

Traction Battery Short Circuit Test Machine

Related Standard Test Requirements

Single Storage Cell Safety Test

- 6.2.4 Short circuit
A) Charge the single storage cell according to 6.1.3 standard
B) The cell is to be short-circuited by connecting the positive and negative terminal with a external resistance of less than 5mΩ for 10 min
C) Observe for 1H

Battery module safety test

- 6.3.4 Short circuit
A) Charge the battery module according to standard 6.1.4
B) The battery module is to be short-circuited by connecting the positive and negative terminal with a external resistance of less than 5mΩ for 10 min
C) Observe for 1H



| Model | BE-XL-2000A | BE-XL-3000A | BE-XL-5000A |
|-----------------------------------|--|-------------|-------------|
| Max. Operating Current (A) | 2000A | 3000A | 5000A |
| Max. Instantaneous Current(A) | 3000A | 4000A | 6000A |
| Temp. Range | Ambient Temperature | | |
| Inner Resistance | < 1mΩ, < 5mΩ, < 10mΩ, < 20mΩ, < 50mΩ, < 100mΩ(Optional) | | |
| Control Mode | PLC Touch Screen + Computer remote control + Remote controller | | |
| Overall Dimension | W700xD1050xH1830mm | | |
| Explosion proof Chamber Dimension | 800 X 800 X 800mm, 1000 X 1000 X 1000mm (Optional) | | |
| Voltage Measurement Range | 0~500V | | |
| Short Circuit Response Time | ≤ 20ms | | |
| Data Interface | USB, Data card, etc. | | |
| Data Acquisition Module | Independent remote acquisition, multi-voltage/temperature/current acquisition channels ensure data accuracy. Acquisition frequency 100HZ | | |
| Short Circuit Mode | Pneumatic + vacuum arc extinguishing | | |
| Safety Device | Electric leakage, over current protection ,smoke alarm device, abnormal sound light alarm. | | |
| Testing Fixture | Customize according to actual testing condition | | |
| Power Supply | 220V 50HZ | | |

Thermal Abuse Test Chamber

Related Standard Test Requirements

Single storage cell Safety Test

- Heating test steps:
a) Charge the battery according to the standard 6.1.3
b) Place it into the chamber
--For lithium storage battery, the oven temperature is raised at a rate of 5℃/min to a temperature of 130℃ ± 2℃, remain this temperature for 30min, then stop heating;
--For metal cyanide nickel battery, the oven temperature is raised at a rate of 5℃/min to a temperature of 85℃ ± 2℃, remain this temperature for 2h, then stop heating.
c) Observe for 1h

Storage Battery Module Safety Test

- a) Charge the battery module according to the standard 6.1.4
b) Place it into the chamber
-For lithium storage battery, the oven temperature is raised at a rate of 5℃/min to a temperature of 130℃ ± 2℃, remain this temperature for 30min, then stop heating;
--For metal cyanide nickel battery, the oven temperature is raised at a rate of 5℃/min to a temperature of 85℃ ± 2℃, remain this temperature for 2h, then stop heating.
c) Observe for 1h



Performance parameters

| Model | BE-101-1000A |
|----------------------------|--|
| Temp. Range | Ambient~200℃(Controllable) |
| Control Accuracy | ± 0.5℃ |
| Temp. Uniformity | ± 2.0℃ (No load) |
| Temp. Rising Speed | RT~150℃ (≥ 5℃/min, liner with load 40kg module) |
| Temp. overshoot | ≤ 2.0℃ |
| Control Display Method | PLC Touch screen + remote control, networking, cell phone APP alarm device, with USB interface, RS485 interface can be connected to computer controlling. |
| Testing Room Dimension | W1000 X D1000 X H1000 mm |
| External Chamber Dimension | W1400 X D1300 X H1840 mm |
| Inner chamber Material | SUS304 Stainless Steel (Mirror finished) |
| External chamber Material | SECC Steel Plate, Powder Painted |
| Basement | With universal wheel |
| Observation Window | 390 X 360mm (20mm Tempered Explosion Proof Glass) |
| Power Source | 380V 50HZ |
| Heating Power | About 12KW |
| Safety Protection Device | over voltage, over temperature, over current protection. protection for short circuit caused by incorrect operation of the operator and battery electrode, battery positive and negative connection, etc |
| Safety Device | Smoke exhaust system, explosion proof pressure relief port, tri-color light alarm. |