

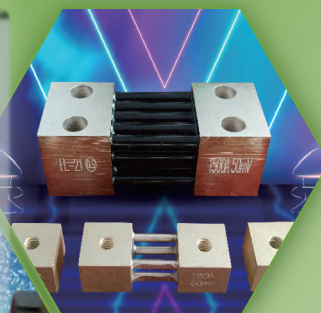
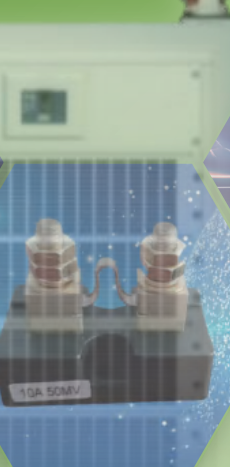
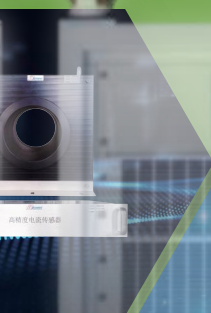


Hangyu Power System (Shanghai) Co., Ltd.

HY-HPDSU Series

High Precision DC Power Supply

Military Quality Power Supply Expert



HY-HPDSU Series High Precision DC Power Supply



High precision, High power density



High-precision high-current reference source is the basis to ensure the calibration and testing accuracy of current sensor. As the "sense organ" of automobile, automobile sensor is widely used in various electronic control systems of automobile, and its accuracy is self-evident.

The precision calibration test has many requirements on the power supply. Firstly, the range of current is large and the accuracy level is very high, which is challenging. Secondly, the real working conditions are often dynamic currents with a large fluctuation range, and large and small currents need to maintain good accuracy.

HY-HPDSU series high-precision power supply is designed to solve this test problem, this power supply reaches 1%-100% of the full range accuracy requirements, and the accuracy level can reach the highest level of 0.01, which is very satisfying the precision calibration requirements.

Product Features

- Meet the full range accuracy requirements of 1%-100%
- Power supply accuracy degree level 0.01, level 0.02, level 0.05 optional
- The maximum output current can reach 50kA
- Can achieve multi-range automatic switching, no conversion device, longer life and higher stability
- Optional high-precision DC ammeter for building a DC current divider testing system
- Optional 10ppm high-precision current sensor for current sensor comparison test
- Optional positive and negative polarity conversion device for current sensor positive and negative current test
- Input standard PFC, power factor up to 0.99

Application Field

- Dedicated for automotive sensors, Shunt calibration accuracy

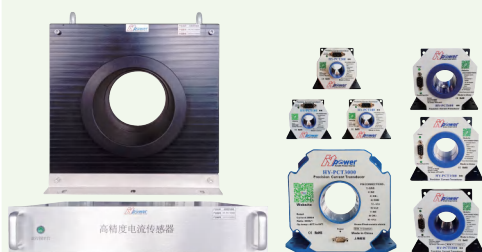


Automotive high-precision current sensor



Automotive DC current shunt

Optional High-Precision Current Sensor For Current Sensor Comparison Test



HY-PCTSU series high-precision sensors, the original edge rated dc current is up to 30kA, the accuracy is up to 10ppm, with excellent linearity and accuracy, strong anti-electromagnetic interference ability, and ultra-low response time.

- High precision: 5ppm, 10ppm, 50ppm optional (2ppm can be customized)
- Drift zero: 2ppm
- Temperature influence: 1ppm/10 degrees
- Can measure AC, DC, pulse current
- On-load start, overload protection, self-recovery function



HY-PCTSU Sample Book

HY-HPDSU Series Select Configuration And Test Schematics

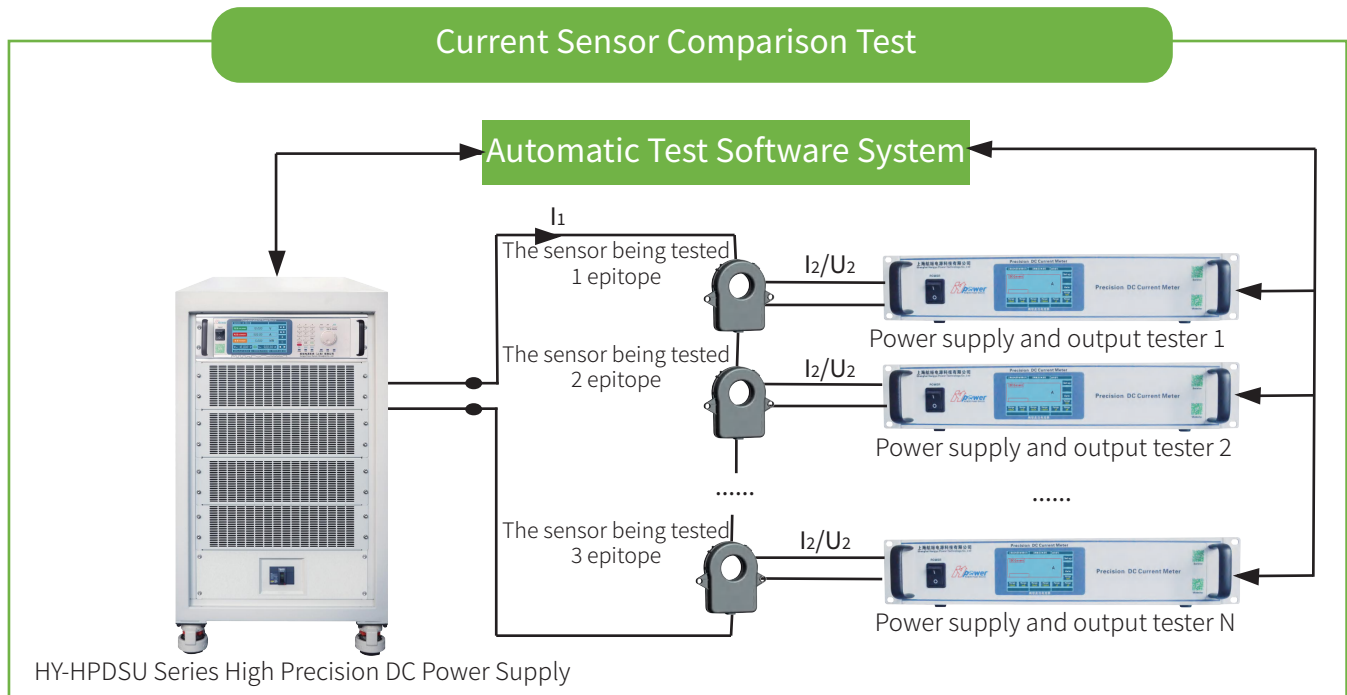
A High Precision DC Ammeter Is Selected To Set Up a DC Current Shunt Test System



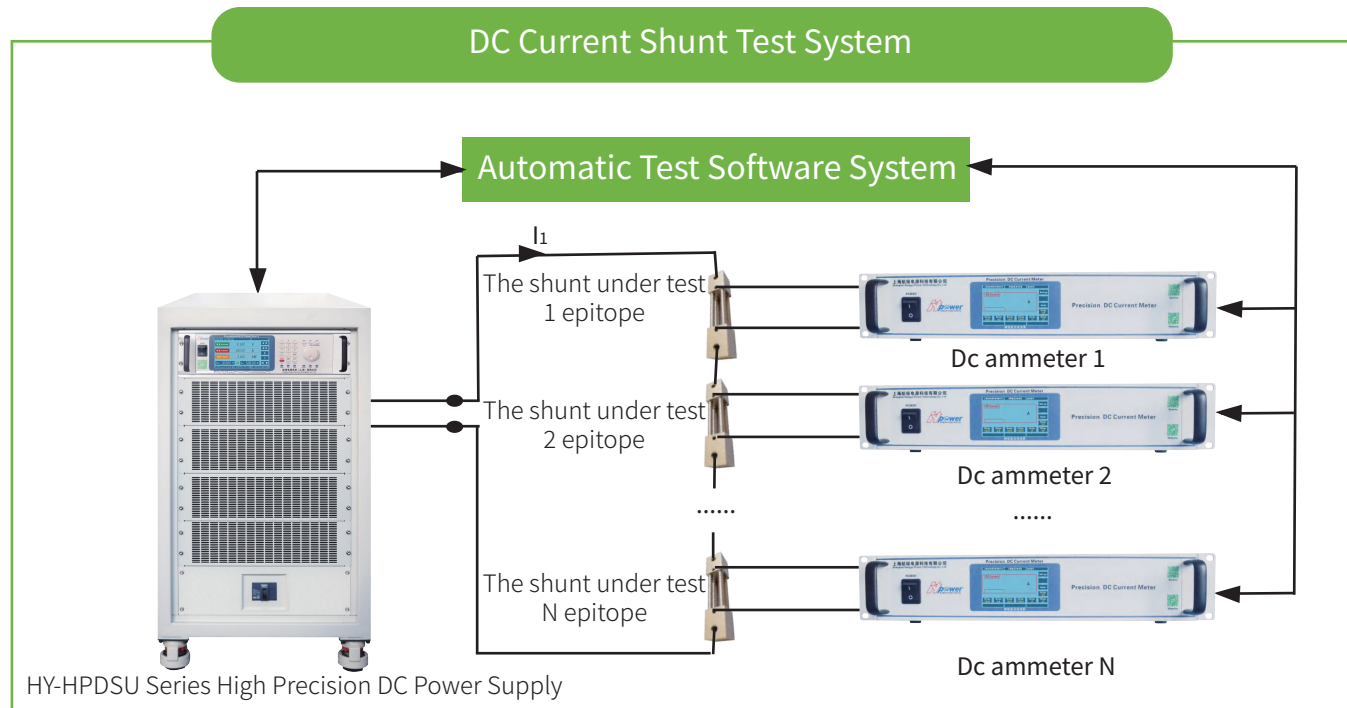
The HY-CMSU series high-precision ammeter can observe small or large currents, and can be used for electronic and electrical measurements, industrial automation, and instrumentation testing and measurement.

- Current measurement range: 0.001A-30000A optional
- Measuring accuracy: Level 0.1, Level 0.05, Level 0.02, Level 0.01
- Optional display resolution: 0.001A, 0.01A, 0.1A

Current Sensor Comparison Test



DC Current Shunt Test System



HY-HPDSU Series Product Selection Table

Product Model Naming Rules

Product Series	Open Circuit Voltage	Output Current	Precision Of Choice To Buy	Communication Protocol	Standard Communication Interface	Optional Communication Interface
HY-HPDSU	10	-	10000	-	01	
Product model: HY-HPDSU 10-10000-01 The model information is: open circuit voltage 10V, output current 100A-10000A, The selection accuracy is 0.01 level, can choose 02 (0.02 level), 05 (0.05 level)				Modbus SCPI	RS-485 RS-232 Digital I/O	- LAN :Ethernet communicationinterface - CAN :CAN communication interface - GPIB :GPIB communication interface - IA :Analog quantity programming and monitoring interface (isolated type)

* All technical indicators can only be guaranteed when the equipment runs continuously for more than 30 minutes at the specified operating temperature.

HY-HPDSU Series Product Model Selection And Parameters

1. Open circuit voltage: 5V, 10V optional
 2. Current output range: 10A-1000A
 3. Accuracy levels of 0.01, 0.02, and 0.05 are available for selection
 4. Adjustment fineness: 0.0005% * RG
 5. Establishment time: The time to output to 0.01% accuracy is less than 3 seconds
- Note: RD is the reading value, RG is the range value.

5V Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power	Short-Term Stability (%/min)			Optimal Measurement Uncertainty (k=2) , ppm*RD+ppm*RG		
				0.01 level	0.02 level	0.05 level	0.01 level	0.02 level	0.05 level
HY-HPDSU 5-50	5V	50A	250W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-100	5V	100A	500W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-150	5V	150A	750W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-200	5V	200A	1000W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-250	5V	250A	1250W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-300	5V	300A	1500W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-400	5V	400A	2000W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-500	5V	500A	2500W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-1000	5V	1000A	5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-1500	5V	1500A	7.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-2000	5V	2000A	10kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-2500	5V	2500A	12.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-3000	5V	3000A	15kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-3500	5V	3500A	17.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-4000	5V	4000A	20kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-4500	5V	4500A	22.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-5000	5V	5000A	25kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-5500	5V	5500A	27.5kW	0.003	0.005	0.01	70+30	150+50	400+100

HY-HPDSU Series Technical Parameters

5V Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power	Short-Term Stability (%/min)			Optimal Measurement Uncertainty (k=2), ppm*RD +ppm*RG		
				0.01 level	0.02 level	0.05 level	0.01 level	0.02 level	0.05 level
HY-HPDSU 5-6000	5V	6000A	30kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-6500	5V	6500A	32.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-7000	5V	7000A	35kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-7500	5V	7500A	37.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-8000	5V	8000A	40kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-8500	5V	8500A	42.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-9000	5V	9000A	45kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-9500	5V	9500A	47.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-10kA	5V	10kA	50kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-11kA	5V	11kA	55kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-12kA	5V	12kA	60kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-13kA	5V	13kA	65kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-14kA	5V	14kA	70kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-15kA	5V	15kA	75kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-20kA	5V	20kA	100kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-30kA	5V	30kA	150kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-40kA	5V	40kA	200kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 5-50kA	5V	50kA	250kW	0.003	0.005	0.01	70+30	150+50	400+100

10V Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power	Short-Term Stability (%/min)			Optimal Measurement Uncertainty (k=2), ppm*RD +ppm*RG		
				0.01 level	0.02 level	0.05 level	0.01 level	0.02 level	0.05 level
HY-HPDSU 10-50	10V	50A	500W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-100	10V	100A	1000W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-150	10V	150A	1500W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-200	10V	200A	2000W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-250	10V	250A	2500W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-300	10V	300A	3000W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-400	10V	400A	4000W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-500	10V	500A	5000W	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-1000	10V	1000A	10kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-1500	10V	1500A	15kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-2000	10V	2000A	20kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-2500	10V	2500A	25kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-3000	10V	3000A	30kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-3500	10V	3500A	35kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-4000	10V	4000A	40kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-4500	10V	4500A	45kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-5000	10V	5000A	50kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-5500	10V	5500A	55kW	0.003	0.005	0.01	70+30	150+50	400+100

HY-HPDSU Series Technical Parameters

10V Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power	Short-Term Stability (%/min)			Optimal Measurement Uncertainty (k=2) , ppm*RD+ppm*RG		
				0.01 level	0.02 level	0.05 level	0.01 level	0.02 level	0.05 level
HY-HPDSU 10-6000	10V	6000A	60kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-6500	10V	6500A	65kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-7000	10V	7000A	70kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-7500	10V	7500A	75kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-8000	10V	8000A	80kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-8500	10V	8500A	85kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-9000	10V	9000A	90kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-9500	10V	9500A	95kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-10kA	10V	10kA	100kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-11kA	10V	11kA	110kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-12kA	10V	12kA	120kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-13kA	10V	13kA	130kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-14kA	10V	14kA	140kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-15kA	10V	15kA	150kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-20kA	10V	20kA	200kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-30kA	10V	30kA	300kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-40kA	10V	40kA	400kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPDSU 10-50kA	10V	50kA	500kW	0.003	0.005	0.01	70+30	150+50	400+100

DC Voltage Measurement DCV (Selective Configuration)

Range	Minimum Resolution	Optimal Measurement Uncertainty (k=2) ppm*RD+μV			Temperature Coefficient, ±ppm*RD/°C		
		0.01 level	0.02 level	0.05 level	0.01 level	0.02 level	0.05 level
1mV	1nV	70+0.5μ	80+0.5μ	150+1μ	15	15	30
10mV	10nV	70+1μ	80+1.5μ	150+3μ	5	5	10
100mV	100nV	70+3μ	80+5μ	150+10μ	5	5	10
1V	1μV	70+30μ	80+10μ	150+20μ	2	2	5
10V	10μV	70+300μ	80+50μ	150+100μ	2	2	5

- 1, Voltage measurement range: $\pm (100\mu\text{V}\sim 11\text{V})$, manual/automatic range shift
- 2, Input resistance: $> 1\text{G}\Omega$
- 3, Input protection: 50Vpk, continuous

HY-HPDSU Series Technical Parameters

Stability And Temperature Coefficient

Temperature Drift	U: 0.01% I: 0.01% (After 30 minutes of power on at a certain input voltage and load ambient temperature, 8 hours)
Temperature Coefficient	U: 50 ppm/°C I: 70 ppm/°C (30 minutes after power on)

Protection Function

OVP Overvoltage Protection Setting Range	10-110%, beyond the limit output immediately off
OCP Overcurrent Protection Setting Range	0-105%, beyond the limit output immediately off
OTP Overtemperature Protection	Beyond the limit output immediately off
OPP Overpower Protection	10-110%, beyond the limit output immediately off

Environmental Condition

Environment	Indoor use; Installation overvoltage class: II; Pollution level: P2; Class II equipment
Operating Ambient Temperature	0°C to 50°C
Storage Ambient Temperature	-20°C to 65°C
Working Ambient Humidity	20%-90% RH, no dew formation, continuous operation
Storage Environment Humidity	10% - 95% RH, no dew formation
Altitude Above Sea Level	Above 2000 meters above sea level, every 100 meters up, the power will be reduced by 2%, or reduce the maximum working ambient temperature by 1°C per 100 meters; When not in operation, the altitude can reach 12,000 meters
Cooling	Forced air cooling, intelligent speed regulating fan, front/side air inlet, rear air outlet
Noise	≤ 65dB(A), use 1 m to weighted measurement

Control Panel

Display	4/7 inch LCD display, touch screen
Control Function	Digital key input, multi-stage adjustment knob (outer ring coarse adjustment/inner ring fine adjustment), output ON/OFF switch, Lock keyboard and touch lock, Reset Restart status indicator (Shift/Local/Remote/Alarm/Lock/Output)
Programming Function	Step, Ladder, Gradient

Input Power Supply

Frequency	47Hz - 63Hz
Connection Mode	Single-phase two-wire + ground wire, 220V ± 15% Three-phase three-wire + ground wire, 380V ± 15% (-3P standard configuration model)
Power Factor (Typical Value)	0.99(single-phase input) / 0.94(three-phase input)



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HY-HPDSU Series Product Manual, Version 08.14, August 2025

All technical data and instructions are based on the actual product

If there is any change, Hangyu Power has the final interpretation right

Authorized distributor:

