

SD 系列开关电源模块 安装说明书

SD 系列开关电源模块是申华电子发明的专利产品，现在是最新改进型，其中SD21-2、SD25-2、SD29-2 是完全关机型，用在有遥控变压器的机型中，其中21、25、29 代表适用的电视机尺寸，请参考使用，SD21-3、SD25-3、SD29-3 适用于遥控待机是降低主电源电压，使开关电源工作在低电压状态给 CPU 提供工作电压之方式的机型，例如 STR-S6309、STR-S6709、STR-F6656 等。利用 SD 系列电源模块可以使开关电源的维修时间从原来的几小时缩短到几分钟。只要求原机开关电源初、次级整流滤波电路及开关变压器是好的，都可以顺利安装。

SD 系列开关电源模块有红、黑、灰、黄、蓝五根引线，安装如下：

1：红色线 接到原机电源开关管 C 极，场效应管为 D 极，如果是采用 STR-S6309、6709 红线接 脚，STR-F6656 红线接 脚。

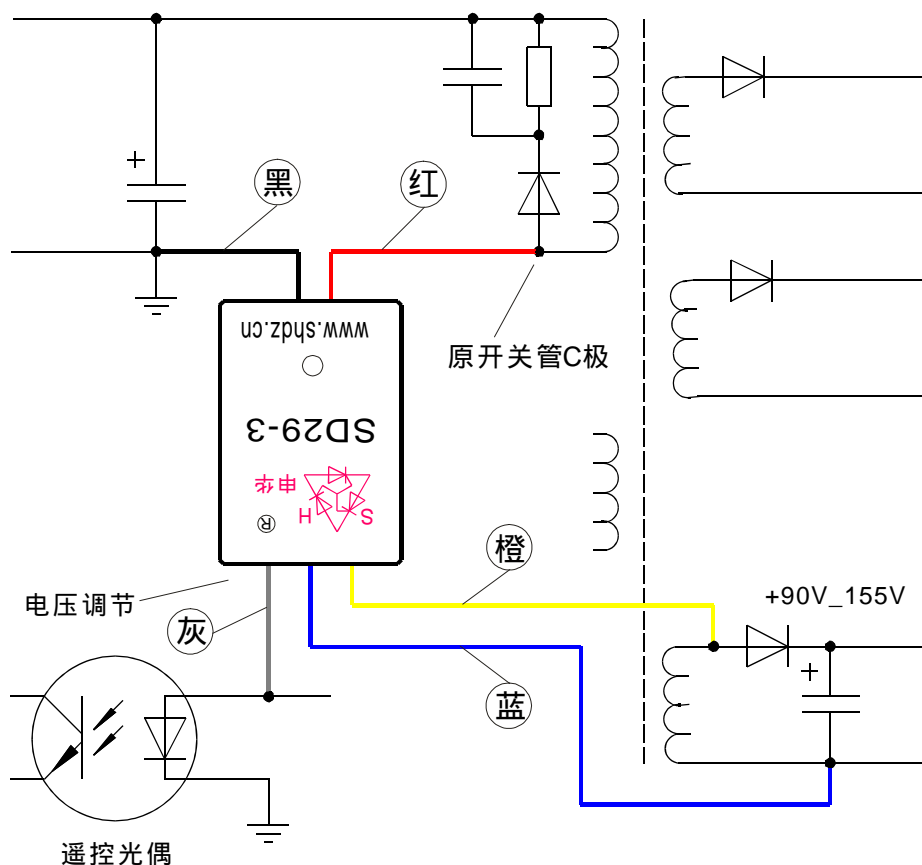
2：黑色线 接到电源初级地线上或开关管 E 极，场效应管为 S 极。

3：黄色线 接到次级主电压整流二极管正端（交流端）。

4：蓝色线 接到次级地线上，俗称冷地。

5：灰色线 是遥控关机线，与初级地线导通后使电源变为待机状态，此时主电压输出 SD-2 型为 0V，SD-3 型为 30V-50V。实际连接时灰色线接关机用光电耦合器内三极管 C 极，去掉与此相连的其它元件，把光电耦合器内三极管 E 极接到初级地线上。

6：把原机电源开关管或者厚膜块去掉，把电源模块牢固地固定在原机散热片上，检查各连接无误即可开机。调整电压调节螺丝（顺时针旋转一周输出电压升高约 2V）使输出主电压和原来相同，其它各组电压会自动适应。SD 系列开关电源模块出厂时电压调整为 110V。



SD 系列开关电源模块 安装注意事项

1：在使用遥控线时，把光电耦合器二极管端相连的稳压元件去掉，如 SE140 等。在使用 STR-S6309、6709，STR-F6654、6656 等不用遥控变压器的机型中安装 SD-3 模块时，要检查待机转换与遥控关机电路是否损坏。注意：此类机型在不接遥控线时要把 CPU 待机供电转换电路去掉。

2：遥控关机采用交流关机、关闭行振荡、用三极管或继电器断开主电压的电路，或者没有遥控关机的机型中遥控灰色线可以不接。

3：模块正常使用温度小于 60℃，加装后如果出现叫声、过热或干扰，应把原机电源管 C 极对地或者对+300V 之间连接的尖峰脉冲吸收电容减小或增大，电容增大时会增加损耗而发热，应使模块温度不大于 85℃ 为准。绝大部分机型不需要改动，确需改动时应遵循以上原则进行。

4：如果你的遥控供电部分损坏，可以采用 SD-3 型模块改用，把原机 26V 左右电压直接连到 CPU 供电稳压块输入端，在遥控待机时 26V 变为 7V 继续为 CPU 提供 5V 电源。实际改装时，把灰色线与初级地线短路，测 26V 电压要大于 6.5V 才能保证 CPU 有 5V 的电压，如果低于 6.5V 要把遥控灰色线上串联 1 只 18V-27V 稳压管，认真理解原机电路后再连接。

5：模块过载保护灵敏，如遇不能启动时应检查各路整流二极管、滤波电容、开关变压器及其相应负载是否短路或损坏。对开关电源模块有特殊要求或者输出主电压在 90V 以下的开关电源模块可以定做。

如果有更高要求，请选择我们生产的采用绿色芯片、直流取样、准谐振式 CD 系列开关电源模块，能满足您各方面的要求。

输入交流：AC90V—270V、50/60Hz

最大功率：200VA，连续工作

输出主电压：DC90V—150V 可调

输出其它各组电压：自动适应

标准号：Q/XSDG 001-2002

专利号：ZL02234016.5

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Operating Instruction of SD Series Multifunctional Switch Power-Supply Module

SD Series multifunctional switch power-supply module is a new product developed by Shenhua Electronics of China. It has simplified the maintenance operation of switch power-supply and reduced the maintenance time from several hours to a few minutes. It is quite suitable to the maintenance of parallel inverter switch power-supply. It can be smoothly installed provided that the primary and secondary rectifier filter circuits of the original switch power-supply and the switch transformer are good.

The switch power-supply module has five leads respectively in red, black, gray, yellow and blue, and they are installed as follows:

1: Remove the power-supply switch tube or thick film circuit block of the original machine (thus making room for installation of the module).

2: The red lead is connected to the power-supply switch tube collector of the original machine (field effect diode is used).

3: The black lead is connected to the primary earth wire (or switch tube emitter).

4: The yellow lead is connected to the front end of secondary main voltage rectifier diode.

5: The blue lead is connected to the secondary earth wire.

6: The gray lead is a remote-control close-down lead. Model SD-1 has no gray lead. The conduction of gray lead of Model SD-2 to the primary earth wire turns the power-supply to a close-down state and the output voltage from all circuits is zero. The conduction of gray lead of Model SD-3 to the primary earth wire turns the power-supply to a semi-close-down state and the

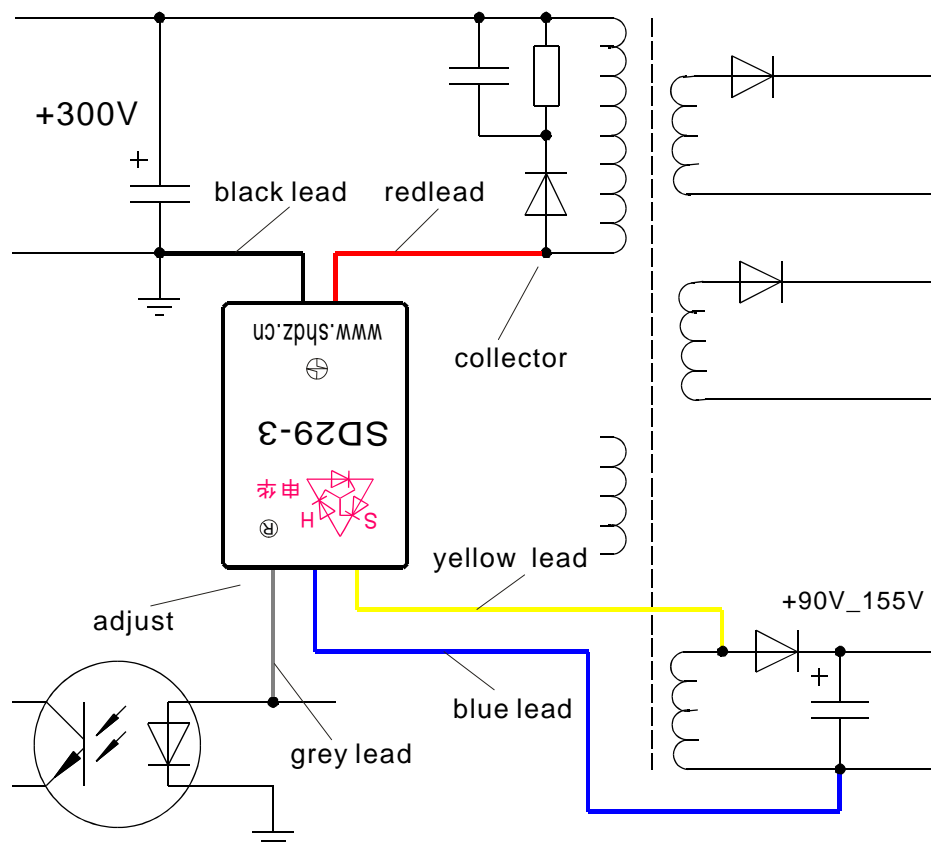
output voltage from all circuits is greatly reduced (about 1/3). In actual connection, the gray lead is connected to the input end of the photoelectric coupler, all the other elements connected to it are removed, and the output end is connected to the primary earth wire. Remove the voltage stabilizing element which is connected to the diode end of the photoelectric coupler, but retain the remote-control close-down element.

7: Apply the attached thermal-conductive silicon grease evenly to between the radiating rib of original machine and the module thus the module is securely fixed on the radiating rib. After all the connections are checked for correctness, the machine can be started. Adjust the voltage-adjusting screw (turning clockwise one round will make the output voltage rise by about 2V) so that the output main voltage is same as the original one, then other sets of voltage will adapt automatically. When the power-supply module is delivered from our plant, its voltage has been adjusted to the minimum value, and its overload protection is quite sensitive, if it

8 : After the module is installed, if there is any phenomenon such as scream or overheat, please add a surge voltage absorption circuit consisting of high-frequency diodes, resistors and capacitors between the power-supply switch tube collector of the original machine and the anode of primary filter capacitor (see the attached diagram), and remove the other elements connected with the switch tube collector. The switch power-supply module can be customized according to special requirement.

Wiring diagram of SD Series Multifunctional Switch

Power-Supply Module



Input AC : AC 130V ~ 280V, 50/60 Hz.

Output power : 20 W ~ 180 W

Starting delay : < 6s

Output main voltage : DC 95 ~ 165V (adjustable)

Other sets of voltage : automatically adapting

Standard number of product : Q/XSDG 001-2002

Patent number : ZL02234016.5

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