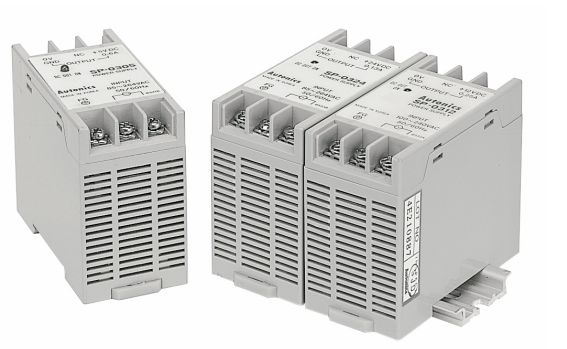
Din Rail Mounting Type Switching Mode Power Supply

■ Features

- Compact size, high quality, cost-effective
- Universal input power
- Enables to drive various controllers
- Built-in overcurrent protection circuit
- DIN rail mounting and mountable without the rail

Please read "Caution for your safety" in operation manual before using.



■ Ordering Information

SP — **03** **24**

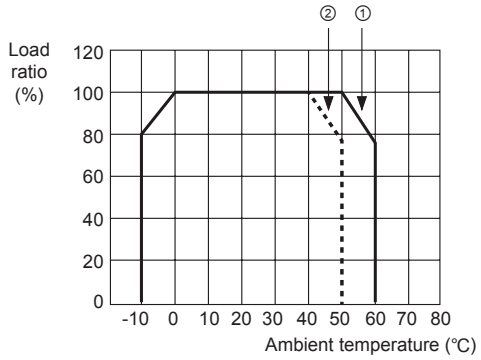
Output voltage	05	5VDC
	12	12VDC
	24	24VDC
Output power	03	3W
Item	SP	Switching Mode Power Supply

■ Specifications

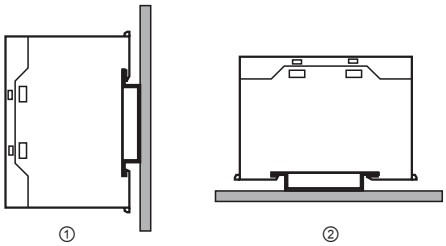
Model		SP-0305	SP-0312	SP-0324
Output power		3W		
Input	Voltage	100-240VAC (85-264VAC)		
	Frequency	50/60Hz		
	Efficiency	67 to 74%		
	Current consumption	Max. 0.15A		
Output	Voltage	5VDC	12VDC	24VDC
	Current	0.6A	0.25A	0.13A
	Allowable voltage range	Max. ±5%		
	Ripple	Max. 5%		
	Voltage fluctuation ratio	Max. 0.5% (at 85-264VAC 100% Load)		
Over current protection		Min. 110%		
Series / Parallel operation		Not available		
Indicator		Output indicator: Red LED		
Insulation resistance		100MΩ (at 500VDC megger)		
Dielectric strength		2000VAC 50/60Hz for 1 minute		
Vibration		0.75mm amplitude at frequency of 10 to 55Hz (for 1 min.) in each X, Y, Z direction for 2 hours		
Shock		300m/s² (approx. 30G) in each X, Y, Z direction for 3 times		
Environ -ment	Ambient temperature	-10 to 50℃, storage: -20 to 70℃		
	Ambient humidity	35 to 85%RH		
Unit weight		Approx. 100g		

※Environment resistance is rated at no freezing of condensation.

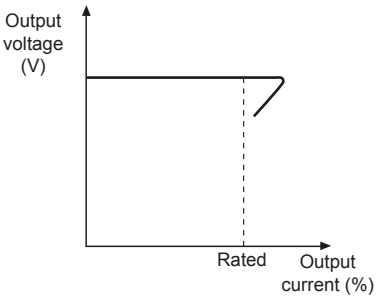
▣ Output Derating Curve By Ambient Temperature



- Be sure when installing as the efficiency is decreased by ambient temperature.
- Refer to output feature beside when installing as the efficiency is affected by mounting status.

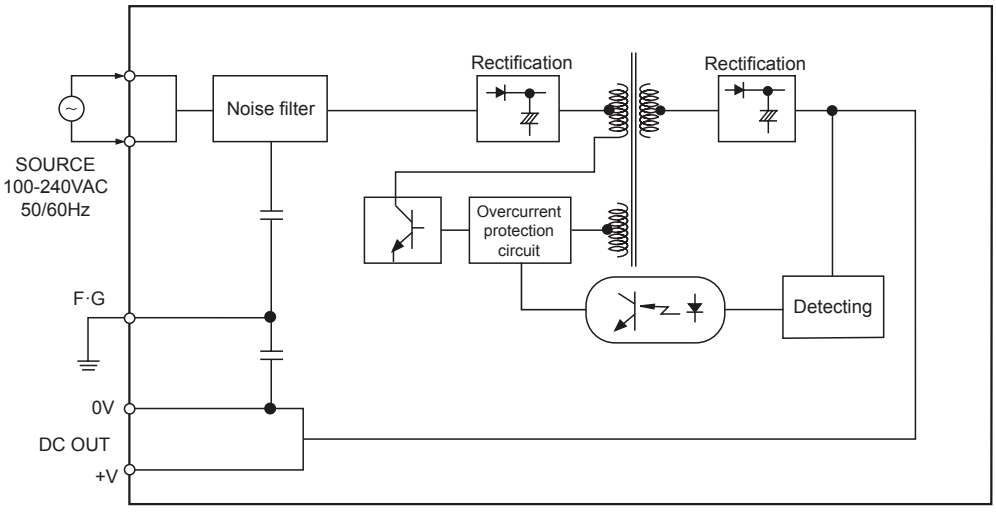


▣ Feature Data Of Over Current Protection



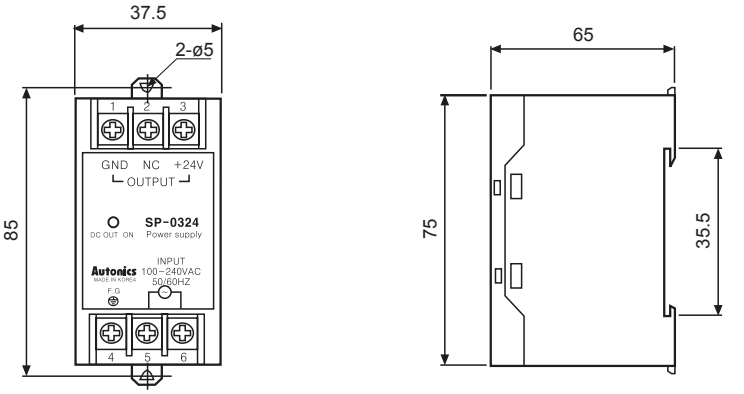
- It is able to protect over current by load with built in over current protection circuit. When the over rated current is flowed, the circuit is operated (output voltage is fallen) and it is released when the load current is under the rated current (it is returned to the rated output voltage).

▣ Block Diagram

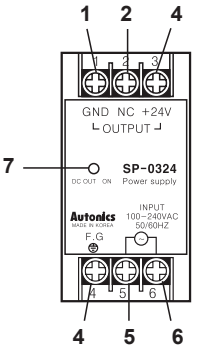


▣ Dimensions

(unit: mm)



▣ Unit Description



1. GND
2. N·C terminal
3. +V
– DC OUTPUT terminal
+ (5VDC, 12VDC, 24VDC)

4. F.G. (Field Ground) terminal

5.
6.
SOURCE
100-240VAC 50/60Hz

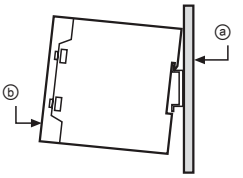
7. Output indicator-DC output is ON, then LED ON

▣ Rail Mounting Method

◎ Mounting on DIN rail and removing

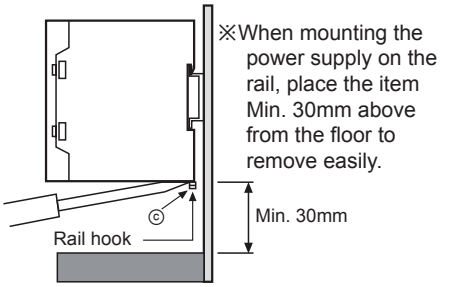
● To mount the power supply on DIN rail

First put the power supply on the part ⓐ of the rail and then press it for the direction ⓑ.



● To remove the power supply from DIN rail

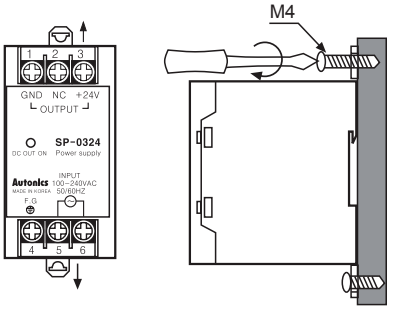
Firstly put a screw driver into the part ⓒ and push it downward.



◎ Mounting on Panel

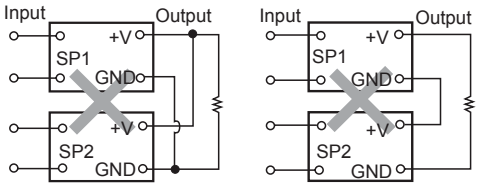
● When there is no DIN rail,

If there is no rail, it is able to mount by screwing a bolt at the hook on the body as following figure.



▣ Proper Usage

◎ Serial and parallel operation

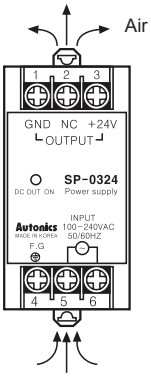


[Parallel connection] [Serial connection]

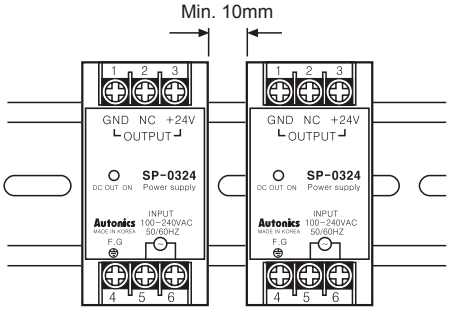
※The power supply should not be used in serial and parallel connection in any case.
Please use it individually always.

◎ Caution for mounting

● Please install it at ventilating place in order to dissipate the heat effectively then it is able to improve the reliability for a long time.



● When installing two or more power supplies side by side, please keep the interval at least 10mm so that the heat is dissipated effectively.



◎ Caution for using

● Please wire input power (AC) to the input power terminal properly. If wiring it to other terminal the inner circuit will be broken.

● It is working with 2000VAC between the terminal and case for a minute, but it will be broken if the overvoltage is supplied for several minutes.

● The power supply has 100MΩ of insulation resistance between the terminal and case.
Please use a D.C insulation tester with 500VDC for the insulation resistance of the power supply.

● Please check as below when problem is happened.
① Short of DC output terminal.
(When overcurrent is supplied the overcurrent protection circuit is operated and when the load current is under the rated current it is stopped.)
② Wiring of AC input and DC output terminal properly.
③ AC input voltage in rated voltage.