USER MANUAL

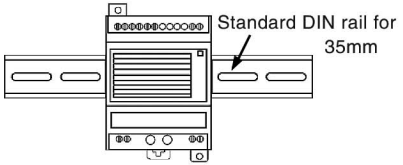
The user manual of the SP-AS/AL Series Switch Power Suply

Ⅰ. Introduction and Installtion Dimensions

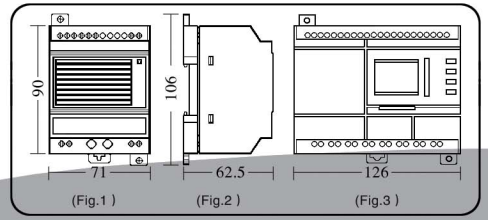
The SP-AS/AL Series Switch Power have many features: being mini-sized, light weight, high efficiency, good reliability and so on. In special, it has the remote control and UPS function.

SP-AS Series: SP-05AS (5V/6A)
SP-12AS (12V/3A)
SP-24AS (24V/1.5A)
71mm × 106mm × 65mm

SP-AL Series: SP-05AL (5V/10A)
SP-12AL (12V/6A)
SP-24AL (24V/3A)
126mm × 106mm × 65mm



(can be used DIN rail installed)

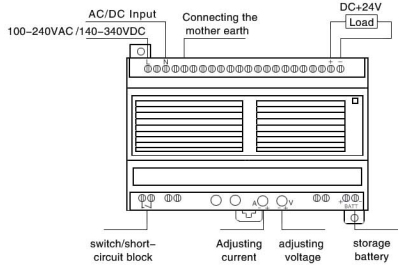


Ⅱ.Features

1、 EMI filter condenser
2、 Input frequency: 47-63Hz
3、 Output voltage stability: ±0.5%
4、 Can be used for DIN rail mounting (EN50022-35)
5、 Wide range voltage input (100-240VAC/140-340VDC)
6、 Ripple voltage tolerance range(85-264VAC/120~370VDC)
7、 Output voltage fine adjustment range (-5%~ +10%, adjusting potentiometer V)
8、 Have the function of soft-start (to limit the peak current of start and the pressure of the voltage to the components)
9、 The current of the load can be roughly adjusted (Means the maximum protective current of the load , adjusting potentio-meter A)
10、Effective: >75%
11、Insulation voltage endurance: >1.5KV
12、Power supply output with the LED indicator
13、Ripple: ≤150mVp-p
14、Have the short circuit and over-load protection(short circuit protection means miss-connect the output voltage in short ,after disconnect,the output will be renew. Over-load protection: 105%-135%)
15、With the UPS function.(External-connected battery, provide with the UPS by the power supply and the battery)
16、With the remote control function (By the switch control the having and non-having of the output voltage)
17、With the over heat protection function (the main control CMOS chip stops output when the temperature is beyond 135℃ and the output will renew automatically when the temperature reduces)

Ⅲ.Using Methods: (Taking SP-24AL as example)

1. General operation:



(Fig.3.1 General application)

Operation Step:

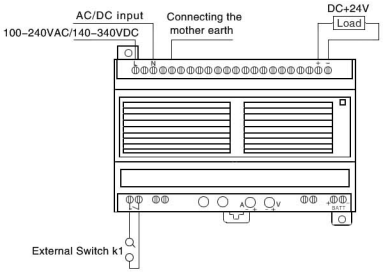
1、Twist firmly the short-circuit block of the switch terminal (If the switch / short-circuit is off,the switch power have no output)
2、Adjusting potentiometer (A) and rotate it to the end clockwise
3、Connect the power (100-240VAC/140-340VDC)
4、Adjusting potentiometer(V) to make the voltage of the output terminal be +24VDC
5、Connect the load in the output terminal (pay attention to the straight polarity and the negative polarity and that the maximum working current must be ≤ 3A)

2.Remote Control:

Attn：Externally–Connect the switch terminal,remote the switch to control output voltage having or non–having

Operation step:

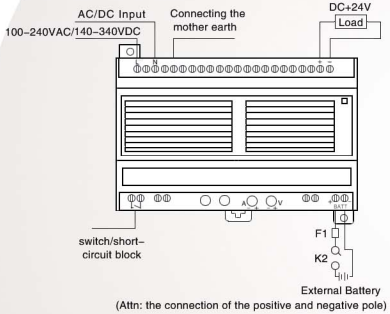
1、Remove the short circuit block from the switch terminal and replace it with a switch k1
2、Adjusting potentiometer (A) and rotate it to the end clockwise
3、Connect the power (100–240VAC/140–340VDC)
4、Adjust potentiometer(V) to make the voltage of the output terminal be +24VDC(Close the switch k1)
5、Load (the working current ≤3A)
6、Close the switch k1,no voltage output



(Fig 3.2 Remote Control application)

3.Using UPS Function:

Attn: If the load can provide with UPS voltage methods, then you can use this function



(Attn: the connection of the positive and negative pole)

(Fig 3.3 UPS application)

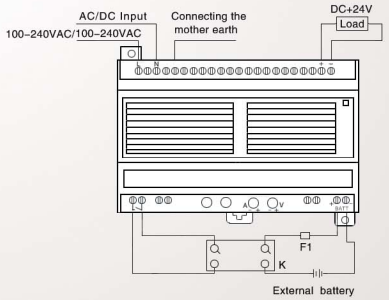
Operation Step:

1、Twist firmly the short circuit block of the switch terminal (If the switch / short–circuit block is off,the switch power have no output)
2、Adjusting potentiometer (A) and rotate it to the end clockwise
3、Connect the power (100–240VAC/140–340VDC)
4、Adjusting potentiometer(V) to make the voltage of the output terminal be +24VDC(Due to SP–12AS/AL to make the output voltage be 12V)
5、Disconnect the AC/DC power wire
6、Connect the switch and fuse wire and the battery according to the positive pole and negative pole marked on the crust
7、Connect the power (100–240VAC/140–340VDC)(If the battery voltage is over +24V,you need to adjust potentiometer(V)to make it over battery voltage)

Attn: At this time the main output voltage is provided by load: BATT port charges the accumulator battery by the switch k2 and fuse wire F1; If there is no AC/DC voltage input, battery power supply the load by the internal circuit, the Maximum working current ≤3A

4.Using Remote Control and UPS simultaneously

Attn: Using remote control and UPS simultaneously, the using method is combined by the method 2 and method 3 as below:



(Attn: the connection of the positive and negative pole)

(Fig3.4: Using Remote and UPS simultaneously application)

5.Specification:

Type	SP–05AS	SP–12AS	SP–24AS	SP–05AL	SP–12AL	SP–24AL
Voltage	5V	12V	24V	5V	12V	24V
Current	6A	3A	1.5A	10A	6A	3A
Dimension (WxHxD)	71mmx106mmx65mm			126mmx106mmx65mm		
Gamut voltage	100–240VAC/140–340VDC					
Ripple voltage tolerance range	85–264VAC/120–370VDC					
Input frequency	47–63Hz					
Output voltage Stabillity	±0.5%					
Ripple	150mVp–p					
Operation Temperature	–25℃ ~ +70℃					
Effciency	>75%					