

Switching Power Supply

S82J

Open-Frame, Covered-Frame, or Enclosed-Frame Type with Capacity Up to 600 W

- Models range from 10 to 600 W
- UL 508 approval
- Class 2 approval on 50-W (24 V) model
- Wide range of output voltages: 5 V, 12 V, 15 V, or 24 V
- UL, CSA, VDE, and CE Approvals
- 10- to 150-W models can easily be DIN-rail mounted with S82Y bracket (sold separately)
- 3-Year warranty

Ordering Information _

OPEN-FRAME TYPE POWER SUPPLIES

Power ratings	Output vo	oltage/current			Part number		
	5 V	12 V	15 V	24 V	120 VAC input	240 VAC input	
10 W	2 A	—	_	—	S82J-0105	S82J-2105	
	—	1 A	—	—	S82J-0112	S82J-2112	
	—	—	0.7 A	—	S82J-0115	S82J-2115	
	—	—	—	0.5 A	S82J-0124	S82J-2124	
25 W	5 A	—	—	—	S82J-0205	S82J-2205	
	—	2.1 A	_	—	S82J-0212	S82J-2212	
	—	—	1.7 A	—	S82J-0215	S82J-2215	
	—	—	_	1.1 A	S82J-0224	S82J-2224	
50 W	10 A	—	_	—	S82J-0505	S82J-2505	
	—	4.2 A	_	—	S82J-0512	S82J-2512	
	—	_	_	2.1 A	S82J-05024A 10	0 to 240 VAC input	
100 W	20 A	_	_	—	S82J-10005A1	S82J-10005A2	
	—	8.5 A	_	—	S82J-10012A1	S82J-10012A2	
	—	—	7.0 A	—	S82J-10015A1	S82J-10015A2	
	—	—	—	4.5 A	S82J-10024A 10	0 to 240 VAC input	
150 W	—	—	—	6.5 A	S82J-15024A 120 automatically se		

Note: A mounting bracket is included with each power supply.





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■ COVERED-FRAME TYPE POWER SUPPLIES

Power ratings	Output vo	oltage/current	Part number	Part number		
	5 V	12 V	15 V	24 V	120 VAC input	240 VAC input
10 W	2 A	—	—	—	S82J-5105	S82J-6105
	—	1 A	—	—	S82J-5112	S82J-6112
	—	—	0.7 A	—	S82J-5115	S82J-6115
	—	—	—	0.5 A	S82J-5124	S82J-6124
25 W	5 A	—	—	—	S82J-5205	S82J-6205
	—	2.1 A	—	—	S82J-5212	S82J-6212
	—	—	1.7 A	—	S82J-5215	S82J-6215
	—	—	—	1.1 A	S82J-5224	S82J-6224
50 W	10 A	—	—	—	S82J-5505	S82J-6505
	—	4.2 A	—	—	S82J-5512	S82J-6512
	—	—	—	2.1 A	S82J-05024D 10	to 240 VAC input
100 W	20 A	—	—	—	S82J-10005D1	S82J-10005D2
	—	8.5 A	—	—	S82J-10012D1	S82J-10012D2
	—	—	7.0 A	_	S82J-10015D1	S82J-10015D2
	—	—	—	4.5 A	S82J-10024D 10	to 240 VAC input
150 W	—	—	—	6.5 A	S82J-15024D 120 automatically se	

Note: A mounting bracket is included with each power supply.

■ ENCLOSED-FRAME TYPE POWER SUPPLIES

Input voltage	Power rating	Output		Part number
		Voltage	Current	
120 or 230 VAC (selectable)	300 W	24 V	14.0 A	S82J-30024
	600 W	24 V	27.0 A	S82J-60024

Note: 1. A mounting bracket is included with each power supply.

2. To order without a mounting bracket (normally included with the 300 W or 600 W), add an "N" at the end of the part number.

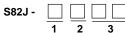
3. For other accessories, refer to the Accessories section that follows.

■ ACCESSORIES

Description	Applicable power supplies	Part number	
DIN-rail mounting bracket	for 10-W models	S82Y-01N	
	for 25-W models	S82Y-03N	
	for 50-W models	S82Y-05N	
	for 100-W and 150-W models	S82Y-10N	
Front-mounting bracket	for 100-W, 24-V models	S82Y-J10F	
DIN-rail	1 m (3.28 ft) length for 10- to 150-W models	PFP-100N/PFP-100N2	
	0.5 m (1.64 ft) length for 10- to 150-W models	PFP-50N	
Cover	for 10-W models	S82Y-J01K	
	for 25-W models	S82Y-J02K	
	for 50-W models	S82Y-J05K	
	for 100-W, 24-V models	S82Y-J10K	
Fan	for 600-W models	S82Y-JFAN	
Ferrite ring core (a set of 3 pieces in package)	for 300-W and 600-W models	S82Y-JC-T	
Noise filter	for 300-W models	S82Y-JF3-N	
	for 600-W models	S82Y-JF6-N	

MODEL NUMBER LEGEND

S82J 10-/25-/50-W (5-V, 12-V) Models



2

1. Input voltage/configuration

- 0,1: 100-120 VAC/Open-frame type
- 2: 200-240 VAC/Open-frame type

- 5: 100-120 VAC/Covered-type
- 6: 200-240 VAC/Covered-type

2. Power ratings 1: 10 W

2: 25 W

5: 50 W

Output	voltage
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05:	5 V
12:	12 V
15:	15 V
24:	24 V

3.

S82J 50-W (24 V)/100-/150-/300-/600-W Models

S82J -			
	1	2	3 4
	1. Powe	er ratings	2. Output voltage
	050:	50 W	05: 5 V
	100:	100 W	12: 12 V
	150:	150 W	15: 15 V
	300:	300 W	24: 24 V
	600:	600 W	

3. Configuration

- A: Open-frame type, front terminals
- D: Covered-type, front terminals None: Enclosed-type, front terminals

4. Input Voltage

1: 100-120 VAC 2: 200-240 VAC None: 100-240 VAC 120/240 VAC (selectable or automatically selected)

Specifications _____

S82J MODELS (10/25/50 W AND 100 W AT 24 V)

Item		120 VAC input				240 VAC input			
		10 W	25 W	50 W (5, 12 V)	100 W (5, 12, 15 V)	10 W	25 W	50 W (5, 12 V)	100 W (5, 12, 15 V)
Efficiency (typical)		67% min.		-	76% min.	67% min.	·	·	76% min.
Life expectancy		8 yrs. min	. (Used at 4	40°C at the ra	ated input with	a 50% load	l, standard	installation)	
Input		-							
Voltage	85 to 132	VAC			170 to 26	4 VAC			
	DC	110 to 170	VDC (See	e Note 1.)		No			
Frequency		50/60 Hz	50/60 Hz (47 to 450 Hz)						
Current (See Note 2.)		0.35 A max.	0.8 A max.	1.4 A max.	2.5 A max.	0.3 A max.	0.6 A max.	0.8 A max.	1.4 A max.
Leakage current (See	Note 2.)	0.5 mA m	ax.			1 mA max	x.		
Inrush current (See No	ote 2.)	25 A max				50 A max	•		
Noise filter		Yes							
Output (See Note 3.)									
Voltage adjustment rai	nge	±10% adj	ustable with	n variable res	sistor (V.ADJ)				
Ripple		2% (p–p)	max.						
Input variation influence	ce	0.4% max	0.4% max. (at 85 to 132 VAC input, 100% load) 0.4% max. (at 170 to 264 VAC input, 100% load)						out, 100%
Load variation influence	ce	0.8% max. (with rated input, 10% to 100% load)							
Temperature variation	influence	0.05%/°C max. (with rated input and output)							
Startup time	200 ms max. (up to 90% of output voltage at rated voltage and rated output voltage/current)								
Hold time		20 ms min. (up to 90% of output voltage at rated voltage and rated output voltage/current)							
Additional functions									
Overload protection			. of rated long Data se		automatic reset	. See the o	verload pro	otection in the)
Overvoltage protection		No			Vec (E)/	No			Yes (5 V
	1	No			Yes (5 V model only)	NO			model only)
Parallel operation	1	No				No			
Parallel operation Series operation	1					-			
	1	No			model only)	No			model only)
Series operation	Operating	No No	erating curv	ve in the <i>Eng</i>	model only)	No No			model only)
Series operation Characteristics		No No See the d	-		Yes	No No	ing		model only)
Series operation Characteristics	Operating	No No See the d	65°C (68°F		Yes	No No	ing		model only)
Series operation Characteristics Ambient temperature	Operating Storage	No No See the d -20°C to 6	65°C (68°F %		Yes	No No	ing		model only)
Series operation Characteristics Ambient temperature	Operating Storage Operating	No No See the d -20°C to 6 25% to 85 25% to 90	65°C (68°F % %	to 149°F) wi	Yes	No No section.		out and GR te	Yes
Series operation Characteristics Ambient temperature Ambient humidity	Operating Storage Operating	No No See the d -20°C to d 25% to 85 25% to 90 3000 VAC	65°C (68°F % % between in	to 149°F) wi	Model only) Yes ineering Data s th no condensa	No No eection. ation and ic	etween inp		Yes
Series operation Characteristics Ambient temperature Ambient humidity Dielectric strength	Operating Storage Operating	No No No See the d -20°C to d 25% to 85 25% to 90 3000 VAC 100 MΩ m	65°C (68°F % % between in hin. (betwee	to 149°F) wi nput and outputs	Yes vineering Data s th no condensa put terminals (2	No No section. ation and ic 200 VAC b GR termina	etween inp als at 500 \	/DC)	model only) Yes rminals)
Series operation Characteristics Ambient temperature Ambient humidity Dielectric strength Insulation resistance	Operating Storage Operating	No No See the d -20°C to d 25% to 85 25% to 90 3000 VAC 100 MΩ m 10 to 55 F	65°C (68°F % between in hin. (betwee Iz, 0.75-mr	to 149°F) wi nput and outp en all outputs n double amp	Yes ineering Data s th no condensa put terminals (2 s and all inputs/	No No section. tition and ic 200 VAC b GR termina 4.5G) for 2	etween inp als at 500 \ 2 h each in	/DC)	model only) Yes rminals)
Series operation Characteristics Ambient temperature Ambient humidity Dielectric strength Insulation resistance Vibration resistance	Operating Storage Operating	No No See the d -20°C to d 25% to 85 25% to 90 3000 VAC 100 MΩ m 10 to 55 F	65°C (68°F % between in in. (betwee Iz, 0.75-mn (approx. 30	to 149°F) wi nput and outp en all outputs n double amp	Yes ineering Data s th no condensa put terminals (2 and all inputs/ plitude (approx.	No No section. tition and ic 200 VAC b GR termina 4.5G) for 2	etween inp als at 500 \ 2 h each in	/DC)	model only) Yes rminals)
Series operation Characteristics Ambient temperature Ambient humidity Dielectric strength Insulation resistance Vibration resistance Shock resistance	Operating Storage Operating Storage	No No No See the d -20°C to 0 25% to 85 25% to 90 3000 VAC 100 MΩ m 10 to 55 H 294 m/s² Green LE	65°C (68°F % between in in. (betwee Iz, 0.75-mn (approx. 30	to 149°F) wi nput and outp en all outputs n double amp 0G), 3 times e	Yes ineering Data s th no condensa put terminals (2 and all inputs/ plitude (approx.	No No section. tition and ic 200 VAC b GR termina 4.5G) for 2	etween inp als at 500 \ 2 h each in	/DC)	model only) Yes rminals)

(This table continues on the next page.)

Note: 1. DC inputs are not included in safety standard approvals.

2. At 100% load for rated input voltage (100 or 200 VAC)

3. The Output specification is defined as the power supply output terminals.

Specifications Table - continued from previous page

Item	120 VAC inp	120 VAC input				240 VAC input			
	10 W	25 W	50 W (5, 12 V)	100 W (5, 12, 15 V)	10 W	25 W	50 W (5, 12 V)	100 W (5, 12, 15 V)	
EMC	Emission AC M Immunity ESD Immunity RF-i	Immunity RF-interference: ENV50140: 10 V/m (80 M Immunity Conducted Distubance: ENV50141: 10 V (0.5 to 8		class A 4-2: 4 kV contact 0: 10 V/m (80 MH : 10 V (0.5 to 80	rt discharge (level 2); 8 kV air discharge (level 3) Hz to 1 GHz) (level 3)				
EMC Standards	Conforms to	EN50081-2, I	EN50082-2						
Approved standards	UL 508, UL	UL 508, UL 1012 (except 100 W), CSA C22.2 No. 14, EN 50173 (VDE 0160), EN 60950							
Weight (covered-type)	250 g max.	350 g max.	400 g max.	1,000 g max.	250 g max.	350 g max.	400 g max.	1,000 g max.	

S82J MODELS 50-W (24 V)/100 (24 V)/150/300/600 W)

Item	100-240 input		120/240 VAC (automatically selected)	120/230 VAC (selectable)		
	50 W (24 V)	100 W (24 V)	150 W	300 W	600 W		
Efficiency (typical)	77% min.	83% min.	82% min.	82% min.			
Input							
Voltage	85 to 264 VAC		85 to 132 VAC or 170 to 264 VAC (automatically selected)	85 to 132 or 170 to 253 VAC (selectable)			
Frequency	50/60 Hz (47 to	o 450 Hz)					
Current (See Note 2.)	1.4 A max. at 100 VAC, 0.8 A max. at 200 VAC	2.5 A max. at 100 VAC, 1.5 A max. at 200 VAC	3.5 A max. at 100 VAC, 2.1 A max. at 200 VAC	8 A max. at 100 VAC or 4 A max. at 200 VAC	14 A at 100 VAC or 7 A at 200 VAC		
Leakage current (See Note 2.)	0.5 mA max. at 100 VAC or 1.0 mA max. at 200 VAC						
Inrush current (See Note 2.)	25 A max. at 10	30 A max. at 100 VAC or 60 A max. at 200 VAC					
Noise filter	Yes						
Output (See Note 3.)							
Voltage adjustment range	±10% (adjustat	ole with variable	resistor (V.ADJ))				
Ripple (See Note 2.)	2% (p-p) max.						
Input variation influence	0.4% max.						
Load variation influence	0.8% max. (wit	h rated input, 10	0% to 100% load)				
Temperature variation influence	0.05%/°C max. (with rated input and output)						
Startup time	500 ms max. (u and output)	ıp to 90% of out	put voltage at rated input	300 ms max. (up to 90% input and output)	of output voltage at rated		
Hold time (See Note 2.)	20 ms min.						
Additional functions							
Overload protection	105% min. of ra	ated load curren	t, automatic reset. See the	overload protection in the	Engineering Data section.		
Overvoltage protection	No	Yes	Yes, protection-ON alarn for 300 W and 600 W mo	n indicator lit (red)			

(This table continues on the next page.)

Note: 1. DC inputs not included in safety standard approvals.

2. Defined with a 100% load and the rated input voltage (100 or 200 VAC).

3. The output specification is defined at the power supply output terminals.

4. The weight indicated is the weight of the open-frame type. (Includes the covers for 300-W and 600-W models.)

5. To ensure the Emission Enclosure rating, ferrite ring cores (recommended model: S82Y-JC-T) should be used on all cabling.

 For resetting, turn OFF the power supply, leave for more than two 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. Specifications Table - continued from previous page

Item	100-240 VAC input		120/240 VAC (automatically selected)	120/230 VAC (selectable)				
	50 W (24 V)	100 W (24 V)	150 W	300 W	600 W			
Overheat protection (See Note 6.)	No			No	Yes, protec- tion-ON alarm indicator lit (red) 600 W only			
Parallel operation	No			Yes, 5 Units max	κ.			
Series operation	Yes			Yes				
Characteristics								
Ambient temperature	Operating: See the de	erating curve in the I	Engineering Data section					
	Storage: -25°C to 65°	°C (–13°F to149°F)						
Ambient humidity	Operating: 25% to 85	%						
	Storage: 25% to 90%							
Dielectric strength	3,000 VAC, 50/60 Hz for 1 min (between all inputs and all outputs) 2,200 VAC, 50/60 Hz for 1 min (between all inputs and GR terminal) 1,000 VAC, 50/60 Hz for 1 min (between all outputs and GR terminal)							
Insulation resistance	100 M Ω min. at 500 V	100 M Ω 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) for 2 h each in X, Y, and Z direc- tions							
Shock resistance	Malfunction: 294 m/s ²	(30G), 3 times each	in $\pm X$, $\pm Y$, and $\pm Z$ direction	ons				
Output indicator	Yes (green)							
Electromagnetic interference	Conforms to FCC clas	s 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 Immunity RF-interference: ENV50140: 10 V/m (80 MHz to 1 GHz) (level 3) Immunity Conducted Disturbance: ENV50141:10 V (0.5 to 80 MHz) (level 3) Immunity Burst: EN610004-4: 2 kV power-line (level 3): 2 kV output line (level 4)							
EMC standards	Conforms to EN50081-2 and EN50082-2 EN50082-2 (See Note With noise filter, confor EN50081-1 (See Notes							
Approved standards	UL 508 (Listed), UL 1950, Class 2 (per UL 1310); CSA C22.2 No. 14/No. 950;	UL 508 (Listed), UL 1950, UL 1012; CSA C22.2 No. 14/No. 950;	UL 508 (Listed), UL 1950, CSA C22.2 No. 14/No. 950;	UL 508, UL 195 CSA EB1402C EN50178 (VDE EN60950				
Life expectancy (See Note 8.)	10 yrs.		8 yrs.	10 yrs.				
Weight (See Note 4.)	400 g max.	500 g max.	1,000 g max.	2,000 g max.	2,500 g max.			

Note: 1. DC inputs not included in safety standard approvals.

- 2. Defined with a 100% load and the rated input voltage (100 or 200 VAC).
- 3. The output specification is defined at the power supply output terminals.
- 4. The weight indicated is the weight of the open-frame type. (Includes the covers for 300-W and 600-W models.)
- 5. To ensure the Emission Enclosure rating, ferrite ring cores (recommended model: S82Y-JC-T) should be used on all cabling.
- 6. For resetting, turn OFF the power supply, leave for more than two 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.
- 7. To ensure the Emission AC Mains rating for EN50081-1 (only for 200-VAC input), a noise filter (recommended models: S82Y-JF3-N for 300 W, S82Y-JF6-N for 600 W) should be used on the input lines.
- 8. Under rated input voltage, load rated of 50%, ambient temperature of 40°C, and standard mounting.

Engineering Data

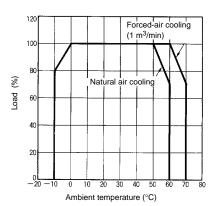
DERATING CURVE

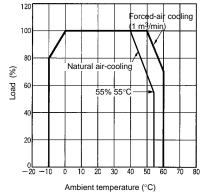
S82J 10/25/50/100 (24 V)/150 W

- Note: 1. The derating curve shown is for standard installation. The derating curve depends on the mounting direction of the Power Supply.
 - 2. Provide a minimum clearance of 20 mm between the Power Supplies. Refer to the *Mounting* information in the *Dimensions* section.

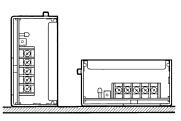
Open-frame type

Covered-type

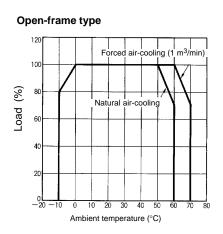




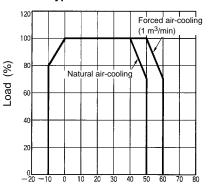




100-W (5, 12, 15 V) Model

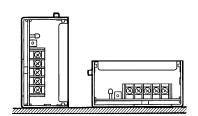


Covered-type



Ambient temperature (°C)

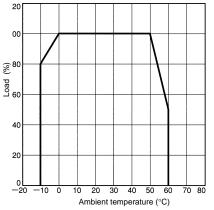
Mounting Position for Standard Installation

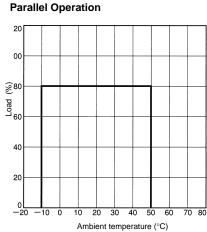


300-W Model **Mounting Position for Parallel Operation** Single Operation Standard Installation 20 Forced-air cooling 20 20 mm min 20 mm min. $(1 \text{ m}^3/\text{min})$ (Standard mounting) Forced-air cooling 00 00 (1 m³/min) (Standard mounting) Natural air cooling 80 (Standard mounting) 80 Forced-air cooling Natural air cooling (1 m³/min) 8 60 (Standard mounting) (%) (Side mounting) 60 Forced-air cooling Load Load (1 m³/min) 20 mm min. (Side mounting) 20 mm min. 40 4(388 20 Natural cooling 20 (Side mounting) 0 -20 -10 0 10 20 30 40 50 60 70 80 0 +⊡→ 10 20 30 -20 -100 40 50 60 70 80 Ambient temperature (°C) Ambient temperature (°C)

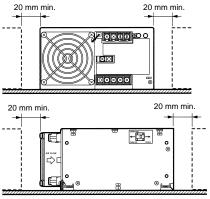
600-W Model











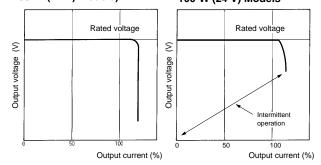
OVERLOAD PROTECTION

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

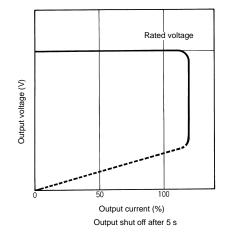
50-W (24 V) and 100-W (24 V) Models



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.



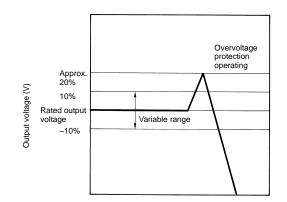
OVERVOLTAGE PROTECTION

100-W (5, 24 V) Output Models

These power supplies have 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 2 minutes minimum (1 minute minimum for 5 V model) 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.



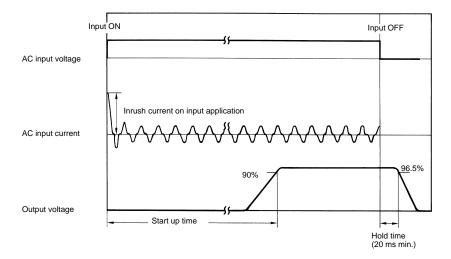
Note: The output voltage can be varied by the V. ADJ adjuster on the front panel. When it is set to a value 10% higher than the rated value, the overvoltage protection function may be effected.

OVERHEAT PROTECTION FUNCTION

600-W Model Only

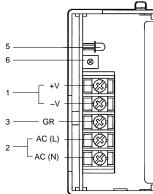
If the internal temperature of the S82J rises excessively as a result of fan failure or any other reason, the overheat protection circuit will be triggered to protect the internal elements of the S82J and simultaneously a protection-ON alarm indicator will be lit. To reset the S82J, turn off the input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

■ INRUSH CURRENT, START UP TIME, HOLD TIME



Nomenclature

S82J 10 W TO 150 W

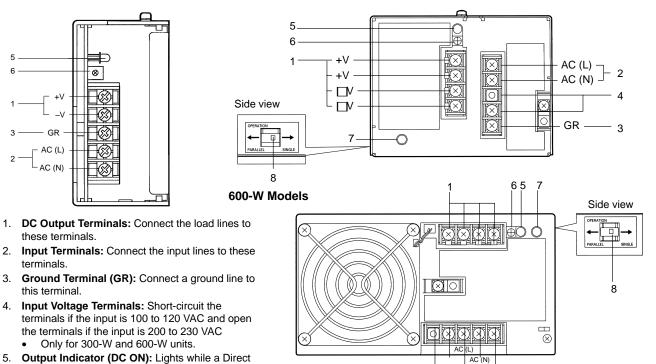


these terminals.

terminals.

this terminal.

300-W Models



4

2

3

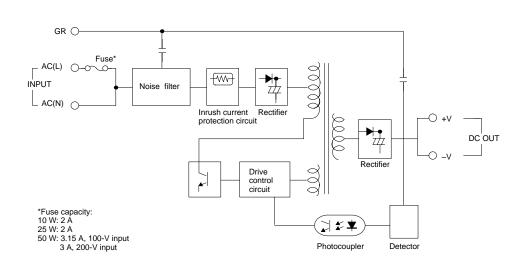
Current (DC) output is ON. 6. Output Voltage Adjuster (V.ADJ): It is possible to increase or decrease the output voltage by 10%.

- 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.

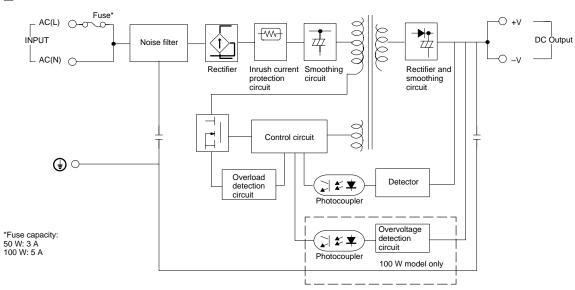
Operation

BLOCK DIAGRAMS

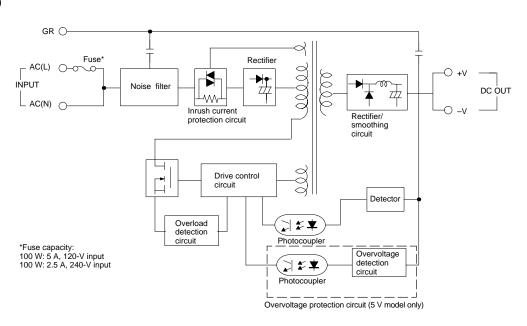
	(10 W)
S82J-□2□□ S82J-□505 (50	
S82J-⊡512 (̀50	



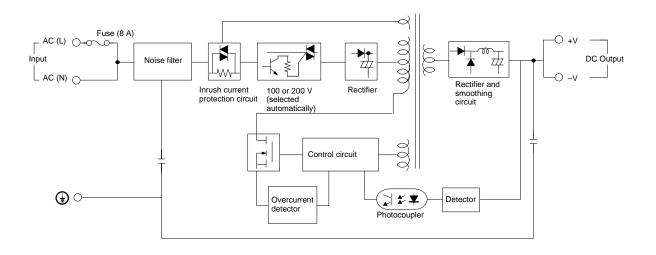




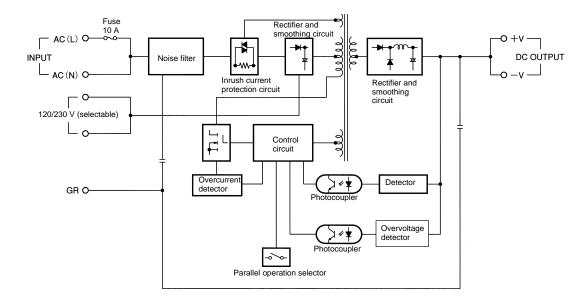
S82J-10005	(100	W)
S82J-10012	(100	W)
S82J-10015	(100	W)



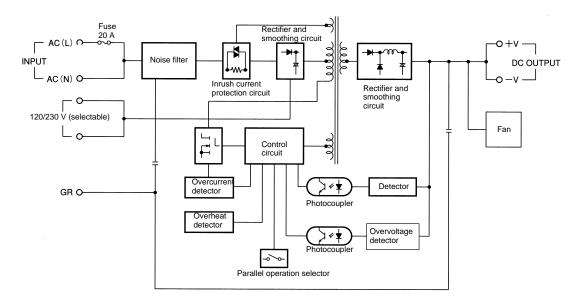
S82J-15024 (150 W)



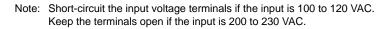
S82J-30024 (300 W)



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.

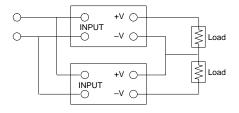


S82J-60024 (600 W)



■ GENERATING OUTPUT VOLTAGE (±)

An output of \pm 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.

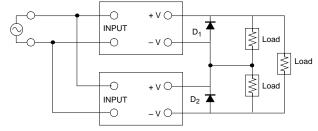
Use Schottky barrier diodes with a low forward voltage (V_F). Other types of diodes will not be effective.

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

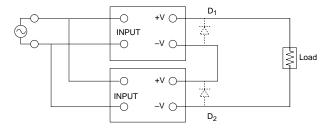
Forward current: At least twice the rated output current

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.

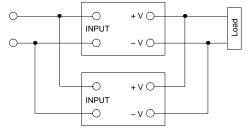


With the S82J-05024 \Box or S82J-10024 \Box , if the load is shorted a reverse voltage may result in the Power Supply causing deterioration and damage. It is recommended that diodes are connected as shown in the previous diagram (D₁, D₂).

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.



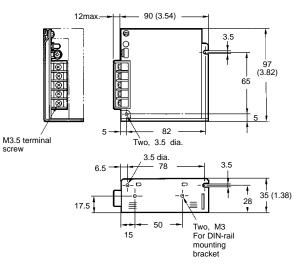
Dimensions

Unit: mm (inch)

OPEN-FRAME AND COVERED-FRAME TYPES

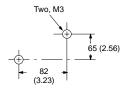
S82J-□1□□





Mounting Holes (Surface Screw Mounting)

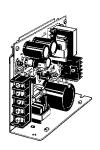
Side Mounting

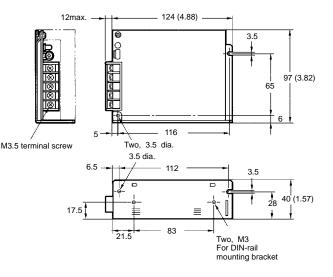


Bottom Mounting

Two, M3

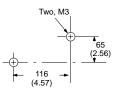
S82J-0200





Mounting Holes (Surface Screw Mounting)

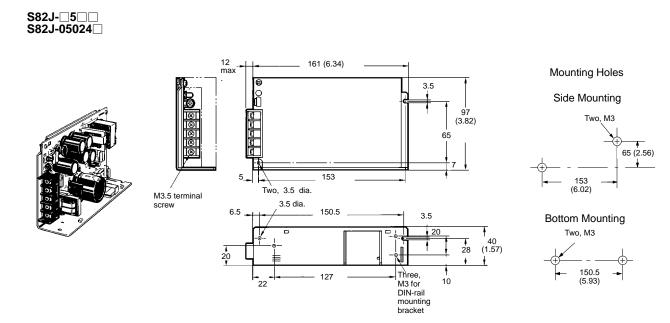
Side Mounting



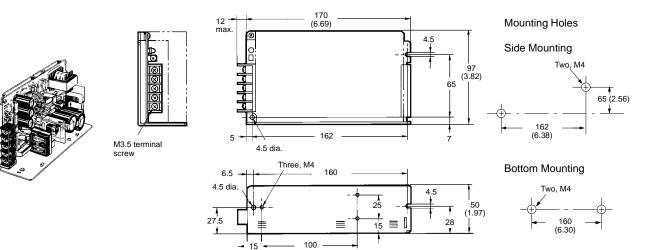
Bottom Mounting



Unit: mm (inch)

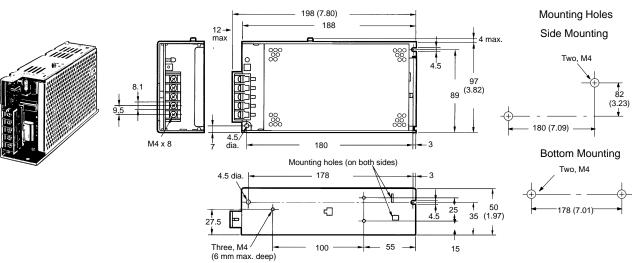


S82J-10024

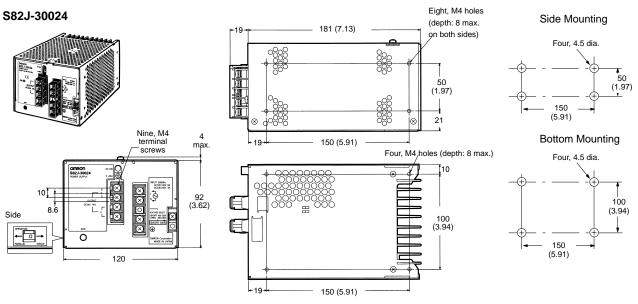


Mounting Holes

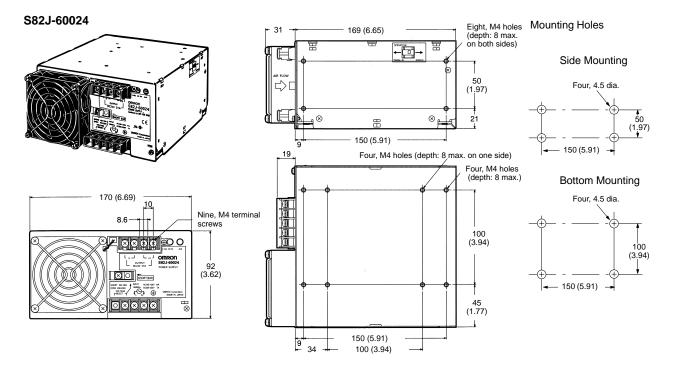
S82J-100



ENCLOSED-FRAME TYPE



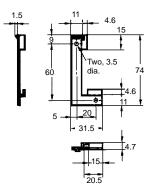
Unit: mm (inch)

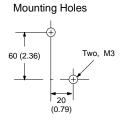


■ MOUNTING BRACKET (INCLUDED WITH POWER SUPPLY UNIT)

S82J 10-/25-/50-/100-W (24-V) Models

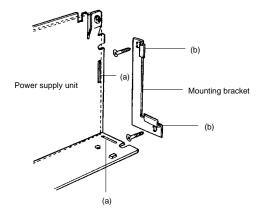
Front-mounting Bracket (Included)



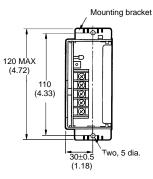


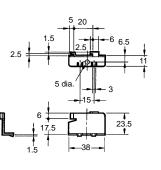
Using the Mounting Bracket

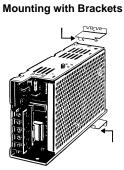
Attach the mounting bracket to the panel and loosely tighten the two screws. Insert the projected parts of the bracket (b) to the square holes of the power supply (a). Then securely tighten the screws.



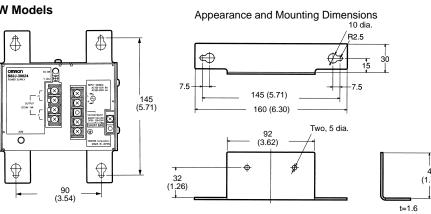
S82J 100-W (5-/12-/15-V) Models or 150-W Models Front Mounting Brackets (Included)

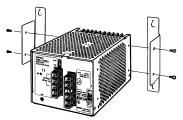


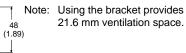




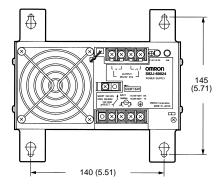
300-W Models

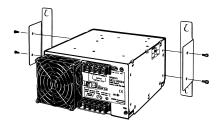






600-W Models



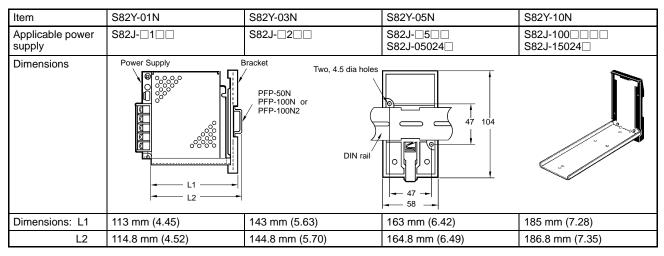




Accessories (Order Separately)

Unit: mm (inch)

OPTIONAL DIN-RAIL MOUNTING BRACKET (ORDER SEPARATELY)

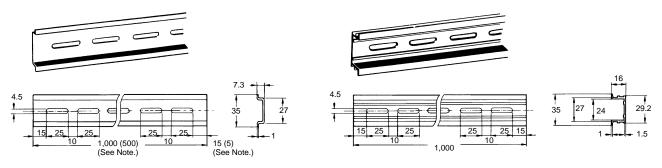


Note: The figures in row L1 apply if a mounting bracket is attached to the power supply. The figures in row L2 apply if PFP-50N or PFP-100N DIN rail is used. Add 10.5 mm to each figure in the L1 row if PFP-100N2 DIN rail is used.

DIN RAIL (ORDER SEPARATELY)

PFP-100N/PFP-50N

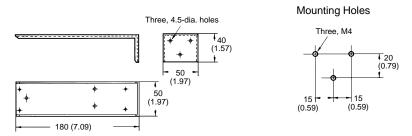
PFP-100N2



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

■ FRONT-MOUNTING BRACKET FOR 100-W, 24-V (ORDER SEPARATELY)

S82Y-J10F



Note: The front mounting bracket (above) cannot be used for S82J 100-W (5-, 12-, 15-V) or 150-W models.

■ COVER (ORDER SEPARATELY)

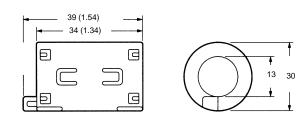
Note: This optional cover is available for the open-frame models also.

Item	S82Y-J01K	S82Y-J02K	S82Y-J05K	S82Y-J10K
Applicable supply uni	s82J-01/-21	S82J-02/-11	S82J-05/-25	S82J-10/-20
Dimensions			Attaching Cover to Power Supple Remove screw (A) before attact Supply. Tighten the screw to see Supply. Note: The derating curve show change with changes in the cover is attached to	hing the cover to the Power cure the cover on the Power wn in <i>Engineering Data</i> may ambient temperature when
Dimensions: A	75 mm (2.95)	109 mm (4.29)	146 mm (5.75)	154 mm (6.06)
В	35 mm (1.38)	39 mm (1.54)	38 mm (1.50)	48 mm (1.89)

■ FERRITE RING CORE (ORDER SEPARATELY)

S82Y-JC-T

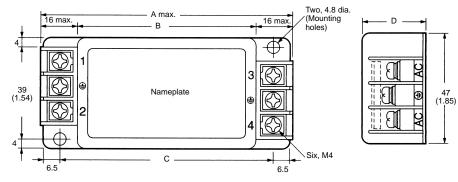




■ NOISE FILTER (ORDER SEPARATELY)

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





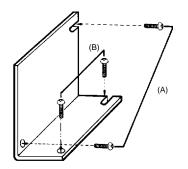
Model	А	В	С	D
S82Y-JF3-N	107 (4.21)	75 (2.95)	90 (3.54)	26 (1.02)
S82Y-JF6-N	117 (4.60)	85 (3.35)	100 (3.94)	30 (1.18)

MOUNTING METHODS

S82J 10/25/50/100 (24 V) W

The following three mounting methods are available.

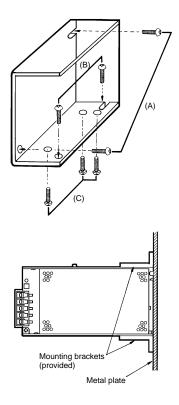
- (A) Side mounting
- (B) Bottom mounting
- (C) Bottom mounting (with S82Y optional bracket)



S82J 100 (5, 12, 15 V)/150 W

The following mounting methods are available.

- (A) Side mounting
- (B) Bottom mounting (secured with screws from the inside of the power supply)
- (C) Bottom mounting (secured with screws from the back of the power supply)



(A) Front mounting

Front mounting is possible with the mounting brackets provided. Refer to the *Dimensions* Section.

Precautions

MOUNTING

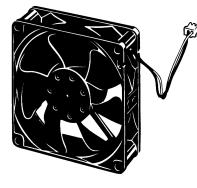
- When mounting the power supply, allow space for adequate air flow around it – to improve and maintain the reliability of the power supply over a long period of time. The power supply is designed to dissipate heat through natural air-flow.
- Omron recommends mounting the power supply to a metal plate.
- When mounting two or more power supplies side-by-side, allow at least 20 mm (0.79) spacing between them, as shown in the illustration provided here.
- Forced-air cooling is recommended.

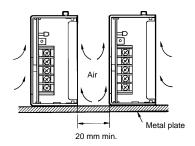
FAN REPLACEMENT

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

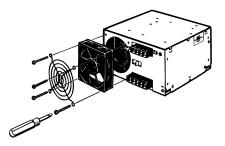




Fan Set:

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

Replace the fan as shown in the following illustration.



NOTE: DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters to inches divide by 25.4.



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7/00

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 1-18023-0
 H-118-2
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 DB1

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 DC36-18-32SW
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 DC37-14-19PW
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