

FT8330 Series

Multi-channel Battery cell simulator



Front Panel

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- **Features :**
 - Voltage output: 0~6V/0~15V; current output: 0~1A/0~2A/0~3A/0~4A/0~6A;
 - Voltage accuracy, resolution up to 10000;
 - The four-wire system can effectively eliminate the measurement influence caused by the wire;
 - The number of channels can be up to 24, and it also be selected according to the demand;
 - Each channel is isolated and can be connected in parallel or series at will;
 - Temperature drift coefficient is less than 30ppm/°C;
 - Professional testing software to support data reporting and data analysis;
 - RS485 and Ethernet control interface;
 - Standard 19-inch 2U chassis design, which can be installed in a rack;
 - Intelligent fan control, long life, low noise.

Brief introduction

FT8330 series battery simulator is a high-precision, multi-channel, single-quadrant programmable cell analog power supply. The number of single channel up to 24 and each channel electrical isolation, convenient for users to string and power. The characteristics of ultra-high output precision, ultra-low ripple and interference make this series of power supply widely used in battery cells, super capacitors, BMS and other testing systems.

The FT8330 series uses a standard 19-inch chassis with a 2U height and provides an RS485 communication interface for easy integration into the R&D and production line automated test platform, or can be used alone.

Application areas :

- Battery core test; Supercapacitor core test;
- BMS (Battery Management system) test
- CMS (Supercapacity Management System) test
- Charge and discharge protection board research and development test
- Power supply test of other electronic products.



RearPanel

Ordering information

Model	Specification	Remark
FT8330A	FT8330 series special case	A single can install up to 4 battery simulator module. In the same host, different type module cannot be mixed.
FT83306A-6-1	Battery Simulator Module 6V/1A/6W, 6 channels	Single quadrant/single range
FT83306A-6-2	Battery Simulator Module 6V/2A/12W, 6 channels	Single quadrant/single range
FT83306R-6-1	Battery Simulator Module 6V/1A/6W, 6 channels	Single quadrant/double range, high sampling speed
FT83306R-6-2	Battery Simulator Module 6V/2A/12W, 6 channels	Single quadrant/double range, high sampling speed
FT83306R-6-3	Battery Simulator Module 6V/3A/18W, 6 channels	Single quadrant/double range, high sampling speed
FT83306R-15-1	Battery Simulator Module 15V/1A/15W, 6 channels	Single quadrant/double range, high sampling speed
FT83303R-6-4	Battery Simulator Module 6V/4A/24W, 3 channels	Single quadrant/double range, high sampling speed
FT83303R-6-6	Battery Simulator Module 6V/6A/36W, 3 channels	Single quadrant/double range, high sampling speed
FT83303R-15-2	Battery Simulator Module 15V/2A/30W, 3 channels	Single quadrant/double range, high sampling speed

Specification sheet-1 :

Model	FT83306A-6-1	FT83306A-6-2
current	1A	2A
voltage	6V	6V
power	6W	12W
channel	6CH	6CH
Constant voltage model		
Range	0~6V	0~6V
Setting resolution	0.1mV	0.1mV
Setting accuracy (25±3°C)	0.01%+0.01%F.S	0.01%+0.01%F.S
Readback resolution	0.1mV	0.1mV
Reading back accuracy (25±3°C)	0.01%+0.01%F.S	0.01%+0.01%F.S
Voltage load adjustment rate	<0.02%F.S	
Temperature coefficient	<30ppm/°C	
Voltage ripple (rms)	2mV	2mV
Current ripple (rms)	1.2mA	1.2mA
Voltage rise time (no load)	<3ms	<3ms
Voltage rise time (full load)	<3ms	<3ms
Voltage drop time (no load)	<3s	<3s
Voltage drop time (full load)	<3ms	<3ms
Dynamic response time	<1ms	<1ms
Constant current mode		
Range	0~1A	0~2A
Set resolution	0.25mA	0.5mA
Setting accuracy (25±3°C)	0.05%+0.05%F.S	0.05%+0.05%F.S
Readback resolution	0.25mA	0.5mA
Readback accuracy (25±3°C)	0.05%+0.05%F.S	0.05%+0.05%F.S
Current load adjustment rate	<0.01%F.S.	
Temperature coefficient	<30ppm/°C	
Other characteristics		
Withstand voltage (channel to channel)	1500VDC	1500VDC
Channel connection mode	Aviation plug	Aviation plug
Single channel sampling speed	4Hz	
Programming response time	<10ms	
Communication interface	LAN/RS485(Isolation)	
Ac input voltage	220VAC±10%	
Size (H×W×D)	88.1mm×482.6mm×521.4mm	
weight	10kg	

Specification sheet-2 :

Model	FT83306R-6-1		FT83306R-6-2		FT83306R-6-3		FT83306R-15-1	
current	1mA/1A		1mA/2A		1mA/3A		1mA/1A	
voltage	6V		6V		6V		15V	
power	6W		12W		18W		15W	
channel	6CH		6CH		6CH		6CH	
Constant voltage model								
Range	0~6V		0~6V		0~6V		0~15V	
Setting resolution	0.1mV		0.1mV		0.1mV		0.25mV	
Setting accuracy (25±3℃)	0.01%+0.01%F.S.		0.01%+0.01%F.S.		0.01%+0.01%F.S.		0.01%+0.01%F.S.	
Readback resolution	0.1mV		0.1mV		0.1mV		0.25mV	
Reading back accuracy (25±3℃)	0.01%+0.01%F.S.		0.01%+0.01%F.S.		0.01%+0.01%F.S.		0.01%+0.01%F.S.	
Voltage load adjustment rate	<0.02%F.S.				<0.02%F.S.			
Temperature coefficient	<30ppm/℃				<30ppm/℃			
Voltage ripple (20Hz~20MHz)	≤2mVrms				≤2mVrms			
Voltage rise time (no load)	<3ms		<3ms		<3ms		<3ms	
Voltage rise time (full load)	<3ms		<3ms		<3ms		<3ms	
Voltage drop time (no load)	<3s		<3s		<3s		<3s	
Voltage drop time (full load)	<3ms		<3ms		<3ms		<3ms	
Dynamic response time	<1ms		<1ms		<1ms		<1ms	
Constant current mode								
Range	0~1mA	0~1A	0~1mA	0~2A	0~1mA	0~3A	0~1mA	0~1A
Set resolution	0.1uA	0.1mA	0.1uA	0.2mA	0.1uA	0.3mA	0.1uA	0.1mA
Setting accuracy (25±3℃)	0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.	
Readback resolution	0.1uA	0.1mA	0.1uA	0.2mA	0.1uA	0.3mA	0.1uA	0.1mA
Readback accuracy (25±3℃)	0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.	
Current load adjustment rate	3uArms	3uArms	3uArms	3uArms	3uArms	3uArms	3uArms	3uArms
Current load adjustment rate	<0.01%F.S.				<0.01%F.S.			
Temperature coefficient	<30ppm/℃				<30ppm/℃			
Other characteristics								
Withstand voltage (output relative to earth)	1500VDC							
Withstand voltage (channel to channel)	1500VDC							
Single channel sampling speed	20Hz							
Programming response time	<10ms							
Communication interface	LAN/RS485 (Isolated)							
Ac input voltage	220VAC±10%							
Size (H×W×D)	88.1mm*482.6mm*521.4mm							
weight	10kg							

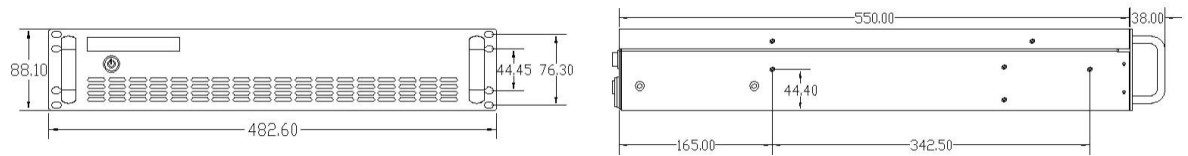
Specification sheet-3 :

Model	FT83303R-6-4		FT83303R-6-6		FT83303R-15-2	
current	2mA/4A		2mA/6A		2mA/2A	
voltage	6V		6V		15V	
power	24W		36W		30W	
channel	3CH		3CH		3CH	
Constant voltage model						
Range	0~6V		0~6V		0~15V	
Setting resolution	0.1mV		0.1mV		0.25mV	
Setting accuracy (25±3°C)	0.01%+0.01%F.S.		0.01%+0.01%F.S.		0.01%+0.01%F.S.	
Readback resolution	0.1mV		0.1mV		0.25mV	
Reading back accuracy (25±3°C)	0.01%+0.01%F.S.		0.01%+0.01%F.S.		0.01%+0.01%F.S.	
Voltage load adjustment rate	<0.02%F.S.		<0.02%F.S.		<0.02%F.S.	
Temperature coefficient	<30ppm/°C		<30ppm/°C		<30ppm/°C	
Voltage ripple (rms)	≤2mVrms		≤2mVrms		≤2mVrms	
Voltage rise time (no load)	<3ms		<3ms		<3ms	
Voltage rise time (full load)	<3ms		<3ms		<3ms	
Voltage drop time (no load)	<3s		<3s		<3s	
Voltage drop time (full load)	<3ms		<3ms		<3ms	
Dynamic response time	<1ms		<1ms		<1ms	
Constant current mode						
Range	0~2mA	0~4A	0~2mA	0~6A	0~2mA	0~2A
Set resolution	0.2uA	0.4mA	0.2uA	0.6mA	0.2uA	0.2mA
Setting accuracy (25±3°C)	0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.	
Readback resolution	0.2uA	0.4mA	0.2uA	0.6mA	0.2uA	0.2mA
Readback accuracy (25±3°C)	0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.	
Current ripple (20Hz~20MHz)	6uArms	0.6Arms	6uArms	0.6Arms	6uArms	0.6Arms
Current load adjustment rate	<0.01%F.S.		<0.01%F.S.		<0.01%F.S.	
Temperature coefficient	<30ppm/°C		<30ppm/°C		<30ppm/°C	
Other characteristics						
Withstand voltage (output relative to earth)	1500VDC		1500VDC		1500VDC	
Withstand voltage (channel to channel)	1500VDC		1500VDC		1500VDC	
Single channel sampling speed	20Hz		20Hz		20Hz	
Programming response time	<10ms		<10ms		<10ms	
Communication interface	LAN/RS485 (Isolated)		LAN/RS485 (Isolated)		LAN/RS485 (Isolated)	
Ac input voltage	220VAC±10%		220VAC±10%		220VAC±10%	
Size (H×W×D)	88.1mm*482.6mm*521.4mm		88.1mm*482.6mm*521.4mm		88.1mm*482.6mm*521.4mm	
weight	10kg		10kg		10kg	

Optional information

Item	Specification	Instruction
Test wire	FT8300-TL02A	2A test line/line is 1.5 m long
Test wire	FT8300-TL03A	3A test line/line is 1.5 m long
Test wire	FT8300-TL06A	6A test line/line is 1.5 m long

Dimensional drawing :



Made in broke – Impasse des Colchiques, 31150 Fenouillet – Tel: 05 62 79 15 14 – contact@madeinbroke.com