16383mS/Res:1mS		1mS~16383mS/Res:1mS		1mS~16383mS/Res:1mS		1mS~16383mS/Res:1mS	
		1S~3600S/Res:1S		1S~3600S/Res:1S		1S~3600S/Res:1S		1S~3600S/Res:1S	
	Accuracy	1uS+100ppm		1uS+100ppm		1uS+100ppm		1uS+100ppm	
	Slew Rate	0.0001~0.25A/uS 0.001~2.5A/uS		0.0001~0.35A/uS 0.001~2.5A/uS		0.0001~0.5A/uS 0.001~1A/uS		0.0001~0.75A/uS 0.001~7.5A/uS	
Short Circuit	Current(CC)	≒ 4.4A	≒ 44A	≒ 6.6A	≒ 66A	≒ 3.3A	≒ 18A	≒ 13.2A	≒ 132A
	Voltage(CV)	0V		0V		0V		0V	
	Resistance(CR)	≒ 35mΩ		≒ 35mΩ		≒ 220mΩ		≒ 20mΩ	
Temperature	Operating	0~40℃		0~40℃		0~40℃		0~40℃	
	Nonoperating	-10℃~60℃		-10℃~60℃		-10℃~60℃		-10℃~60℃	
Dimention	W*H*D(mm) 82*183*573								
Weight	Kg	5							

		IT8733B		IT8722			
Input Rating	Power	600W		200W		200W	
	Current	0-30A		0-30A		0-30A	
ii	Voltage	0-500V		0-80V		0-80V	
CC Mode	Range	0-3A	0-30A	0-3A	0-30A	0-3A	0-30A
	Resolution	1mA	10mA	0.1mA	1mA	0.1mA	1mA
ii	Accuracy	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS
CV Mode	Range	0-18V	0-500V	0-18V	0-80V	0-18V	0-80V
	Resolution	1mV	10mV	1mV	10mV	1mV	10mV
ii	Accuracy	0.05%+0.02%FS	0.05%+0.025%FS	0.05%+0.02%FS	0.05%+0.025%FS	0.05%+0.02%FS	0.05%+0.025%FS
CR Mode	Range	<18Ω	<7.5Ω	<18Ω	<7.5Ω	<18Ω	<7.5Ω
	Resolution	16bit	16bit	16bit	16bit	16bit	16bit
	Accuracy	0.01%+0.0008%S	0.01%+0.0008S	0.01%+0.0008S	0.01%+0.0008S	0.01%+0.0008%S	0.01%+0.0008S
V Measurement	Voltage	0-18V	0-500V	0-18V	0-80V	0-18V	0-80V
	Resolution	1mV	10mV	0.1mV	1mV	0.1mV	1mV
ii	Accuracy	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS	0.025%+0.025%FS
I Measurement	Current	0-3A	0-30A	0-3A	0-30A	0-3A	0-30A
	Resolution	0.01mA	0.1mA	0.01mA	0.1mA	0.01mA	0.1mA
	Accuracy	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS	0.05%+0.05%FS
W Measurement	Watt	100W	600W	100W	200W	100W	200W
	Resolution	1mW	10mW	1mW	10mW	1mW	10mW
ii	Accuracy	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS	1%+0.1%FS
Transition	T1&T2(CC)	10uS~16383uS/Res:1uS		10uS~16383uS/Res:1uS		10uS~16383uS/Res:1uS	
		1mS~16383mS/Res:1mS		1mS~16383mS/Res:1mS		1mS~16383mS/Res:1mS	
		1S~3600S/Res:1S		1S~3600S/Res:1S		1S~3600S/Res:1S	
	Accuracy	1uS+100ppm		1uS+100ppm		1uS+100ppm	
	Slew Rate	0.0001~0.8A/uS 0.001~1.9A/uS		0.0001~0.8A/uS 0.001~1.9A/uS		0.0001~1A/uS 0.001~2.5A/uS	
Short Circuit	Current(CC)	≒ 3.3A ≒ 33A		≒ 3.3A ≒ 33A		≒ 3.3A ≒ 33A	
	Voltage(CV)	0V		0V		0V	
	Resistance(CR)	≒ 220mΩ		≒ 60mΩ		≒ 60mΩ	
Temperature	Operating	0~40℃		0~40℃		0~40℃	
	Nonoperating	-10℃~60℃		-10℃~60℃		-10℃~60℃	
Dimention	W*H*D(mm)	164*183*573 82*183*573					
Weight	Ka	10		5			