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Specifications

BTS-5V5A Battery testing system			
Model:	BTS-5V5A	Battery testing system	SN: CT-9008-5V5A-SMBUS

Items		Values
Input AC		220V +10% / -20%, 50Hz;
Input power		300W
Resolution		AD: 16bit; DA: 16bit
Input Impedance		≥ 1000MΩ Power-on status (leakage current is 100uA when power-off)
Voltage	Output range/channel	Charge: 0V~5V Discharge: 0V~5V
	Minimum discharge voltage	0V
	Accuracy	± 0.02% of range
	Stability	0.005% of FS
Current	Output range/channel	Range1: 0.1μA-150μA; Range2: 150μA-5mA; Range3: 5mA-150mA; Range4: 150mA-5A
	Accuracy	± 0.02% of FS Range1: ±30nA; Range2: ±1μA; Range3: ±30μA; Range4: ±1mA
	Stability	±0.005% of FS
Power	Output power/channel	25W
	Stability	± 0.02% of FS
Temperature	Temperature probe	K type thermocouple
	Measurement range	-40 ~ +110℃
	Measurement accuracy	±1℃
	Resolution	0.1℃
	Date Record Frequency	1Hz
Time	Current response time	<= 100μS (10% to 90% or 90% to 10%);
	Working step time	≤(365*24)h/step Time format-00: 00: 00.000(h、m、s、ms)
Data Record	Data record conditions	Time Δt: >=1ms
		Voltage ΔU: >= 1mV
		Current ΔI: >= 100nA
	Frequency	1000Hz (Continuous charge and discharge mode) / Pulse by pulse recording (GSM pulse mode);
Charge	Charge modes	CC、CV、CCCV、CP、CR
	Cut-off condition	Voltage、Current、-△t、Capacity、Energy、Power

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Discharge	Discharge modes	CC、CV、CR、CP、Pulse
	Cut-off condition	Voltage、Current、-△t、Capacity
Pulse Mode	Charge	CC Mode
	Discharge	CC Mode
	Minimum pulse width	400μs
	Pulse number	A single pulse step supports 16 different pulse segments
	Cut-off condition	Voltage、-△t
DCIR Test	Support DCIR step	
Cycles	Max cycles	65535
	Max steps	255
	Nest	4;
Protection	Safety protection and Anomaly protection	Power-off data protection
		User-defined protection conditions, such as upper and lower limited current/voltage, upper limited capacity, upper limited power, Current and voltage fluctuation, delay time, temperature, etc.
	Hardware protection	Anti-reverse connection protection, input overvoltage protection, output overvoltage protection, input overcurrent protection, output overcurrent protection, overheat protection, overload protection, output no-load protection;
Channel features		Using energy-saving inverter technology, energy is locally transferred between channels, which is energy-saving and environmentally friendly; It adopts automotive-grade master control scheme, 200kHz high frequency conversion, low ripple and low noise; The equipment is small in size, low in energy consumption, and low in heat; Constant current source and constant voltage source adopt independent double closed loop structure; The system adopts an integrated design, and the unit tester directly connects to the test server on the Internet; High-speed 1000Hz sampling; 1GB offline storage capacity per channel;
Channels control mode		Independent control
Data acquisition method		Kelvin connection
Noise		<80dB
Communication with computer		TCP/IP
Data Export		EXCEL、TXT、CSV、PDF、Plot/Graph
Communication port		Ethernet 100M
Number of channels per		8
Operation and storage environment requirement		

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Items	Values
Operation environment temperature	25℃±5℃(Accuracy Guaranteed) 25℃±20℃(extreme operating temperature);
Storage environment temperature	0℃~60℃
Operation environment humidity	30% ~ 70% RH（no moisture condensation）
Storage environment humidity	30% ~ 80% RH（no moisture condensation）
Clamps and dimensions	
Items	Values
Clamps types	Choose according to customer needs
Unit tester size（W*D*H）	443 * 615 * 125 (mm)
Tester Picture (Pictures just for reference)	
SMBUS characteristics	
Items	Values
Hardware compatibility	Compatible with SMBUS, I2C communication protocol, support 400kHz high-speed mode;
Software compatibility	Compatible with the standard specification field information instructions defined by Smart Battery Data Specification Revision 1.1, users can edit the DBC by themselves to support different chip protocols;
Data reading frequency	4CH runs independently, each channel can be individually set to read different SMBUS parameter lists, and each parameter can be dynamically refreshed in real time or read at one time to reduce bus occupation; All channels can be read at full speed at the set bus rate (100kHz~400kHz) at the same time; When only a few parameters are read per channel, it can be refreshed more than 10 times per second;
Variable storage	Test users can define the variable list to be saved by themselves; The SMBUS variable storage and the main channel parameters of the equipment are recorded synchronously;