



ELECTRICAL TESTS FOR BATTERIES

- *Support in selection of cell technology*
- *Functional checks*
- *Characterization of batteries*
- *Simulation of driving cycles*
- *Durability studies*
- *Calendar aging*
- *Cyclic aging*
- *Investigation of the influences of different environmental conditions*



//01 System test benches with climate chambers

CELL LEVEL

- **72 channels**
 Voltage: 0.7 V – 5.5 V
 Current: 100 A charge / 120 A discharge
 Range: 100 A / 10 A
 Parallel: up to 12 channels in parallel for max. discharge current of 1440 A
 Modes: CC, CV, CP and dynamic load profiles
- **96 channels**
 Voltage: 0 – 6 V
 Current: 150 μ A – 5 A
 Modes: CC, CV, CP, dynamic load profiles



//02 Various battery topologies





- **4 channels Impedance Spectroscopy**

Voltage: 0 – 20 V / \pm 10 V

Current: 0 – 2 A (1 channel 20 A)

Frequency: 10 μ Hz – 80 kHz

Modes: PEIS / GEIS

MODULE LEVEL

- **8 test benches**

Voltage: 0 – 70 V / 140 V

Power: max. 60 kW

Modes: CC, CV, CP and dynamic load profiles

SYSTEM LEVEL

- **3 test benches**

Voltage: 0 – 500 V / 1000 V

Power: max. 300 kW

Modes: CC, CV, CP and dynamic load profiles

All test equipment can be combined with climatic chambers.



//03 Test setup

ACCREDITATIONS

- IEC 62660-1
- ISO 12405-4



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