

# 18 Channels Cell Simulator with Fault Simulation CS31-1-18/FS-18-1



## OVERVIEW

The 18 Channels Cell Simulator with Fault Simulation is a 2U rack-mounted device with 18 isolated channels designed to emulate battery characteristics. Each cell's voltage can be configured via CAN (ISO 11898-2), Ethernet TCP, or USB-C, while real-time voltage and current measurements are accessible. The module can operate independently or be integrated into a rack system, and multiple units can be combined to scale channel capacity as needed.

### KEY FEATURES

- 18 Independent Cell Simulation Channels: Expandable by adding modules.
- Flexible Output: Adjustable cell voltage from 0V to 7V with 1.0mV precision.
- High-Current Capability: Supports 1A/2A/3A output per channel.
- Voltage measurement accuracy: 0.4mV
- High-current measurement accuracy: 1mA
- Low-current measurement accuracy: 5μA
- Multi-Protocol Control: CAN ISO 11898-2, Ethernet TCP, and USB-C.
- Support Fault Simulation: Reverse, Short cut and open.

### Dimension

L\*W\*H =  
602mm\*482.6mm\*88.1mm

### Operating Temperature

-20 °C ~ +60 °C

### Power supply

直流电源:  
24 VDC, 6A

## DETAILED SPECIFICATION

voltage output	Value	Unit
Range	0 to 7	V
Stability Accuracy	1000	μV
Setting Accuracy	1000	μV
Isolation Voltage	1500 test 1 minute, Up to 1 mA	V

Discharge Current	Value	Unit
Range	0 to 1/2/3 (selectable)	A

Charge Current	Value	Unit
Range	500~2000(selectable)	mA

Voltage Measurement	Value	Unit
Range	-7 to 7	V
Resolution	16	bit
Accuracy	400	μV

Low-Current Measurement	Value	Unit
Range	-1 to 1	mA
Resolution	16	bit
Accuracy	5	μA

High-Current Measurement	Value	Unit
Range	-1000 to 1000	mA
Resolution	16	bit
Accuracy	1	m A

## Applications

- BMS Testing: For EVs, drones, energy storage systems, and portable electronics.
- Power Tools: Production testing of devices like electric screwdrivers.
- DC-DC Converters & Wireless Chargers: Performance validation.
- Battery Maintenance Equipment: Compliance and lifecycle testing.



## ENVIRONMENT

The 18 Channels Cell Simulator with Fault Simulation 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

$-40^{\circ}\text{C}$  --  $+55^{\circ}\text{C}$

Storage Temperature

$-40^{\circ}\text{C}$  --  $+85^{\circ}\text{C}$

Ingress protection (IP code)

None

Operating humidity

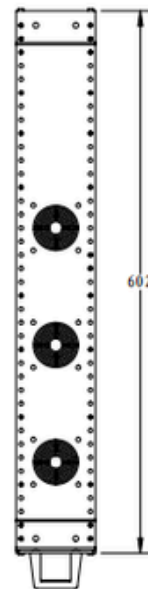
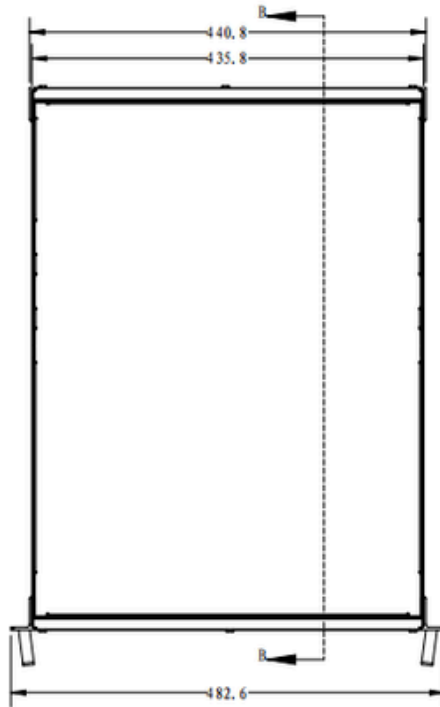
10-90% RH non condensing

Storage humidity

5-95% RH non condensing

## DIMENSION

**L\*W\*H =**  
**602mm\*482.6mm\*88.1mm**



## SUPPORT AND SERVICE

### 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.



ART Logics (Shanghai) Testing Equipment CO., Ltd  
艾驰电子检测设备技术（上海）有限公司

Tel: 021-61075469  
Room 105, No. 258, Chengjiaqiao Road, Shanghai, P.R. China



[www.art-logics.com](http://www.art-logics.com)  
[support@art-logics.com](mailto:support@art-logics.com)