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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China







Switching Power Supply

DIN-Rail Mounting Industrial Power Supplies with Capacity Up to 600 W

- Models range from 10 to 600 W.
- UL 508 approval.
- Class 2 approval available for models below 100 W.
- Universal input or selectable input.
- Wide range of output voltages: 5 V, 12 V, 15 V, or 24 V.
- UL, CSA, VDE, and CE Approvals.
- 3-Year warranty.















Ordering Information

■ OPEN-FRAME TYPE POWER SUPPLIES

Stock Note: Shaded models are normally stocked.

Rated input voltage	Power	Output	Output		Part number		
	ratings	Voltage	Current	Front-mounting bracket	DIN-rail mounting bracket		
		5 V	2 A	S82J-01005A	S82J-01005AD		
	10.14	12 V	1 A	S82J-01012A	S82J-01012AD		
	10 W	15 V	0.7 A	S82J-01015A	S82J-01015AD		
		24 V	0.5 A	S82J-01024A	S82J-01024AD		
		5 V	5 A	S82J-02505A	S82J-02505AD		
100 to 240 VAC	25 W	12 V	2.1 A	S82J-02512A	S82J-02512AD		
		15 V	1.7 A	S82J-02515A	S82J-02515AD		
		24 V	1.1 A	S82J-02524A	S82J-02524AD		
		5 V	10 A	S82J-05005A	S82J-05005AD		
	50 W	12 V	4.2 A	S82J-05012A	S82J-05012AD		
		24 V	2.1 A	S82J-05024A	S82J-05024AD		
120 or 240 VAC		5 V	20 A	S82J-10005A	S82J-10005AD		
(automatically selected)	400 144	12 V	8.5 A	S82J-10012A	S82J-10012AD		
	100 W	15 V	7 A	S82J-10015A	S82J-10015AD		
100 to 240 VAC		24 V	4.5 A	S82J-10024A	S82J-10024AD		
120 or 240 VAC (automatically selected)	150 W	24 V	6.5 A	S82J-15024A	S82J-15024AD		

■ COVERED-FRAME TYPE POWER SUPPLIES

Stock Note: Shaded models are normally stocked.

Rated input voltage	Power	Output		Part number	
	ratings	Voltage	Current	Front-mounting bracket	DIN-rail mounting bracket
		5 V	2 A	S82J-01005D	S82J-01005DD
	10.14	12 V	1 A	S82J-01012D	S82J-01012DD
	10 W	15 V	0.7 A	S82J-01015D	S82J-01015DD
		24 V	0.5 A	S82J-01024D	S82J-01024DD
		5 V	5 A	S82J-02505D	S82J-02505DD
100 to 240 VAC	25 W	12 V	2.1 A	S82J-02512D	S82J-02512DD
		15 V	1.7 A	S82J-02515D	S82J-02515DD
		24 V	1.1 A	S82J-02524D	S82J-02524DD
	50 W	5 V	10 A	S82J-05005D	S82J-05005DD
		12 V	4.2 A	S82J-05012D	S82J-05012DD
		24 V	2.1 A	S82J-05024D	S82J-05024DD
120 or 240 VAC		5 V	20 A	S82J-10005D	S82J-10005DD
(automatically selected)	100 W	12 V	8.5 A	S82J-10012D	S82J-10012DD
	100 W	15 V	7 A	S82J-10015D	S82J-10015DD
100 to 240 VAC		24 V	4.5 A	S82J-10024D	S82J-10024DD
120 or 240 VAC (automatically selected)	150 W	24 V	6.5 A	S82J-15024D	S82J-15024DD

■ ENCLOSED-FRAME TYPE POWER SUPPLIES

Stock Note: Shaded models are normally stocked.

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.

- $2. \quad \text{To order without a mounting bracket (normally included with the 300 W or 600 W), add an "N" at the end of the part number.}$
- 3. For other accessories, refer to the Accessories section that follows.

■ ACCESSORIES

Stock Note: Shaded models are normally stocked.

Description	Applicable power supplies	Part number	
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 for 200 to 230 VAC input	S82Y-JF3-N	
	for 600-W models for 200 to 230 VAC input	S82Y-JF6-N	

■ MODEL NUMBER LEGEND

S82J -	· 🔲 🛚						
		1	- :)	3	4	

1.	Power ratings	2. Output voltage	3. Config
	010: 10 W	05: 5 V	A: Op
	025: 25 W	12: 12 V	B: Co
	050: 50 W	15: 15 V	None:
	100: 100 W	24: 24 V	
	150: 150 W		
	300: 300 W		
	600: 600 W		

4. Mounting Bracket

None: Front-mounting Bracket Type D: DIN-rail Mounting Bracket Type

3. Configuration

A: Open-frame type, front terminals
 B: Covered-type, front terminals
 None: Enclosed-type, front terminals
 with mounting bracket

Specifications _____

Item		100 to 240 VAC input				(selected	120 or 240 VAC (selected automatically)		0 VAC e)	
			10 W	25 W	50 W	100 W (24 V)	100 W (5, 12, 15 V)	150 W	300 W	600 W
Efficiency (typi	cal)		67% min. 24-V mod	(77% min. f els)	for 50-W,	83% min.	75% min.	82% min.	•	•
Input	Voltage		100 to 240 VAC (85 to 264 VAC) 110 to 170 VDC (set the terminal (L) to + side) (See Note 1.)		100 to 240 VAC (85 to 264 VAC)		120 (85 to 132) or 240 (170 to 264) VAC (selected auto- matically)		120 (85 to 132) or 230 (170 to 253) VAC (selectable)	
	Frequency		50/60 Hz	(47 to 450 H	lz)				•	
	Current (See Note	100 VAC input	0.35 A max.	0.8 A max.	1.4 A max.	2.5 A max.	2.5 A max.	3.5 A max.	8 A max.	14 A max.
	2.)	200 VAC input	0.3 A max.	0.6 A max.	0.8 A max.	1.15 A max.	1.4 A max.	2.1 A max.	4 A max.	7 A max.
	Leakage current (See Note 2.)	100 VAC input	0.5mA ma	-						
	Note 2.)	200 VAC input	1mA max.	1mA max.						
	Inrush cur- rent (25°C, cold start) (See Note 2.)	100 VAC input	25 A max. 30 A max.							
		200 VAC input	50 A max. 60 A max.							
	Noise filter		Yes							
Output (See Note 3.)	Voltage adjustment range		±10% (adjustable with variable resistor (V.ADJ))							
	Ripple (See N	ote 2.)	2% (p-p) max.							
	Input variation	influence	0.4% max							
	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)							
	Startup time		500 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) 300 ms max. (up to 90% of output voltage at rated input and output)					ıtput voltage		
	Hold time (See Note 2.)		20 ms min.							
Additional function	Overload protection		105% to 160% of rated load current, inverted L drop/intermittent operation type, automatic reset				105% min. of rated load current, inverted L dr type, automatic reset (For the 600-W model, t circuit will be shut OFF when the overload ex- ceeds 5s. Protection-ON alarm indicator lit (So Note 5.)			-W model, the overload ex-
	Overvoltage protection		NO			Yes (See Note 4.)	Yes (5-V output models only) (See Note 4.)	No	Yes, prote alarm indi Note 5.)	ection-ON cator lit (See
	Overheat protection		No							Yes, protection ON alarm indicator lit (See Note 5.)

(This table continues on the next page.)

Specifications Table - continued from previous page

Item			100 to 240 VAC input			120 or 240 VAC (selected automatically)		120 or 230 VAC (selectable)			
			10 W	25 W	50 W	100 W (24V)	100 W (5, 12, 15 V)	150 W	300 W	600 W	
Additional function	Protection-ON indicator	l alarm	No	'	l .	II.	II.	1	Yes (cold	or, red)	
	Parallel opera	tion	No						Yes, 5 ur	nits max.	
	Series operat	on	No		Yes						
Other	Ambient temperature	Operat- ing	See the	derating cu	rve in the En	gineering D	ata Section				
		Storage	-25°C to	-25°C to 65°C (-13°F to 149°F) with no condensation and icing							
	Ambient humidity	Operat- ing	25% to 8	35%							
		Storage:	25% to 9	00%							
Dielect	Dielectric stre	ngth	3.0 k VA	C, 50/60 H	z for 1 min (b	etween all i	nputs and a	II outputs)			
			2.2 k VA	C, 50/60 H	z for 1 min (b	etween all i	nputs and C	R terminal)		
			1.0 k VA	C, 50/60 H	z for 1 min (b	etween all d	outputs and	GR termina	al)		
	Insulation res	Insulation resistance		min. (betwe	een all outpu	ts and all in	puts/GR ter	minals at 50	00 VDC)		
	Vibration resis	Vibration resistance		10 to 55 Hz, 0.375-mm double amplitude for 2 h each in X, Y, and Z directions							
	Shock resista	Shock resistance		300 m/s ² , 3 times each in \pm X, \pm Y, and \pm Z directions							
	Terminal screttightening	Terminal screw tightening		0.74 N • m 1.08 N • m							
	Output indicat	Output indicator		en)							
		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 Vm (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 6.) With noise to confirms to EN (See Note 6 ar					I-2 and 2-2 (See Note noise filter, to EN50081-1			
	Approved standards	UL		_isting), 199 310) (See	50, Class 2 Note 8.)	UL508 (Li	isting), 1012	2, 1950	UL508/1	012	
		CSA		2.2 No. 14, (See Note 8		CSA C22	.2 No. 14, N	lo. 950	CSA EB	1402C	
		VDE			0) and EN609 terminal par						
	Weight (See N	Note 9.)	250 g max.	350 g max.	400 g max.	500 g max.	1,000 g r	nax	2,000 g max.	2,500 g max.	
	Mean time be failures	tween			ITBF is calcurately reliability of c					I device fail- of the product.	
	Life expectan	су	10 yrs. n	10 yrs. min. (Used at 40°C at the rated input with a 50% load, standard installation).							

- Note: 1. DC inputs are not included in safety standard approvals.
 - 2. At 100% load for rated input voltage (100 VAC or 200 VAC)

 - The output specification is defined at the power supply output terminals.
 For resetting, turn OFF the power supply, leave for more than one minute, and then turn ON the power supply.
 - 5. For resetting, turn OFF the power supply, leave for more than 90 seconds min. (3 minutes 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.
 - To ensure the Emission AC Mains rating for EN50081-1 (only for 230 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. Class 2 approval on 10-W (12, 15, 24 V), 25-W (12, 15, 24 V) and 50-W (24 V) models.
 - 9. The weight indicated is the weight of the open-frame type. (Includes the covers for 300-W and 600-W models)

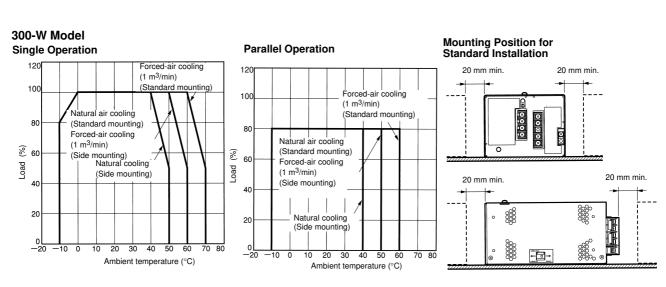
Engineering Data

■ DERATING CURVE

S82J 10/25/50/100/150 W

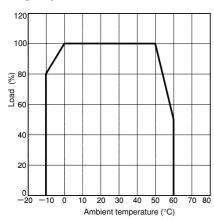
- Note: 1. The derating curve shown is for standard installation. The derating curve depends on the mounting direction of the Power Supply.
 - 2. Provide a minimum clearance of 20 mm between the Power Supplies. Refer to the *Mounting* information in the *Dimensions* section.

Mounting Position for Standard Installation Open-frame type Covered-type 120 120 Forced-air cooling Forced-air cooling (1 m³/min) 100 % Natural air cooling % Load -oad 20 10 20 30 Ambient temperature (°C) Ambient temperature (°C)

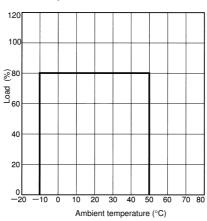


600-W Model

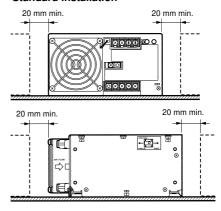
Single Operation



Parallel Operation



Mounting Position for Standard Installation

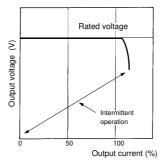


■ OVERLOAD PROTECTION

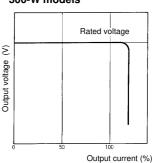
10- to 300-W Models

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% to 160% of the rated output current, the protection function is triggered, decreasing the output voltage. When the output current falls within the rated range, the overload protection function is automatically cleared.

10-W to 100-W (24-V) Models



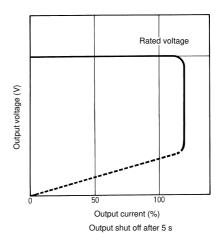
100-W (5, 12, 15-V), 150-W, 300-W models



600-W Models

If an excessive current flows for 5 sec 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.



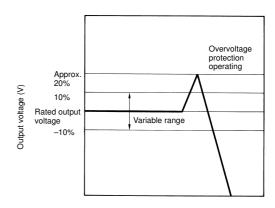
■ OVERVOLTAGE PROTECTION

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 1 minute minimum 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.



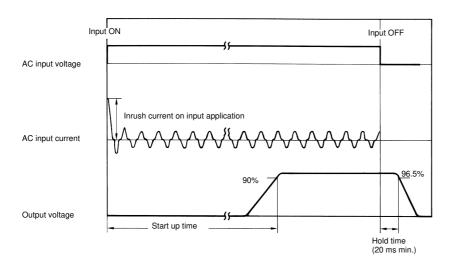
Note: The output voltage can be varied by the V. ADJ adjuster on the front panel. When it is set to a value 10% higher than the rated value, the overvoltage protection function may be effected.

■ 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.

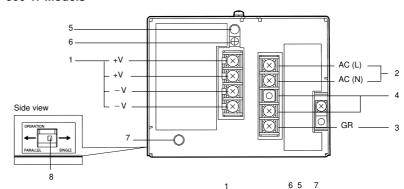
■ INRUSH CURRENT, START UP TIME, HOLD TIME



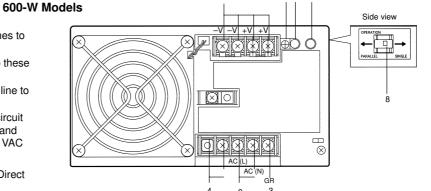
Installation

■ S82J 10 W TO 150 W

300-W Models

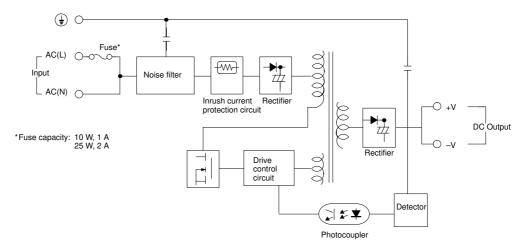


- DC Output Terminals: Connect the load lines to these terminals.
- 2. **Input Terminals:** Connect the input lines to these terminals.
- Ground Terminal (GR): Connect a ground line to this terminal.
- Input Voltage Selector Terminals: Short-circuit the terminals if the input is 100 to 120 VAC and open the terminals if the input is 200 to 230 VAC
 - Only for 300-W and 600-W unit.
- Output Indicator (DC ON): Lights while a Direct Current (DC) output is ON.
- Output Voltage Adjuster (V.ADJ): It is possible to increase or decrease the output voltage by 10%.
- 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.
- Parallel/Single Operation Selector: Set the selector to PARALLEL if the Units are in parallel operation.

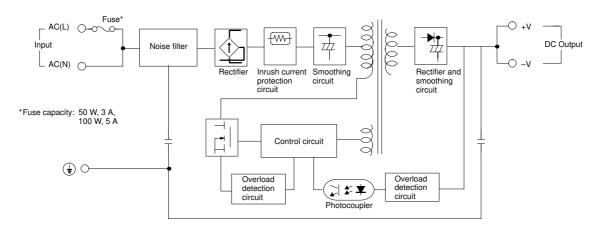


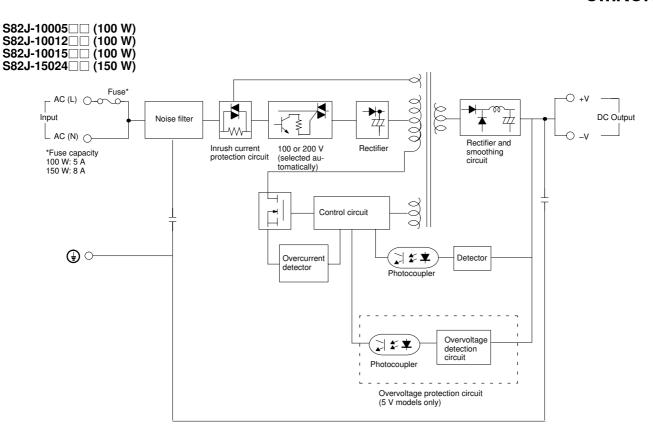
■ BLOCK DIAGRAMS

S82J-010 (10 W) S82J-025 (25 W)

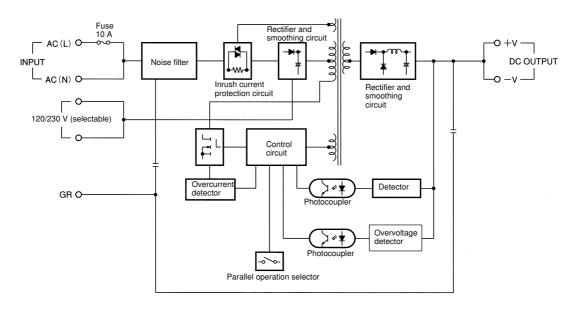


S82J-050 (50 W) S82J-10024 (100 W)



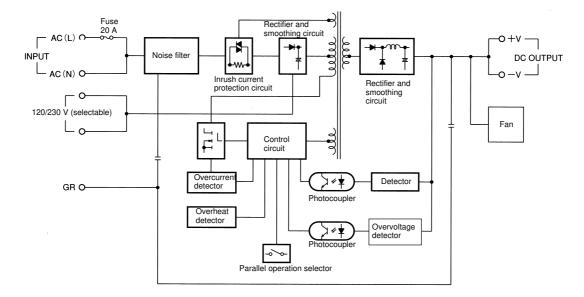


S82J-30024 (300 W)



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

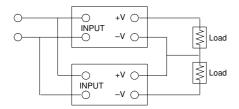
S82J-60024 (600 W)



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

■ 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.

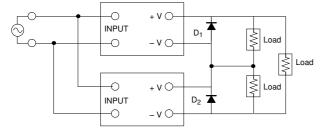
Use Schottky barrier diodes with a low forward voltage (V_F). Other types of diodes will not be effective.

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

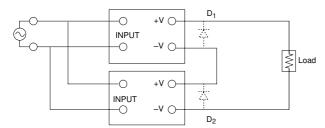
Forward current: At least twice the rated output current

No diodes are required for models that allow series operation.



■ SERIES OPERATION

Only models with power ratings of 50/100/150/300/600 W allow series operation. As shown in the following diagram, the output voltage from each Switching Power Supply can be added.

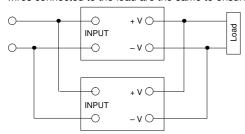


With the S82J-050 \square or S82J-10024 \square , if the load is shorted a reverse voltage may result in the Power Supply causing deterioration and damage. It is recommended that diodes are connected as shown in the previous diagram (D₁, D₂).

■ 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.

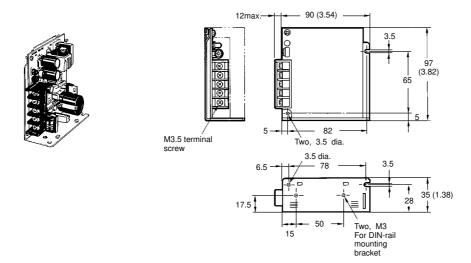
Set the parallel operation selector to PARALLEL if the Units are in parallel operation and make sure that the thickness and the length of all wires connected to the load are the same to ensure that the wires will have no voltage drop differences.



Unit: mm (inch)

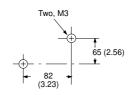
■ FRONT-MOUNTING BRACKET TYPES

S82J-010□□□□ (10 W)



Mounting Holes (Surface Screw Mounting)

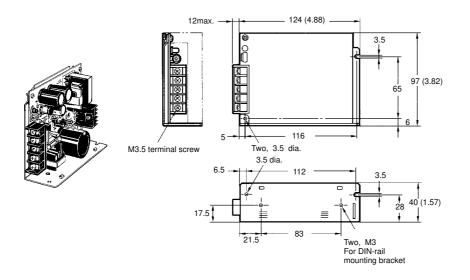
Side Mounting



Bottom Mounting

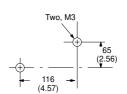


S82J-025□□□ (25 W)



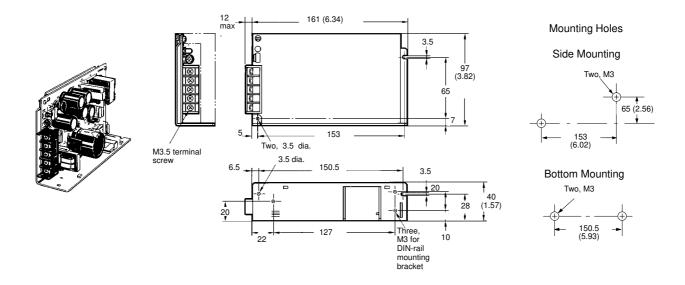
Mounting Holes (Surface Screw Mounting)

Side Mounting

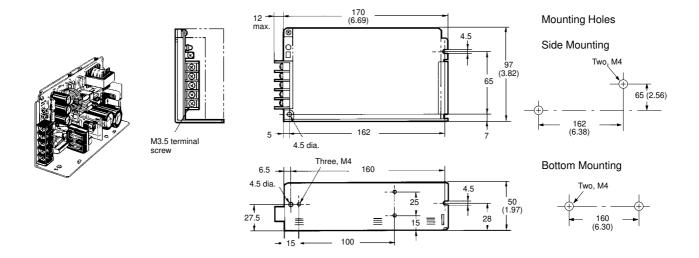


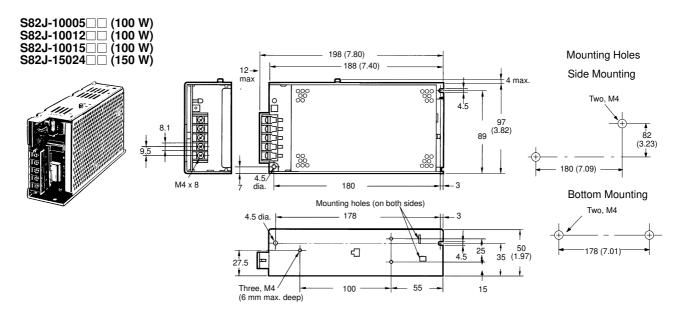
Bottom Mounting

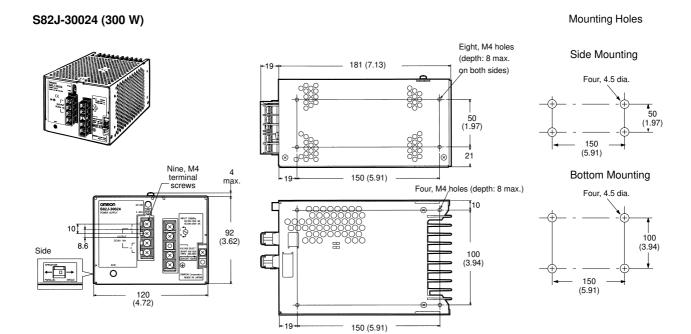
S82J-050□□□□ (50 W)



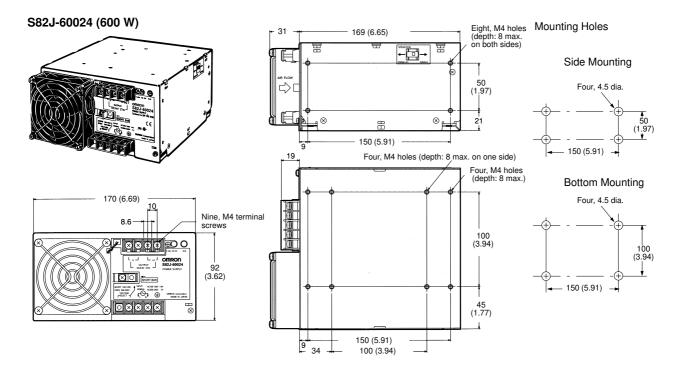
S82J-10024□□ (100 W)







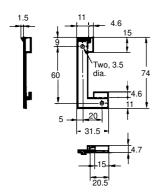
Unit: mm (inch)

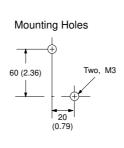


■ MOUNTING BRACKET (INCLUDED WITH POWER SUPPLY UNIT)

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

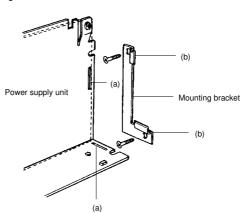
Front-mounting Bracket (Included)





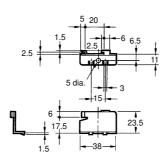
Using the Mounting Bracket

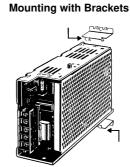
Attach the mounting bracket to the panel and loosely tighten the two screws. Insert the projected parts of the bracket (b) to the square holes of the power supply (a). Then securely tighten the screws.



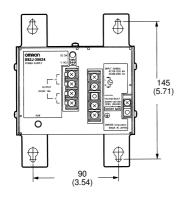
S82J 100-W (5-/12-/15-V) Models or 150-W Models Front Mounting Brackets (Included)

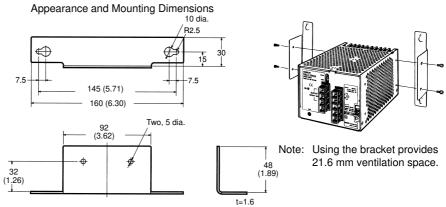
Mounting bracket 120 MAX (4.72) 110 (4.33) 30±0.5 Two, 5 dia. (1.18)



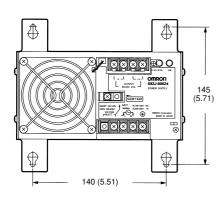


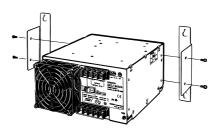
300-W Models





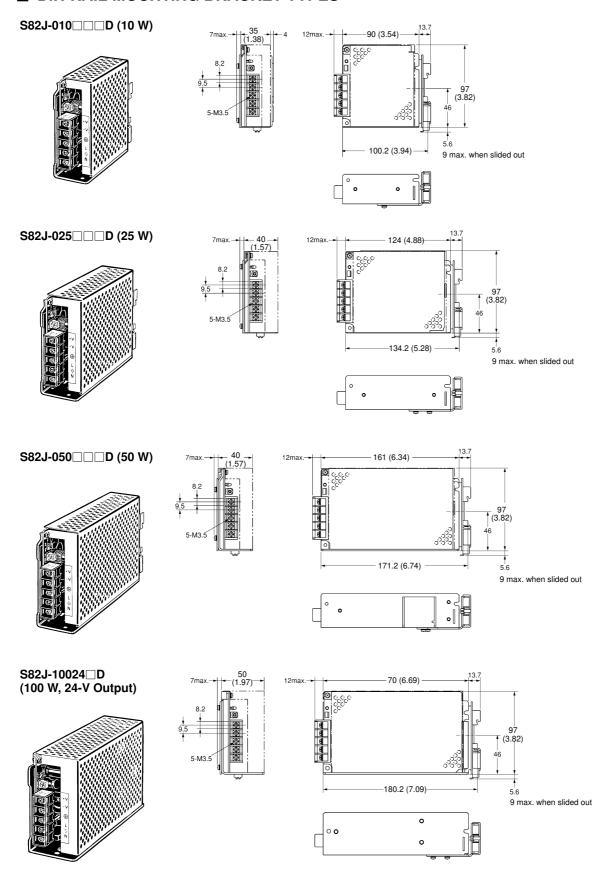
600-W Models

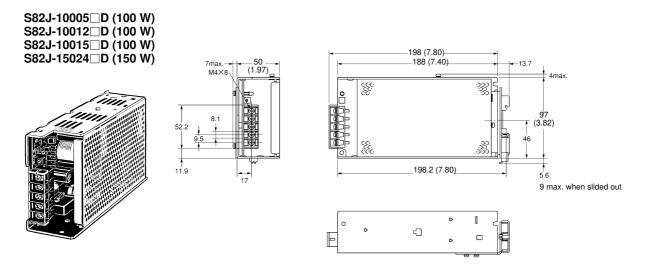




Note: Using the bracket provides 23.6 mm ventilation space.

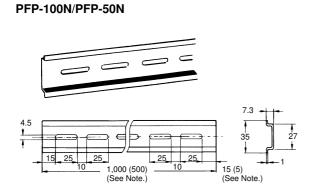
■ DIN-RAIL MOUNTING BRACKET TYPES



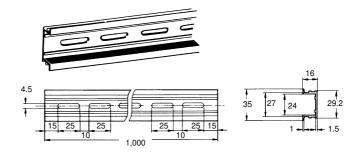


Accessories (Order Separately)

■ DIN RAIL (ORDER SEPARATELY)



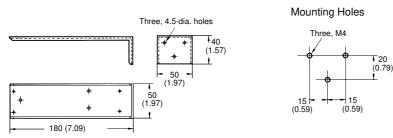
PFP-100N2



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

■ FRONT-MOUNTING BRACKET FOR S82J-10024A AND S82J-10024D (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)

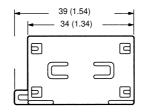
Note: This optional cover is available for the open-frame models also.

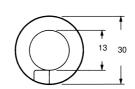
Item	S82Y-J01K	S82Y-J02K	S82Y-J05K	S82Y-J10K
Applicable supply unit	S82J-010	S82J-025□□□□	S82J-050□□□□	S82J-10024□□
Dimensions	5.6	Re Su	emove screw (A) before attachir apply. Tighten the screw to secure apply. The derating curve shown change with changes in an anthe cover is attached to the secure apply.	re the cover on the Power in Engineering Data may nbient 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





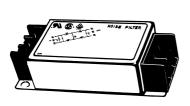


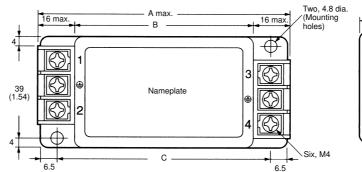
Ð

47 (1.85)

■ NOISE FILTER (ORDER SEPARATELY)

S82Y-JF3-N for 300-W Models for 200 to 230 VAC input S82Y-JF6-N for 600-W Models for 200 to 230 VAC input





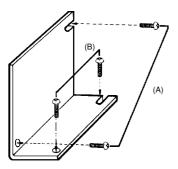
Model	Α	В	С	D
S82Y-JF3-N	107 (4.21)	75 (2.95)	90 (3.54)	26 (1.02)
S82Y-JF6-N	117 (4.60)	85 (3.35)	100 (3.94)	30 (1.18)

■ MOUNTING METHODS

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

The following three mounting methods are available.

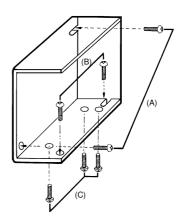
- (A) Side mounting
- (B) Bottom mounting

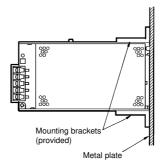


S82J 100 (5, 12, 15 V)/150 W

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)





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

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OMRON CANADA, INC.

885 Milner Avenue Toronto, Ontario M1B 5V8

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