

SPA Series

INSTRUCTION MANUAL

Autonics

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- 01. When connecting the F.G. terminal, use AWG 14 (2.1 mm²) cable or over and tighten the terminal screw with a tightening torque of 0.7 to 0.9 N·m.**
Failure to follow this instruction may result in fire or malfunction due to contact failure.
- 02. Use the unit within the rated specifications.**
Failure to follow this instruction may result in fire, product damage or shortening the life cycle of the product.
- 03. Use dry cloth to clean the unit, and do not use water or organic solvent.**
Failure to follow this instruction may result in electric shock or fire.
- 04. Keep the product away from metal chip, dust, and wire residue which flow into the unit.**
Failure to follow this instruction may result in fire or product damage.
- 05. Do not touch the product during operation or for a certain period of time after stopping.**
Failure to follow this instruction may result in burns.
- 06. Upon occurrence of an error, disconnect the power source.**
Failure to follow this instruction may result in fire or product damage.

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- Do not connect the output voltage neither in serial nor in parallel.
- Since there is no harmonic suppression or power factor correction circuit, install the circuit separately if necessary.
- Since using the condenser input method, power factor is in the range of 0.4 to 0.6.

When using distribution board or transformer, check the capacity of the input voltage.

$$\text{Input apparent power (VA)} = \frac{\text{Output active power (W)}}{\text{Power factor} \times \text{Efficiency}}$$

- Even though a noise filter is installed inside the product, the product can be affected by noise depending on the installation location or wiring.
- If the internal fuse is damaged, please contact our A/S center.
- To ensure the reliability of the product, install the product vertically on the panel or metal surface.

- This unit may be used in the following environments.
 - Indoors (in the environment condition rated in 'Specifications')
 - Altitude max. 2,000 m
 - Pollution degree 2
 - Installation category II

Output range	75 to 100 W					
Model	SPA-075-05	SPA-100-05	SPA-075-12	SPA-100-12	SPA-075-24	SPA-100-24
Output power	75 W	100 W	75 W	100 W	75 W	100 W
Input condition						
Voltage ⁽¹⁾	100 - 120 / 200 - 240 VAC ~ (permissible voltage: 85 - 264 VAC ~) switching type					
Frequency	50 / 60 Hz					
Efficiency ⁽²⁾ (typical)	≥ 70 %		≥ 78 %	≥ 72 %	≥ 78 %	≥ 80 %
Current consumption ⁽²⁾ (typical)	≤ 3.0 A		≤ 2.0 A	≤ 3.0 A	≤ 2.0 A	≤ 2.5 A
Inrush current	100 VAC ~ protection (typical)	≤ 45 A	≤ 35 A	≤ 45 A	≤ 35 A	
240 VAC ~		≤ 50 A	≤ 40 A	≤ 50 A	≤ 40 A	
Output characteristics						
Voltage	5 VDC =		12 VDC =		24 VDC =	
Current	15 A	20 A	6.3 A	8.5 A	3.2 A	4.2 A
Voltage adjustment range ⁽³⁾	≤ ± 5 %		≤ ± 5 %		≤ ± 5 %	
Input variation ⁽⁴⁾	≤ ± 0.5 %		≤ ± 0.5 %		≤ ± 0.5 %	
Load variation ⁽²⁾	≤ ± 2 %		≤ ± 1 %		≤ ± 1 %	
Ripple noise ⁽²⁾	≤ ± 1 %		≤ ± 1 %		≤ ± 1 %	
Start-up time ⁽²⁾ (typical)	≤ 250 ms		≤ 250 ms		≤ 250 ms	
Hold time ⁽²⁾ (typical)	≥ 5 ms		≥ 10 ms		≥ 10 ms	
Protection						
Over-current protection ⁽⁶⁾	≥ 110 %	≥ 105 %	≥ 110 %		≥ 110 %	
Over-voltage protection ⁽⁵⁾	6.5 V ± 10 %		16.0 V ± 10 %		30.0 V ± 10 %	
Output short-circuit protection	≤ 10 ms		≤ 5 ms	≤ 10 ms	≤ 5 ms	
Certification						
Unit weight	≈ 400 g		≈ 400 g		≈ 400 g	

- 01) Since there is no separate input over-voltage protection for the voltage over the rated input voltage range, supplying over-voltage may result in product damage.
- 02) It is in the rated input voltage 100 VAC ~ with 100 % load.
- 03) Use the output voltage adjusting volume within the voltage variable range. If the voltage exceeds the output voltage range, overvoltage protection function is activated and the output is cut off.
- 04) Rate input voltage
 - SPA-030 / 050 series: 100 - 240 VAC ~ (85 - 264 VAC ~) with 100 % of load
 - SPA-075 / 100 series: 100 - 120 / 200 ~ 240 (85 - 132 / 170 - 264 VAC ~) with 100 % of load
 - SPA-100-05 model: 100 - 120 / 200 ~ 240 VAC ~ (100 - 132 / 190 - 264 VAC ~) with 100 % of load
- 05) It is for rate input voltage 100 VAC ~.

A line graph showing the relationship between ambient temperature and load ratio for a steel beam specimen. The x-axis represents ambient temperature in degrees Celsius, ranging from -10 to 70. The y-axis represents the load ratio as a percentage, ranging from 0 to 100. The graph shows a constant load ratio of 100% for temperatures up to approximately 50°C. Beyond 50°C, the load ratio decreases linearly to about 40% at 60°C, where it remains constant.

Ambient temperature (°C)	Load ratio (%)
-10	100
0	100
10	100
20	100
30	100
40	100
50	100
60	40
70	40