

# Switch mode Power Supply S8PS

## The Most Compact DIN-track-mounting Switch mode Power Supplies Ever with Capacities Up to 600 W

- Power range from 50 W up to 600 W.
- Open-frame and covered types available.
- Easily mounted to DIN track with provided Mounting Brackets.
- Models with Front-mounting Bracket available.
- Conforms to EMC standards: EN50081-1, EN50082-2, and EN61000-3-2.
- Maintenance-free up to 300 W due to natural ventilation.
- Protection-ON alarm indicator shows valuable protection functions in action (300-/600-W models).
- AC universal input: 100 to 240 VAC
- Approved by UL/CSA standards, EN60950 (IEC950), and VDE0160.
- Six-language instruction manual provided.
- Life expectancy of 10 years min.
- Finger protection terminal block meets VDE0106/P100. (Covered type)



## Model Number Structure

### Model Number Legend

S8PS-□□□□□□□□  
           1      2      3

#### 1. Power Ratings

- 050: 50 W
- 100: 100 W
- 150: 150 W
- 300: 300 W
- 600: 600 W

#### 2. Output Voltage

- 05: 5 V
- 12: 12 V
- 24: 24 V

#### 3. Configuration

- C: Covered type with Front-mounting Bracket
- D: Open-frame type with DIN Track Mounting Bracket
- CD: Covered type with DIN Track Mounting Bracket
- None: Open-frame type with Front-mounting Bracket

## Ordering Information

### List of Models

Configuration	Input voltage	Power ratings	Output voltage	Output current	Front-mounting Bracket	DIN Track Mounting Bracket	
Covered type	100 to 240 VAC	50 W	5 V	10 A	S8PS-05005C	S8PS-05005CD	
			12 V	4.2 A	S8PS-05012C	S8PS-05012CD	
			24 V	2.1 A	S8PS-05024C	S8PS-05024CD	
		100 W	24 V	4.5 A	S8PS-10024C	S8PS-10024CD	
			150 W	24 V	6.5 A	S8PS-15024C	S8PS-15024CD
				300 W	24 V	14 A	S8PS-30024C
600 W	24 V	27 A	S8PS-60024C	---			
Open-frame type	100 to 240 VAC	50 W	5 V	10 A	S8PS-05005	S8PS-05005D	
			12 V	4.2 A	S8PS-05012	S8PS-05012D	
			24 V	2.1 A	S8PS-05024	S8PS-05024D	
		100 W	24 V	4.5 A	S8PS-10024	S8PS-10024D	
		150 W	24 V	6.5 A	S8PS-15024	S8PS-15024D	

# Specifications

## ■ Ratings/Characteristics

Item		50 W	100 W	150 W	300 W	600 W
Efficiency (typical)		75 to 87% (depends on the model)				
Input	Voltage	100 to 240 VAC (85 to 264 VAC)				
	Frequency	47 to 450 Hz				
	Current (see note 1)	0.9 or 0.45 A max.	1.8 or 0.9 A max.	2.7 or 1.4 A max.	5.4 or 2.7 A max.	10 or 5 A max.
	Power factor (see note 1)	0.95 TYP.				
	Leakage current (see note 1)	0.5 or 1.0 mA max.				
	Inrush current (25°C, cold start) (see note 1)	25 or 50 A max.				
Output	Voltage adjustment range	-5% to 10%				
	Ripple (see note 1)	2% (p-p) max.				
	Input variation influence	0.4% max. (at 85 to 132 VAC input/at 170 to 264 VAC input, 100% load)				
	Load variation influence	0.8% max. (with rated input, 0 to 100% load)				
	Temperature variation influence (see note 1)	0.05%/°C max.				
	Rise time	1,000 ms max. (up to 90% of output voltage at rated output voltage/current)				
	Hold time (see note 1)	20 ms min.				
Additional function	Overload protection	105% min., voltage trailing intermittent operation (With the 600-W model, output is turned OFF at 5 s min.)				
	Overvoltage protection	Yes				
	Overheat protection	No				Yes
	Protection-ON alarm indicator	No				Yes (Red)
Other	Parallel operation	No				Yes, 2 units max.
	Heat radiation	Natural air-cooling				Fan
	Ambient temperature	Operating: See the derating curve in the <i>Engineering Data</i> section. (with no condensation nor icing) Storage: -25°C to 65°C (with no condensation nor icing)				
	Ambient humidity	25% to 85%				
	Dielectric strength	3.0 kVAC, 50/60 Hz for 1 min (between all inputs and outputs) 2.2 kVAC, 50/60 Hz for 1 min (between all inputs and GR terminals) 1 kVAC, 50/60 Hz for 1 min (between all outputs and GR terminals)				
	Insulation resistance	100 MΩ min. (between all output and input/GR terminals at 500 VDC)				
	Vibration resistance	10 to 55 Hz, 0.75-mm amplitude for 2 h each in X, Y, and Z directions				
	Shock resistance	300 m/s <sup>2</sup> , 3 times each in ±X, ±Y, and ±Z directions				
	Output indicator	Yes (green)				
	Terminal screw tightening torque	1.08 N·m (see note 2)				
	Electromagnetic interference	Conforms to FCC Class B, EN50081-1				
	EMC	(EMI): EN50081-1 Emission Enclosure: EN55022 class B Emission AC Mains: EN55022 class B Harmonic Current: EN61000-3-2 (EMS): EN50082-2 Immunity ESD: EN61000-4-2: 4-kV contact discharge (level 2) 8-kV air discharge (level 3) Immunity RF-interference: ENV50140: 10 V/m (80 MHz to 1 GHz) (level 3) Immunity Conducted Disturbance: ENV50141: 10 V (0.15 to 80 MHz) (level 3) Immunity Burst: EN61000-4-4: 2-kV power-line (level 3) 2-kV output line (level 4) Immunity Surge: EN61000-4-5: between 3-kV lines between 4.5-kV line and FG				
	Approved standards	UL508, UL1012, CSA C22.2 No. 950, CSA C22.2 No. 14, EN60950, VDE0160. Conforms to UL1950 and CSA E.B. 1402C				
	Reliability (MTBF) (see note 3)	135,000 hrs min.				60,000 hrs min.
	Life expectancy (see note 4)	10 yrs. min. (Used at 40°C at the rated input with a 50% load, standard installation)				
	Weight (see note 5)	420 g max.	600 g max.	900 g max.	2,200 g max.	3,500 g max.
	Mounting method	Front-mounting Bracket or DIN Track Mounting Bracket				Front-mounting Bracket

- Note:**
- 100% load for rated input voltage (100 VAC or 200 VAC)
  - Do not press down on the terminal block with a force exceeding 75 N while tightening the terminals.
  - MTBF stands for Mean Time Between Failures, which is calculated according to the probability of accidental device failures, and indicates reliability of devices. Therefore, it does not necessarily represent a life of the product.
  - The life expectancy shown in the above table indicates average operating hours under the ambient temperature of 40°C and a load rate of 50%. Normally this is determined by the life expectancy of the built-in aluminum electrolytic capacitor. It must be noted that the life expectancy of the fan built into the 600-W model is not included.
  - The weight indicated is for the open-frame type. (Includes the cover for 300-W and 600-W models.)

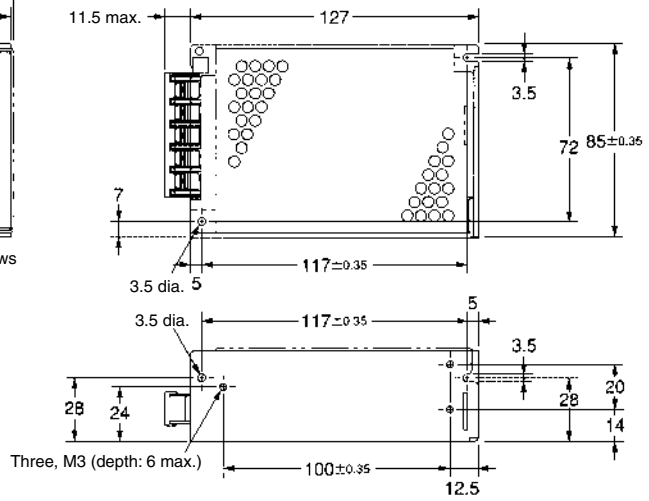
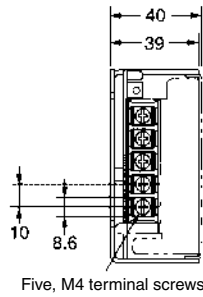
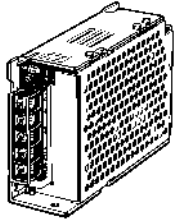
# Dimensions

Note: All units are in millimeters unless otherwise indicated.

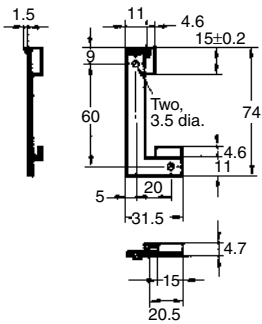
## ■ Front-mounting Bracket Type

The Front-mounting Bracket is provided as an accessory. Screws for fixing the Bracket to the panel are not provided.

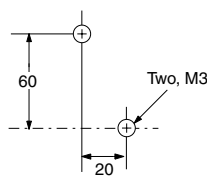
S8PS-050□□ (50 W)  
S8PS-050□□□C (50 W)



### Front-mounting Bracket for 50-W Models

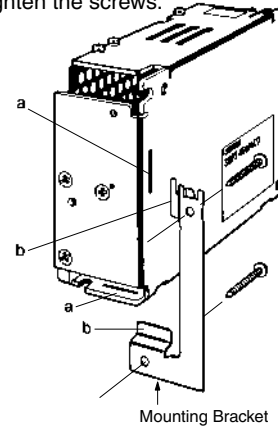


### Mounting Holes



### Using the Mounting Bracket

Attach the Mounting Bracket to the panel and loosely tighten the two screws. Insert the projected parts of the Bracket (b) to the square holes of the power supply (a). Then securely tighten the screws.



S8PS-10024 (100 W)  
S8PS-10024C (100 W)

