VOLTpo■nt™

Li-ion Cell Measurement

Channel 1 Isolated
Floating Front End: ISO-Channel™

CH 1

−○
1MΩ
+○

Filter

Diff Amp

24-bit Sigma-Delta A/D

Isolated DC-DC

Channel Ground for Sensor 1

Channel 48 Isolated
Floating Front End: ISO-Channel™

CH 48

−○
1MΩ
+○

Filter

Diff Amp

24-bit Sigma-Delta A/D

Isolated DC-DC

Channel Ground for Sensor 48

±500V Isolation

ROM
SRAM
Embedded Controller

8 Isolated Digital In
8 Isolated Digital Out
Ethernet (LXI)
USB

VOLTpo■nt™

Applications:

- Hybrid–Electric–Vehicle (HEV) battery performance
- Li-ion Cell measurements
- High voltage, precision battery stack, or cell balance measurements
- High power portable equipment
- Motor shunt measurements
- Commercial, military hybrid vehicles
- Fuel cell stacks
- High voltage data acquisition
- Battery back-up monitoring

High Voltage . . . Ultra-Accurate

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VOLTpoint™

VOLTpoint™ is a precision measurement instrument for cell-by-cell determination of battery voltages from millivolts up to ±400V. Up to 48 separate inputs can be monitored to accuracies of less than 300µV for any direct reading over the complete operating temperature range. Each input is galvanically isolated from each other by 1000V common mode voltage, so that different ground potentials have no effect on any other channel.

Direct voltage inputs of any value up to ±400V can be directly applied from a single cell or from a series of stacked cells. Full accuracies are obtained for each channel by a dedicated 24-bit sigma-delta A/D per channel powered by its own DC-DC converter. This ISO-Channel™ front end technology assures that each input is floating from earth ground and has no effect on any other reading.

A full software application is part of VOLTpoint, no programming is necessary. Simply connect the inputs and measure. There is practically no warm-up time. Full compatibility, either USB or Ethernet, allows its use in a network, as a stand-alone, or export to Excel®.

Fast Start-Up of Applications

- Minimum warm-up and stabilization time
- Easily expand channel count by adding VOLTpoint instruments
- Easy connection with removable screw terminals

Investment Protection

- Software application for any measurement…easily modify for proprietary needs
- Reconfigurable to changing needs – add channels as needed
- Multiple instrument expansion to thousands of channels
- Full Ethernet (LXI) or USB compatibility

Confident Results

- Dedicated 24-bit Sigma-Delta A/D per channel
- Galvanic isolation to protect signal integrity – 1000V channel-to-channel... ISO-Channel™
- Guaranteed accuracy over temperature range...300µV
- Rugged steel enclosure for harsh environment
- Separate calibration utility to assure accurate results

Ready-to-Use

- No programming necessary…simply connect inputs and measure
- Monitor and control measurements from anywhere over the web
- Measurement repeatability for exacting needs
- Unattended operation – set alarm limits and get email notiification

Cover Images courtesy of Linear Technology and the Automotive Career Development Center

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