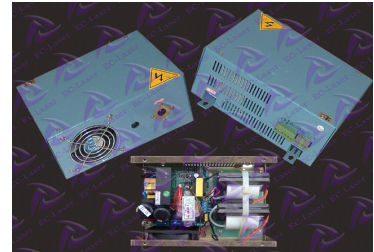


CO2 Laser Power Supply service manual

CO2 Laser Power Supply Parameter (EC-P40)

1. **Input voltage:** AC 220V ± 10%
2. **Max Output voltage:** DC 26KV
3. **Max Output electricity:** DC 26mA
4. **Respond Speed:** ≤ 1mS
5. **Laser Connect Control:** DC(5 ± 1V) / Stop Output Laser
6. **Work Environment:** Temperature (-10~40) °C humidity: ≤ 85%
7. **Laser Power Regulate:** (1) Potentiometer regulate Laser power supply output electricity.
(2) PWM (TTL level) control.
8. **Power supply:** self can closed loop control, Examination laser tube actual work electricity.
9. **Laser on/off:** hand switch control or laser couple interface control.
10. **Size:** 210mm × 160mm × 95mm



Direction for use

1. Laser tube connect:

The high voltage of the power supply must connect CO2 laser tube anode (complete reflect port).

Electricity circuit of the power supply connect CO2 laser tube cathode (laser output port).

Warning: prohibit empty load used; High voltage output port and cathode prohibit on route

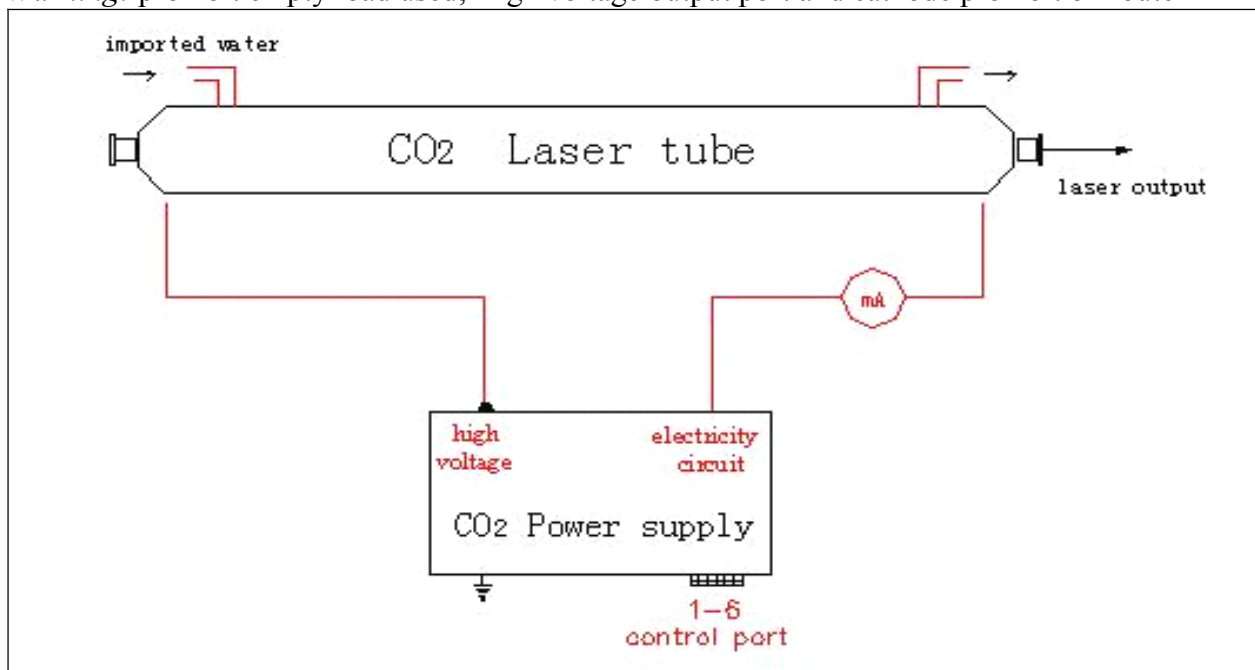


Photo 1 (laser tube and power supply connect)

2. Control signal connect:

- ① control positive
- ② control minus
- ③ protect interface
- ④ signal terra
- ⑤ power regulate input port
- ⑥ positive 5V

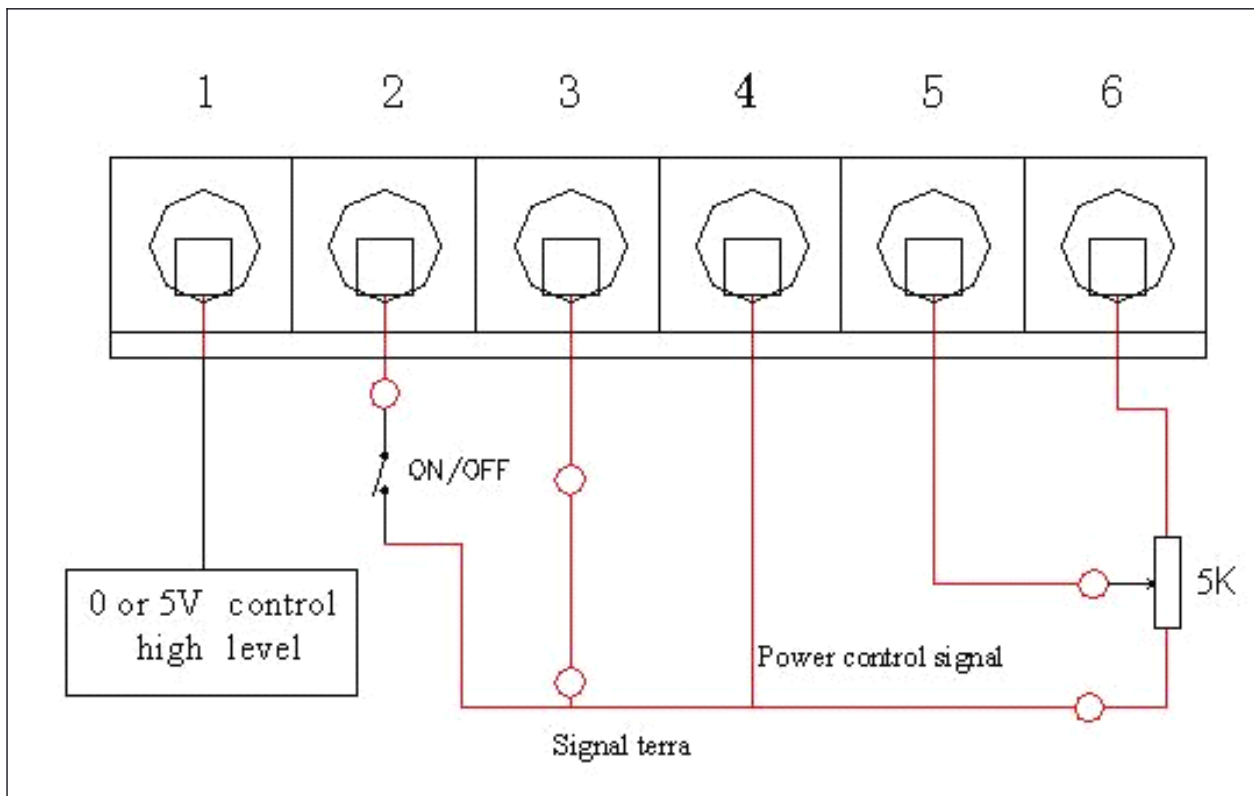


Photo 2 (control high level output laser)

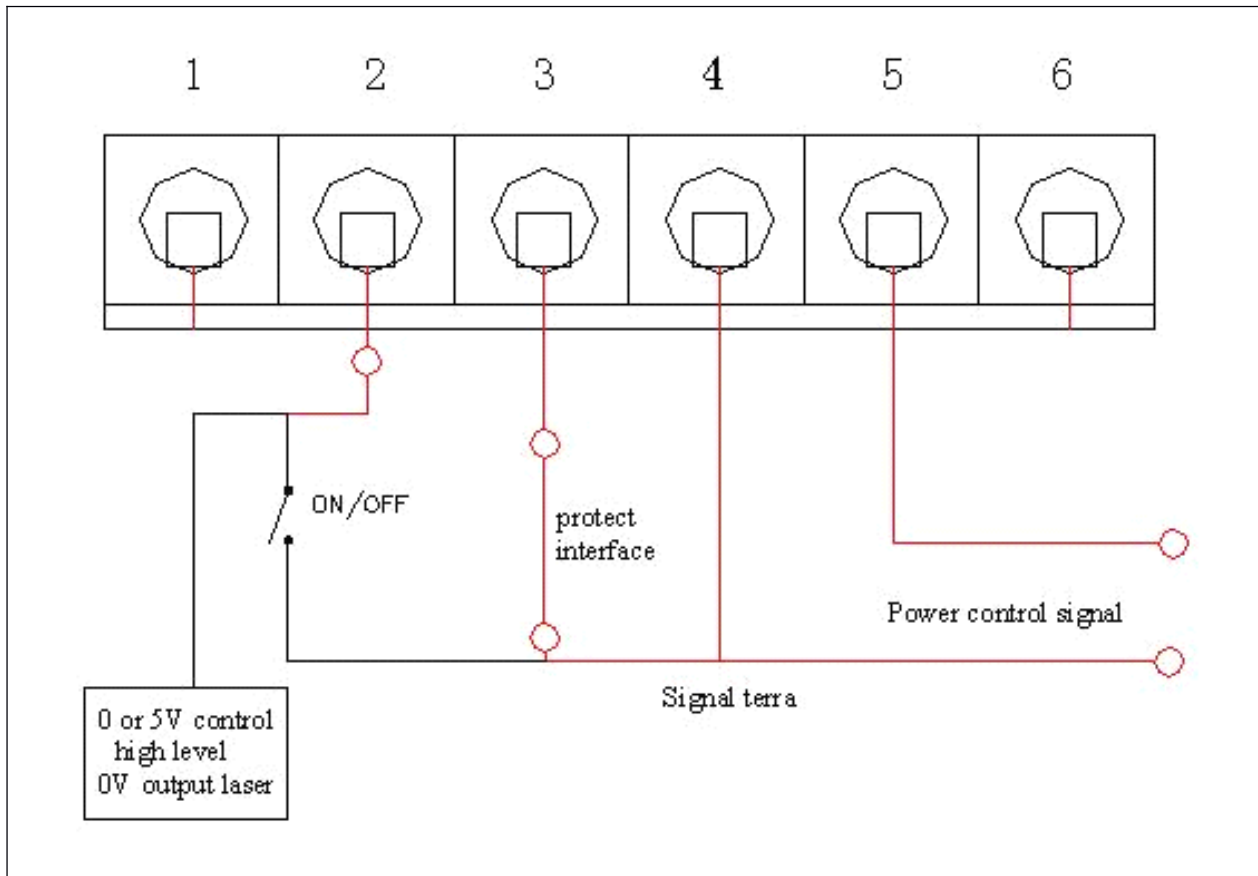


Photo 3 (control low level output laser)

3. Control signal input

The DAC signal for computer and TTL signal input power supply (Photo2 or Photo3)

4. Request power control signal: 0-5V analog signals

5. The power supply connect:

AC220V/50Hz. connect 1 and 4.electrical outlet of backside of the pwoer supply.

2 and 3 are 220V output. (Photo 4)

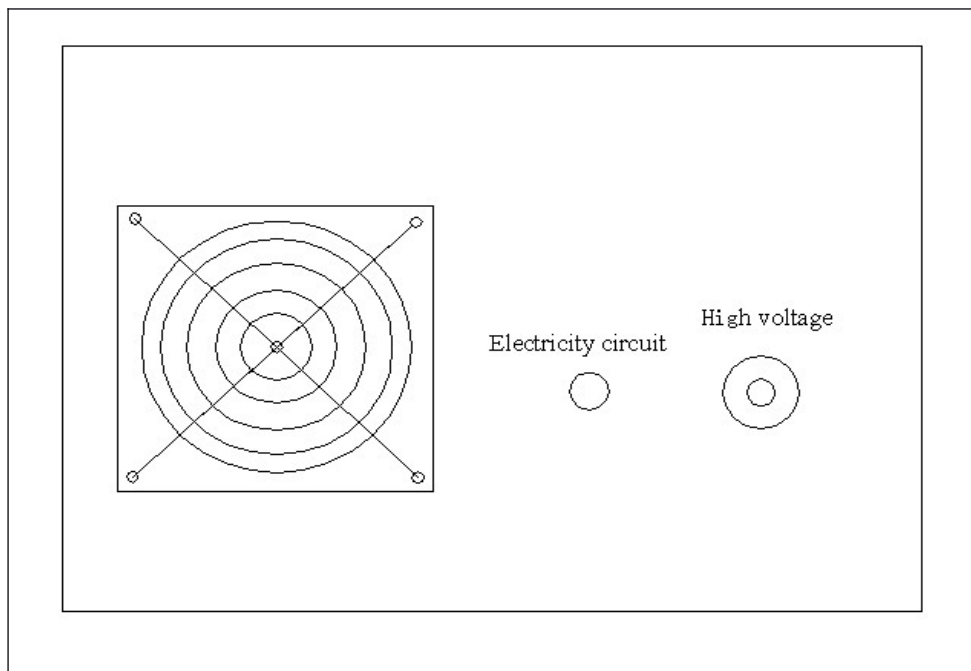
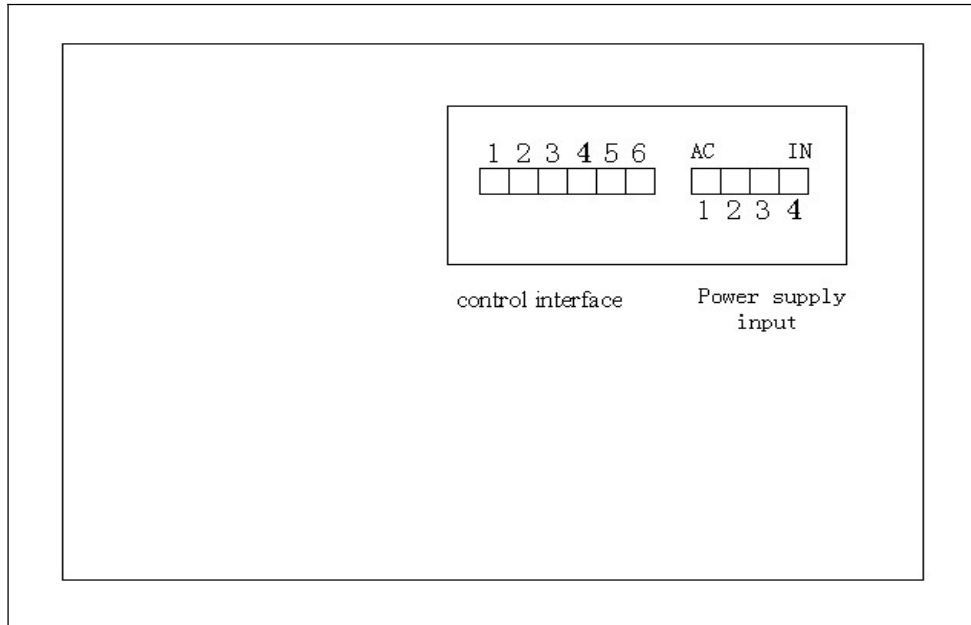


Photo 4

6. Computer control signal request:

when control high level output laser the high level $>2V$;when control low level output laser the high level $>4V$,and low level $<3V$.

7. Fault protect:

- current protect,(photo2 and photo3's thirdly).
- empty load protect
- electricity excess protect

Dispose malfunction

Work electricity <10mA,the power supply noise,then laser tube touch off abnormality.

Causation have:

- (1) voltage low
- (2) laser tube touch off voltage high
- (3) laser bad
- (4) the power supply laser tube touch off voltage low
- (5) water cycle malfunction

processing method

- (1) use booster
- (2) open the power supply can glimpse at two potentiometer (photo 5). Anticlockwise circumgyrate potentiometer(W 302) 1-5 circle
- (3) replacing laser tube
- (4) the same method with (2)
- (5) check-up water cycle

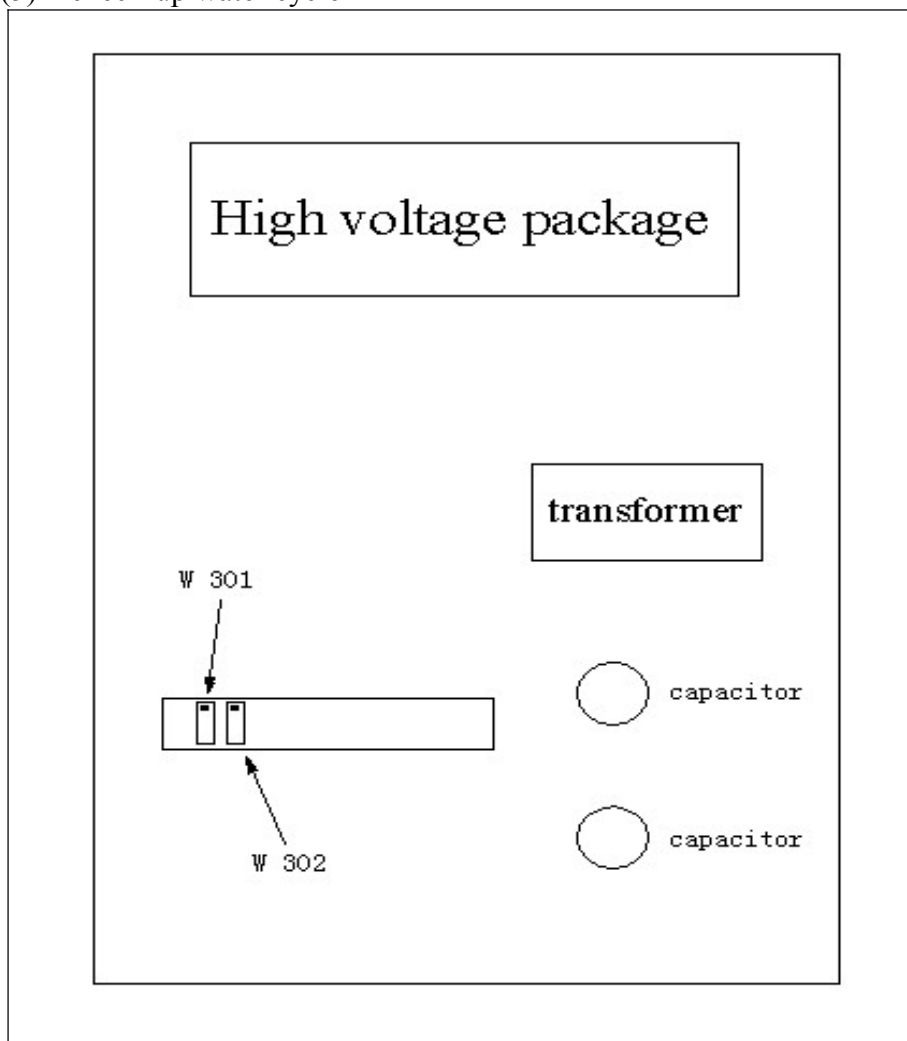


Photo 5



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Disaccord electricity of manual control and computer control.

Computer output voltage bound can not arrive at 0-5V.

Solve method: adjust W301