ReVx Energy

VinciX-BMU-54S

Battery Management Unit



FEATURES

- 54 Cell Monitoring with ±5mV Accuracy and 27 Thermistor Inputs
- Reverse Polarity Protection with ASIL C Compatible Architecture
- 4 Low Side Inputs and 4 High Current Low Side Outputs for System Integration
- On Board SD Card Data Logging for Field Diagnostics
- CAN and RS485 Communication with Configurable Protocols
- Stackable up to 30 BMU through CAN Communication
- H2 Sensor for Hazardous Gas detection from Cell Leakage
- 9-75V Wide Input Range Supply Voltage

APPLICATIONS

- Electric Bus
- Electric Truck
- HV Energy Storage

KEY SPECIFICATION

Parameters	Specifications
Power supply	9V - 75V DC
Compatible With	VinciX-HV Master and VinciX-BCU
Number of cells	18 - 54 Cells
Cell chemistry	Chemistry agnostic
Cell voltage measurement accuracy	± 5mV
Cell voltage sampling time	20 ms
Cell balancing method	Passive Balancing
Cell balancing current	420mA @4.2V
Number of temperature sensor interface	27 Thermistors
Temperature measurement accuracy	± 1 °C
Standby/Sleep mode	Yes with Low Q Current
MCU Features	100MHz Arm Cortex M4 with ART Accelerator
Charger/ECU communication type	CAN 2.0 A/B 11/29 bit ID
CAN Channel	1 Isolated CAN up to 1Mbps
RS-485 Channel	Isolated RS-485 up to 1Mbps
General Purpose Inputs	4 for HVIL Sense and other configurable inputs
High Current Outputs	4 Channels up to 3A Continuous current
Reverse polarity protection	Yes
Hazardous Gas Sensor	H2 Sensor with Temperature and Humidity for high accuracy
Local data logging	Industrial Grade SD Card
Protections	Cell and Pack Under voltage & Over voltage, Discharge and Charge Over Current, Discharge and Charge Over Temperature & Under Temperature, Short circuit and Regen protection
Compliance	IEC 62933-2, IS 17387:2020, IEC 61000-4 All Parts, AIS 004 Part 3
Automotive Compatible	ASIL C Compatible with AEC-Q Components
Temperature	-20 °C to +80 °C

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