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

**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 VisuaLCN 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 VisuaLCN software program via the VisuaLCN Lab Client software
- VisuaLCN 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
**General Specifications**

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

**Technical Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Ranges (A)</td>
<td>0 to 300 (2700A in parallel) – up to three ranges per circuit optional*</td>
</tr>
<tr>
<td>Current Resolution (A)</td>
<td>0.001 to 0.1A (Based on maximum current value)</td>
</tr>
<tr>
<td>Voltage Ranges (V)</td>
<td>0 to 18</td>
</tr>
<tr>
<td>Voltage Resolution (V)</td>
<td>0.001 to 0.01V (Based on maximum voltage value)</td>
</tr>
<tr>
<td>Circuits</td>
<td>up to 96**</td>
</tr>
</tbody>
</table>

*Note: Other ranges and specifications can be available on request.
** Depending on voltage and current configuration.
*** All specifications are subject to change without notice.

**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