Quality Assurance

ExaMight.Inline

SAFION

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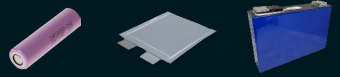
Schedule a demo!

All-in-one solution for Inline battery cell inspection

- Fast, accurate, 100% quality assessment of lithium-ion batteries
- Fully and partially automation and integration
- Precise prediction of battery performance and lifetime within seconds
- Small footprint and scalable design for easy integration
- Continuous monitoring,grading and tracking of battery cells
- Tool-chain for QA workflow and supplier assessment

For **all** cell formats



For **all** cell chemistries

Na-Ion | LCO | LMO | NMC | LFP | NCA | LTO | +

SYSTEM OVERVIEW

Control Unit

- Executes intelligent algorithms for on-the-fly analysis and quality assessment of Li-ion cells
- Controls multiple measurement and multiplexing units for high line-throughput
- Provides communication interfaces (e.g., Profi-Net) for automation PLCs

Measurement Unit

- Fast and accurate multi-sine measurement (rEIS) of the electrochemical impedance of Li-ion cells
- Designed and engineered for the Li-ion battery market: Accurately measures low impedances
- Highly efficient power electronics with very low power dissipation. No active cooling required

Multiplexer Unit

- Multiplex your EIS measurement capabilities across 40 channels
- Sequential measurement with a channel switching time of 0.5 seconds

Key Benefits

- **Safeguard the quality of your Li-ion batteries using rapidEIS**
- **Scalable system that offers high line-throughput**
- **Adaptable to all lithium-ion cell chemisteries and formats**

ExaMight Inline Specifications

Parameter	Value
AC current output (1 Hz – 10 kHz)	Max. 10 A (peak-peak)
AC excitation	parallel multi-sine, up to 32 frequency points
LIB cell voltage range	0 - 5 V
Frequency range	0.1Hz - 10 kHz
Frequency accuracy	100 ppm
Impedance measurement range	0.1 mΩ to 100 mΩ
Resolution voltage measurement (DC)	< 0.5 mV
Resolution voltage measurement (AC)	< 2 µV
Voltage Measurement Accuracy (DC)	< 0.225 mV
Accuracy |Z| (typical, after calibration)	< 1 %
Accuracy arg(Z) (typical, after calibration)	< 0.5 °
Input Voltage (via supplied power supply unit)	110V / 230 VAC
Form Factor	19“ Rack
Operation temperature	+10°C to +30°C

Benefits and Features	Industry Standard	ExaMight.Inline
OCV measurement	✓	✓
1kHz resistance (AC-IR)	✓	✓
EIS measurement duration (1Hz – 10kHz)	**Minutes**	**1 second**
Ability to handle temperature fluctuations	✗	✓
Cell grading and sorting functionalities	✗	✓
Digital twin creation, cell-fingerprinting	✗	✓
Complete Cell Inspection Solution	✗	✓

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