HYC 华兴源创

24-Channel Battery Simulator Datasheet

Multi-channel, high-precision battery simulator

Product Features

HX-EB-1400 series battery simulator features high-precision programmable, highly integrated, multi-channel output. It simulates the output state or the charging and discharging characteristics of real batteries, thus it can be used to replace batteries during the R&D and production test of electronic products.

- Equipped with standard 19-inch 3U chassis, up to 24 independent channels for each machine, with each channel isolated from each other to facilitate series connection of multi-channel.
- Support local/remote (LAN, RS232, CAN) communication control, LAN dual interface, convenient for site test.
- Adopt professional test software, support power mode, charging mode, SOC test, sequence test, real-time curve and other test functions.

■ * We can provide customized service according to customer product specifications and test and measurement requirements, please contact our sales staff for more information.

Product Advantages

High level of integration

◆ Support up to 24 power supply channels in a single machine.

◆ Isolation between channels, support multi-channel series connection, able to simulate battery pack working state.

Compact and powerful

◆ Conveniently fitted in various sites, easy to install and maintain.

◆ Convenient for automated site testing.

Professional software

◆ Simple interface, flexible operation.

◆ Meet the test requirements of multi-channel, multi-parameter, and complex test environment.

Simulate power characteristics

◆ Support SOC test, sequence test, real-time curve and other functions.

◆ Support μA level current measurement.

◆ Ultra-fast dynamic response, voltage rise time <100μs.

Multiple communication interfaces

◆ Support LAN/RS232/CAN communication control.

◆ Single-channel programming communication response time ⩽ 10ms.

Service Advantages

Deep plowing in the field of automotive electronics
Self developed core technology

Short delivery cycle
Fast and accurate response

Localized service team
One-stop solution

Large volume of product shipments with rich application scenarios

■ HYC reserves the right to make improvements to the specifications and appearance of our products without notice.

Equipment Parameters

Category	Specification
Current	1A/CH
Voltage	6V/CH
Power	6W/H
Number of channels	24CH

Constant voltage mode	Measuring range	0~6V
	Set resolution	0.1mV
	Set precision(23±5℃)	0.6mV+0.01%
	Read-back resolution	0.1mV
	Read-back precision(23±5℃)	0.6mV+0.01%
	Temperature coefficient	20ppm/℃
	Long-term stability	80ppm/1000h
Constant current mode (mAscale)	Measuring range	0~1A
	Set resolution	0.1mA
	Set precision(23±5℃)	1mA+0.2%
	Read-back resolution	0.1mA
	Read-back precision(23±5℃)	1mA+0.2%
Constant current mode (μAscale)	Measuring range	0~1mA
	Set resolution	0.1μA
	Set precision(23±5℃)	1μA+0.2%
	Read-back resolution	0.1μA
	Read-back precision(23±5℃)	1μA+0.2%
	Temperature coefficient	30ppm/℃
	Long-term stability	100ppm/1000h
Dynamic characteristics	Voltage rise time*1(no load)	< 100μs
	Voltage rise time(pure resistance full load)	< 100μs
	Voltage drop time*2(no load)	< 3ms
	Voltage drop time(pure resistance full load)	< 100μs
	Transient voltage drop*3	200mV
	Transient recovery time*4	< 100μs
Others	Load regulation	0.2mV
	Withstand voltage(output to ground)	1000VDC
	Withstand voltage(channel to channel)	500VDC
	Single-channel programming response time	< 10ms
	Communication interface	LAN/RS232

- *1 Voltage rise time: time it takes for the voltage to rise from 10% of full voltage to 90% under zero voltage output.
- *2 Voltage drop time: time it takes for the voltage to drop from 90% of full voltage to 10% under full voltage output.
- *3 Transient voltage drop: the maximum voltage drop value when the load changes abruptly from 10% to 90% under full voltage output.
- *4 Transient recovery time: time it takes for the voltage to recover to within −50mV of the original voltage when the load changes abruptly from 10% to 90% under full voltage output.
- In addition to the above specifications, this product can be customized and developed according to customer product specifications and test and measurement requirements.
- HYC reserves the right to make improvements to the specifications and appearance of our products without notice.

Equipment Model

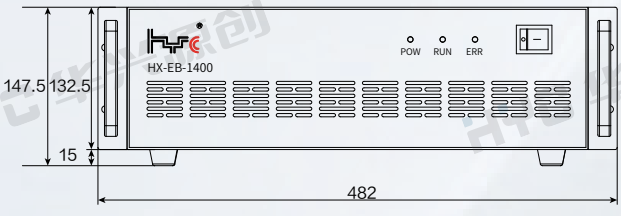
Serial number	Item Code	Model	Device name
1	AP-02-01-10114-N	HX-EB-1400	24-Channel battery simulator

Equipment Specification

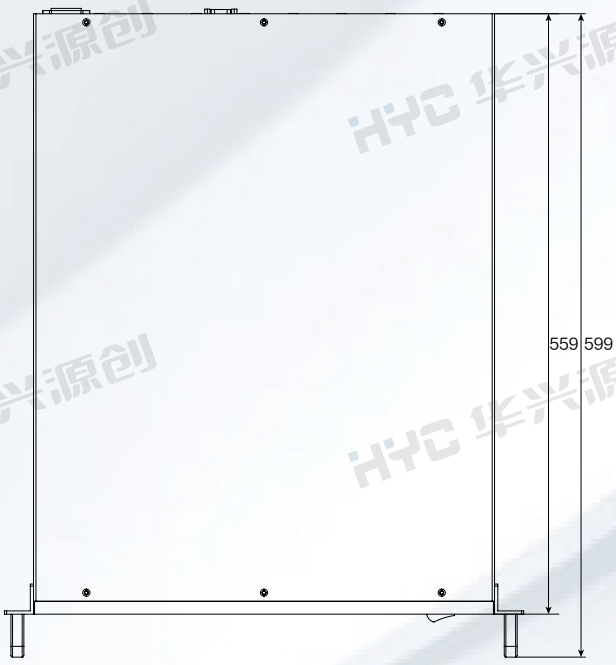
Category		Specification
Equipment model		HX-EB-1400
Equipment dimensions		L 482 mm × W 599 mm × H 147.5 mm
Weight		About 20kg
Power input		AC 220V, frequency 47~63Hz
Rated current		3.5A
Environmental requirement	Temperature	Working temperature: 0℃ ~40℃ Storage temperature: -20℃ ~60℃
	Relative humidity	5%~90% (No condensation)
	Altitude	< 2000m
	Air pressure	80~110Kpa

Equipment Size

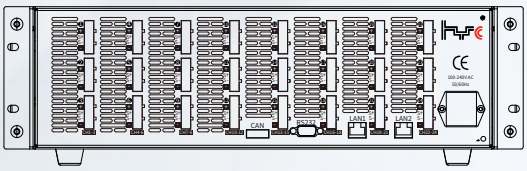
HX-EB-1400



Front view



Top view



Rear view

Manual No. HYC-RD-15-010-2023-EN B00

February 2024