OMRON

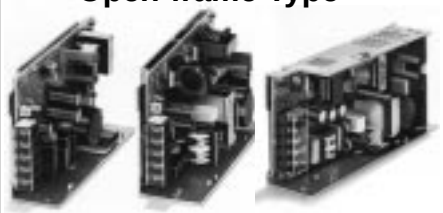
Switching Power Supply | S82J

Compact and Economical Switching Power Supplies with Capacities Up to 600 W

- Power range from 10 W up to 600 W.
- Output Voltages: 5 V, 12 V, 15 V, or 24 V.
- Wide AC input range
  50-/100-W, 24-V output models: 100 to 240 VAC on one body
  150-W models: 100 or 200 VAC selected automatically
  300-/600-W models: 100 or 200 VAC selectable
- Open-frame and covered types available.
- Top terminal- and connector-type available in addition to front terminal type (100-/150-W models).
- Mounting brackets provided for mounting to control panels.
- Easily mounted to DIN track with S82Y (sold separately).
- Maintenance-free up to 300 W due to natural ventilation.
- Protection-ON alarm indicator shows valuable protection functions in action (300-/600-W models).
- Conforms to EMC standards: EN50081-2 and EN50082-2.
- With an external filter, achieves conformance to EN50081-1 for universal usage on EMI (300-/600-W models).
- Finger protection terminal block to meet VDE0106/P100
  (50-/100-/150-W, 24-V output, covered type)
- Class 2 approved (50-W, 24-V output models)
- The UL Listed Power Supplies (50-/100-/150-W, 24-V output models) can be used at full rated power at any location.
- Approved by UL/CSA standards, EN60950, and EN50178 (VDE0160).
- Six-language instruction manual provided.

S82J

Open-frame Type



<10 W to 100 W>
- 100-VAC input
- 200-VAC input
- 100 to 240 VAC (50-/100-W 24-V output models)

<150 W>
- 100 or 200 VAC (selected automatically)

Covered Type

<10 W to 100 W>
- 100-VAC input
- 200-VAC input
- 100 to 240 VAC (50-/100-W 24-V output models)

<150 W>
- 100 or 200 VAC (selected automatically)

Enclosure Type

<300/600 W>
- 100 or 200 VAC (selectable)

Ordering Information

■ S82J

Configuration	Input Voltage	Power ratings	Output voltage	Output current	Front terminals 	Top terminals 	Connector 
Open-frame type	100 VAC	10 W	5 V	2 A	S82J-0105	---	---
			12 V	1 A	S82J-0112	---	---
			15 V	0.7 A	S82J-0115	---	---
			24 V	0.5 A	S82J-0124	---	---
		25 W	5 V	5 A	S82J-0205	---	---
			12 V	2.1 A	S82J-0212	---	---
			15 V	1.7 A	S82J-0215	---	---
			24 V	1.1 A	S82J-0224	---	---
		50 W	5 V	10 A	S82J-0505	---	---
			12 V	4.2 A	S82J-0512	---	---
		100 W	5 V	20.0 A	S82J-10005A1	S82J-10005B1	S82J-10005C1
			12 V	8.5 A	S82J-10012A1	S82J-10012B1	S82J-10012C1
			15 V	7.0 A	S82J-10015A1	S82J-10015B1	S82J-10015C1
	200 VAC	10 W	5 V	2 A	S82J-2105	---	---
			12 V	1 A	S82J-2112	---	---
			15 V	0.7 A	S82J-2115	---	---
			24 V	0.5 A	S82J-2124	---	---
		25 W	5 V	5 A	S82J-2205	---	---
			12 V	2.1 A	S82J-2212	---	---
			15 V	1.7 A	S82J-2215	---	---
			24 V	1.1 A	S82J-2224	---	---
		50 W	5 V	10 A	S82J-2505	---	---
			12 V	4.2 A	S82J-2512	---	---
		100 W	5 V	20.0 A	S82J-10005A2	S82J-10005B2	S82J-10005C2
			12 V	8.5 A	S82J-10012A2	S82J-10012B2	S82J-10012C2
			15 V	7.0 A	S82J-10015A2	S82J-10015B2	S82J-10015C2
	100 to 240 VAC	50 W	24 V	2.1 A	S82J-05024A	---	---
		100 W	24 V	4.5 A	S82J-10024A	---	---
	100 or 200 VAC (selected automatically)	150 W	24 V	6.5 A	S82J-15024A	S82J-15024B	S82J-15024C

Configuration	Input Voltage	Power ratings	Output voltage	Output current	Front terminals 	Top terminals 	Connector 
Covered type	100 VAC	10 W	5 V	2 A	S82J-5105	---	---
			12 V	1 A	S82J-5112	---	---
			15 V	0.7 A	S82J-5115	---	---
			24 V	0.5 A	S82J-5124	---	---
		25 W	5 V	5 A	S82J-5205	---	---
			12 V	2.1 A	S82J-5212	---	---
			15 V	1.7 A	S82J-5215	---	---
			24 V	1.1 A	S82J-5224	---	---
		50 W	5 V	10 A	S82J-5505	---	---
			12 V	4.2 A	S82J-5512	---	---
		100 W	5 V	20.0 A	S82J-10005D1	S82J-10005E1	S82J-10005F1
			12 V	8.5 A	S82J-10012D1	S82J-10012E1	S82J-10012F1
			15 V	7.0 A	S82J-10015D1	S82J-10015E1	S82J-10015F1
	200 VAC	10 W	5 V	2 A	S82J-6105	---	---
			12 V	1 A	S82J-6112	---	---
			15 V	0.7 A	S82J-6115	---	---
			24 V	0.5 A	S82J-6124	---	---
		25 W	5 V	5 A	S82J-6205	---	---
			12 V	2.1 A	S82J-6212	---	---
			15 V	1.7 A	S82J-6215	---	---
			24 V	1.1 A	S82J-6224	---	---
		50 W	5 V	10 A	S82J-6505	---	---
			12 V	4.2 A	S82J-6512	---	---
		100 W	5 V	20.0 A	S82J-10005D2	S82J-10005E2	S82J-10005F2
			12 V	8.5 A	S82J-10012D2	S82J-10012E2	S82J-10012F2
			15 V	7.0 A	S82J-10015D2	S82J-10015E2	S82J-10015F2
	100 to 240 VAC	50 W	24 V	2.1 A	S82J-05024D	---	---
		100 W	24 V	4.5 A	S82J-10024D	---	---
	100 or 200 VAC (selected automatically)	150 W	24 V	6.5 A	S82J-15024D	S82J-15024E	S82J-15024F
Enclosure type	100 or 200 VAC (selectable)	300 W	24 V	14.0 A	S82J-30024	---	
		600 W	24 V	27.0 A	S82J-60024	---	
		300 W	24 V	14.0 A	S82J-30024N	---	
		600 W	24 V	27.0 A	S82J-60024N	---	

Model Number Legend:

50 (24 V)-/100-/150-/300-/600-W Models

S82J - □ □ □ □ □ □ □
1 2 3 4

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
15: 15 V
24: 24 V

3. Configuration
A: Open-frame type, front terminals
B: Open-frame type, top terminals
C: Open-frame type, connector
D: Covered type, front terminals
E: Covered type, top terminals
F: Covered type, connector
N: Without Mounting Brackets
None: Enclosure type, front terminals with Mounting Brackets

4. Input Voltage
1: 100 VAC
2: 200 VAC
None: 100 or 200 VAC, selectable (for 300-/600-W models)
100 or 200 VAC, selected automatically (for 150-W model)
100 to 240 VAC (for 50-/100-W, 24-V output models)

10-/25-/50 (5, 12 V)-W Models

S82J - □ □ □ □
1 2 3

1.Input Voltage/Configuration
0: 100 VAC/Open-frame type
2: 200 VAC/Open-frame type
5: 100 VAC/Covered type
6: 200 VAC/Covered type

2. Power Ratings
1: 10 W
2: 25 W
5: 50 W

3. Output Voltage
05: 5 V
12: 12 V
15: 15 V
24: 24 V

■ Accessories (Order Separately)

Name	S82J-□1□□	S82J-□2□□	S82J-□5□□	S82J-100□□□□ S82J-15024□□	S82J-30024□ S82J-60024□
DIN Track Mounting Bracket	S82Y-01N	S82Y-03N	S82Y-05N	S82Y-10N	---
Mounting Bracket	S82Y-J10F for 100 W, 24 V (F-type) only	---			
Fan	---				S82Y-JFAN for 600-W models only
Ferrite Ring Core	---				S82Y-JC-T (set of 3 pieces in package)
Noise Filter	---				S82Y-JF3-N (for 30- W models) S82Y-JF6-N (for 600-W models)
Mounting Track	PFP-100N, PFP-50N, PFP-100N2				

Specifications

■ Ratings/Characteristics

Item			100 VAC input/200 VAC input				100 or 200 VAC (selectable)		100 to 240 VAC input		100 or 200 VAC (selected automatically)
			10 W	25 W	50 W (5, 12 V)	100 W (5, 12, 15 V)	300 W	600 W	50 W (24 V)	100 W (24 V)	150 W
Efficiency (typical)			67% min.			76% min.	82% min.		77% min.	83% min.	82% min.
Input	Voltage	100 VAC input	100 VAC (85 to 132 VAC), 110 to 170 VDC (see note 1)				100 (85 to 132) or 200 (170 to 253) VAC (selectable)		100 to 240 VAC (85 to 264 VAC)		100 (85 to 132) or 200 (170 to 264) VAC (selected automatically)
		200 VAC input	200 VAC (170 to 264 VAC)								
	Frequency		50/60 Hz (47 to 450 Hz)								
	Current (see note 2)	100 VAC input	0.35 A max.	0.8 A max.	1.4 A max.	2.5 A	8 A max.	14 A max.	1.4 A max.	2.5 A max.	3.5 A max.
		200 VAC input	0.3 A max.	0.6 A max.	0.8 A max.	1.4 A	4 A max.	7 A max.	0.8 A max.	1.5 A max.	2.1 A max.
	Leakage current (see note 2)	100 VAC input	0.5 mA max.								
		200 VAC input	1 mA max.								
	Inrush current (25°C, cold start) (see note 2)	100 VAC input	25 A max.					30 A max.	25 A max.		
		200 VAC input	50 A max.					60 A max.	50 A max.		
	Noise filter		Yes								
Output (see note 3)	Voltage adjustment range		±10% (adjustable with variable resistor (V.ADJ))								
	Ripple (see note 2)		2% (p-p) max.								
	Input variation influence	100 VAC input	0.4% max. (at 85 to 132 VAC input, 100% load)				0.4% max.				
		200 VAC input	0.4% max. (at 170 to 264 VAC input, 100% load)								
	Load variation influence		0.8% max. (with rated input, 10% to 100% load)								
	Temperature variation influence		0.05%/°C max. (with rated input and output)								
	Rise time		200 ms max. (up to 90% of output voltage at rated input and output)				300 ms max. (up to 90% of output voltage at rated input and output)		500 ms min. (up to 90% of output voltage at rated input and output)		
	Hold time (see note 2)		20 ms min.								
Additional function	Overload protection		105% min. of rated load current, inverted L drop type, automatic reset (For the 600-W model, the circuit will be shut OFF when the overload exceeds 5±3s. Protection-ON alarm indicator lit. (see note 4)).						105 to 160% of rated load current, inverted L drop/Intermittent operation type, automatic reset)		105% min. of rated load current, inverted L drop type, automatic reset
	Overvoltage protection (see note 5)		No			Yes (5-V output models only)	Yes, protection-ON alarm indicator lit.		No	Yes	No
	Overheat protection		No					Yes, protection-ON alarm indicator lit (see note 4)	No		
	Protection-On alarm indicator		No				Yes (color, red)		No		
	Parallel operation		No				Yes, 5 units max.		No		
	Series operation		No			Yes					

Item			100 VAC input/200 VAC input				100 or 200 VAC (selectable)		100 to 240 VAC input		100 or 200 VAC (selected automatically)
			10 W	25 W	50 W (5, 12 V)	100 W (5, 12, 15 V)	300 W	600 W	50 W (24 V)	100 W (24 V)	150 W
Other	Ambient temperature		Operating: See the derating curve in the Engineering Data section. Storage: –25°C to 65°C (with no condensation and icing)								
	Ambient humidity		Operating: 25% to 85% Storage: 25% to 90%								
	Dielectric strength		3.0 kVAC, 50/60 Hz for 1 min (between all inputs and all outputs)								
			2.2 kVAC, 50/60 Hz for 1 min (between all inputs and all inputs/GR terminals)				2.2 kVAC, 50/60 Hz for 1 min (between all inputs and GR terminals)				
			---				1.0 kVAC, 50/60 Hz for 1 min (between all outputs and GR terminal)				
	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								
	Terminal screw tightening torque		0.74 N • m			1.08 N • m			0.74 N • m		1.08 N • m
	Output indicator		Yes (green)								
	Electromagnetic interference (see note 2)		Conforms to FCC Class A								
	EMC		Emission Enclosure: EN55011 class A Emission AC Mains: EN55011 class A Immunity ESD: EN61000-4-2: 4 kV contact discharge (level 2) 8 kV air discharge (level 3) Immunity RF-interference: ENV50140: 10 V/m^2 (80 MHz to 1 GHz) (level 3) Immunity Conducted Disturbance: ENV50141: 10 V (0.5 to 80 MHz) (level 3) Immunity Burst: EN61000-4-4: 2 kV power-line (level 3) 2 kV output line (level 4)								
	EMC standards		Conforms to EN50081-2 and EN50082-2				Conforms to EN50081-2 and EN50082-2 (see note 6) With noise filter, confirms to EN50081-1 (see note 6 and 7)		Conforms to EN50081-2 and EN50082-2		
	Approved standards	UL	UL508/1012			UL508	UL508/1012		Class 2 (per UL1310), UL508 (Listing)/ 1950	UL508 (Listing)/ 1012/1950 (see note 8)	
		CSA	CSA C22.2 No. 14				CSA EB1402C		Class 2 (per CSA C22.2 No. 950), CSA C22.2 No. 14/ No. 950	CSA C22.2 No. 14/No. 950	
		VDE	EN50178 (VDE0160) and EN60950						EN50178 (VDE0160) and EN60950 For covered types, conforms to VDE 0106/P100		
	Weight		250 g max. (see note 9)	350 g max. (see note 9)	400 g max. (see note 9)	1,000 g max.	2,000 g max.	2,500 g max.	500 g max.	600 g max.	1,000 g max.

Note:
1. DC inputs not included in safety standard approvals.
2. At 100% load for rated input voltage (100 VAC or 200 VAC).
3. The output specification is defined at the power supply output terminals.
4. For resetting, turn OFF the power supply, leave for more than three minutes, and then turn ON the power supply.
5. For resetting, turn OFF the power supply, leave for more than one minutes (90 seconds min. for the 300-W models and 3 minutes min. for the 600-W models), and then turn ON the power supply.
6. To ensure the Emission Enclosure rating ferrite ring cores (recommended model: S82Y-JC-T) should be used on all cabling.
7. To ensure the Emission AC Mains rating for EN50081-1 (only for 200-VAC input), a nose filter (recommended models: S82Y-JF3-N for 300-W, S82Y-JF6-N for 600-W) should be used on the input lines.
8. With UL508, 150-W connector type has “Recognized” approval.
9. The weight indicated is the weight of the open-frame type.

■ Reference Value

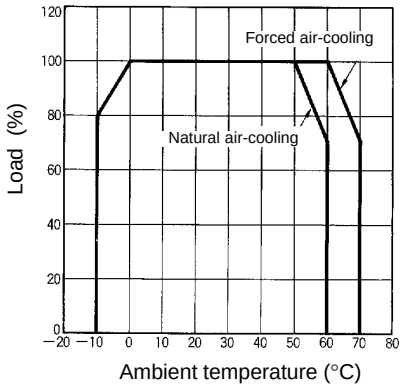
Item	Value		Definition
Reliability (MTBF)	135,000 hours		MTBF stands for Mean Time Between Failures, which is calculated according to the probability of accidental device failures, and indicates reliability of devices. Therefore, it does not necessarily represent a life of the product.
Life expectancy	10-/25-/50 (5, 12 V)-/100 (5, 12, 15 V)-/150-W Models	8 yrs. Min.	The life expectancy 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.
	50 (24 V)-/100 (24 V)-/ 300-/600-W Models	10 yrs. Min.	

Engineering Data

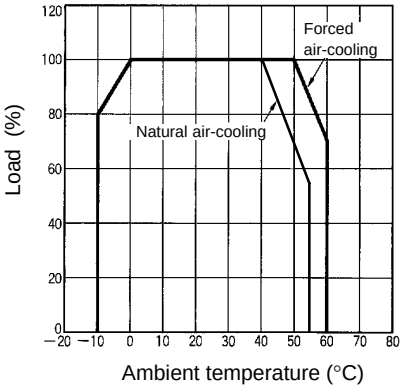
■ Derating Curve

10-/25-/50-/100 (24 V)-/150-W Model

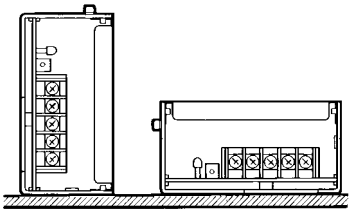
Open-frame type



Covered-type



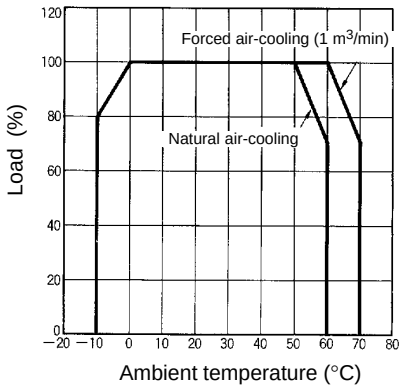
Standard Installation



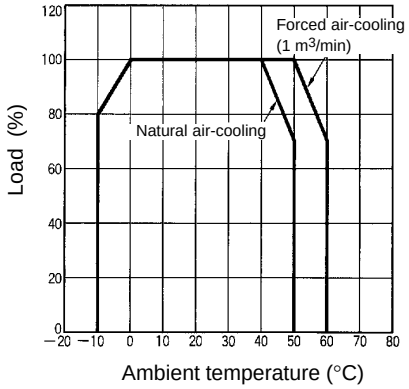
Note: The derating curve shown is for standard installation. The derating curve depends on the mounting direction of the Power Supply.

100 (5, 12, 15 V)-W Model

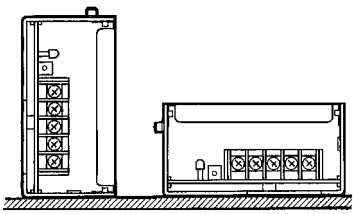
Open-frame Type



Covered Type



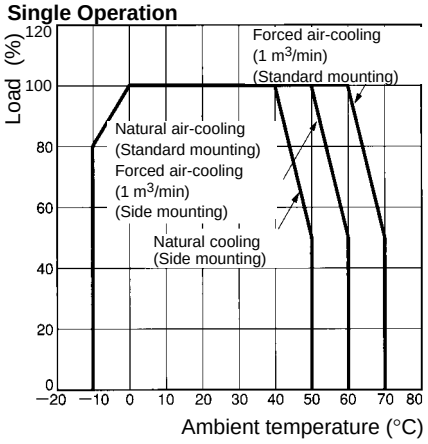
Standard Installation



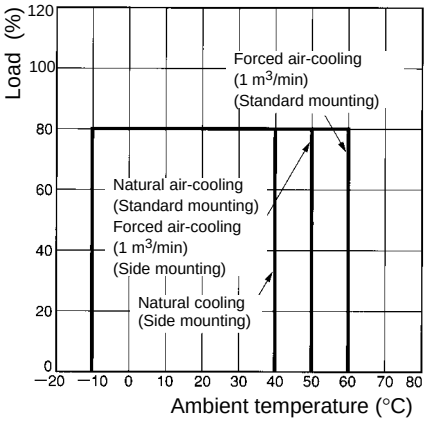
Note: The derating curve shown is for standard installation. The derating curve depends on the mounting direction of the Power Supply.

300-W Model

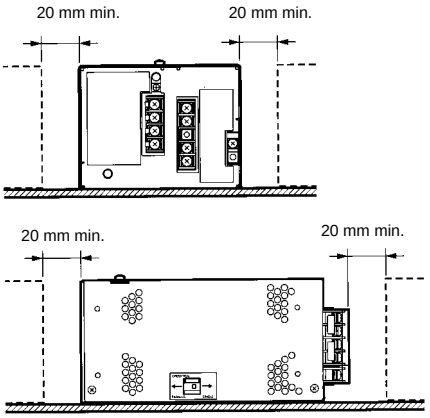
Single Operation



Parallel Operation

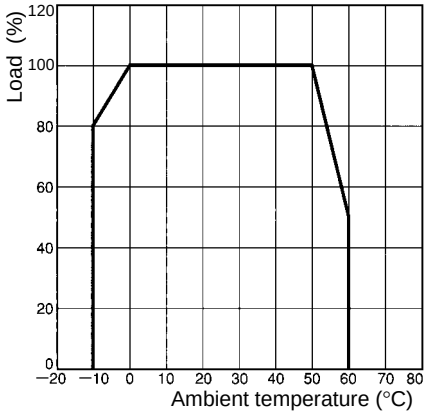


Standard mounting

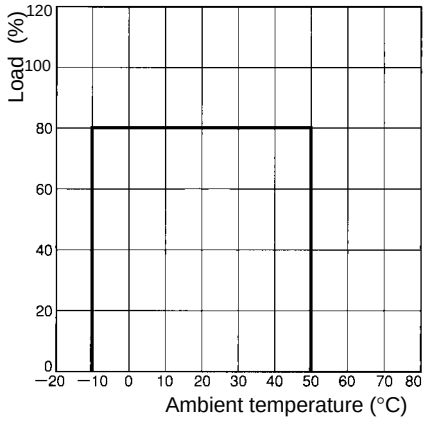


600-W Model

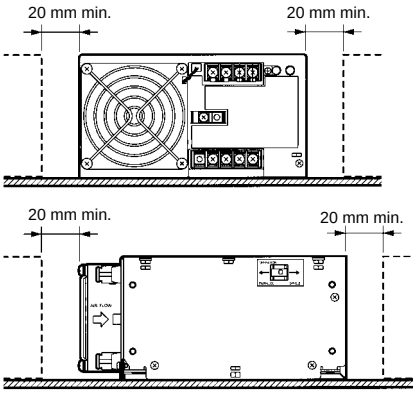
Single Operation



Parallel Operation



Standard Mounting



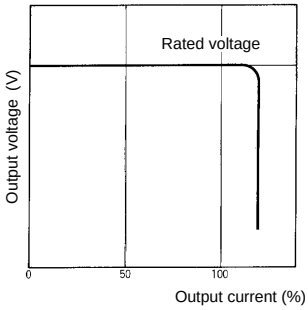
Note: Provide a minimum clearance of 20 mm between the Power Supplies.

■ Overload Protection

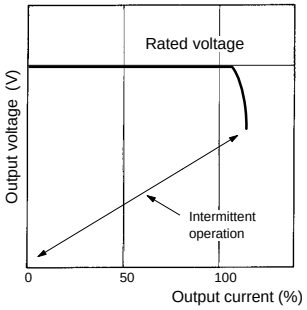
10- to 300-W Models

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 (105% to 160% of the rated output current for 50 (24 V)-W and 100 (24 V)-W models), 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.

10- to 300-W Models (except for 50 (24 V)-W and 100 (24 V)-W Models)



50 (24 V)-W and 100 (24 V)-W Models



600-W Models

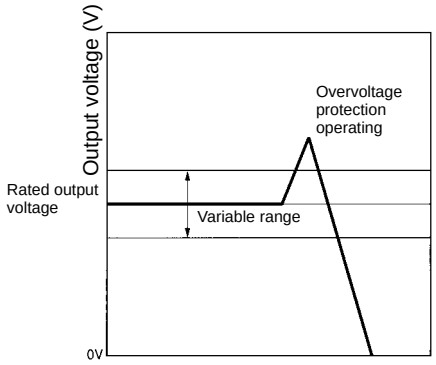
If an excessive current flows for 5 s or more, the output will be turned off and simultaneously protection-ON alarm indicator will be lit. To reset the S82J, turn off the input voltage, leave the S82J for at least three minutes, and then apply the input voltage again.

Note: Do not continue using the S82J with the output terminals short-circuited or the overcurrent condition continued, otherwise the internal elements of the S82J may be damaged or broken.

■ Overvoltage Protection

100 (5, 24 V)-W Models

The Power Supply is provided with an overvoltage protection function that protects the load and the Power Supply from possible damage by overvoltage. When the output voltage rises above a set value (120% of the rated output voltage), the protection function is triggered, shutting off the output voltage. If this occurs, reset the Power Supply by turning it off for 1 minutes min. and then turning it on again.



300- and 600-W Models

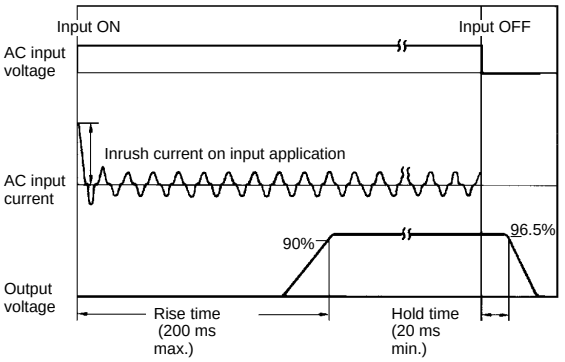
If a voltage that is 120% of the rated output voltage or above is output, the output voltage will be turned off and simultaneously protection-ON alarm indicator will be lit. To reset the S82J, turn off the input voltage, leave the S82J for at least three minutes if it is a 600-W model or at least 90 seconds if it is a 300-W model, and then apply the input voltage again.

■ Overheat Protection Function

600-W Model Only

If the internal temperature of the S82J rises excessively as a result of fan failure or any other reason, the overheat protection circuit will be triggered to protect the internal elements of the S82J and simultaneously a protection-ON alarm indicator will be lit. To reset the S82J, turn off the input voltage, leave the S82J for at least three minutes, and then apply the input voltage again.

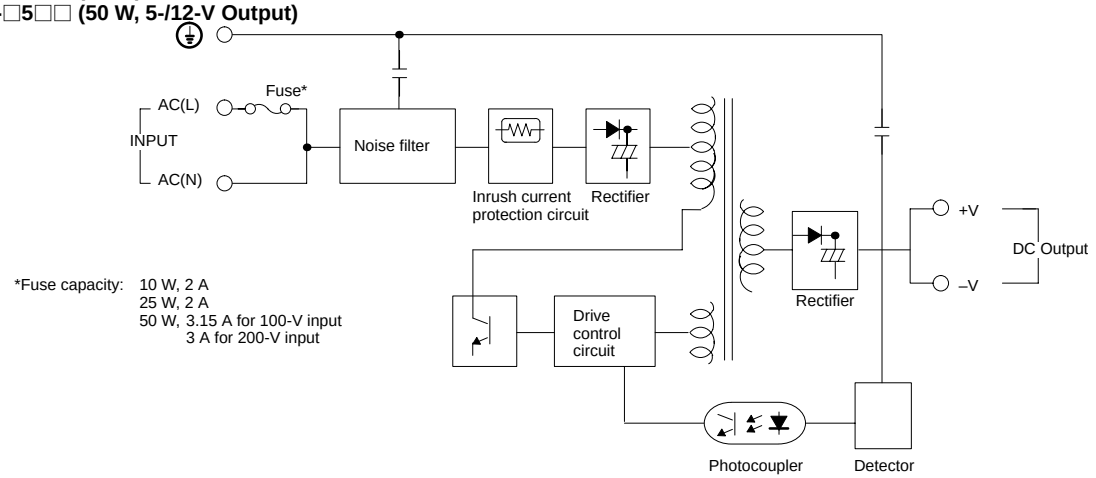
■ Inrush Current, Rise Time, Hold Time



Operation

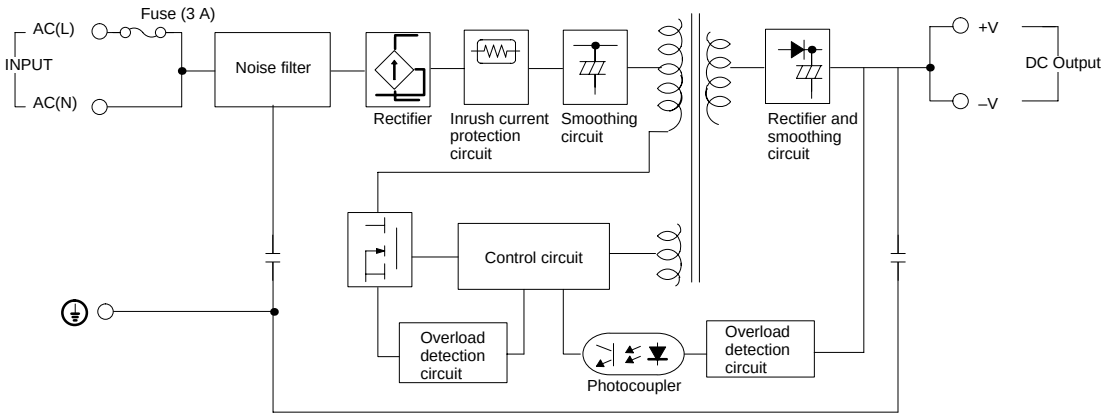
■ Block Diagrams

S82J-□1□□ (10 W)
S82J-□2□□ (25 W)
S82J-□5□□ (50 W, 5-/12-V Output)

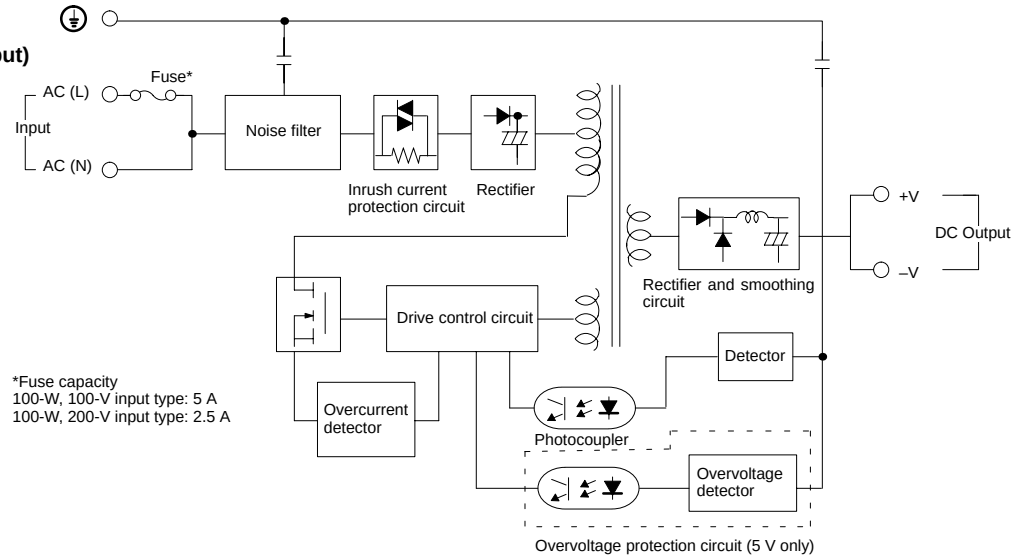


*Fuse capacity: 10 W, 2 A
25 W, 2 A
50 W, 3.15 A for 100-V input
3 A for 200-V input

S82J-05024□
(50 W, 24-V Output)

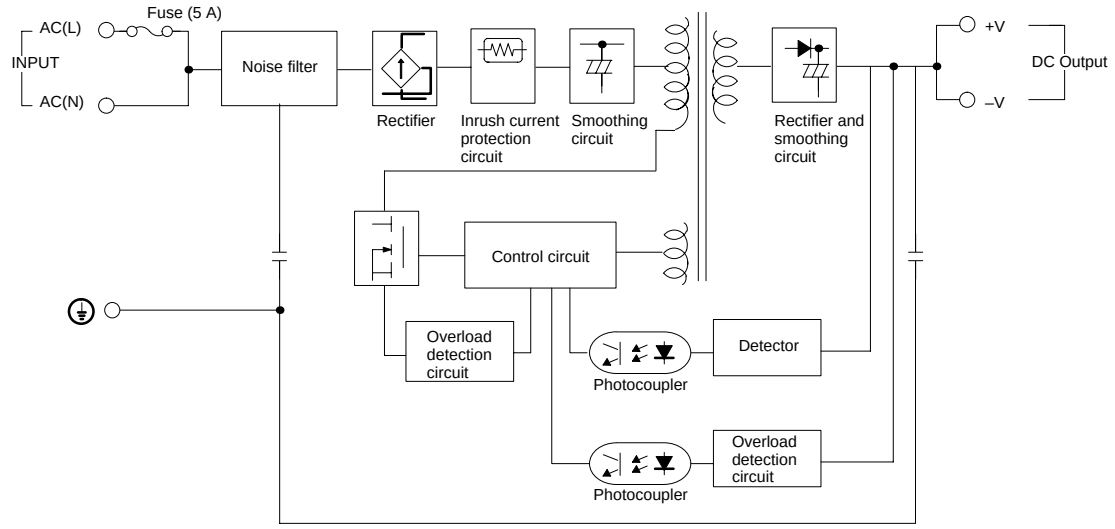


S82J-100□□□□
(100 W, 5-/12-/15-V Output)

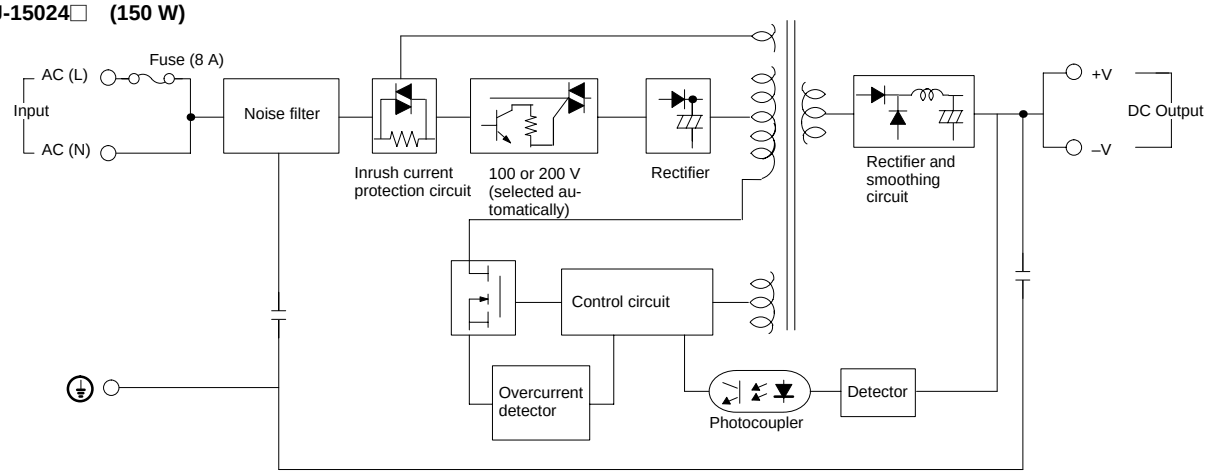


*Fuse capacity
100-W, 100-V input type: 5 A
100-W, 200-V input type: 2.5 A

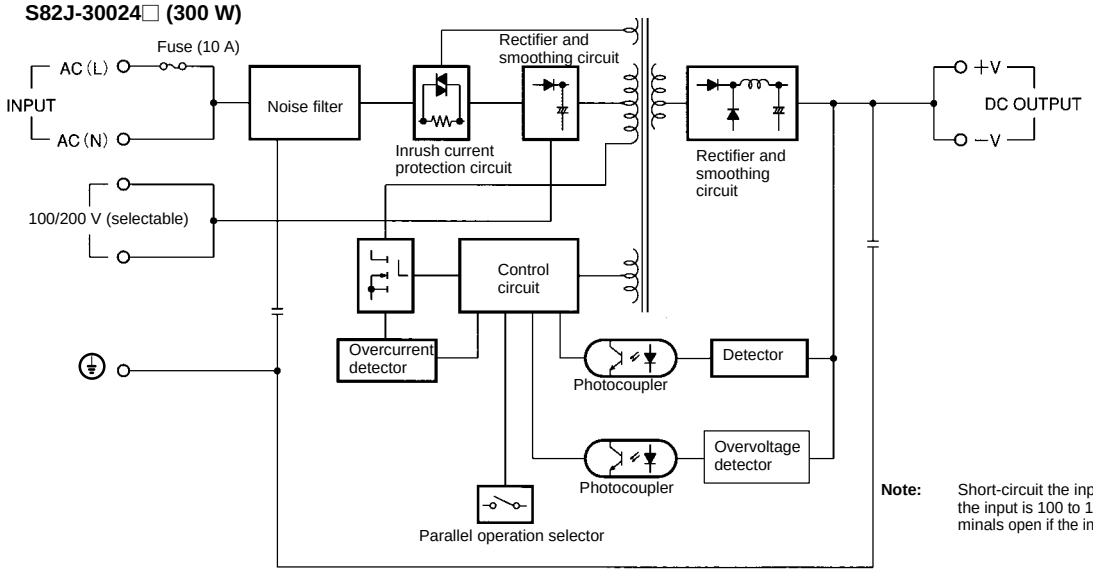
S82J-10024□ (100 W, 24-V Output)



S82J-15024□ (150 W)

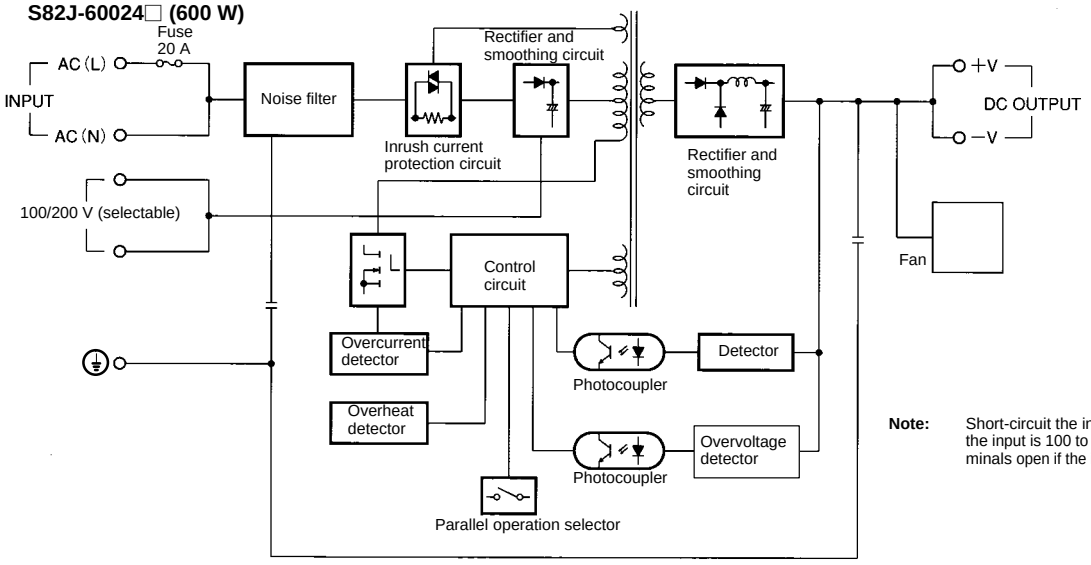


S82J-30024□ (300 W)



Note: Short-circuit the input voltage terminals if the input is 100 to 120 VAC. Keep the terminals open if the input is 200 to 230 VAC.

S82J-60024□ (600 W)

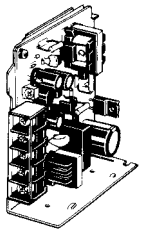


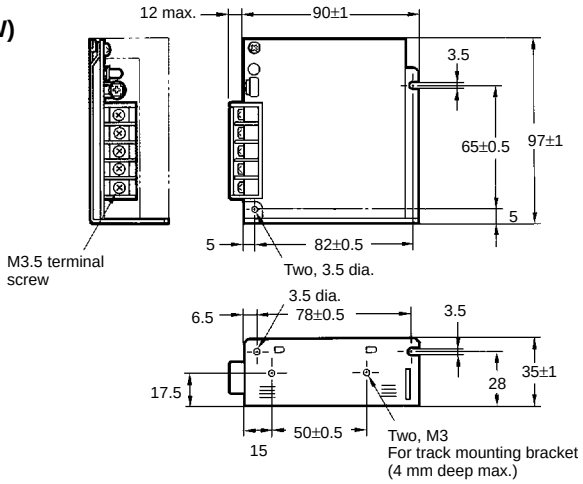
Note: Short-circuit the input voltage terminals if the input is 100 to 120 VAC. Keep the terminals open if the input is 200 to 230 VAC.

Dimensions

Note: All units are in millimeters unless otherwise indicated.

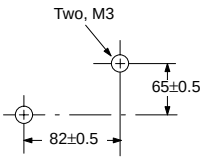
S82J-□1□□ (10 W)



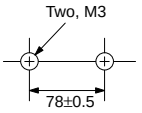


Mounting Holes (Surface Screw Mounting)

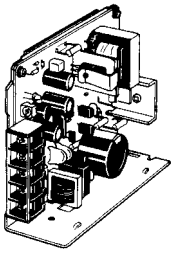
Side Mounting

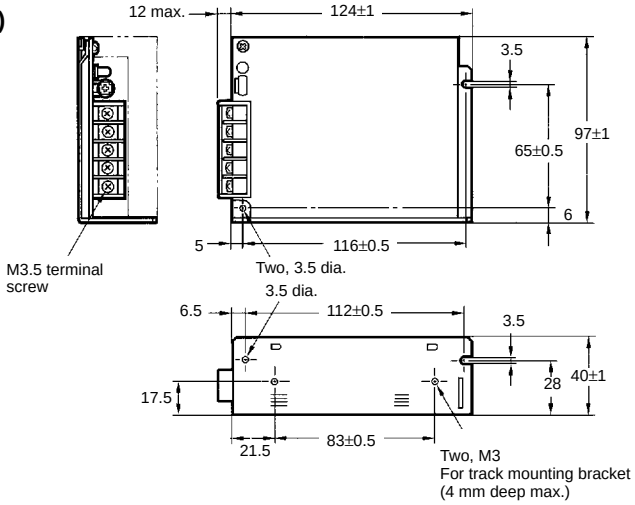


Bottom Mounting



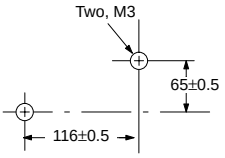
S82J-□2□□ (25 W)



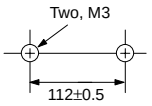


Mounting Holes (Surface Screw Mounting)

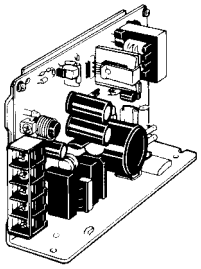
Side Mounting

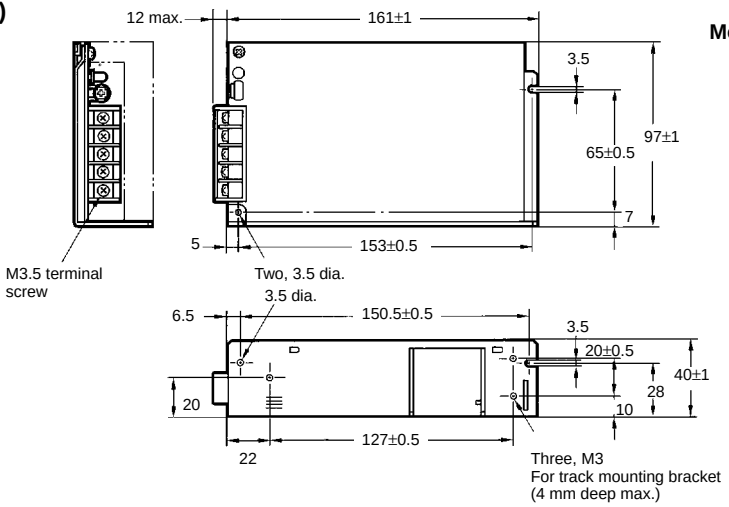


Bottom Mounting



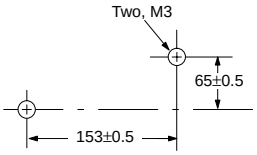
S82J-□5□□ (50 W)
S82J-05024□ (50 W)



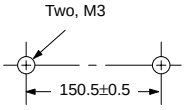


Mounting Holes

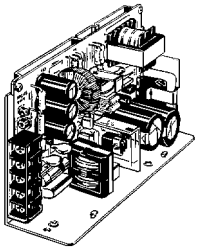
Side Mounting

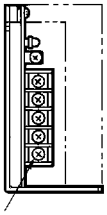


Bottom Mounting

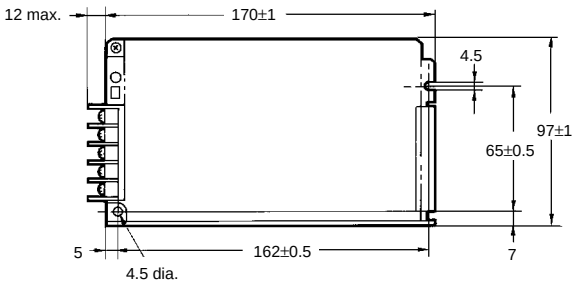


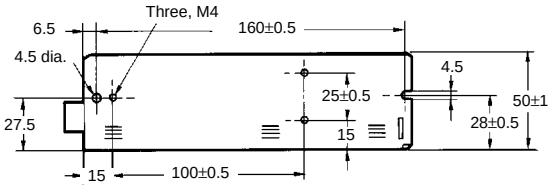
S82J-10024□ (100 W)





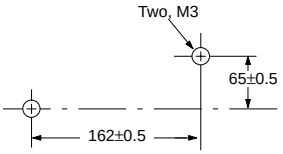
M3.5 terminal screw



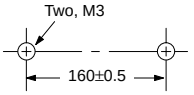


Mounting Holes

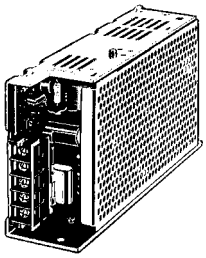
Side Mounting

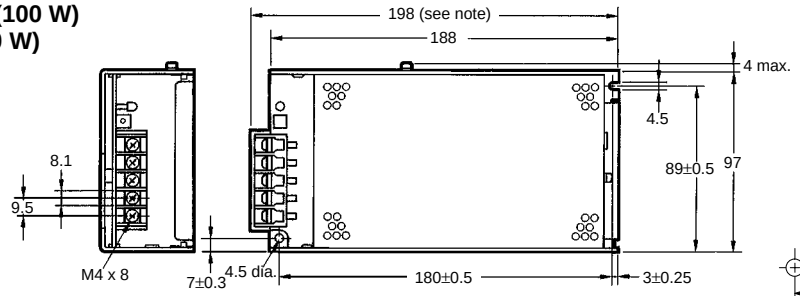


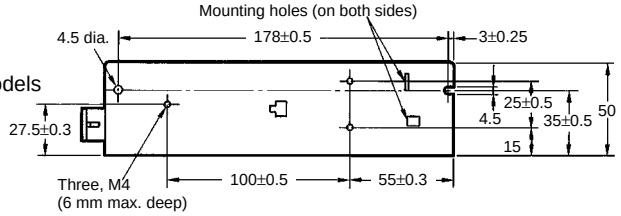
Bottom Mounting



S82J-100□□□□ (100 W)
S82J-15024□ (150 W)



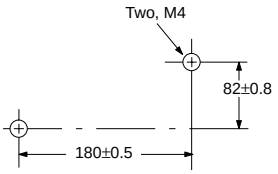




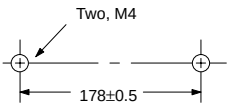
Note: Top terminal and connector models are 188 mm wide.

Mounting Holes (Surface Screw Mounting)

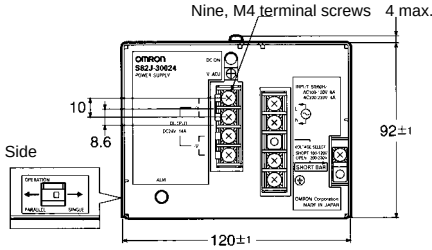
Side Mounting

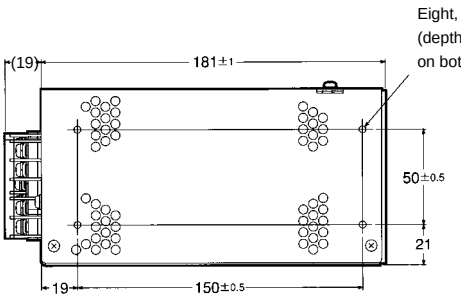


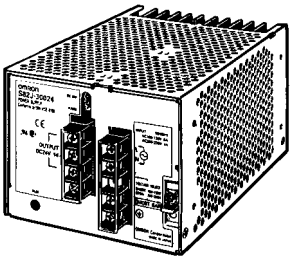
Bottom Mounting

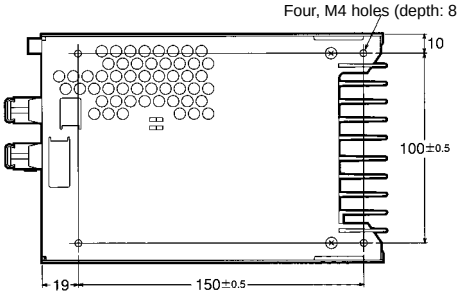


S82J-30024□ (300 W)



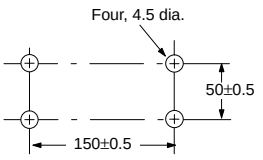




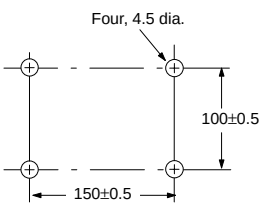


Mounting Holes (Surface Screw Mounting)

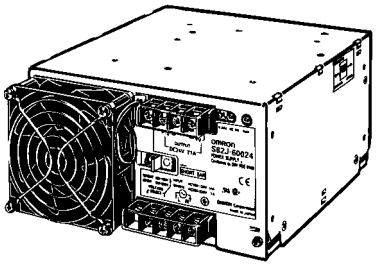
Side Mounting

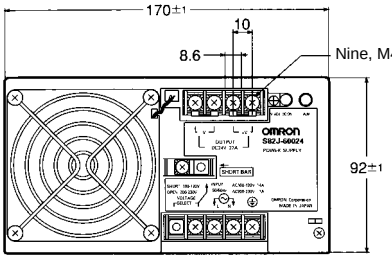


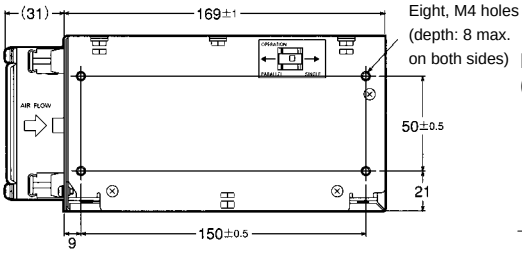
Bottom Mounting

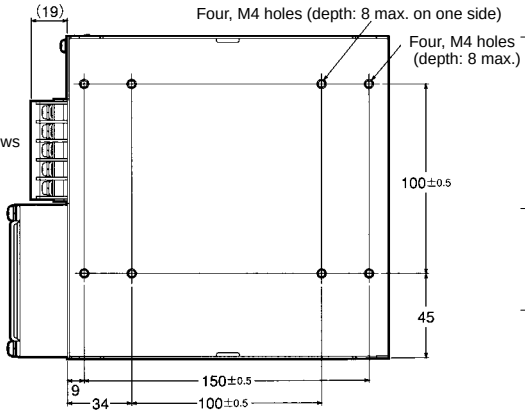


S82J-60024□ (600 W)



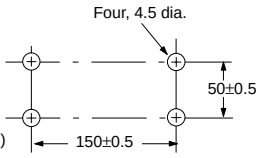




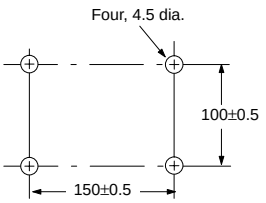


Mounting Holes (Surface Screw Mounting)

Side Mounting

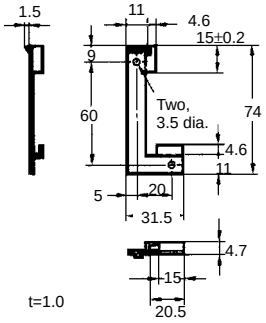


Bottom Mounting

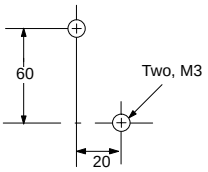


Dimensions with Provided Mounting Brackets

10-/25-/50-/100 (24 V)-W Models



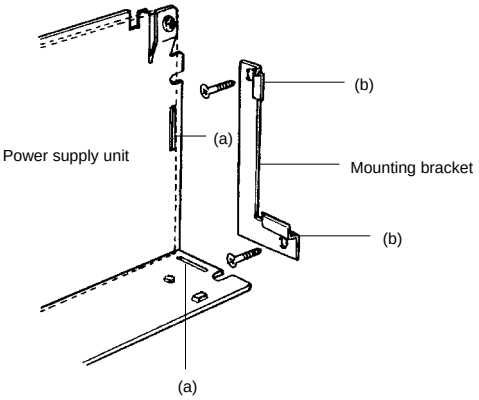
Mounting Holes



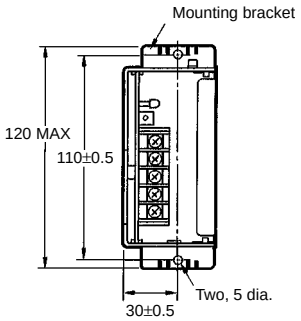
Using the Mounting Bracket

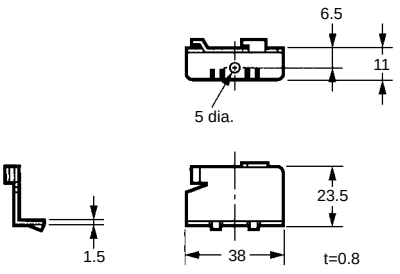
Attach the mounting bracket to the panel and loosely tighten the two screws. Insert the projected parts of the bracket (b) to the square holes of the power supply (a). Then securely tighten the screws.

Note: The mounting screws are order separately.

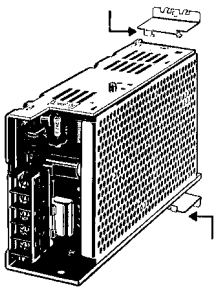


100- (5, 12, 15 V) and 150-W Models



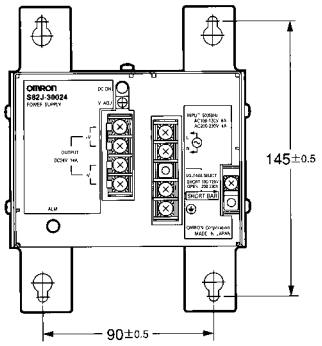


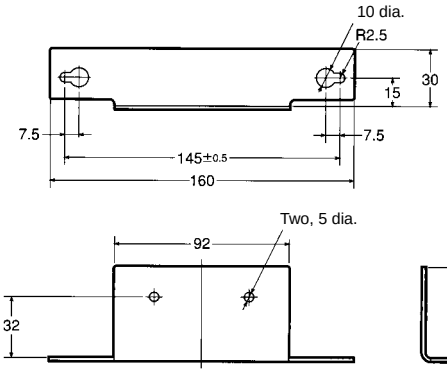
Mounting with Brackets

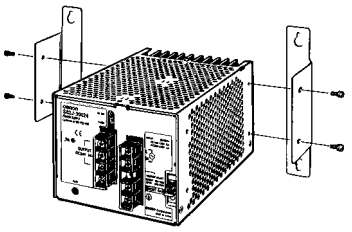


Note: The brackets are for front-mounting.

300-W Models

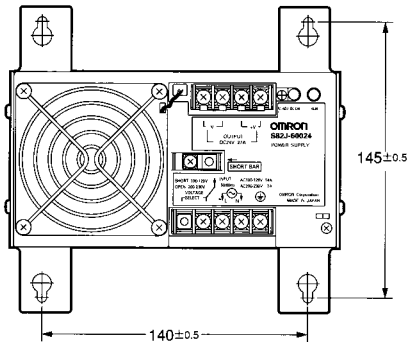


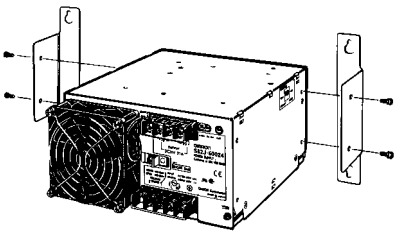




Note: To provide ventilation space, the body will shift forward by 21.6 mm from the mounting surface.

600-W Models



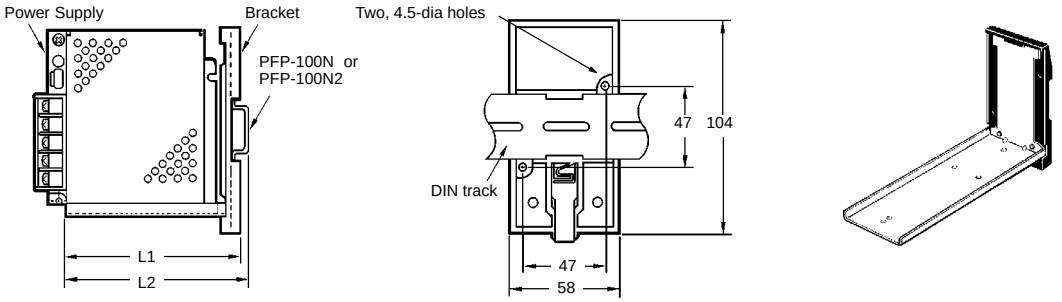


Note: To provide ventilation space, the body will shift forward by 23.6 mm from the mounting surface.

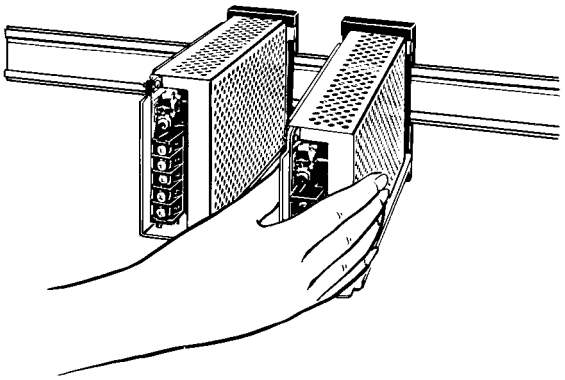
Accessories (Order Separately)

DIN Track Mounting Bracket

By attaching the DIN Track Mounting Bracket to the Switching Power Supply, the Switching Power Supply can be mounted to a DIN-track with ease.

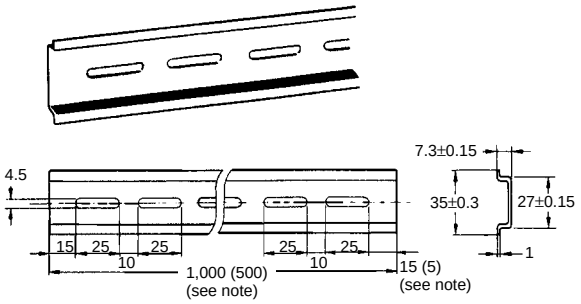
Item	S82Y-01N	S82Y-03N	S82Y-05N	S82Y-10N
Applicable supply unit	S82J-□1□□	S82J-□2□□	S82J-□5□□	S82J-100□□□□ S82J-15024□
Dimensions				
Dimensions: L1	113 mm	143 mm	163 mm	185 mm
L2 (see note)	114.8 mm	144.8 mm	164.8 mm	186.8 mm

Note: The values given for L2 are for when the PFP-100N Mounting Track is used. If the PFP-100N2 is used, added 10.5 mm to the values given for L2.

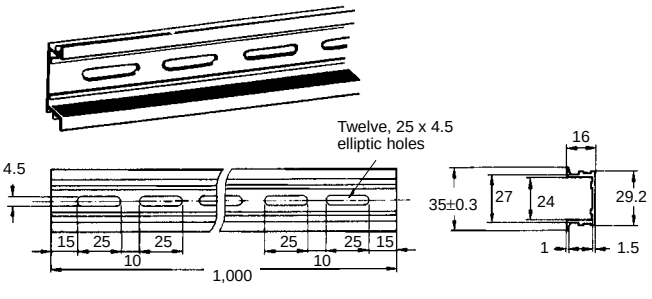


Mounting Track

PFP-100N/PFP-50N



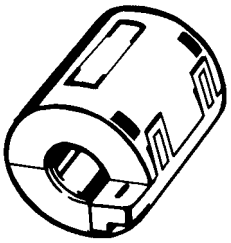
PFP-100N2

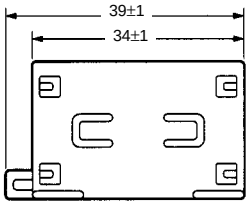


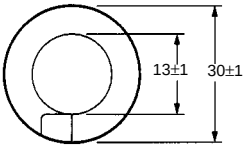
Note: The values shown in parentheses are for the PFP-50N.

Ferrite Ring Core

S82Y-JC-T

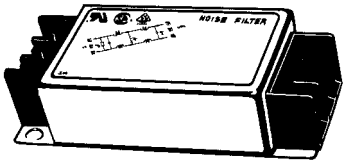


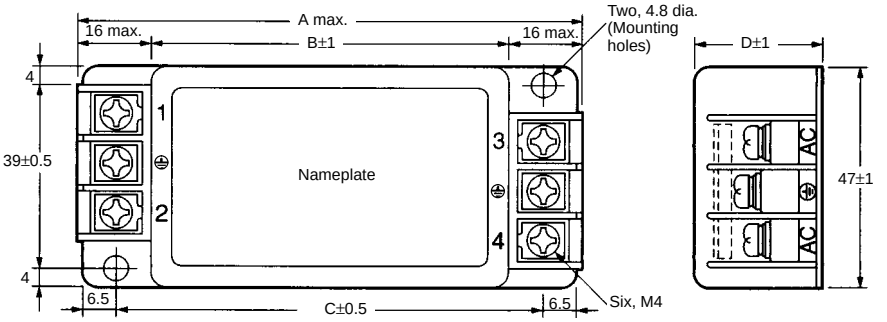




Noise Filter

S82Y-JF3-N for 300-W Models
S82Y-JF6-N for 600-W Models

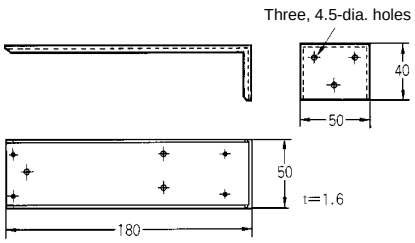




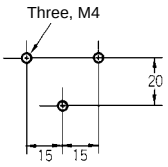
Model	A	B	C	D
S82Y-JF3-N	107	75	90	26
S82Y-JF6-N	117	85	100	30

Front-mounting Bracket for 100-W, 24-V (F-type)

S82Y-J10F



Mounting Holes



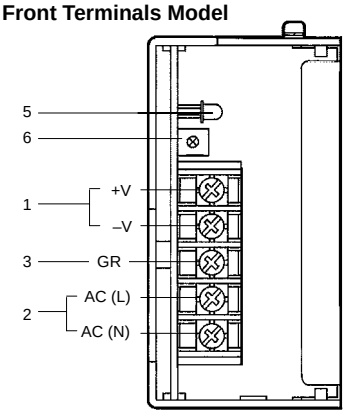
Note: The Front Mounting Bracket cannot be used for 5-, 12-, or 15-V S82J (100-, 150-W models).

Installation

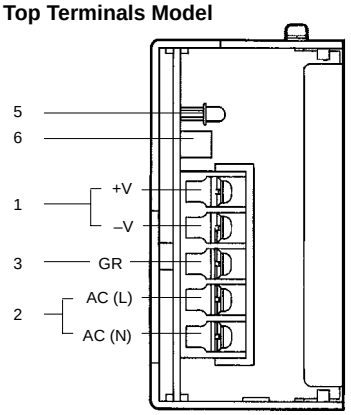
10-/25-/50-/100-/150-W Models

Note: 10-/25-/50-/100 (24 V)-W models are available only as Front Terminal Models.

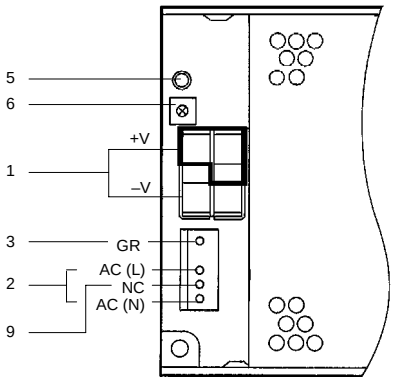
Front Terminals Model



Top Terminals Model



Connector Model

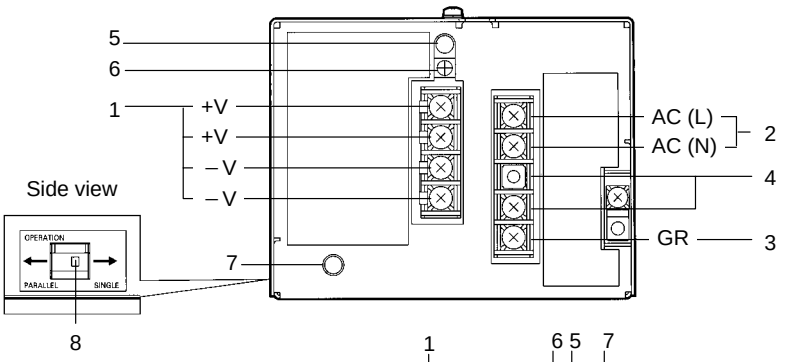


Connectors

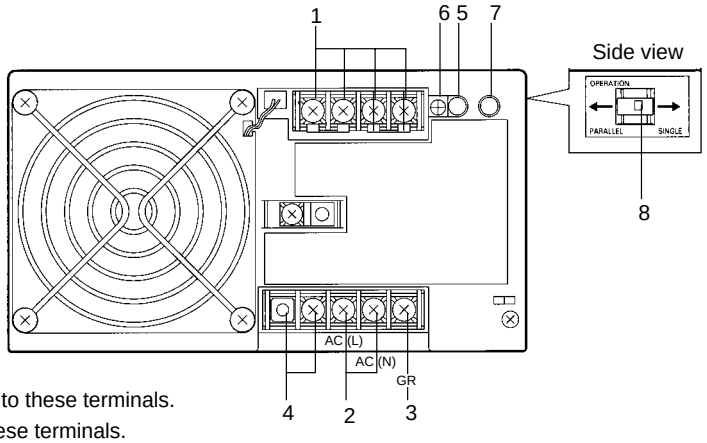
Connector	Connector on the PCB side	Housing	Terminal
Input	Wafer (Made by Molex) 5277-04A-RE	Housing (Made by Molex) 5196-04-RE or 5196-04	Terminal (Made by Molex) 5194T or 5194TL
Output	Tab header (Made by Nippon AMP) 1-178140-5	Rise housing (Made by Nippon AMP) 1-178129-6	Rise contact (Made by Nippon AMP) 1-175196-5 or 1-175218-5

Note: The permissible current of the output connector is 8 A per pin.

300-W Models



600-W Models



1. **DC Output Terminals:** Connect the load lines to these terminals.
2. **Input Terminals:** Connect the input lines to these terminals.
   Note: A fuse is inserted into the AC (L) side.
3. **Ground Terminal (GR):** Connect a ground line to this terminal.
4. **Input Voltage Terminals:** Short-circuit the terminals if the input is 100 to 120 VAC and open the terminals if the input is 200 to 230 VAC
5. **Output Indicator (DC ON):** Lights while a Direct Current (DC) output is ON.
6. **Output Voltage Adjuster (V.ADJ):** It is possible to increase or decrease the output voltage by 10%.
7. **Protection-ON Alarm Indicator:** The red indicator will be lit if the overvoltage (for a 300-/600-W model) or overheat protection (for a 600-W model) circuit is triggered. This indicator will also be lit when overcurrent (for a 600-W model) is detected.
8. **Parallel/Single Operation Selector:** Set the selector to PARALLEL if the Units are in parallel operation.
9. **NC Terminals:** Leave unconnected.

Precautions

Mounting

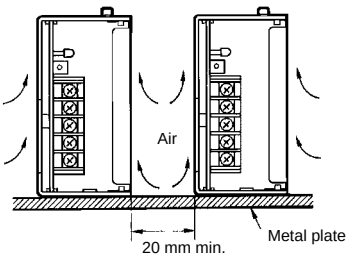
To improve and maintain the reliability of the Power Supply over a long period of time, adequate consideration must be given to heat radiation.

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 the Power Supply, mounting it to a metal plate is recommended.

When mounting two or more Power Supplies side-by-side, allow at least 20 mm spacing between them, as shown in the following illustration.

Forced air-cooling is recommended.



Mounting Methods

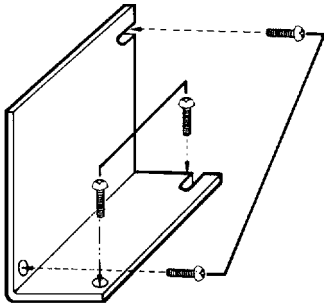
The following mounting methods are available.

10-/25-/50-/100 (24 V)-W Models

(A) Side mounting

(B) Bottom mounting

(C) Front mounting (see *Accessories)*

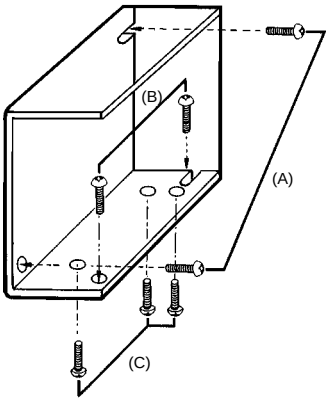


100 (5, 12, 15 V)/150-/300-/600-W Models

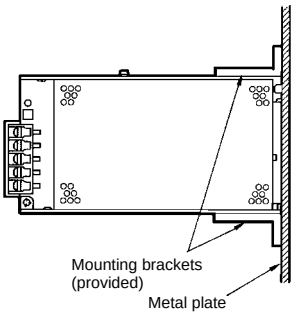
(A) Side mounting

(B) Bottom mounting (secured with screws from the inside of the Switching Power Supply)

(C) Bottom mounting (secured with screws from the back of the Switching Power Supply)

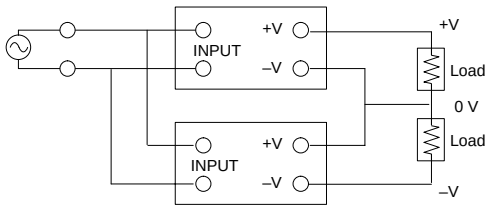


(D) Front mounting
Front mounting is possible with the mounting brackets provided. Refer to *Dimensions*.



Generating Output Voltage (±)

An output of ± can be generated by using two Power Supplies as shown below, because the Power Supply produces a floating output.



If operation amplifiers as loads are connected in series, connect a diode between the positive and negative output terminals of each Switching Power Supplies as shown in the illustration below. Without these diodes, the Power Supplies may not start when power is turned on, possibly damaging internal circuits over a period of time.

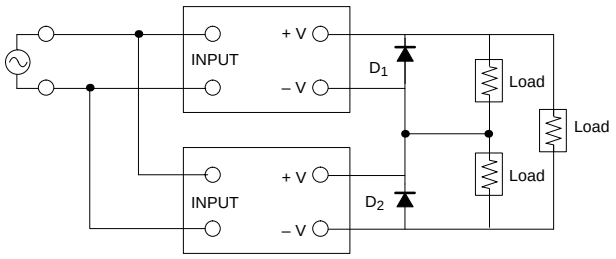
Use Schottky barrier diodes with a low forward voltage (V_F). Other types of diodes will not be effective.

Guidelines for the dielectric strength and current of the diodes are as follows:

Dielectric strength: At least twice the rated output voltage of the Power Supply

Forward current: At least twice the rated output current

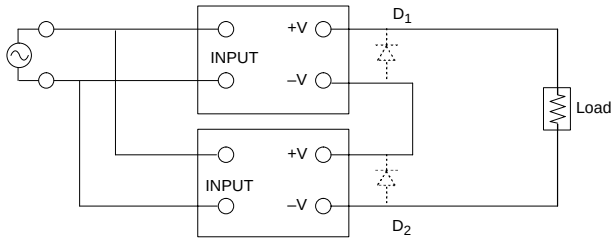
No diodes are required for models that allow series operation.



Series Operation

Only models with power ratings of 50 (24 V)/100/150/300/600 W allow series operation.

As shown in the following diagram, the output voltage from each Switching Power Supply can be added.



With the S82J-05024□ or S82J-10024□, if the load is shorted a reverse voltage may result in the Power Supply causing deterioration and damage. It is recommended that diodes are connected as shown in the previous diagram (D_1, D_2).

Parallel Operation

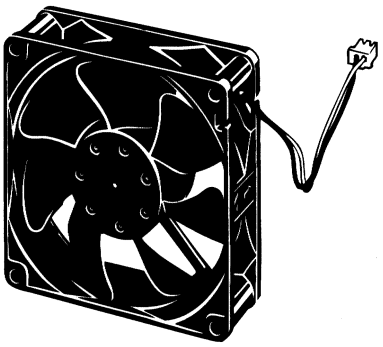
Only 300- and 600-W models can be in parallel operation. Do not operate any other models in parallel. The output of the models in parallel operation is a maximum of 80% of the rated output.

Set the parallel operation selector to PARALLEL if the Units are in parallel operation and make sure that the thickness and the length of all wires connected to the load are the same to ensure that the wires will have no voltage drop differences.

Fan Replacement

The service life of the fan is approximately 50,000 hours (at 25°C). The service life varies, however, depending on the ambient temperature or other surrounding environmental conditions such as dust. As a preventive maintenance measure, replace the fan within two years if it is used at an ambient temperature of 40°C.

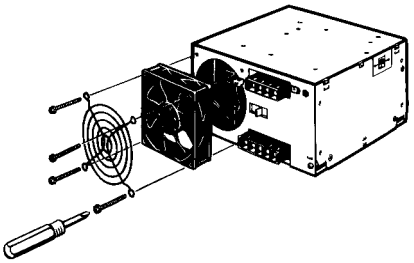
Fans are available as replacements.



Model: S82Y-JFAN

Fan Set:
Fan (above), four M4 x 35 sems screws, instruction sheet, and packing case

Replace the fan as shown in the following illustration.



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. M047-E1-5 **In the interest of product improvement, specifications are subject to change without notice.**

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