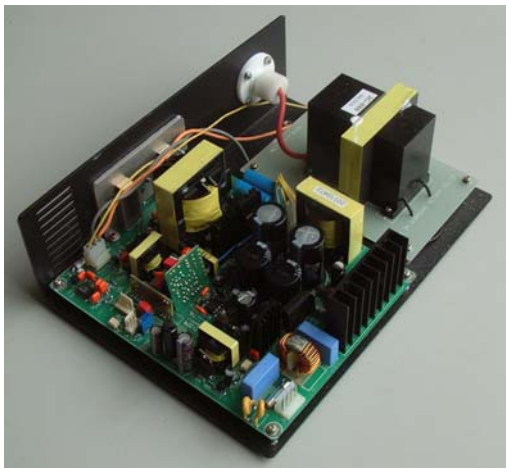
Operation Manual

SH Series CO2 Laser Power Supply



Sintec Optronics Pte Ltd
196 Pandan Loop #07-26
Pantech Industrial Complex Singapore 128384
Tel: +65 67781866 Fax: +65 67781781
E-mail: sales@SintceOptronics.com or sales@sintecoptronics.com.sg
URL: http://www.SintecOptronics.com or
http://www.SintecOptronics.com.sg

Important： Please read this operation manual carefully before using the laser.

Danger： Invisible laser radiation in operation. Avoid eye or skin exposure to direct or scattered radiation.

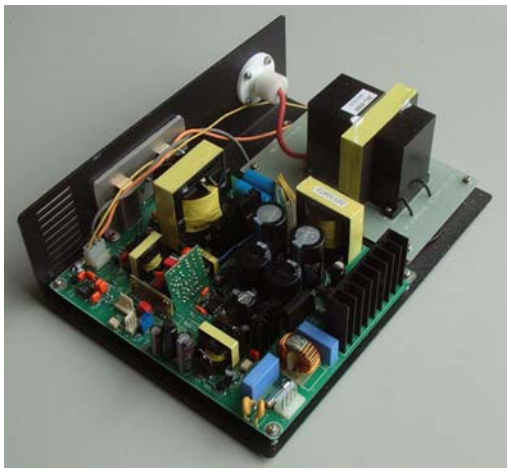
Warning: For protection against radiation it is absolutely necessary to wear the goggles with suitable filter.

Attention:

- The electrical voltage of the system reaches high levels and it is essential that the servicing operations are carried out by competent and authorized personnel.
- Any person who uses this system should read this operation manual carefully before operation.
- Make sure that all connections should be correct before operation.
- Please check whether the system is properly connected with ground before switching on the power supply.

CO_2 Laser Power Supply

The switching power supplies are specially designed for CO_2 laser tubes. PWM switching mode and current-regulated method are employed. The power supply is suitable for the CO_2 lasers for medical, engraving and cutting applications.

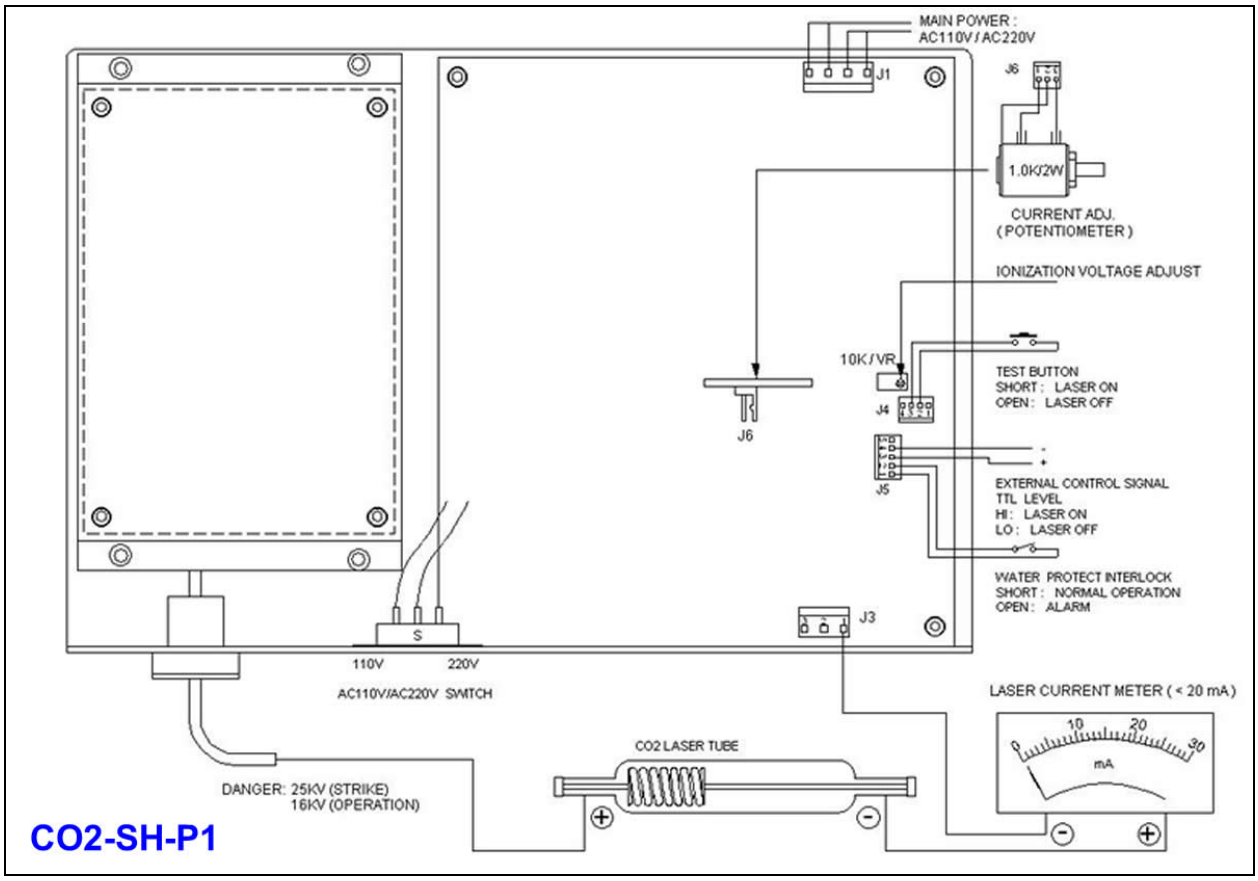


Technical Specifications

Model		CO2-SH-P1	CO2-SH-P2
Input	Voltage	94-127VAC or 187-253VAC ±15%, 50Hz	
	Surge	DC220V-28A	
Output	Trigger voltage	20kV	30kV
	Operation voltage	15kV	20kV
	Operation current	18mA	24mA
	Max. operation current	20mA	25mA
	Over voltage protection	Automatic switch off if >25kV	
	Over current protection	yes	
External control input	Voltage	0-5V, TTL level	
	Minimum pulse width	0.5ms	
Test	Input terminal vs ground	2000VAC	
	Insulation resistance	>50MΩ	
	Standards	• GB4943, UL1950, IEC380 • VDE0871 class B, FCC class B	
Others	Operation temp.	-10 - +45°C	
	Store temp.	-25 - +75°C	
	Dimension (mm)	260×190×85	235x208x100
	Weight	5kg	4kg
	Driven laser tube length	≤1000m	1200mm-1800mm

CO2-SH-P1

LASER POWER SUPPLY

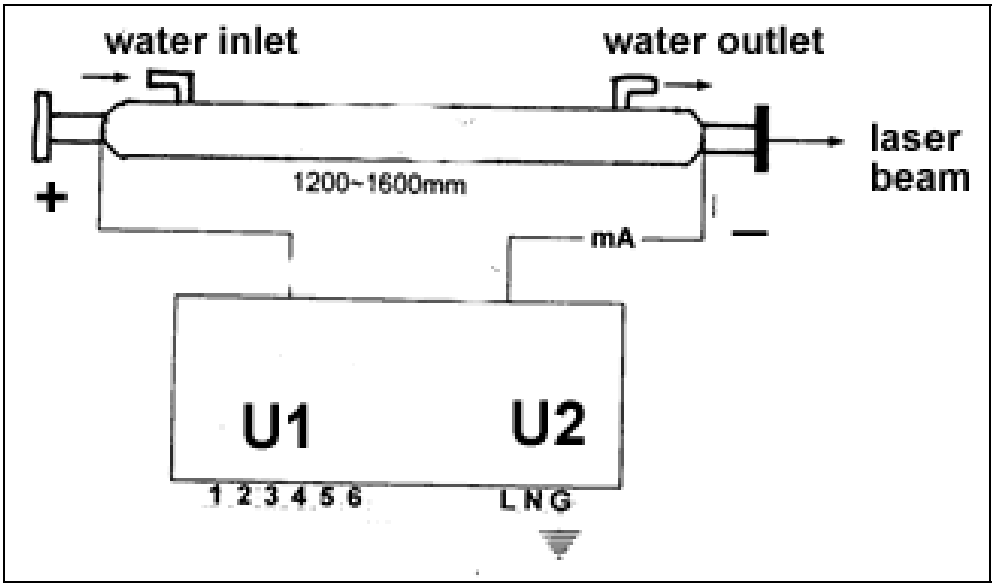


Description of Connectors

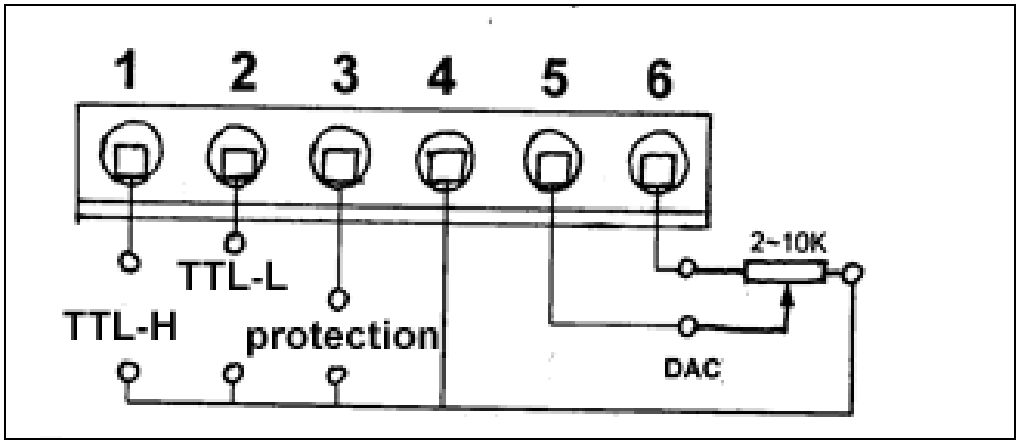
1. J1: electricity 220VAC input
2. J2 & JG: high voltage block input
3. J3: PIN1 to the cathode of output HV
4. J4: PIN2 and PIN3 for testing. When it is short, the laser beam outputs.
5. J5: PIN1 and PIN2 for protection use (interlock); PIN3 and PIN4 for TTL control signal input
6. J6: potentiometer with 1kΩ resistance. It is used to adjust the discharge current (laser power) of the laser tube.

CO2-SH-P2

LASER POWER SUPPLY



U1						U2		
1	2	3	4	5	6	1	2	3
TTL-H input	TTL-L input	Protection input	COM	DAC Control input	5V	L	N	G ground
						220VAC input		



TTL-H input	TTL-L input	Control input (DAC)	Laser output
empty	Low (<0.3)	0-4V	Pmin to Pmax
	High (>3)	0-4V	0
Low (<0.3)	Empty	0-4V	0
High (>3)		0-4V	Pmin to Pmax
Protection input – empty		0-4V	0