

9841

Battery Charge and Discharge Test System



AUTOMATIC TEST EQUIPMENT (ATE)



PRODIGIT ELECTRONICS CO., LTD.

No. 7-1, Zhongxing Rd., Tucheng Dist., New Taipei City 236, Taiwan (R.O.C.)

TEL : 886-2-2918-2620

FAX : 886-2-2912-9870

[http : //www.prodigit.com](http://www.prodigit.com)

E-mail : pdsales@prodigit.com.tw



9841 Battery Charge and Discharge Test System



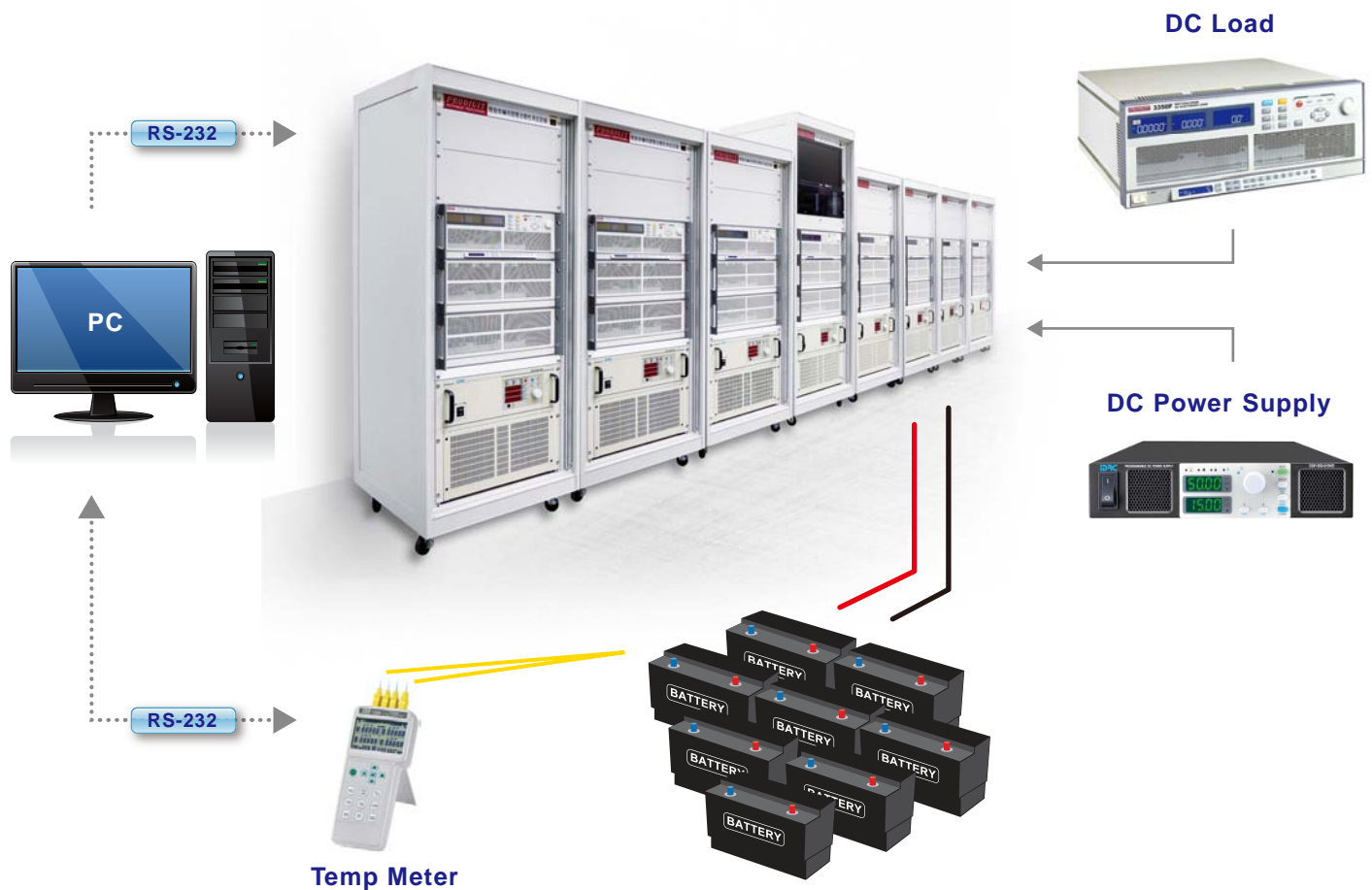
Features

- Charge Test
- CP-Charge Test
- Discharge Test
- Capability Test (AH)
- Power Consumption Test (KWH)
- Cycle Life Test

Descriptions

- Provide user define Test Step
- Easy user interface
- Measure Voltage, Current, Power, KWH, AH, Temperature, Reference Voltage
- Accuracy Measure Time
- Easy to see now test progress
- Can cycle test
- Provide Charge, Discharge, Suspend, FOR, LOOP Mode Select
- When Charging, set the stop current to stop charging when fully charged so as to avoid overcharging that will damage the battery. When Discharge, set the stop voltage to stop discharge when discharging to lowest so as to avoid over-discharging that will damage the battery.
- The test result will be stored to ACCESS data
- The test result will be saved to EXCEL CSV format
- When test result data are excess 32000 data, it will be separated automatically during transfer to EXCEL file
- The maximum test procedures you can set are up to 100.

Hardware



Test Example

The Start Screen

Prodigit 9841-01 電動車輛用鋰電池電性測試系統 R1.0

Channel - 1

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	Suspend			1		
2	DisCharge	CC	2.3	60	0	1
3	Suspend			1		

SN : [201108221]
Measurement Item:
☒ Voltage ☒ KWH
☒ Current ☒ AH
☒ Power ☒ Temperature
Measure Time : [3] S

Channel - 2

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	FOR			1	100	
2	Charge	1	0.1	1	0	1
3	Suspend			0.1		
4	DisCharge	CC	0.1	1	0	0
5	Suspend			0.1		
6	LOOP					

SN : [201108222]
Measurement Item:
☒ Voltage ☒ KWH
☒ Current ☒ AH
☒ Power ☒ Temperature
Measure Time : [10] S

Channel - 3

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	FOR			1	500	
2	Charge	1	0.1	1	0	1
3	Suspend			0.1		
4	DisCharge	CC	0.1	1	0	1
5	Suspend			0.1		
6	LOOP					

SN : [201108223]
Measurement Item:
☒ Voltage ☒ KWH
☒ Current ☒ AH
☒ Power ☒ Temperature
Measure Time : [10] S

Channel - 4

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	FOR			1	250	
2	Charge	1	0.1	1	0	1
3	Suspend			0.1		
4	DisCharge	CC	0.1	1	0	1
5	Suspend			0.1		
6	LOOP					

SN : [201108224]
Measurement Item:
☒ Voltage ☒ KWH
☒ Current ☒ AH
☒ Power ☒ Temperature
Measure Time : [10] S

Channel - 5

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	FOR			1	250	
2	Charge	1	0.1	1	0	1
3	Suspend			0.1		
4	DisCharge	CC	0.1	1	0	1
5	Suspend			0.1		
6	LOOP					

SN : [201108225]
Measurement Item:
☒ Voltage ☒ KWH
☒ Current ☒ AH
☒ Power ☒ Temperature
Measure Time : [10] S

Channel - 6

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	FOR			1	250	
2	Charge	1	0.1	1	0	1
3	Suspend			0.1		
4	DisCharge	CC	0.1	1	0	1
5	Suspend			0.1		
6	LOOP					

SN : [201108226]
Measurement Item:
☒ Voltage ☒ KWH
☒ Current ☒ AH
☒ Power ☒ Temperature
Measure Time : [10] S

Channel - 7

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	FOR			1	250	
2	Charge	1	0.1	1	0	1
3	Suspend			0.1		
4	DisCharge	CC	0.1	1	0	1
5	Suspend			0.1		
6	LOOP					

SN : [201108227]
Measurement Item:
☒ Voltage ☒ KWH
☒ Current ☒ AH
☒ Power ☒ Temperature
Measure Time : [10] S

Channel - 8

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	FOR			1	250	
2	Charge	1	0.1	1	0	1
3	Suspend			0.1		
4	DisCharge	CC	0.1	1	0	1
5	Suspend			0.1		
6	LOOP					

SN : [201108228]
Measurement Item:
☒ Voltage ☒ KWH
☒ Current ☒ AH
☒ Power ☒ Temperature
Measure Time : [10] S

Additional Test Procedure

Addition Step - Channel 1

Action Mode : **Charge**

Charge Setup

Charge Voltage : **0** V

Charge Current : **0** A

Stop Time : **0** Minutes

Stop Current : **0** A

Stable Time : **0** Seconds

OK

Cancel

Modify Channel - 2 Step - 3

Action Mode : **Suspend**

Suspend Setup

Suspend Time : **0.1**

OK

Cancel

Modify Channel - 3 Step - 4

Action Mode : **DisCharge**

DisCharge Setup

DisCharge Mode : **CC**

DisCharge Current : **0.1** A

Stop Time : **1** Minutes

Stop Voltage : **0** V

Stable Time : **1** Seconds

OK

Cancel

Modify Channel - 5 Step - 1

Action Mode : **FOR**

FOR Setup

Times : **250**

OK

Cancel

Modify Channel - 4 Step - 2

Action Mode : **CP-Charge**

CP-Charge Setup

Charge Power : **30** W

Charge Current : **1** A

Stop Time : **1** Minutes

Stop Current : **0.1** A

Stable Time : **1** Seconds

OK

Cancel

Modify Channel - 6 Step - 6

Action Mode : **LOOP**

LOOP Setup

OK

Cancel

System Setup

System Setup

Test Channel Count : **8**

Temperature Meter Count : **4**

Device 1 COM : **18**

Device 2 COM : **19**

Device 3 COM : **20**

Device 4 COM : **21**

Save

Cancel

Connection Setup

Connection Setup - Channel 1

Load - COM : BaudRate :

Power - COM : BaudRate :

Temperature CH -

<input checked="" type="checkbox"/> 01	<input checked="" type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04
<input type="checkbox"/> 05	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08
<input type="checkbox"/> 09	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12
<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16

OK Cancel

Start Test

Channel - 1 - Load Error

Step	Action Mode	Mode / Volt	Value	StopTime(m)	StopValue	Stable(s)
1	FOR				1500	
2	Charge	3.3	2.3	0.1	0	1
3	Suspend			0.1		
4	DisCharge	CC	2.3	0.1	0	1
5	Suspend			0.1		
6	LOOP					

SN.: 201108291

Measurement Item

☒ Voltage ☒ KWH

☒ Current ☒ AH

☒ Power ☒ Temperature

MeasureTime : 1 S

Review test data

Channel - 1

Measurement Value

2011-08-29 15:43:59

Voltage 3.28862 Temperature 25.2 25.4

Current 0.10975

Power 0.3609260

KWH .36097357

AH .17764000

SN.: 201108291

Measurement Item

☒ Voltage ☒ KWH

☒ Current ☒ AH

☒ Power ☒ Temperature

MeasureTime : 1 S /

Review test records

Prodigit CSV Viewer MainForm

Select CSV File

Filter

Action : Time Range : ☐ Cycle View

Show Count : 1

X - Scale

Max Min

Y - Scale

Max Min

Sub Y - Scale

Max Min

CSV Information

Log Count : 0

Print Wave

View

Real time monitoring the test waveform

