

A Thin Power Supply Designed for PC Applications A Inside Small Control Box

- The 65 mm depth matches that of OMRON Mini H-type PCs.
- Good for various industrial applications using 100 mm depth control box.
- UL, CSA, and VDE qualifications met for safety.
- Wide AC input range: 100 or 200 VAC selectable.



Ordering Information

Power ratings	Output		Model
	Voltage	Current	
30 W	24 VDC	1.3 A	S82V-0324
50 W	24 VDC	2.1 A	S82V-0524

Specifications

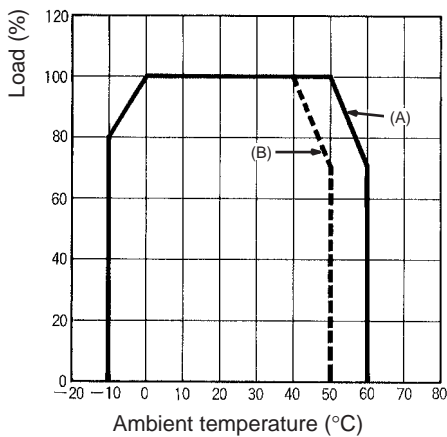
■ Ratings/Characteristics

Item		30 W	50 W	
Efficiency (typical)		83%		
Life expectancy		8 yrs. min. (Used at 40°C at the rated input with a 50% load)		
Input	Voltage (AC only)	100 VAC (85 to 132 VAC)/200 VAC (170 to 264 VAC) selectable		
	Frequency	50/60 Hz (47 to 450 Hz)		
	Current (with rated I/O)	100 VAC input	0.9 A max.	1.3 A max.
		200 VAC input	0.6 A max.	0.8 A max.
	Leakage current (with rated I/O)	100 VAC input	0.5 mA max.	
		200 VAC input	1 mA max.	
	Inrush current (with rated I/O)	100 VAC input	25 A max.	
200 VAC input		50 A max.		
Noise filter		Yes		
Output	Voltage adjustment range	±5%		
	Ripple and noise	2% (p-p) max.		
	Input variation influence	0.5% max. (at 85 to 132 VAC/170 to 264 VAC input, 100% load)		
	Load variation influence	1.5% max. (rated input, 10 to 100% load)		
	Temperature variation influence	0.05%/°C max.		
	Start-up time	100 ms max. (up to 90% of output voltage at rated input and output)		
	Hold time	20 ms min.		
Additional function	Overload protection	105% min. of rated load current, inverted L drop, automatic reset.		

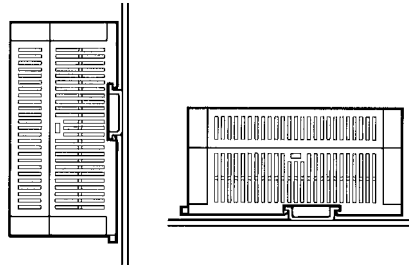
Item		30 W	50 W
Other	Ambient temperature	Operating: See the derating curve in the "Engineering Data" section Storage: -25° to 65°C (no condensation or icing)	
	Ambient humidity	Operating: 25% to 85% Storage: 20% to 90%	
	Dielectric strength	2.7 kVAC, 50/60Hz for 1 min (between all inputs and all outputs/GR terminals)	
	Insulation resistance	100 MΩ min. (between all outputs and all inputs/GR terminals at 500 VDC)	
	Vibration resistance	10 to 55 Hz, 0.375-mm double amplitude for 2 h each in X, Y, and Z directions	
	Shock resistance	294 m/s ² , 3 times each in ±X, ±Y, and ±Z directions	
	Output indicator	Yes (green)	
	Electromagnetic interference	Conforms to FCC class B	
	Approved standards	UL 508; CSA C22.2 No.14, E.B.1402C; VDE 0160; VDE0805; EN60950 (IEC 60950)	
	Weight	380 g max.	

Engineering Data

Derating Curve



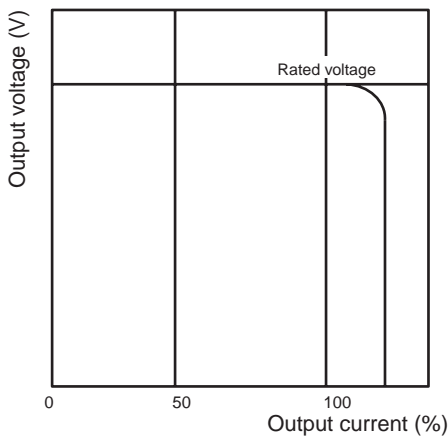
Note: The derating curve depends on the mounting direction of the Power Supply



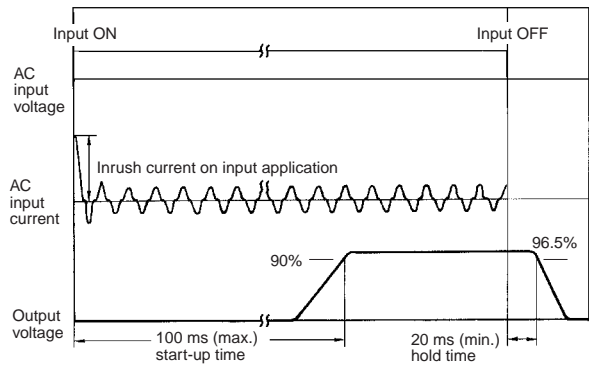
(A) Standard (vertical) Mounting Position (B) Horizontal Mounting Position

Overload Protection

The power supply is provided with an overload protection function that protects the load and the power supply from possible damage by overcurrent. When the output current rises above 105% of the rated output current, the protection function is triggered, decreasing the output voltage. When the output current falls within the rated range, the overload protection function is automatically cleared.

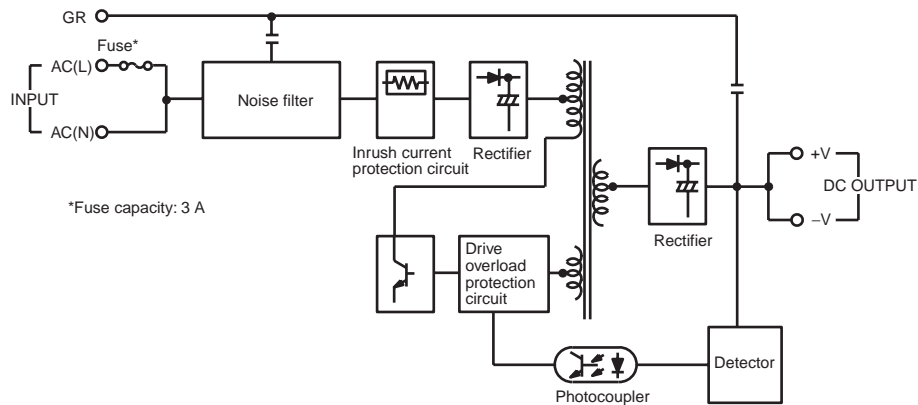


Inrush Current, Start-up Time, Hold Time



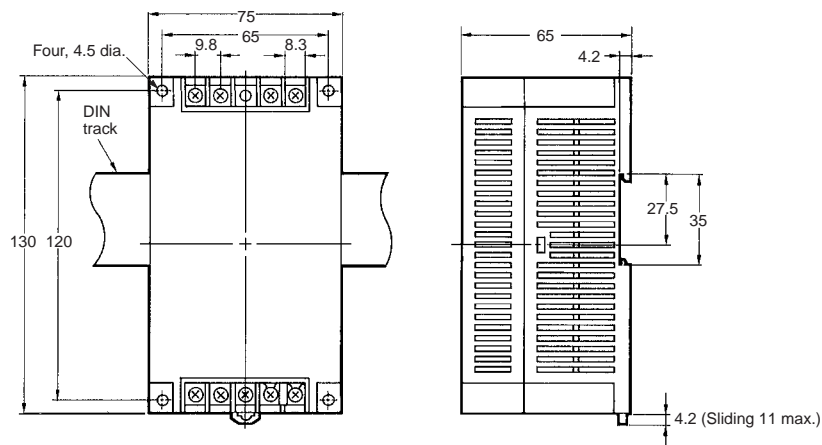
Operation

■ Block Diagram



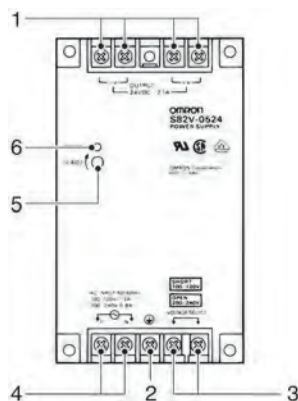
Dimensions

Note: All units are in millimeters unless otherwise indicated.



Installation

■ Terminal Arrangement



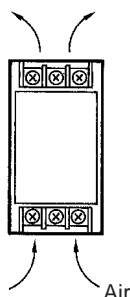
- DC Output Terminals:** Connect the load lines to these terminals.
 - Ground Terminal (GR):** Connect a ground line to this terminal.
 - Input Voltage Selector Terminals:** Selects a 100 to 120 V or 200 to 240 V input voltage depending on whether the short bar is attached across these terminals (short-circuited: 100 to 120 V, opened: 200 to 240 V).
 - Input Terminals:** Connect the input lines to these terminals.
- Note:** A fuse is connected to AC (L) terminal.
- Output Voltage Adjuster (V.ADJ):** Used to increase or decrease the output voltage.
 - Output Indicator (DC ON):** Lights while direct current (DC) output is ON.

Precautions

Mounting

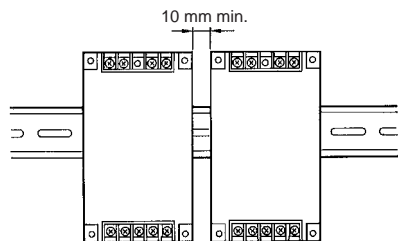
To improve and maintain the reliability of the power supply over a long period of time, adequate consideration must be given to heat radiation.

The power supply is designed to radiate heat by means of natural air-flow. Therefore, mount the power supply so that air flow takes place around the power supply.



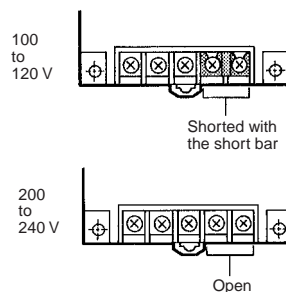
When mounting two or more power supplies side-by-side, allow at least 10 mm spacing between them, as shown in the following diagram.

Forced air-cooling is recommended.



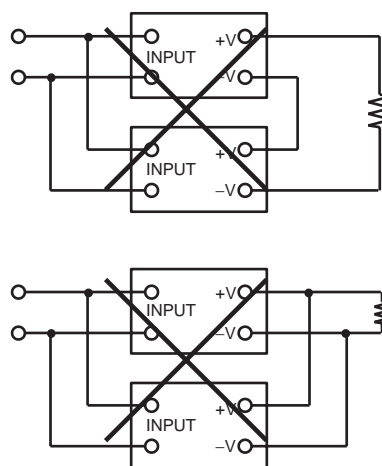
Selecting Input Voltage

Select a 100 to 120 V input or 200 to 240 V input by shorting or opening the input voltage selector terminals, as shown in the following diagram (factory set to 200 V).



Series or Parallel Operation

No series or parallel operation is available.



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
 To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. M045-E1-03 **In the interest of product improvement, specifications are subject to change without notice.**

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Printed in Japan
 0302-0.3C (0897)