FT8340 Multi-channel Battery Simulator

Faith

Multi channel battery simulator FT8340 series

SHENZHEN FAITHTECH CO.,LTD

|General

The FT8340 series is a high precision, multi-channel, dual quadrant programmable battery simulator.The current of the simulator can be charged and discharged， and supports various fault simulations, which can not only meet the requirements of BMS testing, but also meet the ATE testing of consumer electronics products.There are at most 12 channels in a device, and each channel is electrically isolated, which is convenient for users to use in series. The built-in upper computer software is easy to operate, flexible and easy to use. It supports single channel programming operations, multi-channel editing operations, and multi process programming operations.

The FT8340 series uses a standard 19 inch chassis,2U height, and provides dual network ports and RS485 communication interfaces, which is convenient for integrating into the R&D and production line automation test platform, or can be used alone.

|Features

- Voltage range:±5V/±6V/±15V/±20V(Positive and negative voltages are only available for A series);
- Current range:±1A/±2A/±3A/±5A/±10A;
- Two current ranges, uA level measurement, capable of static power consumption testing;
- Equipped with an independent DVM channel for high-precision measurement (only for A series);
- Voltage temperature drift coefficient less than 25ppm/℃;
- Seamless switching between source and load, powerful battery characteristic simulation function;
- Unique fault simulation function, simulating battery disconnection, short circuit, reverse connection etc(only for A series);
- Equipped with battery simulation function;
- Isolation between channels, capable of using multiple channels in series;
- Professional testing software that supports data reporting and analysis;
- Built in RS485 and dual LAN control interface;
- Standard 19 inch chassis,with a height of 2U,easy for rack installation.

|Application fields

- BMS（battery management system）testing;
- CMS（capacity management system）testing;
- Consumer electronics testing such as earphones, phones, tablets, e-cigarettes etc;
- Production testing of electric tool products;
- Power supply testing for other types of electronic products.

|Various battery simulation

FT8340 series products have various battery simulation functions such as power mode, battery simulation, battery charging test, discharge test, fault simulation etc. Realize one device for multiple purposes, simplify test equipment and optimize test process. The user can also set the curve of cell parameters (SOC, voltage, capacity, internal resistance and other parameters fitting) to simulate the battery output for testing the products to be inspected.

|Static power consumption testing

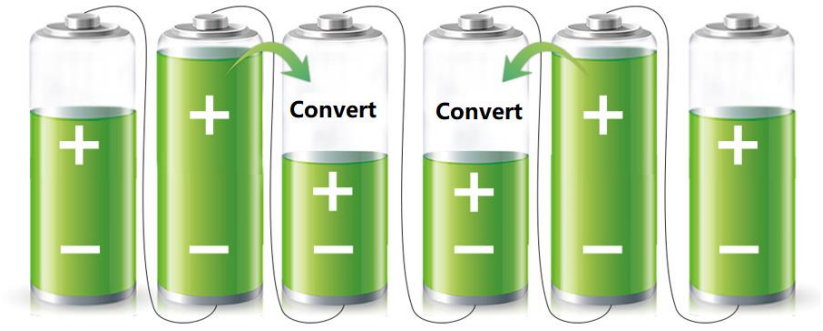
FT8340 has high-precision voltage and current measurement.Two current ranges with current accuracy up to 1μA.The FT8340 provides power supply for the tested product, which can visually test the static power consumption of the tested product in standby mode and screen out unqualified products.

|Integrated fault simulation function (only for A series)

A device has at most 8 independent output simulator channels, each channel has built-in positive and negative short circuit, positive and negative circuit break, polarity reverse connection and other functions. It can be directly controlled by the upper computer software, eliminating the external matrix switch parts that simulate battery failure, saving more space and valuable investment for users.

|Support active and passive equalization

FT8340 series adopts current bidirectional design, each channel supports current output and suction, and the balanced current is up to 5A. The user can customize the battery charging and discharging model and conduct real-time control through a dedicated host computer, which fully meets the requirements of BMS active/passive equalization test.



|Ordering information

Channels	A series model	E series model	Spec.	Height	Remark
4CH	FT83404A-5-10	FT83404E-5-10	5V/10A/50W	2U	DVM module and fault simulation function(only for A series
	FT83404A-6-1	FT83404E-6-1	6V/1A/6W		
	FT83404A-6-2	FT83404E-6-2	6V/2A/12W		
	FT83404A-6-3	FT83404E-6-3	6V/3A/18W		
	FT83404A-6-5	FT83404E-6-5	6V/5A/30W		
	FT83404A-15-1	FT83404E-15-1	15V/1A/15W		
	FT83404A-15-2	FT83404E-15-2	15V/2A/30W		
	FT83404A-15-3	FT83404E-15-3	15V/3A/45W		
	FT83404A-15-5	FT83404E-15-5	15V/5A/75W		
	FT83404A-20-1	FT83404E-20-1	20V/1A/20W		
	FT83404A-20-3	FT83404E-20-3	20V/3A/60W		
	FT83404A-20-5	FT83404E-20-5	20V/5A/75W		
8CH	FT83408A-5-10	FT83408E-5-10	5V/10A/50W	2U	
	FT83408A-6-1	FT83408E-6-1	6V/1A/6W		
	FT83408A-6-2	FT83408E-6-2	6V/2A/12W		
	FT83408A-6-3	FT83408E-6-3	6V/3A/18W		
	FT83408A-6-5	FT83408E-6-5	6V/5A/30W		
	FT83408A-15-1	FT83408E-15-1	15V/1A/15W		
	FT83408A-15-2	FT83408E-15-2	15V/2A/30W		
	FT83408A-15-3	FT83408E-15-3	15V/3A/45W		
	FT83408A-15-5	FT83408E-15-5	15V/5A/75W		
	FT83408A-20-1	FT83408E-20-1	20V/1A/20W		
	FT83408A-20-3	FT83408E-20-3	20V/3A/60W		
	FT83408A-20-5	FT83408E-20-5	20V/5A/75W		
12CH	FT834012A-5-10	FT834012E-5-10	5V/10A/50W	2U	
	FT834012A-6-1	FT834012E-6-1	6V/1A/6W		
	FT834012A-6-2	FT834012E-6-2	6V/2A/12W		
	FT834012A-6-3	FT834012E-6-3	6V/3A/18W		
	FT834012A-6-5	FT834012E-6-5	6V/5A/30W		
	FT834012A-15-1	FT834012E-15-1	15V/1A/15W		
	FT834012A-15-2	FT834012E-15-2	15V/2A/30W		
	FT834012A-15-3	FT834012E-15-3	15V/3A/45W		
	FT834012A-15-5	FT834012E-15-5	15V/5A/75W		
	FT834012A-20-1	FT834012E-20-1	20V/1A/20W		
	FT834012A-20-3	FT834012E-20-3	20V/3A/60W		
	FT834012A-20-5	FT834012E-20-5	20V/5A/75W		

|optional information

Optional part 1

Name	Model or Spec.	Description
Test wire 1	FT8340-TL03A	3A test wire/length 1.5 meter
Test wire 2	FT8340-TL10A	10A test wire/length 1.5 meter

|Specification

Basic characteristics

Basic characteristics		
Connection mode		Green PCB soldering terminal/Four wire system wiring
Dimension		2U/19”
Sampling frequency		20Hz
Communication interface		LAN、RS485
Communication protocol		SCPI、Modbus
Transport protocol		TCP/IP
Input voltage		Single phase，100～240Vac，50/60Hz
Environmental characteristics	Working temperature	0～40℃
	Storage temperature	-25℃～60℃
	Working humidity	20%rh～85%rh（No condensation）
	Storage humidity	＜90%rh（No condensation）
	Use environment	Altitude < 2000m, indoor use

Electrical characteristics 1

Model		FT834012A-6-1	FT834012A-6-2	FT834012A-6-3	FT834012A-6-5	FT834012A-5-10
Voltage *1		±6V	±6V	±6V	±6V	±5V
Current		±1A	±2A	±3A	±5A	±10A
Power		6W	12W	18W	30W	50W
Input impedance		≥3GΩ	≥3GΩ	≥3GΩ	≥3GΩ	≥3GΩ
Number of channels		12CH	12CH	12CH	12CH	12CH
Maximum series connection		The maximum series output voltage does not exceed 1000V, and the hosts can be connected in series				
Voltage parameter	Output range	0～6.12V				0～5.1V
	Output accuracy	0.01%+0.6mV				0.01%+0.5mV
	Resolution	0.1mV				
	Measurement accuracy	0.01%+0.6mV				0.01%+0.5mV
	Resolution	0.1mV				

	Rise time	≤1ms				
	Temperature coefficient	25ppm/℃				
Current parameters (double range)						
Rang 1	Output range	-1～1A	-2～2A	-3～3A	-5～5A	-10～10A
	Measurement accuracy	0.05%+0.5mA	0.05%+1mA	0.05%+1.5mA	0.05%+2.5mA	0.05%+5mA
	Resolution	0.1mA				
Rang 2	Output range	-1～1mA				-10～10mA
	Measurement accuracy	0.05%+0.5uA				0.05%+5uA
	Resolution	0.1uA				
Temperature coefficient		50ppm/℃				

DVM(digital voltage meter)*1			
Channels	12CH	Measurement accuracy	0.01%+0.01%F.S.
Measurement voltage range	-30V～+30V	Measurement frequency	20Hz
Measurement resolution	0.1mV	Input impedance	2MΩ
Connection terminal	Pluggable Terminal Blocks	Temperature coefficient	30ppm/℃
Fault simulation（Simulated test failure）*1			
Positive broken circuit, negative broken circuit, output short circuit, polarity reverse connection			

Notice：

*1. The functions described are only available for Series A.

Electrical characteristics 2

Model		FT834012A-15-1	FT834012A-15-2	FT834012A-15-3	FT834012A-15-5
Voltage *1		±15V	±15V	±15V	±15V
Current		±1A	±2A	±3A	±5A
Power		15W	30W	45W	75W
Input impedance		≥3GΩ	≥3GΩ	≥3GΩ	≥3GΩ
Number of channels		12CH	12CH	12CH	12CH
Maximum series connection		The maximum series output voltage does not exceed 1000V, and the hosts can be connected in series			
Voltage parameter	Output range	0～15.3V			
	Output accuracy	0.01%+1.5mV			
	Resolution	0.1mV			
	Measurement accuracy	0.01%+1.5mV			
	Resolution	0.1mV			
	Rise time	≤1ms			
	Temperature coefficient	25ppm/℃			
Current parameters (double range)					
Rang 1	Output range	-1～1A	-2～2A	-3～3A	-5～5A
	Measurement accuracy	0.05%+0.5mA	0.05%+1mA	0.05%+1.5mA	0.05%+2.5mA
	Resolution	0.1mA			
Rang 2	Output range	-1～1mA			
	Measurement accuracy	0.05%+0.5uA			
	Resolution	0.1uA			
Temperature coefficient		50ppm/℃			

DVM(digital voltage meter)*1			
Channels	12CH	Measurement accuracy	0.01%+0.01%F.S.
Measurement voltage range	-30V～+30V	Measurement frequency	20Hz
Measurement resolution	0.1mV	Input impedance	2MΩ
Connection terminal	Pluggable Terminal Blocks	Temperature coefficient	30ppm/℃

Fault simulation（Simulated test failure）*1
Positive broken circuit, negative broken circuit, output short circuit, polarity reverse connection

Notice：

*1. The functions described are only available for Series A.

Electrical characteristics 3

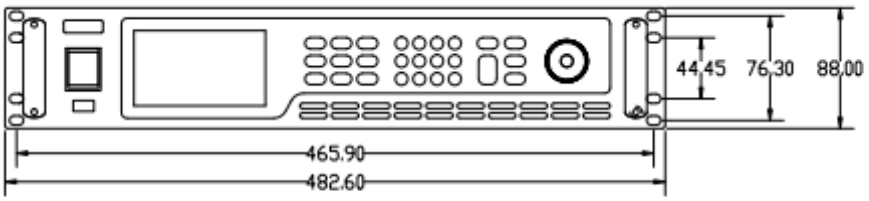
Model		FT834012A-20-1	FT834012A-20-3	FT834012A-20-5
Voltage *1		±20V	±20V	±20V
Current		±1A	±3A	±5A
Power		20W	60W	75W
Input impedance		≥3GΩ	≥3GΩ	≥3GΩ
Number of channels		12CH	12CH	12CH
Maximum series connection		The maximum series output voltage does not exceed 1000V, and the hosts can be connected in series		
Voltage parameter	Output range	0～20.4V		
	Output accuracy	0.01%+2mV		
	Resolution	0.1mV		
	Measurement accuracy	0.01%+2mV		
	Resolution	0.1mV		
	Rise time	≤1ms		
	Temperature coefficient	25ppm/℃		
Current parameters (double range)				
Rang 1	Output range	-1～1A	-3～3A	-5～5A
	Measurement accuracy	0.05%+0.5mA	0.05%+1.5mA	0.05%+2.5mA
	Resolution	0.1mA		
Rang 2	Output range	-1～1mA		
	Measurement accuracy	0.05%+0.5uA		
	Resolution	0.1uA		
Temperature coefficient		50ppm/℃		

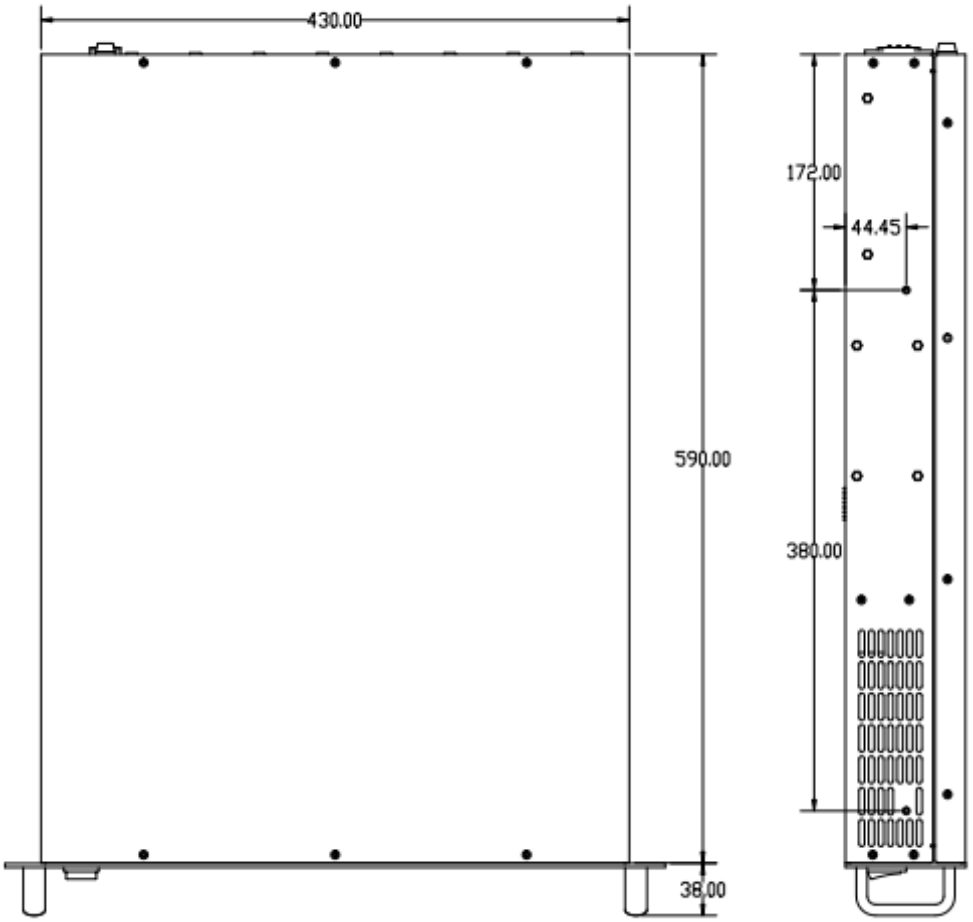
DVM(digital voltage meter)*1			
Channels	12CH	Measurement accuracy	0.01%+0.01%F.S.
Measurement voltage range	-30V～+30V	Measurement frequency	20Hz
Measurement resolution	0.1mV	Input impedance	2MΩ
Connection terminal	Pluggable Terminal Blocks	Temperature coefficient	30ppm/℃
Fault simulation（Simulated test failure）*1			
Positive broken circuit, negative broken circuit, output short circuit, polarity reverse connection			

Notice：

*1. The functions described are only available for Series A.

|Dimensions


44.45
76.30
88.00
465.90
482.60


430.00
590.00
38.00
172.00
44.45
380.00