

12 CHANNELS CELL SIMULATOR 12 NTC-RACK CSNTC 31-1-1212 F



OVERVIEW

The Cells Simulation Rack/Module with NTC and fault simulation is a battery simulator module with 12 isolated cells used to simulate battery features. It also contains 12 NTC channels to simulate temperature sensor output and support the short circuit, open circuit and reverse voltage fault simulation modes.

The voltage of each cell and NTC output can be adjusted through Standard CAN, Ethernet TCP and USB-C, as well as getting the voltage and the current measurements.

DIMENSION

L*W*H = 482mm*350mm*89mm

KEY FEATURES

- 12 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 0 V to 7 V with a precision of 1.0 mV.
- The current sourcing of each cell is up to 1 A.
- Voltage measurement with a precision of 0.4 mV.
- High current measurement with a precision of 1mA.
- Low current measurement with a precision of 5 uA.
- Short circuit, open circuit and reverse voltage fault simulation modes.
- Controllable by CAN ISO 11898-2, Ethernet TCP and USB-C.
- 12 independent NTC channels to simulate temperature sensor output.

OPERATING TEMPERATURE

-20 °C ~ +60 °C

POWER REQUIREMENT

DC power supply: 24 VDC

DETAILED SPECIFICATIONS:

Cell Voltage Output	Val ue	Unit
Range	0 to 7	V
Stability Precision	1000	μV
Setting Precision	1000	μV
Isolation Voltage	1500, Tested for 1 minute and 1mA max	V

Cell Discharge Current	Val ue	Unit
Range	0 to 1	A

Cell Charge Current	Val ue	Unit
Range	500	mA

Cell Voltage Measurement	Val ue	Unit
Range	-7 to 7	V
Resolution	16	bit
Precision	400	μV

Low Cell Current Measurement	Val ue	Unit
Range	-1 to 1	mA
Resolution	16	bit
Precision	5	μA

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

NTC	Val ue	Unit
Range	0 to 8.1 M	Ω
Resolution	1	Ω

SERIES					
Item	18 Cell Simulator CS 31-1-18	Standalone 18 Cell Simulator CS 31-1-18	18 Channels Cell Simulator (2U Rack) CS 31-1-18	18 Channels Cell Simulator (2U Rack) CSNTC 31-1-18/4	12 Channels Cell Simulator (2U Rack) CSNTC 31-1-12/4
18 independent cell output 0 to 7V	✓	✓	✓	✓	✓
Charge / Discharge mode	✓	✓	✓	✓	✓
Voltage and current independent measurement @each channel	✓	✓	✓	✓	✓
Sleep current measurement @each channel	✓	✓	✓	✓	✓
NTC simulation - 4ch (with current measurement @each channel)	OPTIONAL	OPTIONAL	OPTIONAL	✓	✓
Debugging monitoring panel	✓	✓	OPTIONAL	OPTIONAL	OPTIONAL
Embedded script running	✓	✓	✓	✓	✓
Off line mode	✓	✓	OPTIONAL	OPTIONAL	OPTIONAL
LAN/USB/CAN Control	✓	✓	✓	✓	✓
Application software	✓	✓	✓	✓	✓
Battery curve simulation	✓	✓	✓	✓	✓
Fault simulation	✓	✓	✓	✓	✓

APPLICATION EXAMPLE

- New energy vehicles/drones/energy storage BMS (battery management system), battery protection board test
- Development and testing of portable consumer electronics products, such as mobile phones, Bluetooth headsets, smart watches.
- Power tools production test, such as electric screwdriver, etc
- Battery powered, small power supply such as DC-DC, wireless charging and other product testing
- Battery maintenance equipment class test

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

SUPPORT AND SERVICES

Calibration ART logics measurement hardware is calibrated to ensure measurement accuracy and verify that the device meets its published specifications. To ensure the ongoing accuracy of the measurement hardware, ART logics offers basic or detailed recalibration service.



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