

100W Laser power supply Instruction

一、100W Laser power supply picture



二、Main Feature:

The new stable laser power supply, the biggest feature: the modular design automatically detects the laser power signal, automatic detection of water protection! The mounting holes are all the same and are suitable for factory assembly. 1. It adopts zero-current half-bridge soft-switching circuit, which makes the power supply have high efficiency and fast response, and it is easy to cooperate with laser tubes of various manufacturers.

2, port control is simple, adapt to high and low level two signals, use TTL level to control the start and stop of the laser, and add an abnormal protection switch to detect whether the external water, ventilation and so on.

3, laser power adjustment can input 0 to 5V analog signal, can also input PWM signal to control the laser power.

4. The power supply has an open circuit protection function: in the case of good protection grounding, the power supply can work in an open state for a short time, so as to avoid damage of the laser power source caused by the bursting of the laser tube.

5. Factory aging test: Each power supply will pass the high temperature 60 degree 12 hour aging test



under full load condition, and the power supply test will be started and stopped 500 times in 7 seconds.

三、 Main Technical Parameter:

Note that the 80 watt power supply peaks at 90 watts and most of the current 80 watt laser tube peaks

At 100 watts, a 100 watt power supply matching laser tube is recommended. If it is a long time and low power work, pay attention to

Engraving can still be used with this power supply to match the laser tube.

Dimension : 100W: 230mm*161mm*96mm Net weight: 2.8kg

四、 Technical Parameter of Black serial laser power supply:

Item		MYJG-50 W	MYJG-60 W	M Y J G - 8 0 R	MYJG-10 0	MYJG-13 0W	MYJG-15 0W
Input	AC input voltage	AC220V/AC110V					
	AC input frequency	47~440Hz					
Output	Maximum voltage output	22KV	24KV	26KV	28KV	30KV	31KV
	Maximum current output	22mA(De pending on the laser tube of different manufactu rers)	25mA(De pending on the laser tube of different manufactu rers)	28mA(De pending on the laser tube of different manufactu rers)	30mA(De pending on the laser tube of different manufactu rers)	35mA(De pending on the laser tube of different manufactu rers)	38mA(De pending on the laser tube of different manufactu rers)
Max dimension	L*W*H (mm)	171*161*91	197*161*91	197*161*91	230*161*91	305*161*91	305*161*91
Weight	kg	1.5	2.1	2.1	2.8	3.6	3.6
Color	Black						
Efficiency	91%						
Protection	Overcurrent protection	130%x Max current					
	Open circuit protection	yes (short time)					
Structure	Exhaust fan						
Work environment	-30°C+65°C						
Relative Humidity	20~85%RH (No condensation)						



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	Input—Output	AC1500V1minute \leq 10mA
	Input—Shell	AC1500V1 minute \leq 10mA
	Output—Shell	Connection
Insulation resistance		\geq 50M Ω (DC500V)
Ground leakage Current		\leq 1mA (AC220V) \leq 0.5mA (AC110V)
Vibration resistance		Amplitude 0.5mm Frequency 10~55Hz3 Dimensional direction 2 hours
Trouble free time		\geq 30,000hours
Full load 60 ° C high temperature test time		12 hours
7 second start and stop power test		500 times

五、100W Laser power difference:

The same point: ① used electronic components, high voltage package is basically the same, have a higher stability;

Different points: ① terminal definition is different, the wiring is different; ② different sizes, installation dimensions are different.

六, the terminal definition:

Aluminum case 100W/black 100W/yellow 100W terminal definition



FG AC

H L P G IN

FG: Grounding AC: 110V/220V

H: Laser light control (active high)

L: Laser light control (active low)

P: Water protection switch (grounding is valid)

G: Signal ground

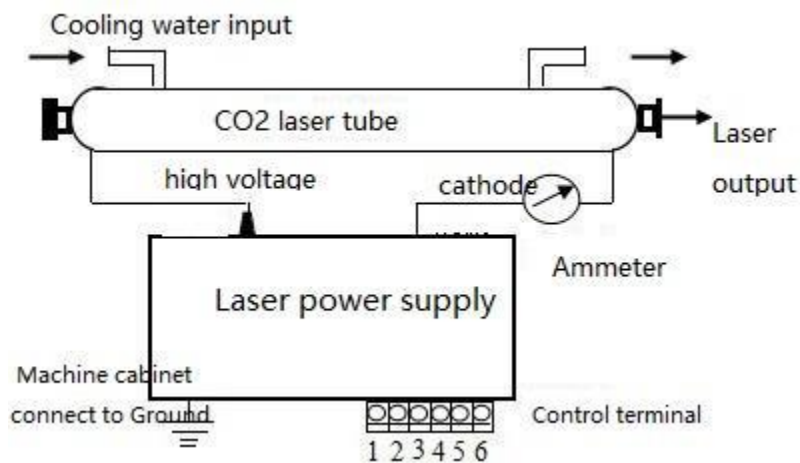
IN: laser energy control signal) (0~5V)

5V: Output 5V

七、 Power detection instructions:

In the standby state of the power supply, the fan turns, the signal terminal is unplugged, and after the TEST switch on the power supply, the laser tube outputs the laser, the power supply is basically normal; if the laser tube does not emit laser light, the laser tube or the laser power supply is abnormal.

八. Wiring diagram of power supply and laser:



Current reflow
(negative electrode)

(Positive
high pressure)

九、 Precautions::

1. The laser tube must be cooled with water when working!
2. The high voltage output must not open the way! (The positive and negative terminals of the high voltage output must be properly connected to the positive and negative terminals of the laser.)



3. The bleeder resistor has been added to the power supply. After the power is cut off, the residual voltage can be discharged within two seconds. But for the sake of safety, you should still pay attention to the electric shock! (The high-voltage output must ensure the insulation safety requirements of the 40KV high-voltage suspension at both ends.)
4. The laser power supply must use a three-hole socket with a ground terminal. The case must be strictly grounded! To avoid electric shock.

十. Laser power supply common problems and solutions



Fault phenomenon	Reason	Measure to judge	How to do
Power-on trip	External wiring reverses AC and FG	See if you connect the AC FG	Wired correctly according to the label
	External wiring There is a short circuit between AC and AC.	Use a multimeter to measure two AC Whether short circuit	Rewire to remove short circuit
	internal AC and AC or AC and FG short circuit		Return to factory maintenance
	other reasons		
There is AC but the power supply fan does not turn	fan socket is loose	Manual light	Open the case and plug in the socket
	the fan is bad	Manual light	Change fan or return to factory for repair
	the internal fuse is blown	Manual no light	Return to factory maintenance
Have AC but not light	Control line wiring is incorrect	According to the instructions, check the wiring or not	Re-wire properly
	the internal connector is loose	Open the machine case to check	Plug in the connector
	the protection switch is enabled but there is no water or the water switch does not work. normal	The voltage between WP and G is greater than 0.5V	Flow Water or change flow-water switch
	the light control signal logic is incorrect	When the high level controls the light, the voltage between TH and G is lower than 3V.	Change control board or change ground point
		When the low level controls the light, the voltage between TL and G is higher than 0.3V.	
the power control signal is zero	The voltage between IN and G is 0	Raise the voltage between IN and G	



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	the internal fuse is blown	Fan does not turn	Return to factory maintenance
	other reasons		Return to factory maintenance
Always have light	When the low level controls the light, the short circuit between TL and G	The voltage between TL and G is always 0	Disconnect the connection between TL and G



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	1.Bad logic circuit		Return to factory for repair
	2.Manual light switch is broken		Replace manual light switch
	3.Other reasons		Return to factory for repair
The current cannot be adjusted	1.AC input voltage is low	The output current is consistently maintained at around 5mA	Add AC voltage regulator
	2.The power supply and laser do not match well		Return to factory for repair
	The board power control signal and IN are not connected properly.	The output current is consistently maintained at around 10mA.	Reconnect the components.
	3.The power adjustment potentiometer is broken	The output current fluctuates, sometimes increasing and sometimes decreasing.	Replace the power control potentiometer.
	4.The frequency or amplitude of PWM is inappropriate		Adjust the PWM frequency or amplitude
	5.Internal transformer is broken	The output current is consistently maintained at around 5mA	Return to factory for repair
	6.The wire inside is not functioning		
7.Other reasons			
Working laser Head turmoil Light at work Sometimes no laser When the two laser heads work, the action unusual	The ground wire is not connected well		Reliably connect the ground of the control board, the chassis of the laser power supply, and the 5V ground of the control board power supply. On the outer casing of the laser machine

If you have any interesting in weihua laser product, please don't hesitate to contact us!

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