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*Ideal Power Solution*

## CSP – 10KW Series Programmable DC Power Supply

- Rated power range: 10KW
- Rated voltage range: 100V / 200V / 300V / 400V / 500V / 600V / 750V / 1000V
- 5 - digit voltage display voltage and 4 - digit current display, with a maximum resolution of 10mV and 10mA.
- High programming accuracy, high output accuracy, and low ripple noise.
- Excellent dynamic response time <10ms.
- Output start - up without overshoot, and can set the rising slope of voltage and current.
- Real-time power display.
- RS232 / RS485 communication interface.



### Overview

CSP-10KW is the highest output power model of the programmable DC power supply products. It adopts a 19-inch 3U standard rack-mounted chassis with the designed output power of 10KW. It has the widest programmable DC output voltage range, covering 100Vdc / 200Vdc / 300Vdc / 500Vdc / 600Vdc / 750Vdc / 1000Vdc, now, the 10KW programmable power supplies are widely used for production line manufacturing test, photovoltaic plate aging test and various programmable DC power supply cutting-edge applications.

The mature IGBT high frequency switching power topology design and all-digital signal control loop endow the 10KW programmable DC power supplies with high-precision, low ripple, high power density, high efficiency and fast response speed electronic characteristics, and the microprocessor unit with built-in control program allows the DC power supply to achieve flexible and efficient programming control through the front panel silica gel buttons and stepless knobs. The 4.3-inch LCD with up to 5 digits display resolution ensures high-precision programming and monitoring levels to make this programmable DC power supplies' measurement results accurate and reliable.

At the same time, the 10KW programmable DC power supplies are equipped with RS485 interface as standard, following the MODBUS-RTU international protocol, which can realize remote control programming, test results save and uploading to the master unit and status monitoring of the power supply.

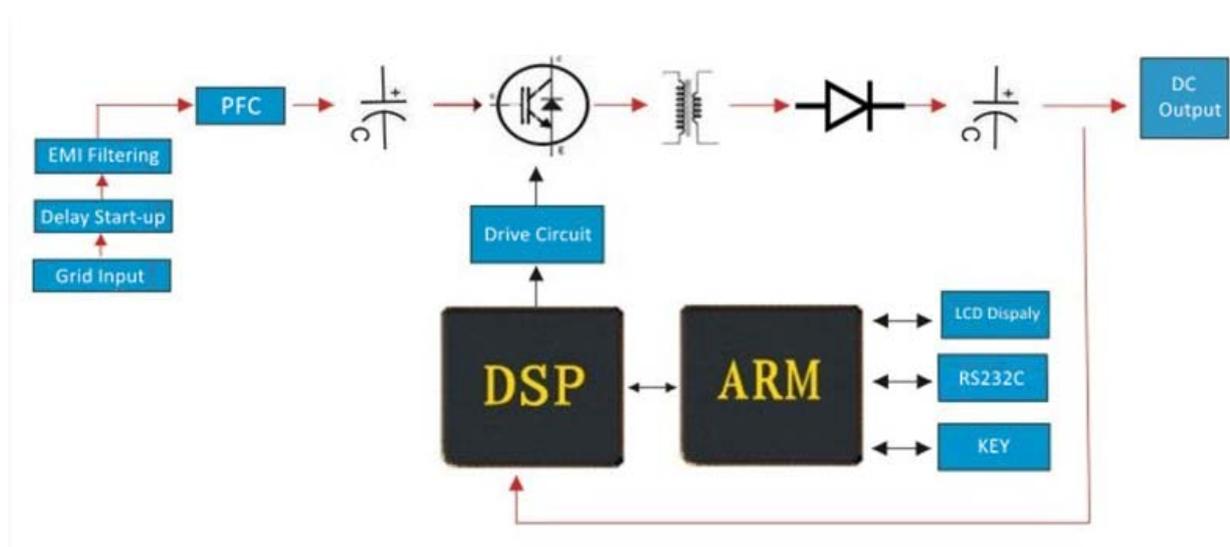
## Features

- The power supply chassis is produced using laser technology, with unique color matching and excellent baking paint production technology, which gives the power supply generous and elegant appearance.
- The internal circuit boards of power products all produced by PCBA and DIP process, to reduce human faults. The production adopts process inspection for each step, which reduces the defective assembly rate and further improves product reliability.
- Firm and reliable internal structure design and high-quality packaging reduce the probability

of damage that may be caused by transportation.

- The power supply adopts LCD display, preset voltage / current values, output voltage / current values, real-time power, local / remote working mode & start / stop status are all displayed on LCD interface, which is convenient for customers to control & monitor the status of DC power supply.
- High display accuracy: 0.1% voltage display accuracy in CV mode, 5 digits voltage display with minimum 10mV resolution; 0.2% current display accuracy in CC mode, 4 digits current display with minimum 10mA resolution.
- The power supply can be used as a constant current source for its low output current ripple while ensuring low voltage ripple.
- The power supply voltage and current have almost no starting impact, and the power output dynamic response time is excellent
- With output programming function, you can edit step waveforms, pulse waveforms, etc., and the rising slope of the voltage and current.

## Block diagram



## Applications

- LED and energy-saving lamps aging test.
- Switching power supply and power adapter aging test.
- Photovoltaic inverter aging test.
- Aerospace and national defense industry.
- Testing and aging of electric vehicle motors, controllers, and DC motors
- Capacitors, resistors, relays, transistors, sensors and other electronic devices.
- Electrolytic, electroplating, and corroded aluminum foil processing.
- LCD, touch screen test.
- Automotive electronics, DC motor, motor controller, cigarette lighter, audio and video burn-in test.

## Featured functions

### Programming function

The power supply has output programmable function for 10 groups of different parameters and the number of cycles. Such as initial voltage/current value, final voltage/current value, hold time and other parameters setting. And, it can realize multi-step continuous output, single-step output and cyclic output functions. Different modes such as voltage step and voltage sequence can also be realized.





- The voltage and current are settable within the full range.
- The holding time setting range: 1S~10000S
- The number of cycles: 1~65535
- The programming mode ON/OFF can be set through the parameter setting interface. In the programming mode, the normal voltage and current parameter settings are invalid.

## Excellent dynamic response speed



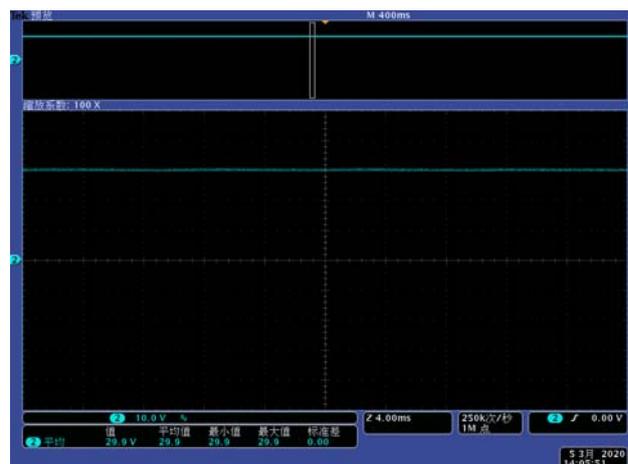
Output dynamic response waveform under 10% ~ 50% load change



Output dynamic response waveform under 50% ~ 10% load change

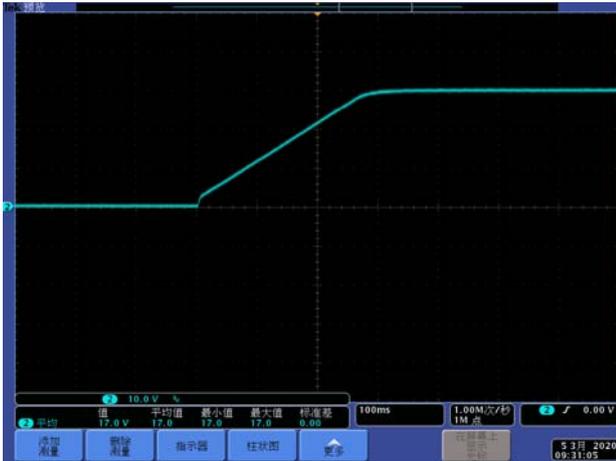


Output dynamic response waveform under 50% ~ 90% load change



Output dynamic response waveform under 90% ~ 50% load change

## No overshoot at output start-up & Settable output voltage and current rising slope



300ms rising time



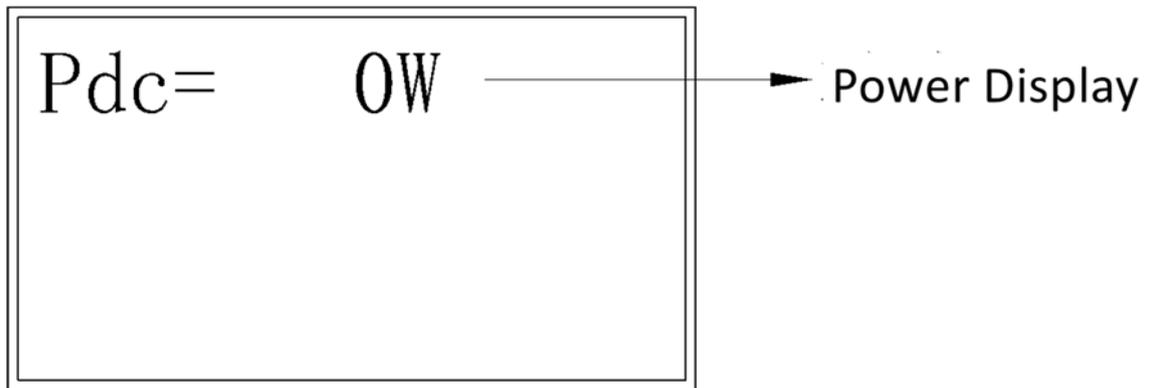
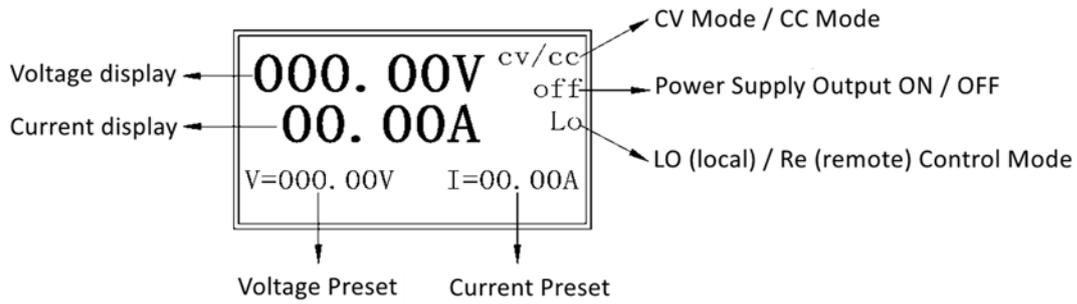
1000ms rising time

## Ultra-high output display accuracy



## Comprehensive information LCD display

Preset voltage/current value; output voltage/current value; real time power; local/remote control working mode; power supply start/stop status information can be displayed in the LCD on the power supply front panel at the same time, which is convenient for customers to monitor the status of the DC power supply.



## Specifications

<b>Input</b>	Phase	Three – phase	
	Voltage	380Vac $\pm$ 10%	
	Frequency	50Hz/60Hz	
	Power factor	> 0.92	
<b>Output</b>	DC Voltage	Accuracy	< 0.2% of rated value (CV mode)
		Load regulation (0 ~ 100% load variance)	< 0.05% of rated value
		Line regulation ( $\pm$ 10% $\Delta$ UAC)	< 0.05% of rated value
		Regulation time (10% ~ 100% load variance)	< 10ms
		Rise time from 10% to 90% loading	< 500ms ~ 10s
	DC Current	Accuracy	< 0.3% of rated value (CC mode)
		Load regulation (1% ~ 100% load variance)	< 0.15% of rated value
		Line regulation ( $\pm$ 10% $\Delta$ UAC)	< 0.05% of rated value

	DC Power	Accuracy	< 0.5% of rated value
Isolation withstand voltage		AC Input to Shell	1500VDC
		AC Input to Output	1500VDC
		DC Output to Shell	500VDC
Protection functions		Output voltage – limiting protection, output current – limiting protection, output power – limiting protection and over temperature protection	
Communication port		RS232 or RS485 In line with MODBUS-RTU standard.	
Cooling method		Forced air cooling	
Working temperature		-5°C ~ 45°C	
Storage temperature		-20°C ~ 60°C	
Relative humidity		< 80%(non-condensing)	
Size (W*H*D) (mm)		425*132*552	
Weight		Approx. 24Kg	

## Power Supply Front and Rear Panels Description

### Front panel description

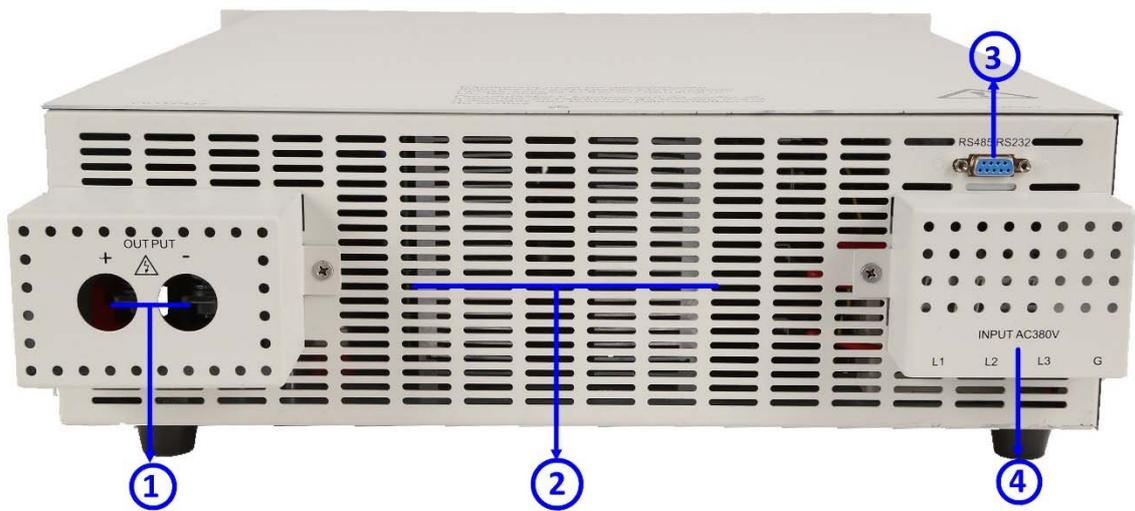


Key button identification

Key button description

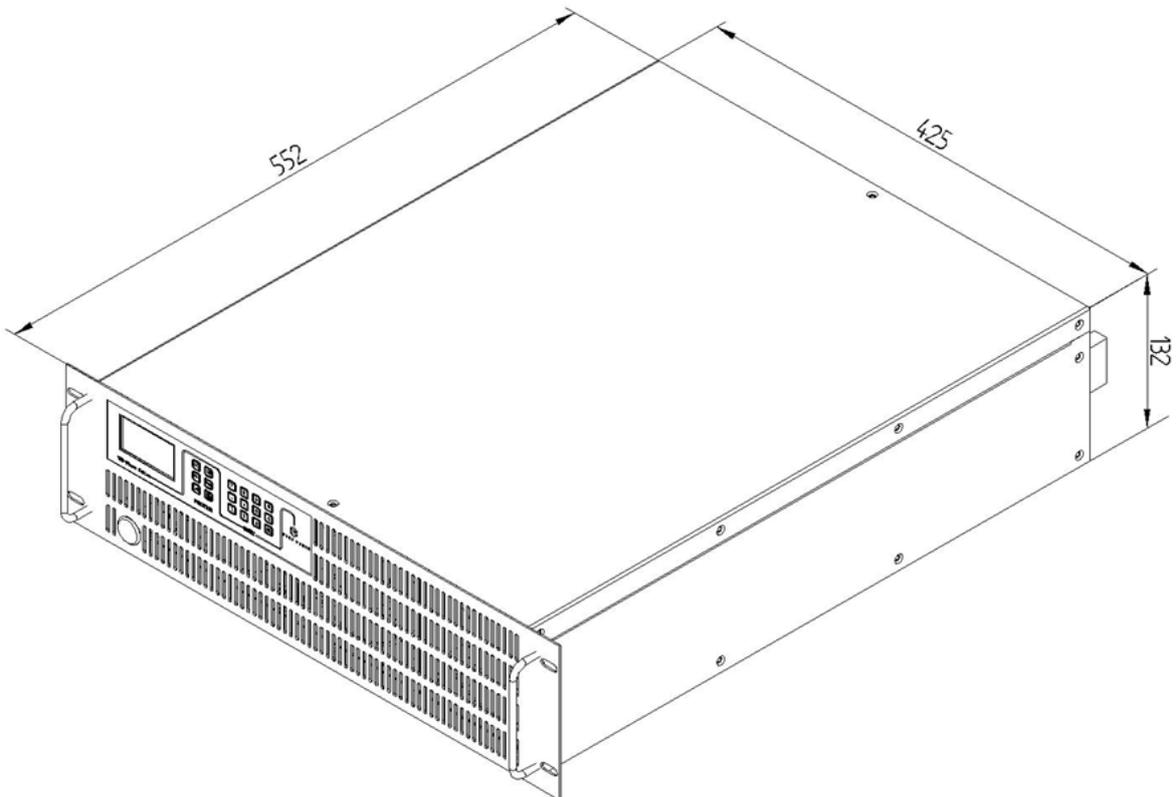
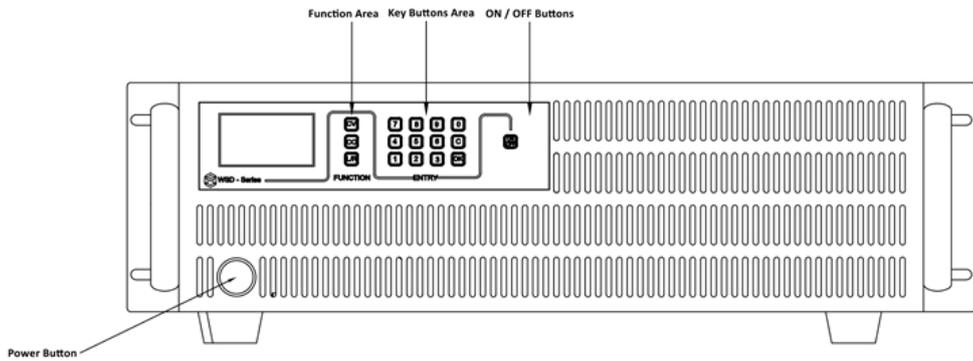
CV	Switch to power supply output voltage value setting
CC	Switch to power supply output current value setting
L/R	Local / Remote control switching
0~9	Number key buttons
C	Return key button
OK	Enter key button
ON/OFF	Power supply output ON / OFF control

**Rear panel description**



No.	Description
1	DC output terminal, red is positive pole and black is negative pole.
2	The cooling fan air duct, NO blocking!
3	RS485 / RS232 communication interface
4	AC power connection terminal, make sure of well grounding.

# Power Supply Chassis Drawing



Standard model list								
Model	CSP10H10H	CSP20H60	CSP30H30	CSP40H25	CSP50H20	CSP60H15	CSP75H12	CSP10HH10
Rated power	10KW							
Rated voltage	100.00V	200.00V	300.00V	400.00V	500.00V	600.00V	750.00V	1000.00V
Rated current	100.0A	50.00A	30.00A	25.00A	20.00A	15.00A	13.00A	10.00A
Voltage Ripple	Vrms < 0.3%							

### Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0°C ~ 45°C) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.