

# MCV

## EV/HEV Battery Cell Testing System

### Highlights

The Bitrode MCV product is a full-featured life cycle test system for development of automotive, industrial and consumer batteries.



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### Applications

- Standard Electric Vehicle Tests:
  - Federal Urban Driving Schedule (FUDS and SFUDS)
  - Dynamic Stress Tests (DST)
  - ECE-15L
- Life Cycle Testing: Perform charge/discharge cycling of cells or batteries to obtain charge and discharge capacity, energy and DC internal resistance
- Automotive Battery testing

### Key Features

- Parallel circuit operation for greater flexibility in test specification
- Constant current, power or voltage control
- Bipolar capacity for discharging to below zero volts (optional)
- Optional inputs can be assigned to any test channel
- Program execution is independent from the PC with VisualLCN software
- Remote Binary Protocol via Ethernet connection available for 3rd party software control
- Program headers available in software for global control
- Each circuit is operated by the Bitrode's Windows-based VisualLCN software program via the VisualLCN Lab Client software
- VisualLCN product platform allows users to:
  - create custom test profiles
  - monitor test progress of each test circuit
  - analyze the collected data in the Access database, which can be exported to Excel via a .csv file within Quick Data view

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### General Specifications

Duty Cycle:	100%
Accuracy:	± 0.1% Full Scale
Data Acquisition Rate:	100ms max*
Rise Time (10-90%):	50ms*
Input Power Supply:	3 - phase, 50/60 Hz
Ambient Temperature:	0 - 40°C
Control Software:	VisuaLCN Lab Client
Interface:	Ethernet

### Technical Specifications

Current Ranges (A):	0 to 300 (2700A in parallel) –up to three ranges per circuit optional*
Current Resolution (A):	0.001 to 0.1A (Based on maximum current value)
Voltage Ranges (V):	0 to 18
Voltage Resolution (V) :	0.001 to 0.01V (Based on maximum voltage value)
Circuits:	up to 96**

\*Note: Other ranges and specifications can be available on request.

\*\* Depending on voltage and current configuration.

\*\*\*All specifications are subject to change without notice.



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### Software / Hardware Options

- Cell Voltage Monitoring
- Temperature Monitoring
- Digital Input/Output
- Pressure Monitoring
- Ramp Charge/Discharge
- Expressions-based program limit conditions
- Constant resistance discharge
- Internal resistance calculation
- Bipolar voltage capability
- Charge/Discharge AH/WH
- Real Time Clock
- Sub-step Sampling
- Remote Input Output (RIO) system
- CAN interface
- Open Protocol Interface via Ethernet connection available for 3rd party software control
- Environmental Chamber Interface
- EIS Meter Interface



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