

# **S7000H** Regenerative DC Source-Load Power System



- Bidirectional DC source
- Regenerative electric load
  - PV Array IV Simulation
- Battery charge-discharge
  - Battery simulation
    - Parallel operation

### Summary

S7000H is a high precision DC power system supporting dual mode-source and load-with energy regenerative feature. (1) As a DC source, it supports dual quadrant energy flow; (2) As an electronic load, it supports energy recovery to the grid. Highly efficient in switching modes, featuring high power density, 3U-sized dimension enables it to power up to 30kW and output voltage up to 2000V. Support parallel operation of multiple machines. Human-computer interface is engineered to suit all your needs by offering two choices, colorful touchscreen and knob. Can be applied in battery testing, battery storage inverter testing, electronic testing of EV etc. A comprehensive test solution to versatile types of products with highly effective and robust result

#### **Advantages**

Voltage output range: 0-2000V (up to 2250V)

Support parallel operation of 20 machines (or more).

Unique design for human-computer interface: knob and colorful touchscreen.

Smooth switching between DC source mode and load mode.

Bidirectional energy flow supporting energy recovery to the grid

High power density: 30kW in 3U

High precision voltage and current output. Low ripple.

Standard communication interfaces: RS485/CAN/LAN/USB

Comprehensive protection including OCP/OVP/OPP/OTP/input protection/island protection etc.

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#### Specifications

型号		S7000H-7K5 -750-0040	S7000H-15K -750-0080	S7000H-21K -750-0120	S7000H-15K -1500-0040	S7000H-21K -2000-0040	S7000H-30k -2000-0040	
	Voltage	750V	750V	750V	1500V	2000V	2000V	
Rated Values	Current	40A*1	80A	120A	40A*1	40A*1	40A*1	
	Power	7.5kW	15kW	21kW	15kW	21kW	30kW	
Display Resolution	Voltage	0.01V 0.1V						
	Current	0.01A						
	Power	1W						
Precision	Voltage	≤0.05%F.S.						
	Current	≤0.1% F.S.						
Line Regulation	Voltage	≤0.02%F.S.						
	Current	≤0.02%F.S.						
Load Regulation	Voltage	≤0.05%F.S.						
	Current	≤0.05%F.S.						
Ripple	Vpp (20MHz)	<	<1000mV <3000mV					
	Voltage (rms)		< 200mV			<400mV		
	Current (rms)	< 35mA	< 100	mA	< 35mA			
Slew Rate	Voltage (no load)	0.001V/ms ~ 80V/ms						
	Voltage (full load)	0.001V/ms ~ 30V/ms						
	Current (no load)	0.001A/ms ~ 20A/ms						
	Current (full load)	0.001A/ms ~ 10A/ms						
Dynamic Response Time		< 1ms *2						
161	Voltage	342VAC~528VAC						
AC Input	Frequency	47Hz~63Hz						
Efficiency		≈95%						
Power Factor		>0.99						
Protection		OVP/OCP/OPP/OTP/Anti-islanding protection						
Communication Interface		RS485/LAN/CAN/USB/Others (custom)						
Ambient Temperature		0 ~ 40℃						
Dimensions		733mm(D) x 445mm(W) x 132.5mm(H)						
Weight		≈40kg	≈45kg	≈50kg	≈45kg	≈!	50ka	

注: \*1: Up to 70A \*2: 10%-90% Load

## **Proven Test Curve**



Seamless current switching in dual quadrant



Start-up at constant-voltage mode

