

BTS-5V100mA Four-Range Battery Testing System

Equipment model		CT-8002Q -5V 100m A -124	
Indicator project		Indicator parameters	
Input power supply		AC 220V $\pm 10\%$ / 50Hz	
Input power		25 W	
Resolution ratio		AD: 24bit; DA: 16bit	
Input impedance		$\geq 1\text{G}\Omega$	
Voltage	Voltage range per channel	10mV~5V	
	Minimum discharge voltage	-5 V	
	Accuracy	$\pm 0.01\%$ of F.S.	
	Stability	$\pm 0.01\%$ of F.S.	
Current	Current range per channel	Range 1:0.1 mA; range 2:1 mA; range 3:10 mA; range 4:100 mA	
	Accuracy	$\pm 0.02\%$ of F.S.	
	Constant pressure cut-off current	Range 1: 0.1 μA , range 2: 1 μA , range 3: 10 μA , range 4: 100 μA	
	Stability	$\pm 0.02\%$ of F.S.	
Power	Max power per channel	0.5 W	
	Accuracy	$\pm 0.03\%$ of F.S.	
	Stability	$\pm 0.03\%$ of F.S.	
Time	Current response time	$\leq 1\text{ms}$ (10% ~ 90% of F.S.)	
	Charge and discharge conversion time	$\leq 20\text{ms}$	
	Time range of work step	(365 * 24) hours / work step	Supported in time format: 00:00:00:00 (h, min, s, ms)
Data record	Recording conditions	Minimum time interval: 10ms (100Hz)	
		Minimum voltage interval: 5 mV	
		Minimum current interval: range 1: 0.1 μA , range 2: 1 μA , range 3: 10 μA , range 4: 100 μA	
Charge and discharge mode	work pattern	Constant current charge and discharge, constant voltage charge and discharge, constant current and constant voltage charge and discharge, constant power charge and discharge, constant power and constant voltage charge and discharge, pulse charge and discharge, constant	

		resistance charge and discharge, current slope charge and discharge, following mode charge and discharge, etc
	cut-off condition	Voltage, current, relative time, capacity, and energy
Pulse mode	Charge / discharge mode	Constant current mode, constant power mode
	Minimum pulse width	500ms
	Pulse number	A single pulse working step was supported for 32 different pulses
	Continuous charge / discharge charge switching	A pulse step can realize continuous switching of charging, or continuous switching of discharge
	cut-off condition	Voltage, and relative time
Working condition simulation	Charge / discharge mode	Constant flow, constant power
	cut-off condition	Time, line number
	Charge-discharge continuous switching	A pulse working step can achieve continuous switching from charging to discharging
	Limit the number of step files	One million
DCIR test	Support for custom taking points for the calculation of DCIR	
Recurrence	Circulating test range	1 to 65,535 times
	Single cycle step number	254
	loop nesting	≤3 layer
Protect	Software protection	Power loss data protection, offline test function, safety protection conditions can be set, setting parameters include: voltage upper and lower limit, upper and lower limit of current, delay time, upper limit of capacity, custom variable protection, etc
	Hardware protection	Anti-reverse protection, overpressure protection, overcurrent protection, over temperature protection, emergency stop protection, etc
IP levels of protection		Protection level is IP20
Channel characteristics		The constant current source and the constant voltage source adopt a double closed-loop structure
Channel control mode		Independent control
Voltage and current detection sampling		Four-line connection
Noise		<55dB (measured at 1m)
Data base		The MySQL database was used to centralize the test data
Upper-computer communication mode		Based on the TCP / IP protocol

Server operating system	Windows 7、Windows 10
Data output mode	EXCEL、TXT
Server disk configuration	Above the 500GB
CI	internet access
Communication expansion (optional)	Support CAN, RS485 communication and BMS communication, with DBC configuration function
Equipment working environment requirements	
Indicator project	Indicator parameters
Operating temperature range	0°C ~40°C (within $25 \pm 10^{\circ}\text{C}$, guarantee measurement accuracy: accuracy drift 0.005% of FS /°C)
Storage temperature range	-10°C~50°C
Relative humidity range of working environment	70% RH (no moisture condensation)
Relative humidity range of storage environment	80% RH (no moisture condensation)