ITECH
YOUR POWER TESTING SOLUTION

Product

IT8600 AC / DC ELECTRONIC LOAD

Features

IT8600

AC / DC ELECTRONIC LOAD

Your Power Testing Solution

IT8600
AC/DC ELECTRONIC LOAD

IT8600 series AC/DC electronic loads has power range 0~14.4 kVA, power can extend up to 43.2KVA by paralleling, and adjustable frequency is 45 Hz ~ 450 Hz. The unique oscilloscope waveform display function of IT8600's can display input voltage & current as waveform. It is equipped with measurement modes for different parameters such as inrush current, peak value, effective value, PF (power factor). Voltage harmonics measurement capacity is up to 50th. The built-in GPIB, LAN and USB communication interfaces are for reliable and fast control. IT8600 is the perfect solution for testing UPS, inverters, AC power supplies and relevant AC electronic components etc.

Features

- Frequency range: 45 Hz~450 Hz
- Power range: 0~14.4 kVA
- Voltage range: 50~420 Vrms, 15~260 Vrms
- Current range: 0~1 60 Arms
- Parallel connection/ three-phase control, power can extend up to 43.2KVA
- 7'' LCD screen
- Oscilloscope function supporting display of voltage and current waveform
- High-speed AD sampling, real-time capture waveform
- Measure Vrms, Vpk, Vdc, Irms, Ipk, Idc, W, VA, VAR,CF, PF and FREQ
- Measures THD (V) up to 50th Harmonic
- AC electronic load: CC/CR/CP mode
- DC electronic load: CC/CR/CP/CV mode *1
- External 0~10 V analog control input, voltage and current analog monitoring function *2
- OTP, OCP, OVP, UVP and OPP protection function
- GPIB, LAN and USB communication interfaces and external USB flash disk interface

*1 Only IT8615/IT8615L have this function
*2 Only IT8615 and IT8615L have external analog function

Model	Voltage	Current	Power	Output
IT8615	50~420 Vrms	20 Arms	1800 VA	1φ
IT8615L	15~260 Vrms	20 Arms	1800 VA	1φ
IT8616	50~420 Vrms	40 Arms	3600 VA	1φ
IT8617	50~420 Vrms	60 Arms	5400 VA	1φ or 3φ
IT8624	50~420 Vrms	80 Arms	7200 VA	1φ

Model	Voltage	Current	Power	Output
IT8625	50~420 Vrms	100 Arms	9000 VA	1φ
IT8626	50~420 Vrms	120 Arms	10.8 kVA	1φ
IT8627	50~420 Vrms	140 Arms	12.6 kVA	1φ
IT8628	50~420 Vrms	160 Arms	14.4 kVA	1φ

Applications

- UPS
- Inverter
- Frequency converter
- Generator
- AC power supply
- Electronic component

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IT8600 AC/DC Electronic Load

Display Multiple Parameters Simultaneously

IT8600 provides 7 inch LCD display screen, easy user interface. Give full consideration to engineers' requirements in different tests, IT8600 not only can display multiple parameters simultaneously,but also has diversified display modes for choice, such as waveform, histogram and list etc.

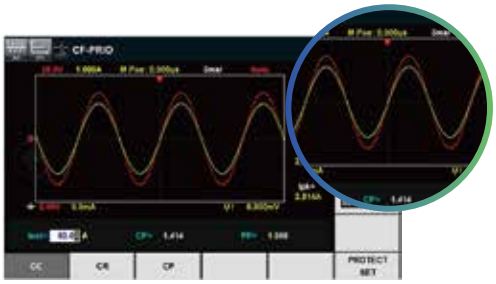
Harmonic Measuring And Analysis Function

BAR

LIST

IT8600 provides powerful data measurement function, which can not only support measurement of conventional parameters such as Vrms, Vpk, Vdc, Irms, Ipk, Idc, W, VA, VAR, CF, PF and Freq, but also provide unique voltage harmonic analysis function to verify the harmonic interference of the object (UPS, generators, etc.) to be measured over the grid. The harmonic measurement function supports analysis up to the 50th voltage harmonic and it can display the percentage of each harmonic analysis results in different forms.

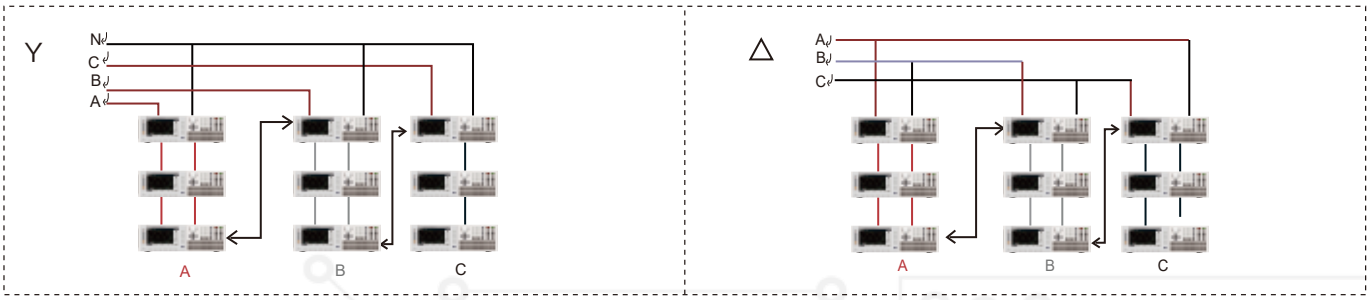
Oscilloscope Function



The most unique highlight of IT8600 lies in the oscilloscope display function, which can display the input voltage and current waveform of the device under test measured. Through the screenshot function key to save the current screen picture to peripheral storage disk by the front USB interface, easy for the second analysis.

Parallel/3-Phase Control

IT8600 provides parallel and 3-phase functions for three-phase and high-power applications, power can extend up to 43.2KVA after paralleling. In 3-phase applications, users can make Y or △ connection according to their specific requirements. IT8600 is available for AC 380V input to meet diverse test requirements.



I/V Monitor

IT8600 AC/DC electronic load is with I/V monitor and allow users to observe current and DUT output voltage through connecting to oscilloscope of BNC. The function is very useful for users to monitor the change of voltage and current by waveforms. Not only simplify the wiring, improve the measurement accuracy, but also save test cost without oscilloscope current probe.

* Only IT8615 and IT8615L have external analog function

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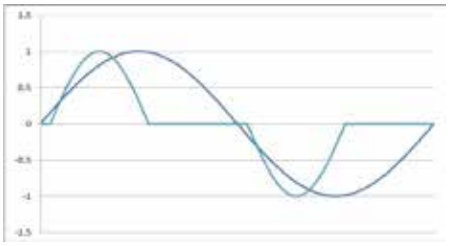
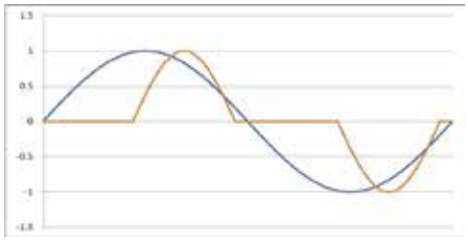
IT8600 AC/DC Electronic Load

Adjustable CF/PF Value

IT8600 has CC, CR and CP operation modes. In CC and CP operation modes, PF or CF or both are available for programming. Power factor range is 0~1 lead or lag, CF setting range is 1.414~5, besides CF and PF, IT8600 also has various settings modes for choice to realize actual current simulation.



CF=2 PF=0.6



CF=2 PF=-0.68

Short circuit simulation function

IT8600 AC/DC electronic load can simulate short circuit under DC load mode. The actual current value consumed under the short circuit state depends on the operating mode and current range of the current load. Users can press [Short] soft key to switch short circuit state. The max short circuit current is 120% current range under CC, CP and CR mode.

Under the CV mode, the short circuit corresponds to the rated voltage value of 0V *1.

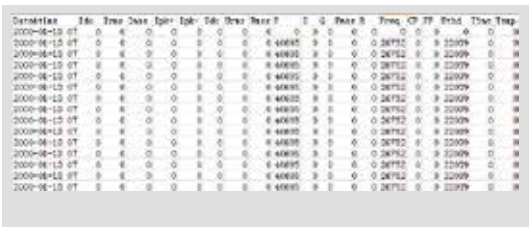
*1 Only IT8615 and IT8615L are with CV mode

Data logging function

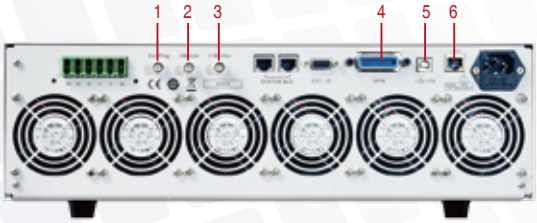
IT8600 series AC/DC electronic load can record all the data in the measurement process, users can press Log key to set the time interval for recording, and press the start key to start recording data, the current measured data is recorded from time to time, the data is saved to the external device storage disk. e.g. IT8615.csv

- Application: Battery discharge test

Test battery pack performance, draw voltage curve for single battery, plug the U disk before the test, press start key to record data, pull out the U disk after the test.



Abundant communication interface



1. Analog input terminal
2. Current monitor terminal
3. Voltage monitor terminal
4. GPIB interface
5. USB interface
6. LAN interface

* Take IT8615 for example

Parameters		IT8615	IT8615L	IT8616
		AC Section		
Rated parameter	Input voltage	50~420 Vrms , 600 V peak	15~260 Vrms , 360 V peak	50~420Vrms , 600V peak
	Current	0~20 Arms ,60 Apeak	0~20 Arms ,60 A peak	0~40Arms ,120Apeak
	Power	0~1800 VA	0~1800 VA	0~3600VA
	Frequency	45~450 Hz	45~450 Hz	45~450Hz
CC Mode *1	Range	0.1~20 Arms	0.1~20 Arms	0.1~40Arms
	Resolution	2 mA	2 mA	2mA
	Accuracy	±(0.1%+0.2%FS)	±(0.1%+0.2%FS)	±(0.1%+0.2%FS)
CR Mode *2	Range	3 Ω~2.5 KΩ	3Ω~2.5 KΩ	1.5Ω~1.25KΩ
	Resolution	16 bit	16 bit	16bit
	Accuracy	0.2% +0.01 S	0.2% +0.01 S	0.2% +0.01S
CP Mode	Range	1800 W	1800 W	3600W
	Resolution	0.4 W	0.4 W	0.4W
	Accuracy	0.5%+0.5% FS	0.5%+0.5% FS	0.5%+0.5%FS
Crest factor	Range	1.414~5.0	1.414~5.0	1.414~5.0
(CP,CC mode)	Resolution	0.005	0.005	0.005
	Accuracy	(0.5% / Irms) + 1% FS	(0.5% / Irms) + 1% FS	(0.5%*(1+2/9) / Irms) + 1% FS
Power factor	Range	0~1 phase lead or lag	0~1 phase lead or lag	0~1 phase lead or lag
	Resolution	0.001	0.001	0.001
		DC Section		
Input rating	voltage	10~ 600 V	10~ 360 V	10~ 600V
	current	0.1~20 A	0.1~20 A	0.1~40A
	power	0~1800 W	0~1800 W	0~3600 W
Operation modes		CC, CV, CR, CP	CC, CV, CR, CP	CC、CR、CP
Short-circuit simulation		Use the CC mode under the maximum power or maximum working current		
		Meter		
Current	Range	0~60 A	0~60 A	0~120A
	Resolution	1 mA	1 mA	1 mA
	Accuracy	0.1%+0.2%FS+0.1%*CF^2*KHZ	0.1%+0.2%FS+0.1%*CF^2*KHZ	0.2%+0.2%FS+0.2%*CF^2*KHZ
Voltage	Range	0~600 V	0~360 V	0~600V
	Resolution	10 mV	10 mV	10 mV
	Accuracy	0.1%+0.1%FS	0.1%+0.1%FS	0.1%+0.1%FS
		Meter (continue)		
Others		S(VA), Q(VAR), P(W), Ip+, Ip-, Freq, THDv, CF, PF, R, FFT		
		Other		
Voltage Monitor		±600 V/±10 V(Isolated)	±360 V±10 V(Isolated)	±600 V/±10 V(Isolated)
Current Monitor		±60 A/±10 V(Isolated)	±60 A±10 V(Isolated)	±120 A/±10 V(Isolated)
Protection		OCP、OVP、OPP、OTP	OCP、OVP、OPP、OTP	OCP、OVP、OPP、OTP
Interfaces		GPIB、USB、LAN	GPIB、USB、LAN	GPIB、USB、LAN
Dimension(W*H*D)		3U	3U	6U

*1 Typical value at 45 Hz-100 Hz

*2 Resistance accuracy: （ 1/(1/R+(1/R)*0.2%+0.01),1/(1/R-(1/R)*0.2%-0.01)
Test conditions： Voltage>10%FS, Current>10%FS

*3 Operating temperature： 0-40℃, Temperature coefficient: 100ppm/℃

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IT8600 AC/DC Electronic Load

Parameters		IT8617	IT8624	IT8625
AC Section				
Rated parameter	Input voltage	50~420Vrms , 600V peak	50~420Vrms , 600V peak	50~420Vrms , 600V peak
	Current	0~60Arms ,180Apeak	0~80Arms ,240Apeak	0~100Arms ,300A peak
	Power	0-5400W	0-7.2kVA	0-9kVA
	Frequency	45~450Hz	45~450Hz	45~450Hz
CC Mode *1	Range	0.1~60Arms	0.4~80Arms	0.1~100Arms
	Resolution	2mA	10mA	20mA
	Accuracy	±(0.1%+0.2%FS)	±(0.2%+0.2%FS)	±(0.5%+0.5%FS)
CR Mode *2	Range	1Ω~833KΩ	0.75Ω~625Ω	0.5Ω~500Ω
	Resolution	16bit	16bit	16bit
	Accuracy	0.2% +0.01S	0.2% +0.01S	0.2% +0.01S
CP Mode	Range	5400W	7.2kW	9kW
	Resolution	0.4W	1W	3W
	Accuracy	0.5%+0.5%FS	0.5%+0.5%FS	0.5%+0.5%FS
Crest factor	Range	1.414~5.0	1.414~5.0	1.414~5.0
(CP,CC mode)	Resolution	0.005	0.005	0.005
	Accuracy	(0.5%*(1+1/3) / Irms) + 1% FS	(2% / Irms) + 1% FS	(1.5% / Irms) + 1% FS
Power factor	Range	0~1 phase lead or lag	0~1 phase lead or lag	0~1 phase lead or lag
	Resolution	0.001	0.001	0.001
DC Section				
Input rating	voltage	10~ 600V	10~600V	10~600V
	current	0.1~60A	0.4~80A	0.1~140A
	power	0~5400W	0~7.2kW	0~9kW
Operation modes		CC、CR、CP	CC、CR、CP	CC、CR、CP
Short-circuit simulation		Use the CC mode under the maximum power or maximum working current		
Meter				
Current	Range	0~180A	0~240A	0~300A
	Resolution	1 mA	5mA	0.1A
	Accuracy	0.2%+0.2%FS+0.2%*CF^2*KHZ	0.1%+0.2%FS+0.1%*CF^2*KHZ	0.1%+0.2%FS+0.1%*CF^2*KHZ
Voltage	Range	0~600V	0~600V	0~600V
	Resolution	10 mV	10 mV	10 mV
	Accuracy	0.1%+0.1%FS	0.1%+0.1%FS	0.1%+0.1%FS
Meter (continue)				
Others		S(VA), Q(VAR), P(W), Ip+, Ip-, Freq, THDv, CF, PF, R, FFT		
Other				
Voltage Monitor		±600v/±10V(Isolated)	±600V/±10V(Isolated)	±600V/±10V(Isolated)
Current Monitor		±180A/±10V(Isolated)	±240A/±10V(Isolated)	±300A/±10V(Isolated)
Protection		OCP、OVP、OPP、OTP	OCP、OVP、OPP、OTP	OCP、OVP、OPP、OTP
Interfaces		GPIB、USB、LAN	GPIB、USB、LAN	GPIB、USB、LAN
Dimension(W*H*D)		15U	27U	27U

*1 Typical value at 45 Hz-100 Hz

*2 Resistance accuracy: （ 1/(1/R+(1/R)*0.2%+0.01), 1/(1/R-(1/R)*0.2%-0.01)

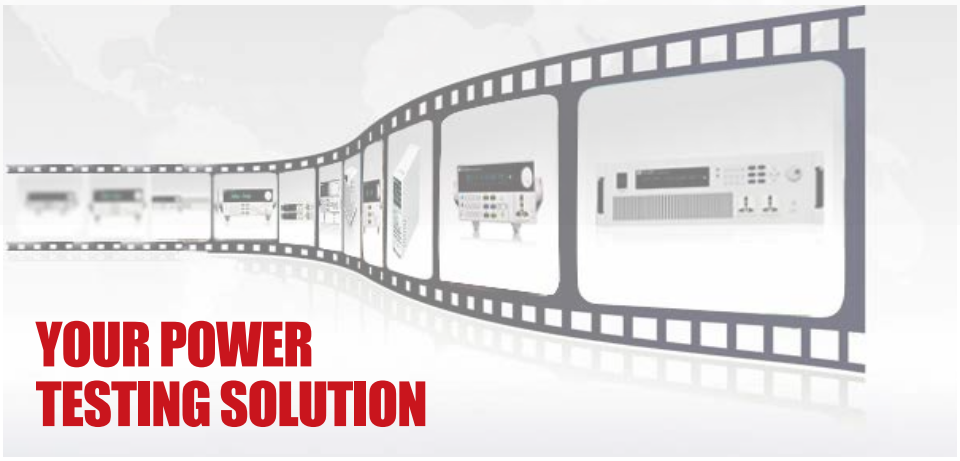
*3 Operating condition: Voltage>10%FS, Current>10%FS

Parameters		IT8626	IT8627	IT8628
AC Section				
Rated parameter	Input voltage	50~420Vrms , 600V peak	50~420Vrms , 600V peak	50~420Vrms , 600V peak
	Current	0~120Arms ,360Apeak	0~140Arms ,420A peak	0~160Arms ,420Apeak
	Power	0-10.8kVA	0-12.6kVA	0-14.4kVA
	Frequency	45~450Hz	45~450Hz	45~450Hz
CC mode *1	Range	0.6~120Arms	0.1~140Arms	0.8~160Arms
	Resolution	20mA	20mA	20mA
	Accuracy	±(0.2%+0.2%FS)	±(0.5%+0.5%FS)	±(0.2%+0.2%FS)
CR mode *2	Range	0.5Ω~416Ω	0.5Ω~350Ω	0.375Ω~312.5Ω
	Resolution	16bit	16bit	16bit
	Accuracy	0.2% +0.01S	0.2% +0.01S	0.2% +0.01S
CP mode	Range	10.8kW	12.6kW	14.4kW
	Resolution	3W	3W	3W
	Accuracy	0.5%+0.5%FS	0.5%+0.5%FS	0.5%+0.5%FS
Crest factor	Range	1.414~5.0	1.414~5.0	1.414~5.0
(CP,CC mode)	Resolution	0.005	0.005	0.005
	Accuracy	(1.5% / Irms) + 1% FS	(1% / Irms) + 1% FS	(1% / Irms) + 1% FS
Power factor	Range	0~1 phase lead or lag	0~1 phase lead or lag	0~1 phase lead or lag
	Resolution	0.001	0.001	0.001
DC Section				
Input rating	voltage	10~600V	10~ 600V	10-600V
	current	0.6~120A	0.1~140A	0.8~160A
	power	0~10.8kW	0~12.6kW	0-14.4kW
Operation modes		CC、CR、CP	CC、CR、CP	CC、CR、CP
Short-circuit simulation		Use the CC mode under the maximum power or maximum working current		
Meter				
Current	Range	0~360A	0~420A	0-480A
	Resolution	10mA	0.1A	0.1A
	Accuracy	0.1%+0.2%FS+0.1%*CF^2*KHZ	0.1%+0.2%FS+0.1%*CF^2*KHZ	0.1%+0.2%FS+0.1%*CF^2*KHZ
Voltage	Range	0~600 V	0~600V	0~600V
	Resolution	10 mV	10 mV	10 mV
	Accuracy	0.1%+0.1%FS	0.1%+0.1%FS	0.1%+0.1%FS
Meter (continue)				
Others		S(VA), Q(VAR), P(W), Ip+, Ip-, Freq, THDv, CF, PF, R, FFT		
Other				
Voltage Monitor		±600V/±10V(Isolated)	±600V/±10V(Isolated)	±600V/±10V(Isolated)
Current Monitor		±360A/±10V(Isolated)	±420A/±10V(Isolated)	±480A/±10V(Isolated)
Protection		OCP、OVP、OPP、OTP	OCP、OVP、OPP、OTP	OCP、OVP、OPP、OTP
Interfaces		GPIB、USB、LAN	GPIB、USB、LAN	GPIB、USB、LAN
Dimension(W*H*D)		27U	27U	37U

*1 Typical value at 45 Hz-100 Hz

*2 Resistance accuracy: （ 1/(1/R+(1/R)*0.2%+0.01),1/(1/R-(1/R)*0.2%-0.01)
Test conditions： Voltage>10%FS, Current>10%FS

*3 Operating temperature： 0-40℃, Temperature coefficient:100ppm/℃



This information is subject to change without notice.
For more information, please contact ITECH.

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