



Yangzhou IdealTek Electronics Co., Ltd.

Address: #343, No. 8 Wenchang Middle Road, Guangling District, Yangzhou, Jiangsu, China.

Tel: +86 – 514 – 87922965

Fax: +86 – 514 – 87922965

Ideal Power Solution

Website: www.idealtek.cn

Email: sales@idealtek.cn

LTP Series High Voltage Lab Power Supply

- Power range: 30W ~ 1KW
- Voltage range: 1KV ~ 60KV
- Current range: 1mA ~ 1A
- 2U / 19-inch standard chassis
- Precise voltage and current setting and measurement capabilities
- OVP, OCP, short circuit and load discharging protections etc.



Overview

The LTP series laboratory high-voltage power supply is a high-voltage power supply specially designed for high-voltage laboratory applications. It adopts a 19-inch 2U standard chassis with a designed output power of 1KW and an output voltage range of 1KV to 60KV.

The LTP series high-voltage laboratory power supply is a constant-voltage and constant-current controlled high-voltage power supply. The output voltage and current can be continuously adjusted from 0 to the rated value through the control potentiometer on the front panel, and the output display is through high-resolution KV and mA LEDs. The power supply is also equipped with a DB9 interface as standard, and 0-10V signals and dry contact signals can be applied to the interface to achieve control and monitoring of the power supply.

The high-voltage laboratory power supply has high precision, high stability and low ripple output characteristics. The stability and ripple can reach the level of 0.1%. At the same time, the power supply is equipped with complete protection functions to deal with sparks, short circuits, overloads, and loads discharging conditions.

At present, the high-voltage laboratory power supplies are mainly used for laboratory high-voltage test benches, electrostatics, insulation testing and electrophoresis applications.

Features

- CV / CC working modes.
- Output voltage & current adjustable from 0 to 100%
- Stable & Low ripple HV output.
- 4-digit LED digital meters display.
- Perfect & Complete protection functions
- Compact structure, small size and light weight.

Optional functions

- 0 ~ 10V analog signal control (standard DB interface) (+AC)
- RS communication interface (RS232 / RS485 optional) (+RC)

Specifications

Input	Voltage	Single-phase 220V±10%
	Frequency	50Hz/60Hz
	Connection	Input line provided by iDealTek. (1 meter)
Output	Rated power	****W
	Output voltage adjusting range	1KV/2KV/3KV/4KV5KV/10KV/20KV/30KV/40KV/50KV/60KV available ** (For other output voltages, please contact us for details)

	Output current adjusting range		0A ~ ****mA
	Output polarity		Positive or Negative (both available) Client must choose one output polarity before ordering.
	Line regulation		0.1% for ±10% change in input voltage.
	Load regulation		0.1% for no load to full load at output.
	Ripple (Vr.m.s.)		≤0.1%@ rated output.
	Output connection		1.5 meters high-voltage cable & connector provided by IdealTek.
	Efficiency		≥85%
Setting & Display	Output control mode	Local	10-turn potentiometer on front panel.
		Remote	DB9 analog port & RS485 communication port.
	Display mode	Display mode	4 ¹ / ₂ LED digital display
		Display resolution	≤1% (range: 5%~100% of the rated value)
Protection & Monitoring functions	Load discharging protection		When the load has discharging due to insufficient safety distance between load and ground, the power supply shutdown the high voltage output, and then restarts, so cycle like this till the discharging fault is eliminated.
	Short circuit protection		When a short circuit occurs between the load and the ground, the power supply works in constant current mode, the current is limited to the maximum value, and the voltage drops to 0 to protect the internal inverter from damage.
	Over current protection		When the users' load exceeds the rated load and cause over-loading, the power supply works in constant current mode, the power supply output current does not change, and output voltage decreases.
	Over voltage protection		When the power supply is unloaded, the power supply works in constant voltage mode to prevent power supply from overvoltage damage.
Noise			≤55dB
Protection degree			IP20
Cooling method			Forced air cooling
MTBF			50000 hours @ 25°C
Working	Ambient temperature		10°C ~ 40°C

environment conditions	Humidity	10% ~ 90%(non-condensing)
	Height	≤2000m
Storage environment conditions	Ambient temperature	-20℃ ~ 60℃
	Humidity	10% ~ 90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		200*100*300 (≤30W) 500*88*600 (19" 2U standard chassis) (>30W)
<ul style="list-style-type: none"> Note: every power supply has 48 hours full load burn-in test @ 40℃ 		
Safety caution		

1. This power module has HV output, only professional person could operate it.
2. Please check power module as below before start-up.
 - (1). Keep power module clean and good ventilation.
 - (2). HV input & output connectors or HV load no touch anything.
 - (3). Please check back current of load well connected with GND bolt at the back of power module.

Model list			
KV	mA	P (KW)	Model
1	1000	1	LTP-220VAC-(N/P)1KW-1KV
2	500	1	LTP-220VAC-(N/P)1KW-2KV
3	333	1	LTP-220VAC-(N/P)1KW-3KV
4	250	1	LTP-220VAC-(N/P)1KW-4KV
5	200	1	LTP-220VAC-(N/P)1KW-5KV
10	100	1	LTP-220VAC-(N/P)1KW-10KV

20	50	1	LTP-220VAC-(N/P)1KW-20KV
30	33.3	1	LTP-220VAC-(N/P)1KW-30KV
40	25	1	LTP-220VAC-(N/P)1KW-40KV

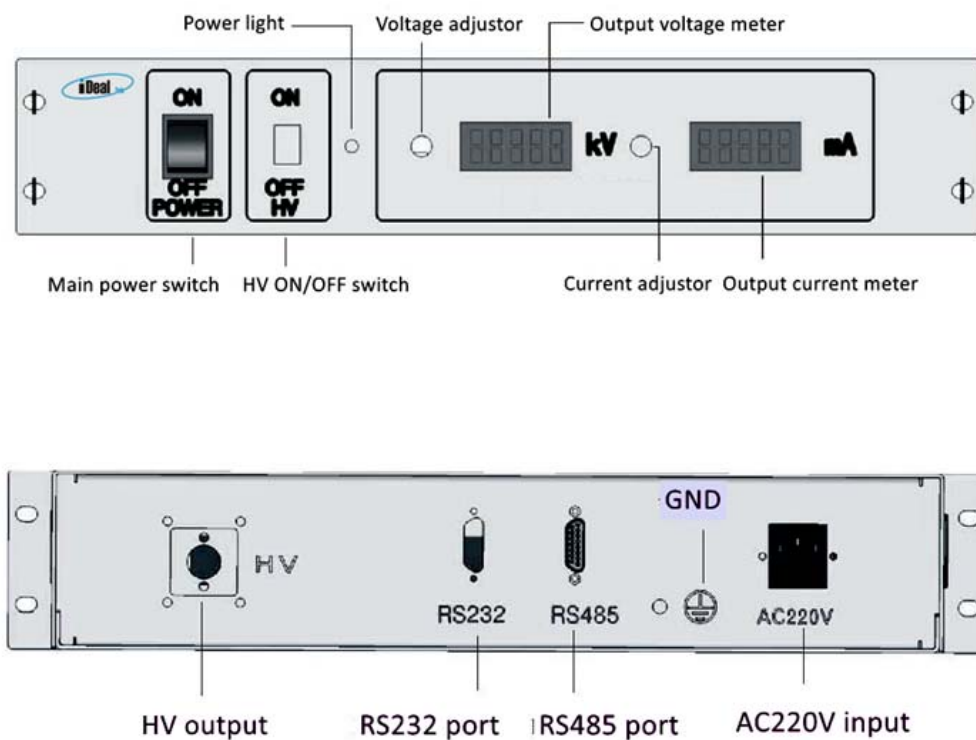
More models are coming soon. 😊

Drawings (for reference only)

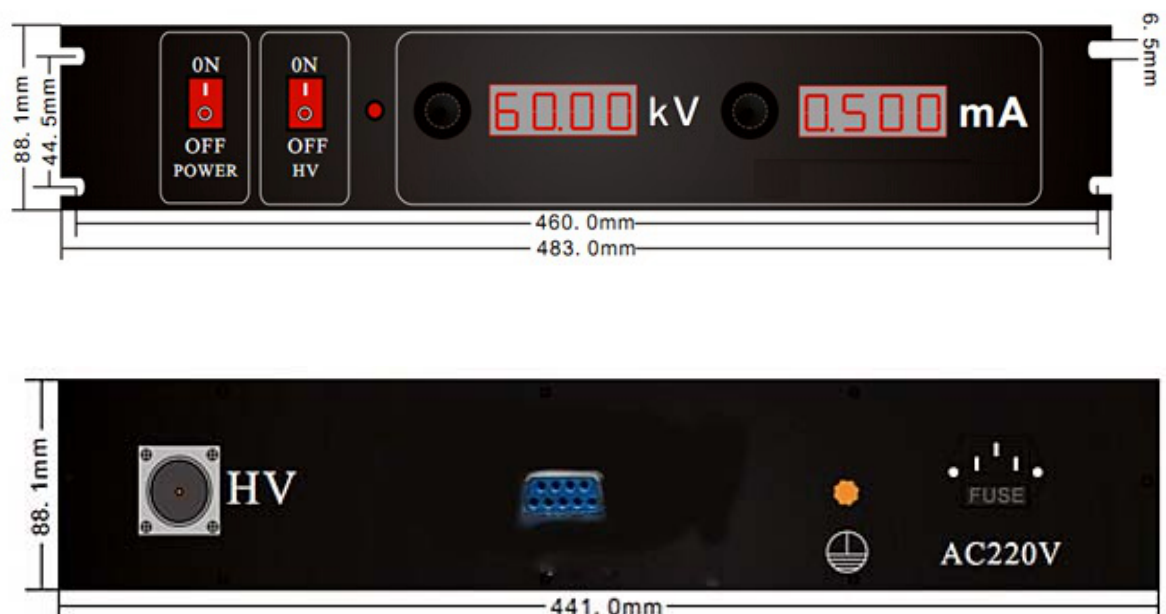
200*100*300 (≤30W) (Black)



2U chassis (>30W) (RAL7035)



2U chassis (>100W) (Black)



DB9 Analog Port



1. GND: Signal ground.
2. NC: N/A
3. HV DEM: Output voltage setting, 0-5V corresponds to 0-maximum voltage.
4. GND: Signal ground.
5. HV FBK: HV feedback, 0-5V corresponds to 0-maximum voltage.
6. L / R REMOTE: 0V = LOCAL, 12Vdc = REMODE
7. HV INHIBIT 0V = HV ON, 12Vdc = HV OFF
8. IDEM: Output current setting, 0-5V corresponds to 0-maximum current.
9. IFBK: Current feedback, 0-5V corresponds to 0-maximum current.