

Battery analyzer BA610/760/910 series for e-bike batteries testers



The BA610/760/910 series are used to measure the capacity of batteries and the quality of their chargers. Since the charger is used to charge the battery to 100%, the measured capacity is truly reliable. An automatic recharge completes the test. Testing is done under simulated street conditions or at warranty power levels. Cell problems will really be detected. The units are connected to a PC using USB and operated under software control. The supplied PC program, shows graphs and reports that can be stored

and printed or sent to the supplier for evaluation.

Up to 32 analyzers can be connected to 1 PC and run under the control of the software, allowing 64 batteries to be tested in one go.

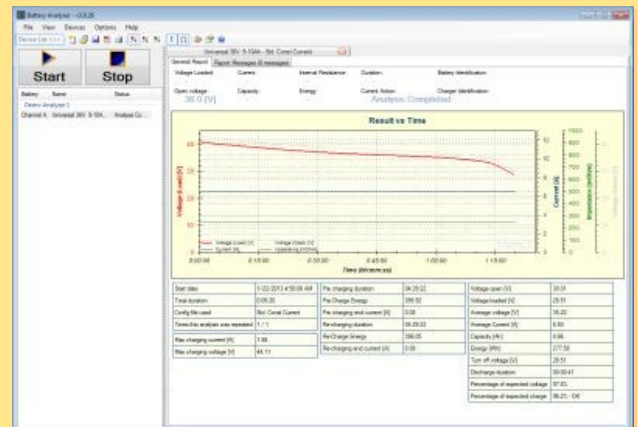
- Voltage under load, and no-load.
- Discharge current in Ampere.
- Capacity in Ah.
- Battery impedance.

Benefits:

- Measurement is not easily tampered
- Reporting tools, also to manufacturer
- Street use testing conditions
- Warranty test conditions

Features:

- Tests 1 or 2 batteries in one go.
- Battery voltages: 7.2 to 72V.
- Test any type of battery: Li-Ion, Li-Poly, LiFePO4, NiCd, NiMH, lead-acid.
- Automatic sequence: Charge → Discharge → Recharge. (+ looping) using the batteries own charger.
- Constant or dynamic measurement up to 26A
- Readout of battery management system (BMS) through HDQ, SMBus/I²C.
- High continuous load on battery ex: 36V @ 12A, peak 17A
- Works through USB, PC program included.
- Storage and printing of measurement reports in PDF on the PC.



Specially useful for Quality Control, service- and repair stations.

Information: Battery Condition Test

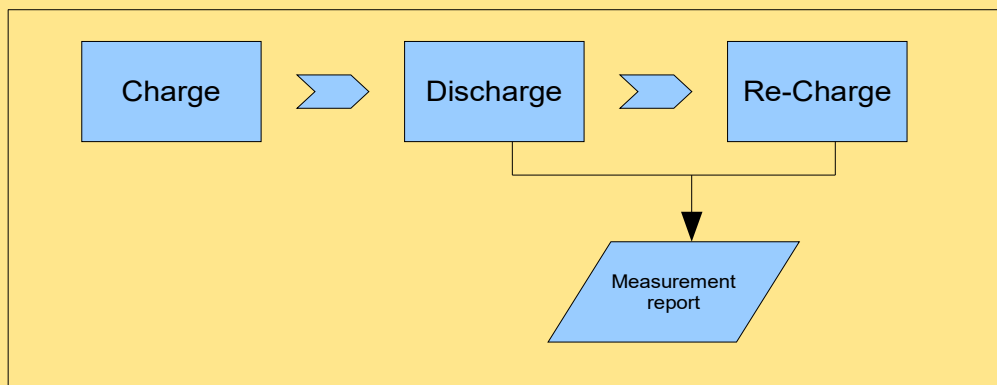
www.BatteryConditionTest.com



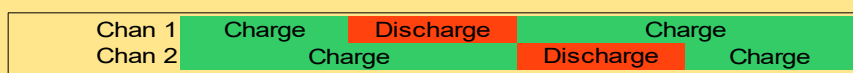
Specifications

Item	Limit			Unit
Number of channels (Battery + Charger)	2			
Absolute maximum input voltage	86			V _{DC}
Minimum input voltage @ 8A at rate Power supply voltage (230/115)	5			V _{DC}
Voltage Measurement range	0 ~ 90			V _{DC}
Voltage measurement accuracy	< ±1% of Reading, ± 0.1V			
Voltage measurement resolution	0.1			V
Voltage measurement technology	4-wire; True RMS			
<i>Power</i>	<i>Cont</i>	<i>Peak 10s</i>	<i>Peak 3s</i>	
Maximum allowable continuous discharge power (BA610)	300	500	600	W
Maximum allowable continuous discharge power (BA760)	400	600	750	W
Maximum allowable continuous discharge power (BA 910)	500	750	900	W
Maximum allowable continuous discharge current **	16			A
Maximum allowable peak discharge current **	26			A
Current measurement range	From 0.5			A
Current measurement accuracy	< ± 2.0% of Reading, ± 0.02A			
Current measurement resolution	0.01			A
Current measurement technology	True RMS			
Capacity measurement range	0 ~ 500000			Ah
Capacity measurement resolution	~ 0.01			Ah
Capacity measurement accuracy	< 2.5			%
Impedance measurement technology	Cont. AC at 50 / 60 (auto sense)			Hz
Power supply	115 / 230 (auto switch)			V _{AC}
Fuse (Slow acting type) (5 x 20 mm)	6			A
Operating ambient temperature	10 ~ 30 / (50 ~ 86)			°C / (°F)
BMS communication mode (battery dependent)	HDQ and SMBus/I2C (extra convertors optional)			
USB connection	USB 2.0			
USB Power requirement (max 8 devices on 1 port)	50			mA
IP rating P 20	IP 20			
Size	230 x 230 x 175 / (9 x 9 x 6.9)			mm / (inch)
Weight	3.5 / (7.7)			Kg / (lbs)

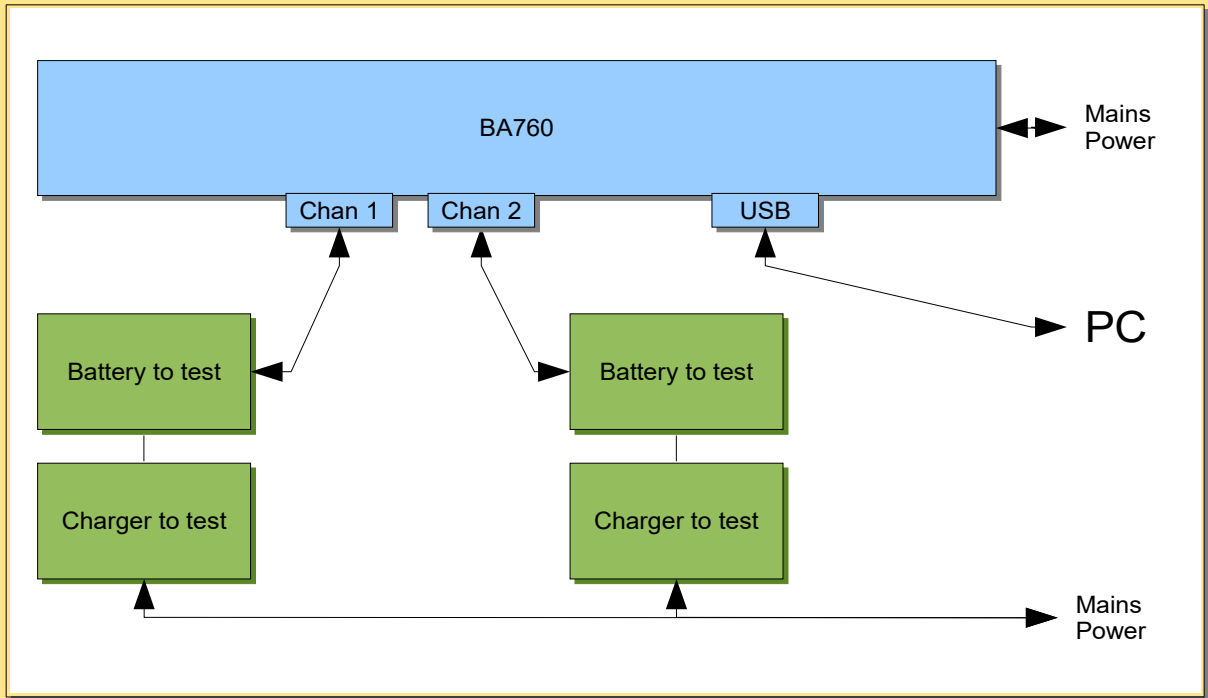
** Depending on peak time.



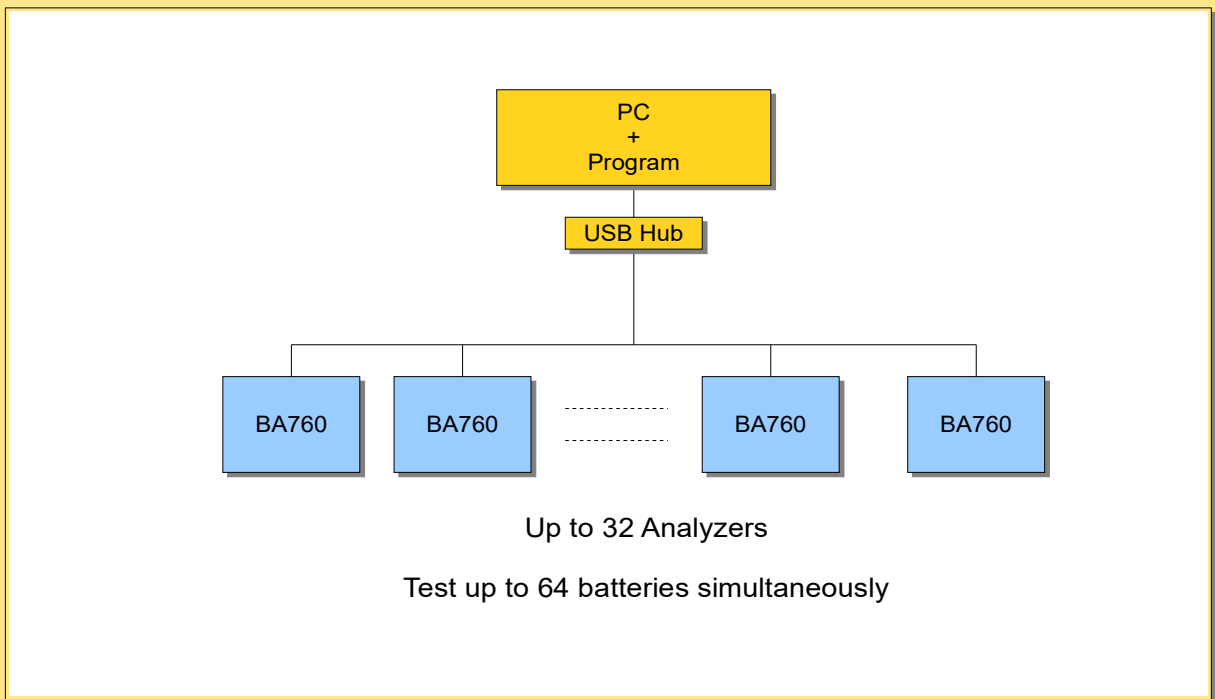
Test Sequence



Overlapping operation (BA750/2 only)



Connection diagram



Incoming inspection application

See a sample of a test report on the next page(s)

Battery:

Type of Battery 00 TranzX - JD 5BL7 36V 11Ah

Battery Serial Nr.

Test Results Passed

[Put your Name or Logo here](#)

Charger:

Type of Charger 2A

Test Results Passed

Tester:

Test Equipment BA750-2 1214-0123V

Test Profile Warranty - Const. Current -- Repeat Count: 4

Test Date/Time Friday, February 21, 2014 5:12:54 PM

BMS Information

Recommended Charge Current [A]	4.00
Recommended Charge Voltage [V]	41.50
Factory Capacity [Ah]	9.50
Factory Voltage [V]	36.00
BMS Version	4.9
Manufacturing Date	Wednesday, September 12, 2012
Manufacturer Name	MELTON
Battery Identification	battery
Serial number	1
Battery Chemistry	LION

Test Results:

	Rated	Measured	Lower Limit	Upper Limit	%	Test Result
Energy [Wh]	396.00	373.26	316.80		94.3 %	
Capacity [Ah]	11.00	10.66	9.90		96.9 %	Passed
Impedance [mOhm]	200.00	180.17		220.00	90.1 %	Passed
Cut-off-Voltage [V]	26.75	26.74	24.08	29.43	100.0 %	Passed
Charge end Voltage [V]	42.00	41.73	41.16	42.84	99.4 %	Passed
Charge Duration [hh:mm]	08:00	07:34			94.7 %	Passed

Measurement Module Results:

Time	Measurement	Value
Entering state: Pre-Charging at 2/22/2014 8:13:21 AM		
00:00:00	Temperature (Degree Celsius)	31.9 °C
00:00:00	Voltage [V]	30.2
00:00:00	Absolute State Of Charge	0 %
00:00:00	Remaining Capacity [Ah]	0.00
00:00:00	Fully Charged Capacity[Ah]	11.42
00:00:00	Cycle Count	35
Entering state: Discharging at 2/22/2014 3:48:34 PM		
00:00:00	Temperature (Degree Celsius)	22.9 °C
00:00:00	Voltage [V]	41.7
00:00:00	Absolute State Of Charge	120 %
00:00:00	Remaining Capacity [Ah]	11.42
00:00:00	Fully Charged Capacity[Ah]	11.42
00:00:00	Cycle Count	35
01:24:46	Temperature (Degree Celsius)	44.9 °C
01:24:46	Voltage [V]	28.2
01:24:46	Absolute State Of Charge	0 %
01:24:46	Remaining Capacity [Ah]	0.00
01:24:46	Fully Charged Capacity[Ah]	11.42
01:24:46	Cycle Count	36

