OMRON

Switching Power Supply
S82V

A Thin Plastic Housed Power Supply

- Field-selectable input voltage 120 or 240 VAC
- Thin 65 mm (2.56 in) mounting depth matches OMRON's Mini H-type PLCs
- Ideal for various industrial applications using a 100 mm (3.94 in) control box depth
- Meets UL, CSA, and VDE safety standards
- 3-year warranty

Ordering Information

■ SWITCHING POWER SUPPLIES

Stock Note: Shaded models are normally stocked.

Rated input voltage	Power ratings	Output voltage	Output current	**Part number**
120/240 VAC Selectable	30 W	24 VDC	1.3 A	**S82V-0324**
	50 W	24 VDC	2.1 A	**S82V-0524**

■ ACCESSORIES (SOLD SEPARATELY)

Stock Note: Shaded models are normally stocked.

DIN Rail

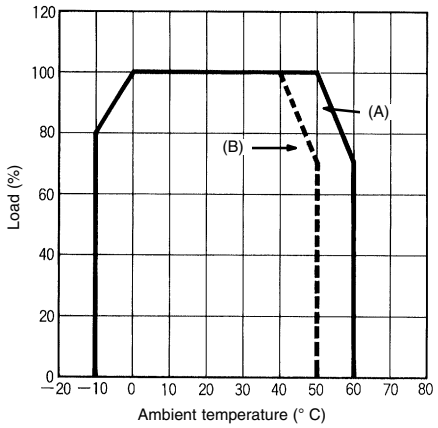
Item	Length	Width	**Part number**
DIN-rail (See *Dimensions* section for details.)	0.5 m (1.64 ft)	7.3 mm (0.29 in)	**PFP-50N**
	1 m (3.28 ft)	7.3 mm (0.29 in)	**PFP-100N**
	1 m (3.28 ft)	16 mm (0.63 in)	**PFP-100N2**

Specifications

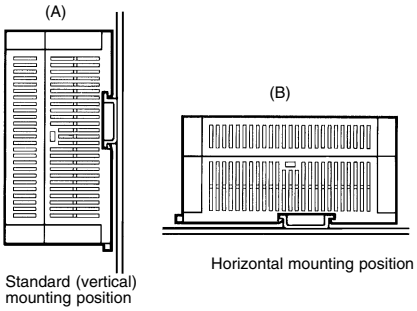
Output capacity		30 W	50 W
Efficiency (typical)		83%	
Life expectancy		8 yrs. min. (Used at 40°C at the rated input with a 50% load)	
Input			
Voltage (AC only)		Selectable: 120 V (85 to 132 V) or 240 V (170 to 264 V)	
Frequency		47 to 450 Hz	
Current	100 V input	0.9 A max.	1.3 A max.
(with rated I/O)	200 V input	0.6 A max.	0.8 A max.
Leakage current	100 V input	0.5 mA max.	
(with rated I/O)	200 V input	1 mA max.	
Inrush current	100 V input	25 A max.	
(with rated I/O)	200 V input	50 A max.	
Noise filter		Yes	
Output capacity		30 W	50 W
Output			
Voltage adjustment range		±5%	
Ripple and noise		2% (p-p) max.	
Input variation influence		0.5% max. (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.	
Rise time		100 ms max. (output voltage rise to 90%, with rated input and output)	
Hold time		20 ms min.	
Additional functions			
Overload protection		105% min. of rated load current, inverted L drop, automatic reset.	
Characteristics			
Ambient temperature	Operating	See the derating curve in the *Engineering Data* section	
	Storage	–25° to 65°C (–13° to 149°F)	
Ambient humidity	Operating	25% to 85%	
	Storage	20% to 90%	
Dielectric strength		2,700 VAC, 50/60Hz for 1 min. (between all inputs and outputs/GR terminal) 500 VDC for 1 min. (between all inputs and all outputs/GR terminal)	
Insulation resistance		100 MΩ min. at 500 VDC (between all outputs and all inputs/GR terminal)	
Vibration resistance		Malfunction: 10 to 55 Hz, 0.75-mm double amplitude (approx. 4.5G) each in X, Y, and Z directions for 2 hours.	
Shock resistance		Malfunction: 294 m/s^2 (30G), 3 times each in +X, +Y, and +Z directions	
Output indicator		Green LED	
Electromagnetic interference		Conforms to FCC class B standards	
Approved standards		UL 508, CSA C22.2 No.142, VDE 0160, VDE 0805, EN 60950 (IEC 950)	
Weight		380 g max.	

Engineering Data

■ DERATING CURVE



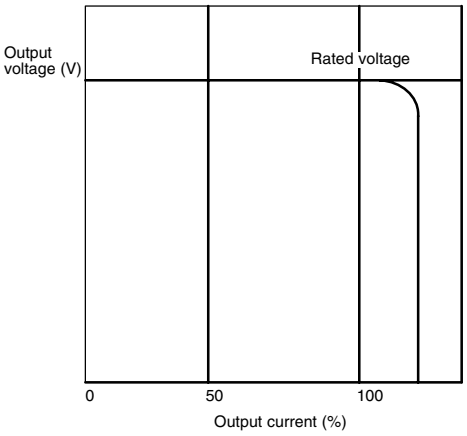
Note: The derating curve depends on the mounting direction of the power supply.



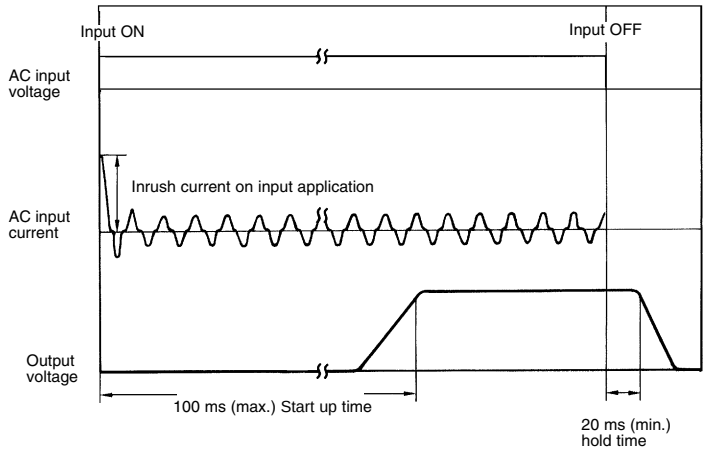
■ OVERLOAD PROTECTION

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 a set value (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.

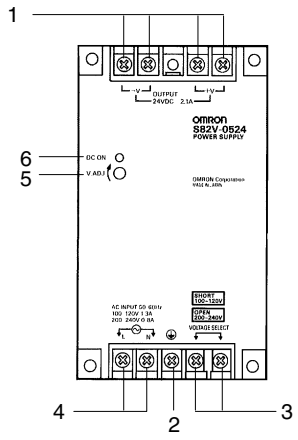


■ INRUSH CURRENT, START TIME, HOLD TIME



Nomenclature

■ TERMINAL ARRANGEMENT



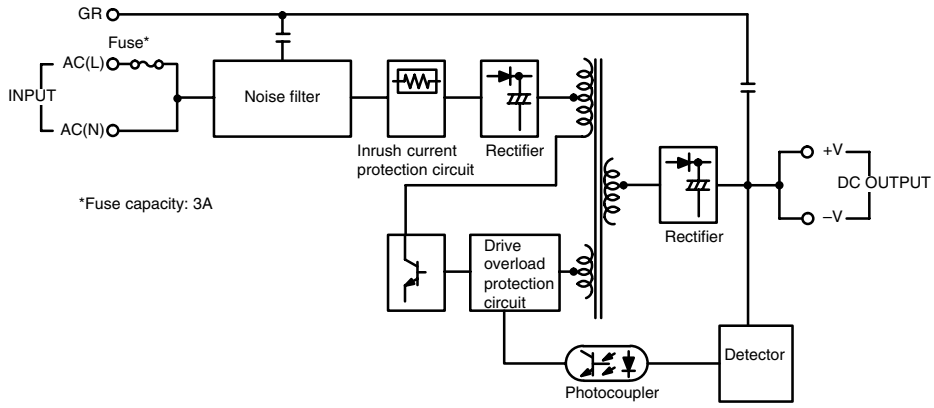
1. **DC Output Terminals:** Connect the load lines to these terminals.
2. **Ground Terminal:** Connect a ground line to this terminal.
3. **Input Voltage Selector Terminals:** Selects a 100 to 120 V or 200 to 240 V input voltage depending on whether the short bar is attached across these terminals (short-circuited: 100 to 120 V, opened: 200 to 240 V).
4. **Input Terminals:** Connect the input lines to these terminals.

Note: A fuse is connected to AC (L) terminal.

5. **V.ADJ Adjuster:** Adjusts the output voltage.
6. **Output LED Indicator:** Lights while a DC voltage is ON.

Operation

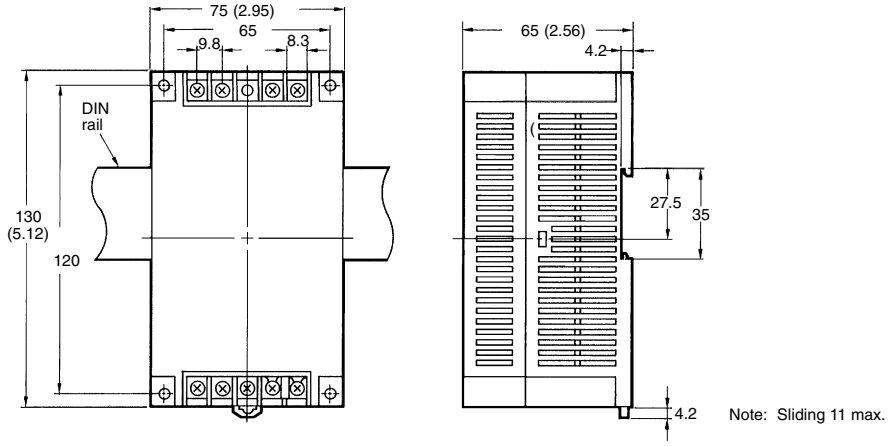
■ BLOCK DIAGRAM



Dimensions

Unit: mm (inch)

■ S82V



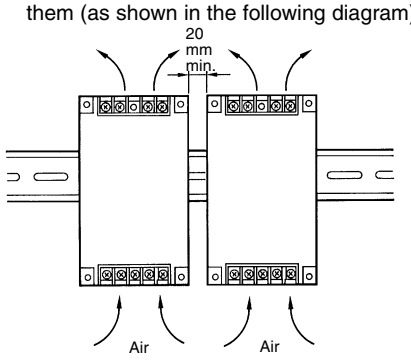
Precautions

■ MOUNTING

- The power supply is designed to dissipate heat through natural air-flow. Mount the power supply so that air flow takes place around the power supply. This will improve and maintain the reliability of the power supply over a long period of time.
- Forced-air cooling is recommended.

Two (or More) Mounted Side-by-Side

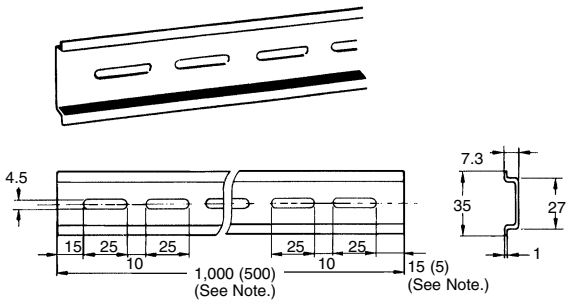
- When mounting two or more power supplies side-by-side, allow at least 20 mm (0.79 in) spacing between them (as shown in the following diagram).



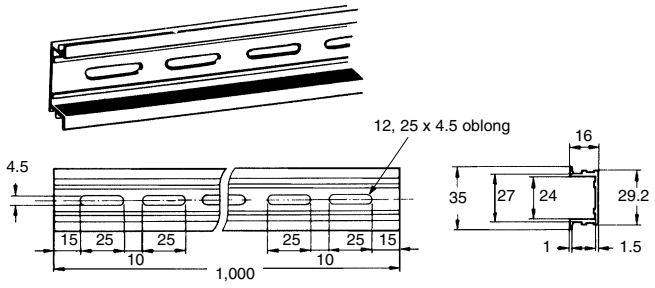
■ ACCESSORIES

DIN-Rail Mounting Track (Order Separately)

PFP-100N/PFP-50N



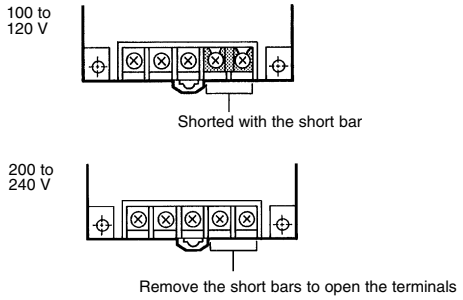
PFP-100N2



Note: The values shown in parentheses are for the PFP-50N.

■ 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).



■ SERIAL OR PARALLEL OPERATION

No serial or parallel operation is available.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters into inches, divide by 25.4

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