

72 CHANNELS CELL SIMULATION WITH FAULT SIMULATION RACK



OVERVIEW

The Cells Simulation Rack/Module is a battery simulator module with 72 isolated cells used to simulate battery features. The voltage of each cell can be adjusted through Standard CAN, Ethernet TCP and USB-C, as well as getting the voltage and the current measurements.

A single module can be used or several in series according to the requirements (based on how many cells are needed). Also, the module can be used independently or in a mountable rack system.

KEY FEATURES

- 72 independent and isolated cells in total.
- Extendable number of cells by adding more modules in series.
- Standalone module or bench rack mounted.
- Each cell has an adjustable output voltage of 0V to 5V with 1.0 mV precision.
- The current sourcing of each cell is up to 1 A/5A. Voltage measurement with a precision of 0.4mV.
- High current measurement with a precision of 1mA.
- Low current measurement with a precision of 20uA.
- Rise time for all 72 channels <1ms.
- Controllable by CAN ISO 11898-2, Ethernet TCP & USB-C.
- Support the RTDS HIL System protocol.
- Ready to use C#,labVIEW APIs and Veristand CD.
- Fault simulation status LED Indicators.
- Fault simulation modes: Short / Open Circuit, Reversed.
- (Optional) 28 to 72 NTC channels with adjustable output resistance simulation from 0 Ω to 8.1 Ω with 1 Ω steps.

DIMENSION

L*W*H = 55cm*70cm*113.7cm

OPERATING TEMPERATURE

-20 °C ~ +60 °C

POWER REQUIREMENT

DC power supply: 24 VDC

DETAILED SPECIFICATIONS:

Cell Voltage Output	Value	Unit
Range	0 to 5	V
Stability Precision	1000	μ V
Setting Precision	1000	μ V
Isolation Voltage	1500, Tested for 1 minute and 1mA max	V
Rise time for all channels	<1	ms

Cell Discharge Current	Value	Unit
Range	0 to 1/0 to 5	A

Cell Charge Current	Value	Unit
Range	500	mA

Cell Voltage Measurement	Value	Unit
Range	-5 to 5	V
Resolution	16	bit
Precision	400	μ V

Low Cell Current Measurement	Value	Unit
Range	-1 to 1	mA
Resolution	16	bit
Precision	20	μ A

High Cell Current Measurement	Value	Unit
Range	-1000 to 1000	mA
Resolution	16	bit
Precision	1	m

NTC DETAILED SPECIFICATIONS(Optional):

Resistance	Value	Unit
Range	0 to 8.1 M	Ω
Resolution	1	Ω

Current Measurement	Value	Unit
Range	0 to 100	mA
Resolution	12	bit
Precision	1	m

Communication Interface	Unit
Ethernet	TCP/IP 10/100 Mbps link Programmable source, gateway, and mask IP
USB-C	USB 2.0 5V power supply

ENVIRONMENTAL

The Cells Simulation module is intended for indoor use only but may be used outdoors if installed in a suitable enclosure. Refer to the manual for more information about meeting these specifications.

Operating temperature	-40°C-- +55°C
Storage temperature	-40°C-- +85°C
Ingress protection (IP code)	None
Operating humidity	10-90% RH non condensing
Storage humidity	5-95% RH non condensing



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