

Switch Mode Power Supply S8JX (15/35/50/100/150/300/600-W Models)

Low-profile Power Supply to Help Reduce Panel Depth

- Easy Mounting:
 - Mounting Bracket provided as a standard feature. (except for DIN Rail-mounting models)
 - Mounts to DIN Rail. (except 600-W model)
 - Screw-mount at the top. (except 300-/600-W models)
- Safety standards:
 - UL 508/60950-1
 - cUL CSA C22.2 No. 107.1
 - cUR CSA C22.2 No. 60950-1
 - EN 50178 (= VDE 0160)
 - EN 60950-1 (= VDE 0805 Teil 1)
- EMC: Conforms to EN 61204-3 Class A.
 - (EMI: EN55011)
 - (EMS: EN61000-4)



Note: Refer to *Safety Precautions* on page 17.

Model Number Structure

Model Number Legend

Note: Not all combinations are possible. Refer to *List of Models* in *Ordering Information* on page 2.

15-/35-/50-/100-/150-W Models

S8JX-G□□□□□□□□
1 2 3 4

1. Power Ratings

015: 15 W
035: 35 W
050: 50 W
100: 100 W
150: 150 W

2. Output Voltage

05: 5 V
12: 12 V
15: 15 V
24: 24 V

3. Configuration (15/35/50/100/150 W model)

None: Open-frame
C: Covered

4. Configuration/mounting

None: Front-mounting
D: DIN Rail-mounting

300-/600-W Models

S8JX-G□□□□□□□□
1 2 3

1. Power Ratings

300: 300 W
600: 600 W

2. Output Voltage

24: 24 V

3. Configuration/mounting (covered type)

C: Front-mounting
CD: DIN Rail-mounting

S8JX

Ordering Information

List of Models

Note: For details on normal stock models, contact your nearest OMRON representative.

Configuration		Input voltage	Power ratings	Output voltage (VDC)	Output current	Model	
Open-frame Power Supplies	Front-mounting *1	100 to 240 VAC (free) (100 to 370 VDC *2)	15 W	5 VDC	3 A	S8JX-G01505	
				12 V	1.3 A	S8JX-G01512	
				15 V	1 A	S8JX-G01515	
				24 V	0.65 A	S8JX-G01524	
			35 W	5 V	7 A	S8JX-G03505	
				12 V	3 A	S8JX-G03512	
				15 V	2.4 A	S8JX-G03515	
				24 V	1.5 A	S8JX-G03524	
			50 W	5 V	10 A	S8JX-G05005	
				12 V	4.2 A	S8JX-G05012	
				24 V	2.1 A	S8JX-G05024	
			100 W	5 V	20 A	S8JX-G10005	
	12 V			8.5 A	S8JX-G10012		
	24 V			4.5 A	S8JX-G10024		
	150 W		24 V	6.5 A	S8JX-G15024		
	DIN Rail-mounting			15 W	5 V	3 A	S8JX-G01505D
					12 V	1.3 A	S8JX-G01512D
					15 V	1 A	S8JX-G01515D
					24 V	0.65 A	S8JX-G01524D
				35 W	5 V	7 A	S8JX-G03505D
					12 V	3 A	S8JX-G03512D
					15 V	2.4 A	S8JX-G03515D
					24 V	1.5 A	S8JX-G03524D
				50 W	5 V	10 A	S8JX-G05005D
12 V		4.2 A			S8JX-G05012D		
24 V		2.1 A			S8JX-G05024D		
100 W		5 V		20 A	S8JX-G10005D		
		12 V	8.5 A	S8JX-G10012D			
		24 V	4.5 A	S8JX-G10024D			
150 W		24 V	6.5 A	S8JX-G15024D			
Covered Power Supplies		Front-mounting *1	100 to 240 VAC (free) (100 to 370 VDC *2)	15 W	5 V	3 A	S8JX-G01505C
					12 V	1.3 A	S8JX-G01512C
					15 V	1 A	S8JX-G01515C
					24 V	0.65 A	S8JX-G01524C
				35 W	5 V	7 A	S8JX-G03505C
					12 V	3 A	S8JX-G03512C
					15 V	2.4 A	S8JX-G03515C
					24 V	1.5 A	S8JX-G03524C
				50 W	5 V	10 A	S8JX-G05005C
	12 V				4.2 A	S8JX-G05012C	
	24 V				2.1 A	S8JX-G05024C	
	100 W			5 V	20 A	S8JX-G10005C	
		12 V		8.5 A	S8JX-G10012C		
		24 V		4.5 A	S8JX-G10024C		
	150 W	24 V		6.5 A	S8JX-G15024C		
	DIN Rail-mounting			15 W	5 V	3 A	S8JX-G01505CD
					12 V	1.3 A	S8JX-G01512CD
					15 V	1 A	S8JX-G01515CD
					24 V	0.65 A	S8JX-G01524CD
				35 W	5 V	7 A	S8JX-G03505CD
					12 V	3 A	S8JX-G03512CD
					15 V	2.4 A	S8JX-G03515CD
					24 V	1.5 A	S8JX-G03524CD
				50 W	5 V	10 A	S8JX-G05005CD
12 V			4.2 A		S8JX-G05012CD		
24 V			2.1 A		S8JX-G05024CD		
100 W			5 V	20 A	S8JX-G10005CD		
	12 V	8.5 A	S8JX-G10012CD				
	24 V	4.5 A	S8JX-G10024CD				
150 W	24 V	6.5 A	S8JX-G15024CD				
Front-mounting *1	100 to 120 VAC 200 to 240 VAC (Swichable)	300 W	24 V	14 A	S8JX-G30024C		
DIN Rail-mounting		600 W		27 A	S8JX-G60024C		
		300 W		14 A	S8JX-G30024CD		

*1. The front-mounting bracket is included as standard with the product.

*2. Safety standards, however, are not applicable.

Ratings, Characteristics, and Functions

Item	Input specification		100 to 240 V input		
	Power ratings *1		15 W	35 W	
Efficiency			68% min.	73% min.	
Input	Voltage *2	100 to 240 VAC (85 to 264 VAC)			
		100 to 370 VDC Note: This range is not applicable for the safety standards.			
	Frequency *2		50/60 Hz (47 to 450 Hz)		
	Current *3	100 V input	0.4 A	1 A	
		200 V input	0.25 A	0.6 A	
	Power factor		---		
	Harmonic current emissions		---		
	Leakage current *3	100 V input	0.5 mA max.		
		200 V input	1 mA max.		
	Inrush current (for a cold start at 25°C) *3	100 V input	20 A max.		
200 V input		40 A max.			
Noise filter		Yes			
Output *4	Voltage adjustment range *5		-10% to 15% (with V. ADJ)		
	Ripple *3		2% (p-p) max.		
	Input variation influence		0.4% max.		
	Load variation influence		0.8% max. (0 to 100% load, rated input voltage)		
	Temperature variation influence		0.05%/°C max. (at rated input and output)		
	Startup time		500 ms max. (up to 90% of output voltage at rated input and output)		
	Hold time *3		20 ms min.		
Additional functions	Overload protection *6		105% to 160% of rated load current, voltage drop, intermittent, automatic reset		
	Overvoltage protection *7		Yes		
	Overheat protection		No		
	Parallel operation		No		
	Series operation		Yes (For up to two Power Supplies; external diodes required.)		
Protective circuit operation indicator		No			
Other	Ambient operating temperature		Refer to the derating curve in <i>Engineering Data</i> on page 9 (with no icing or condensation)		
	Storage temperature		-25 to 65°C (with no icing or condensation)		
	Ambient operating humidity		25% to 85% (Storage humidity: 25% to 90%)		
	Dielectric strength		3.0 kVAC for 1 min. (between all inputs and outputs; detection current: 20 mA) 2.0 kVAC for 1 min. (between all inputs and PE terminals; detection current: 20 mA) 1.0 kVAC for 1 min. (between all outputs and PE terminals; detection current: 20 mA)		
	Insulation resistance		100 MΩ min. (between all outputs and all inputs/PE terminals) at 500 VDC		
	Vibration resistance		10 to 55 Hz, 0.375-mm single amplitude for 2h each in X, Y, and Z directions		
	Shock resistance		150m/s ² , 3 times each in ±X, ±Y, ±Z directions		
	Output indicator		Yes (Color: Green)		
	EMI	Conducted Emissions *3		Conforms to EN 55011 Group 1 Class A and based on FCC Class A	
		Radiated Emissions		Conforms to EN 55011 Group 1 Class A	
	EMS	Electrostatic Discharge		Confirms to EN61000-4-2	
		Radiated Electromagnetic Field		Confirms to EN61000-4-3	
		Electrical Fast Transient/Burst		Confirms to EN61000-4-4	
		Surge		Confirms to EN61000-4-5	
		Conducted Disturbance		Confirms to EN61000-4-6	
		Voltage Dips/Short Interruptions		Confirms to EN61000-4-11	
	Approved standards		UL 508 (Listing), UL 60950-1 cUL: CSA C22.2 No.107.1 cUR: CSA C22.2 No. 60950-1 EN/VDE: EN50178 (= VDE 0160), EN 60950-1 (= VDE 0805 Teil 1) (Terminal block: Based on DIN50274 (VDE 0660-514))		
SEMI		SEMI F47-0200 (200-VAC input)			
Weight *8		250 g max.			

*1. When a load is connected that has a built-in DC-DC converter, the overload protection may operate at startup and the Power Supply may not start. Refer to *Overload Protection* on page 11.

*2. Do not use an Inverter output for the Power Supply. Inverters with an output frequency of 50/60 Hz are available, but the rise in the internal temperature of the Power Supply may result in ignition or burning.

*3. Rated input voltage: 100 or 200 VAC at 100% load.

*4. Output characteristics: Specified at power supply output terminals.

*5. If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by more than +15% of the voltage adjustment range. When adjusting the output voltage, confirm the actual output voltage from the Power Supply and be sure that load is not damaged.

*6. For details, refer to *Overload Protection* on page 11.

*7. To reset the protection, turn OFF the input power for seven minutes or longer and then turn it back ON.

*8. The weight indicated is for Front-mounting, Open-frame Power Supplies.

Item	Input specification		100 to 240 V input		
	Power ratings *1		50 W	100 W	150 W
Efficiency			76% min.		86% min.
Input	Voltage *2	100 to 240 VAC (85 to 264 VAC)			
		100 to 370 VDC Note: This range is not applicable for the safety standards.			
	Frequency *2	50/60 Hz (47 to 450 Hz)			
	Current *3	100 V input	1.4 A	2.5 A	3.5 A
		200 V input	0.8 A	1.5 A	2.1 A
	Power factor	---			
	Harmonic current emissions	---			
	Leakage current *3	100 V input	0.5 mA max.		
		200 V input	1 mA max.		
	Inrush current (for a cold start at 25°C) *3	100 V input	20 A max.		
200 V input		40 A max.			
Noise filter	Yes				
Output *4	Voltage adjustment range *5	-10% to 15% (with V. ADJ)			
	Ripple *3	2% (p-p) max.			
	Input variation influence	0.4% max.			
	Load variation influence	0.8% max. (0 to 100% load, rated input voltage)			
	Temperature variation influence	0.05%/°C max. (at rated input and output)			
	Startup time	500 ms max. (up to 90% of output voltage at rated input and output)			
	Hold time *3	20 ms min.			
Additional functions	Overload protection *6	105% to 160% of rated load current, voltage drop, intermittent, automatic reset			
	Overvoltage protection *7	Yes			
	Overheat protection	No			
	Parallel operation	No			
	Series operation	Yes (For up to two Power Supplies; external diodes required.)			
Protective circuit operation indicator	No				
Other	Ambient operating temperature	Refer to the derating curve in <i>Engineering Data</i> on page 9 (with no icing or condensation)			
	Storage temperature	-25 to 65°C (with no icing or condensation)			
	Ambient operating humidity	25% to 85% (Storage humidity: 25% to 90%)			
	Dielectric strength	3.0 kVAC for 1 min. (between all inputs and outputs; detection current: 20 mA) 2.0 kVAC for 1 min. (between all inputs and PE terminals; detection current: 20 mA) 1.0 kVAC for 1 min. (between all outputs and PE terminals; detection current: 20 mA)			
	Insulation resistance	100 MΩ min. (between all outputs and all inputs/PE terminals) at 500 VDC			
	Vibration resistance	10 to 55 Hz, 0.375-mm single amplitude for 2h each in X, Y, and Z directions			
	Shock resistance	150m/s ² , 3 times each in ±X, ±Y, ±Z directions			
	Output indicator	Yes (Color: Green)			
	EMI	Conducted Emissions *3	Conforms to EN 55011 Group 1 Class A and based on FCC Class A		
		Radiated Emissions	Conforms to EN 55011 Group 1 Class A		
	EMS	Electrostatic Discharge	Confirms to EN61000-4-2		
		Radiated Electromagnetic Field	Confirms to EN61000-4-3		
		Electrical Fast Transient/Burst	Confirms to EN61000-4-4		
		Surge	Confirms to EN61000-4-5		
		Conducted Disturbance	Confirms to EN61000-4-6		
	Voltage Dips/Short Interruptions	Confirms to EN61000-4-11			
	Approved standards	UL 508 (Listing), UL 60950-1			
cUL: CSA C22.2 No. 107.1 cUR: CSA C22.2 No. 60950-1					
SEMI	EN/VDE: EN50178 (= VDE 0160), EN 60950-1 (= VDE 0805 Teil 1) (Terminal block: Based on DIN50274 (VDE 0660-514))				
	SEMI F47-0200 (200-VAC input)				
Weight *8	300 g max.	550 g max.	600 g max.		

*1. When a load is connected that has a built-in DC-DC converter, the overload protection may operate at startup and the Power Supply may not start. Refer to *Overload Protection* on page 11.

*2. Do not use an Inverter output for the Power Supply. Inverters with an output frequency of 50/60 Hz are available, but the rise in the internal temperature of the Power Supply may result in ignition or burning.

*3. Rated input voltage: 100 or 200 VAC at 100% load.

*4. Output characteristics: Specified at power supply output terminals.

*5. If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by more than +15% of the voltage adjustment range. When adjusting the output voltage, confirm the actual output voltage from the Power Supply and be sure that load is not damaged.

*6. For details, refer to *Overload Protection* on page 11.

*7. To reset the protection, turn OFF the input power for seven minutes or longer and then turn it back ON.

*8. The weight indicated is for Front-mounting, Open-frame Power Supplies.

Item		Input specification		100/200 V (Selected)		
		Power ratings *1		300 W	600 W	
Efficiency				82% min.	80% min.	
Input	Voltage *2		100 to 120 VAC (85 to 132 VAC) 200 to 240 VAC (170 to 264 VAC) (Switchable)			
	Frequency *2		50/60 Hz (47 to 450 Hz)			
	Current *3	100 V input	8 A max.		14 A max.	
		200 V input	4.5 A max.		8 A max.	
	Power factor		---			
	Harmonic current emissions		---			
	Leakage current *3	100 V input	0.5 mA max.			
		200 V input	1 mA max.			
	Inrush current (for a cold start at 25°C) *3	100 V input	25 A max.		30 A max.	
200 V input		50 A max.		60 A max.		
Noise filter		Yes				
Output *4	Voltage adjustment range *5		-10% to 15% (with V. ADJ)			
	Ripple *3		2% (p-p) max.			
	Input variation influence		0.4% max.			
	Load variation influence		0.8% max. (0 to 100% load, rated input voltage)			
	Temperature variation influence		0.05%/°C max.			
	Startup time		650 ms max.		500 ms max.	
	Hold time *3		20 ms min.			
Additional functions	Overload protection *6		105% of rated load current, voltage drop, intermittent, automatic reset		105% of rated load current, Inverted L voltage drop, the circuit will be shut OFF when the overload exceeds 5 s. *9	
	Overvoltage protection *7		Yes		Yes *9	
	Overheat protection		No		Yes *9	
	Parallel operation		Yes (up to 5 units)			
	Series operation		Yes (For up to two Power Supplies; external diodes required.)			
	Protective circuit operation indicator		No		Yes (color: red)	
Other	Ambient operating temperature		Refer to the derating curve in <i>Engineering Data</i> on page 9 (with no icing or condensation)			
	Storage temperature		-25 to 65°C (with no icing or condensation)			
	Ambient operating humidity		25% to 85% (Storage humidity: 25% to 90%)			
	Dielectric strength		3.0 kVAC for 1 min. (between all inputs and outputs; detection current: 25 mA) 2.0 kVAC for 1 min. (between all inputs and PE terminals; detection current: 25 mA) 1.0 kVAC for 1 min. (between all outputs and PE terminals; detection current: 25 mA)			
	Insulation resistance		100 MΩ min. (between all outputs and all inputs/PE terminals) at 500 VDC			
	Vibration resistance		10 to 55 Hz, 0.375-mm single amplitude for 2h each in X, Y, and Z directions			
	Shock resistance		150m/s ² , 3 times each in ±X, ±Y, ±Z directions			
	Output indicator		Yes (Color: Green)			
	EMI	Conducted Emissions *3		Conforms to EN 55011 Group 1 Class A and based on FCC Class A		
		Radiated Emissions		Conforms to EN 55011 Group 1 Class A		
	EMS	Electrostatic Discharge		Confirms to EN61000-4-2		
		Radiated Electromagnetic Field		Confirms to EN61000-4-3		
		Electrical Fast Transient/Burst		Confirms to EN61000-4-4		
		Surge		Confirms to EN61000-4-5		
		Conducted Disturbance		Confirms to EN61000-4-6		
	Voltage Dips/Short Interruptions		Confirms to EN61000-4-11			
	Approved standards		UL 508 (Recognition), UL 60950-1 cUL: CSA C22.2 No. 107.1 cUR: CSA C22.2 No. 60950-1 EN/VDE: EN50178 (= VDE 0160), EN 60950-1 (= VDE 0805 Teil 1) (Terminal block: Based on DIN50274 (VDE 0660-514))			
SEMI		SEMI F47-0200 (200-VAC input)				
Weight *8		1,600 g max.		2,500 g max.		

*1. When a load is connected that has a built-in DC-DC converter, the overload protection may operate at startup and the Power Supply may not start. Refer to *Overload Protection* on page 11.

*2. Do not use an Inverter output for the Power Supply. Inverters with an output frequency of 50/60 Hz are available, but the rise in the internal temperature of the Power Supply may result in ignition or burning.

*3. Rated input voltage: 100 or 200 VAC at 100% load.

*4. Output characteristics: Specified at power supply output terminals.

*5. If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by more than +15% of the voltage adjustment range. When adjusting the output voltage, confirm the actual output voltage from the Power Supply and be sure that load is not damaged.

*6. For details, refer to *Overload Protection* on page 11.

*7. To reset the protection, turn OFF the input power for three minutes or longer and then turn it back ON.

*8. The weight indicated is for Front-mounting, Open-frame Power Supplies.

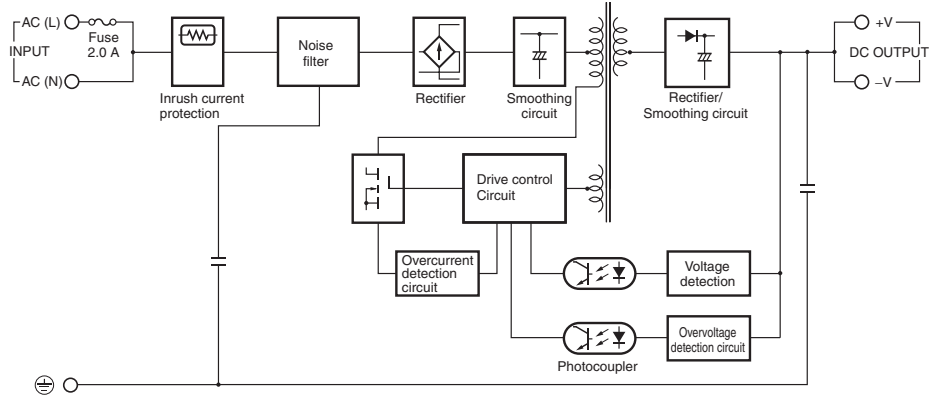
*9. The protection-ON alarm indicator will light as soon as the output is interrupted. For resetting, turn OFF the input power, leave for more than three minutes, and then turn it back ON again.

S8JX

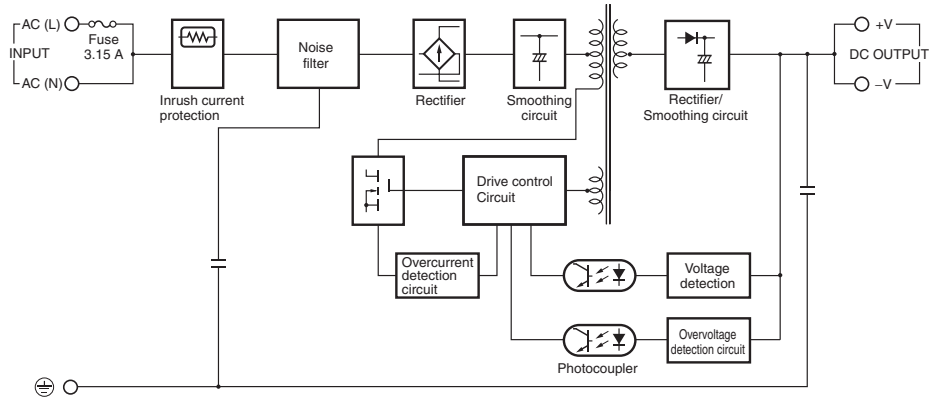
Connections

Block Diagrams

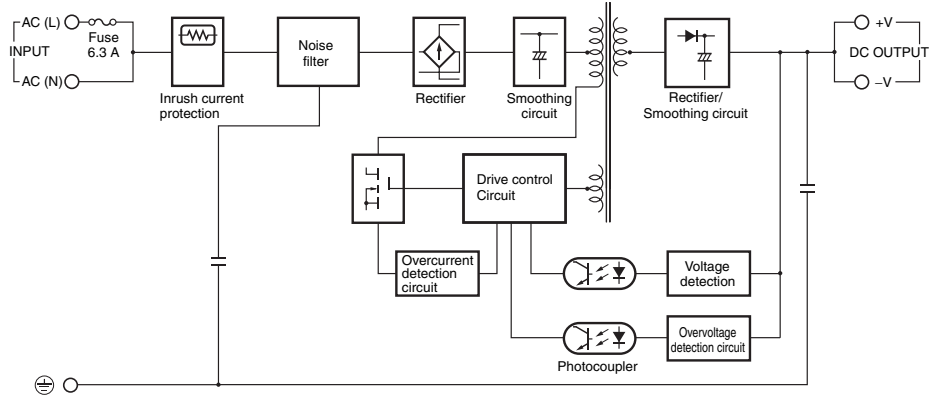
S8JX-G015□□□□ (15 W)



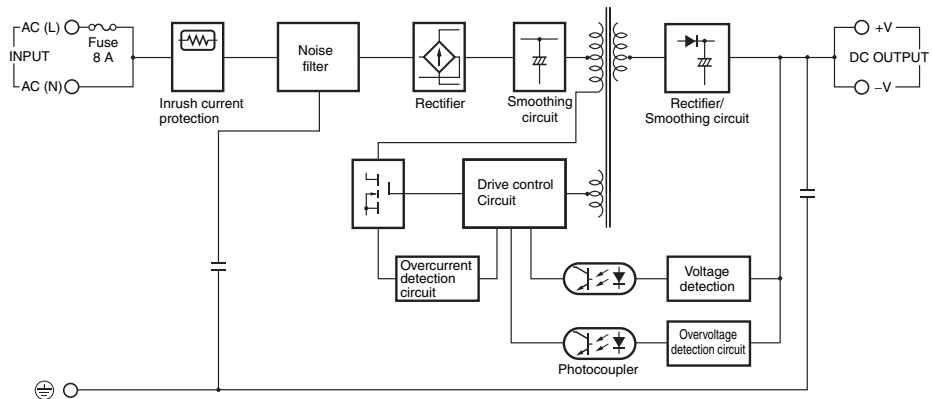
S8JX-G035□□□□ (35 W)



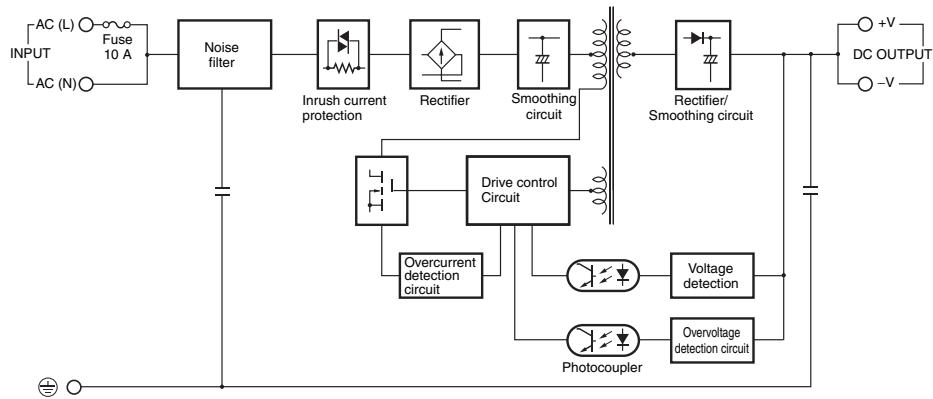
S8JX-G050□□□□ (50 W)



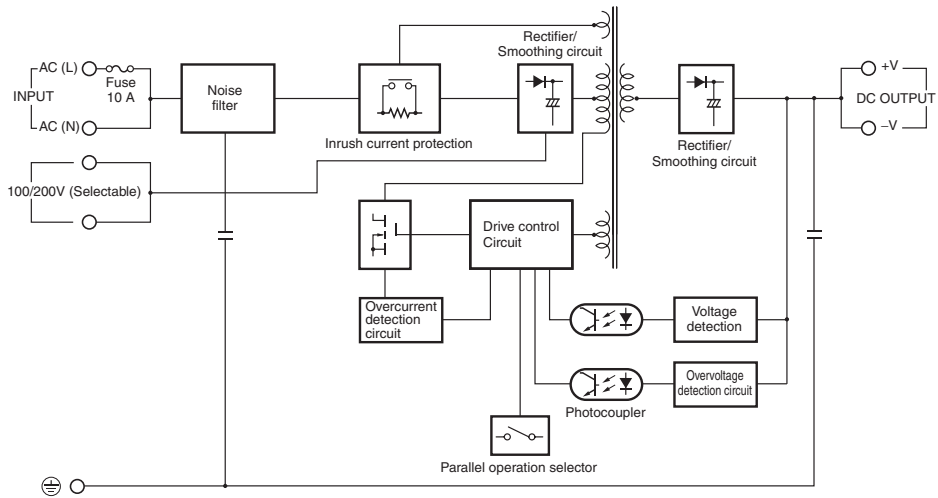
S8JX-G100□□□□ (100 W)



S8JX-G15024□□ (150 W)

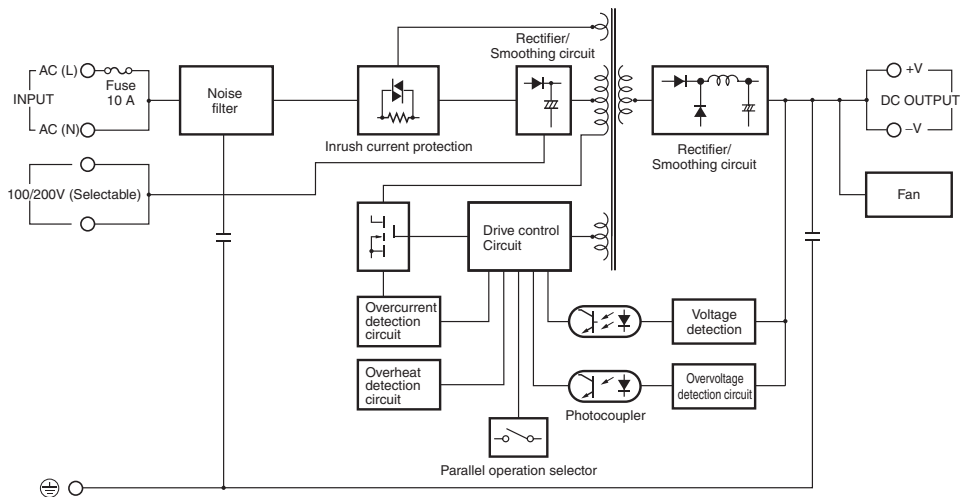


S8JX-G30024□□ (300 W)



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 240 VAC.

S8JX-G60024□□ (600 W)



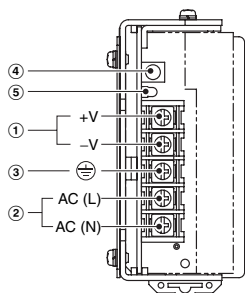
Note: Short-circuit the input voltage selector terminals if the input is 100 to 120 VAC. Keep the terminals open if the input is 200 to 240 VAC.

S8JX

Construction and Nomenclature

Nomenclature

15-/35-/50-/100-/150-W Models



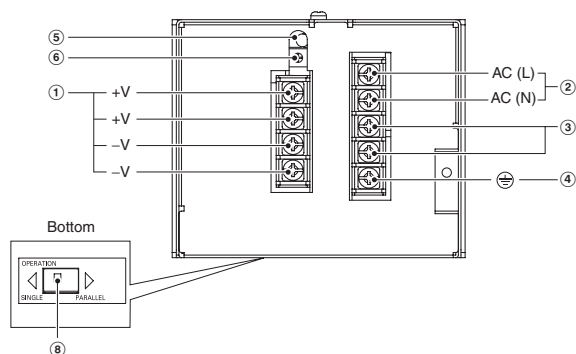
No.	Name	Function
1	DC Output Terminals (-V), (+V)	Connect the load lines to these terminals.
2	AC Input Terminals (L), (N)	Connect the input lines to these terminals. *1
3	Protective Earth Terminal (PE) (\oplus)	Connect the ground line to these terminals. *2
4	Output Voltage Adjuster (V. ADJ)	Use to adjust the voltage.
5	Output Indicator (DC ON: Green)	Lights green while a direct current (DC) output is ON.

*1. The fuse is located on the (L) side. It is NOT user-replaceable.

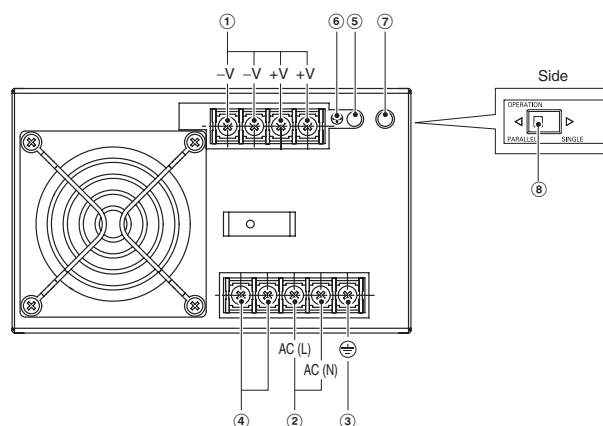
*2. This is the protective earth terminal specified in the safety standards. Always ground this terminal.

Note: The S8JX-G05024CD is shown above.

300-W Model



600-W Model



No.	Name	Function
1	DC Output Terminals (+V), (-V)	Connect the load lines to these terminals.
2	AC Input Terminals (L), (N)	Connect the input lines to these terminals. *1
3	Protective Earthing Terminal (\oplus)	Connect the ground line to these terminals. *2
4	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.
5	Output Indicator (DC ON: Green)	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.
7	Protection-ON Alarm Indicator (DC ON: Red)	The red indicator will be lit if the overvoltage (for a 600-W model) or overheat protection (for a 600-W model) circuit is triggered. This indicator will also be lit when overload (for a 600-W model) is detected.
8	Selector of Parallel Operation	Set the selector to PARALLEL if the Units are in parallel operation.

*1. The fuse is located on the (L) side. It is NOT user-replaceable.

*2. This is the protective earth terminal specified in the safety standards. Always ground this terminal.

Reference Values

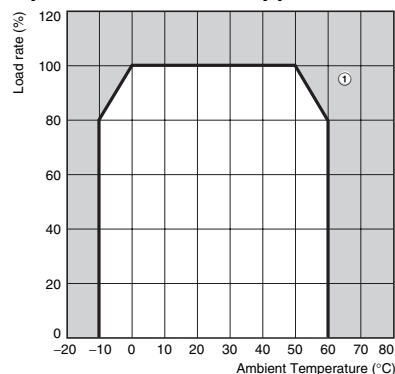
	Value
Reliability (MTBF)	15 W: 300,000 hrs
	35 W: 300,000 hrs
	50 W: 300,000 hrs
	100 W: 270,000 hrs
	150 W: 250,000 hrs
	300 W: 400,000 hrs
	600 W: 300,000 hrs
Definition	MTBF stands for Mean Time Between Failures, which is calculated according to the probability of accidental device failures, and indicates reliability of devices. Therefore, it does not necessarily represent a life of the product.
Life expectancy	10 yrs. min.
Definition	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.

Engineering Data

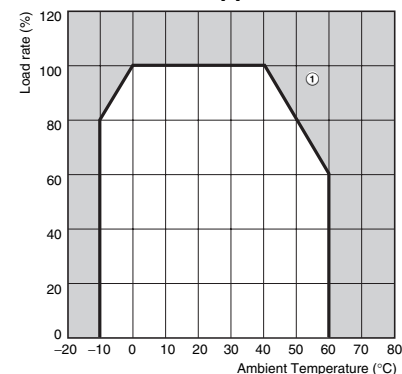
Derating Curves (Standard Mounting)

15-/35-/50-/100-/150-W Models

Open-frame Power Supplies



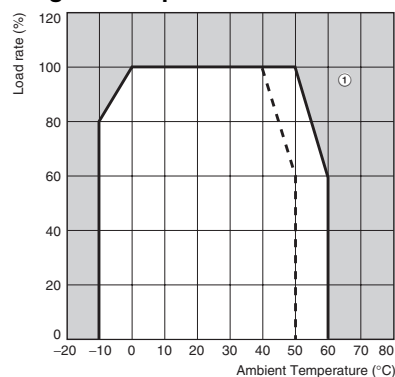
Covered Power Supplies



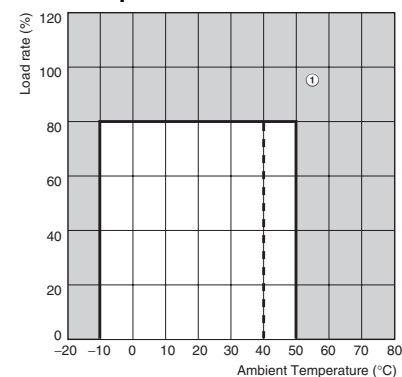
- Note:**
1. Internal parts may occasionally deteriorate or be damaged. Do not use the Power Supply in areas outside the derating curve (i.e., the area shown by shading ① in the above graph).
 2. If there is a derating problem, use forced air-cooling.

300-/600-W Models

Single Unit Operation



Parallel Operation



- Solid line Front-mounting, Bottom-mounting, DIN Rail mounting, Side mounting (600W)
- - - Dotted line Side mounting (300W)

- Note:**
1. Internal parts may occasionally deteriorate or be damaged. Do not use the Power Supply in areas outside the derating curve (i.e., the area shown by shading ① in the above graph).
 2. If there is a derating problem, use forced air-cooling.

Mounting

15-/35-/50-/100-/150-W Models

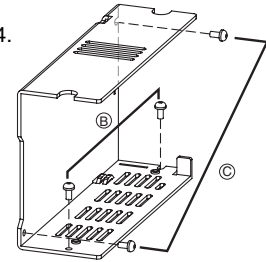
The following three mounting methods are possible.

A. Front-mounting: Refer to *Mounting Bracket Provided with Front-mounting Power Supplies* (A) on page 14.

B. Bottom-mounting

C. Side-mounting

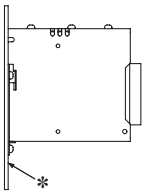
Note: Additional mounting methods are also available using DIN Rail-mounting models.



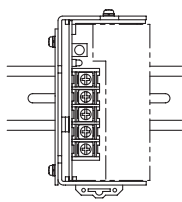
Standard Mounting

15-/35-/50-/100-/150-W Models

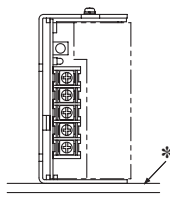
Front-mounting



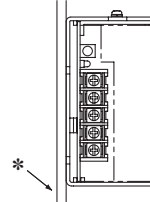
DIN Rail-mounting



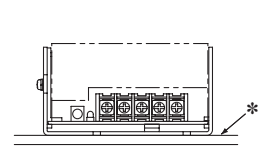
Bottom-mounting



Vertical Side-mounting



Horizontal Side-mounting



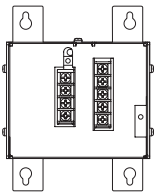
Note: 1. Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. Use the standard mounting method only.

2. When mounting the Power Supply, mounting it to a metal plate (*) is recommended.

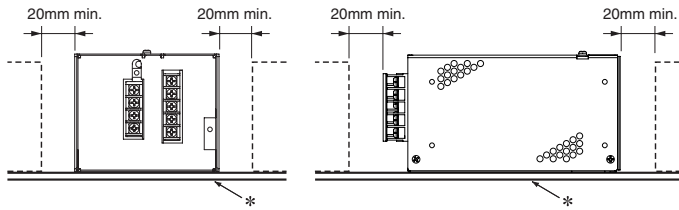
3. Install the Power Supply so that the air flow circulates around the Power Supply, as the Power Supply is designed to radiate heat by means of natural air flow.

300-W Model

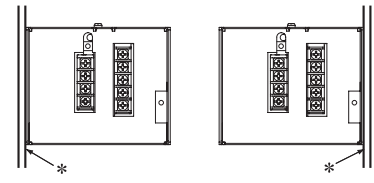
Front-mounting



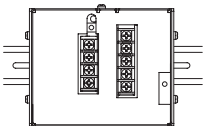
Bottom-mounting



Side-mounting



DIN Rail mounting



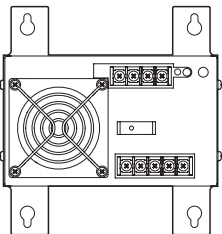
Note: 1. Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. Use the standard mounting method only.

2. When mounting the Power Supply, mounting it to a metal plate (*) is recommended.

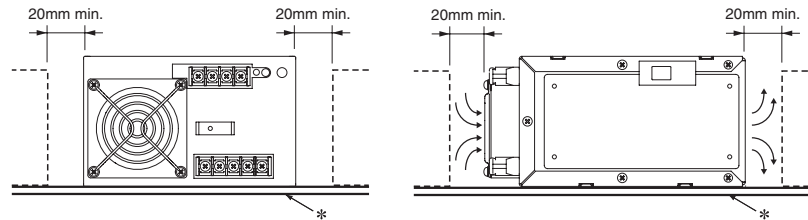
3. Install the Power Supply so that the air flow circulates around the Power Supply, as the Power Supply is designed to radiate heat by means of natural air flow.

600-W Model

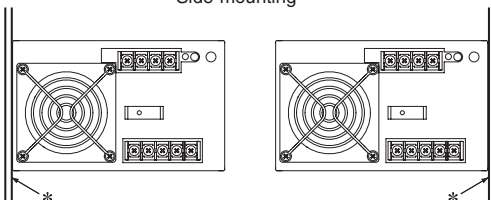
Front-mounting



Bottom-mounting



Side-mounting



Note: 1. Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. Use the standard mounting method only.

2. When mounting the Power Supply, mounting it to a metal plate (*) is recommended.

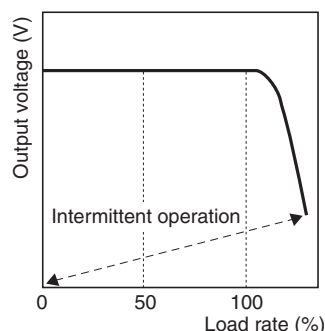
3. Install the Power Supply so that the air flow circulates around the Power Supply, as the Power Supply is designed to radiate heat by means of natural air flow.

Overload Protection

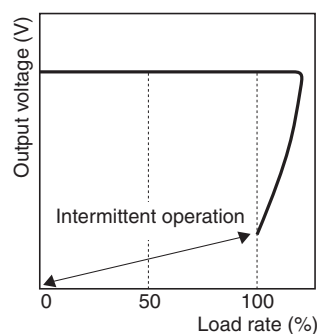
The Power Supply is provided with an overload protection function that protects the power supply from possible damage by overcurrent. When the output current rises above 105% min. of the rated current, the protection function is triggered, decreasing the output voltage. When the output current falls within the rated range, the overload protection function is automatically cleared.

(Reference value)

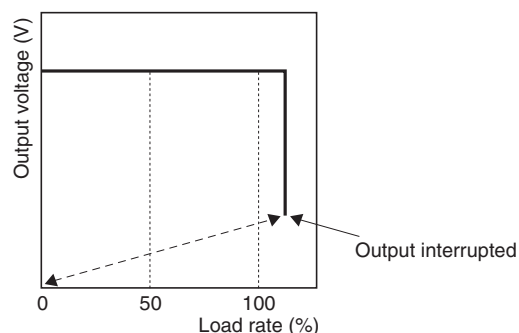
15-/35-/50-/100-/150-W Models



300-W Model



600-W Model



If an excessive current flows for 5 s or more, the output will be turned OFF and simultaneously the protection-ON alarm indicator will be lit. To reset the S8JX, turn OFF the power, leave the S8JX for at least three minutes, and then turn it ON again.

- Note:**
1. When a load is connected that has a built-in DC-DC converter, the overload protection may operate at startup and the power supply may not start.
 2. Internal parts may occasionally deteriorate or be damaged if a short-circuited or overcurrent state continues during operation.
 3. Internal parts may possibly deteriorate or be damaged if the Power Supply is used for applications with frequent inrush current or overloading at the load end. Do not use the Power Supply for such applications.

Overvoltage Protection

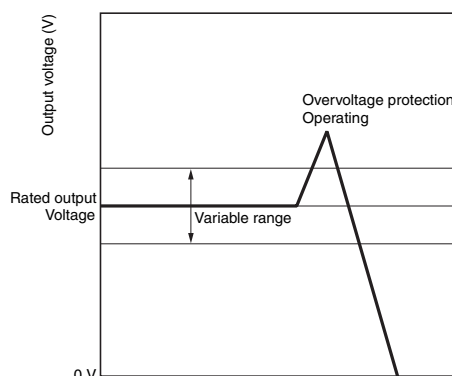
15-/35-/50-/100-/150-W Models

Consider the possibility of an overvoltage and design the system so that the load will not be subjected to an excessive voltage even if the feedback circuit in the power supply fails. When an excessive voltage that is approximately 130% of the rated voltage or more is output, the output voltage is shut OFF, preventing damage to the load due to overvoltage. Reset the input power by turning it OFF for at least seven minutes and then turning it back ON again.

300-/600-W Models

Consider the possibility of an overvoltage and design the system so that the load will not be subjected to an excessive voltage even if the feedback circuit in the Power Supply fails. When an excessive voltage that is approximately 130% of the rated voltage or more is output, the output voltage is shut OFF, preventing damage to the load due to overvoltage. Reset the input power by turning it OFF for at least seven minutes and then turning it back ON again.

(Reference value)



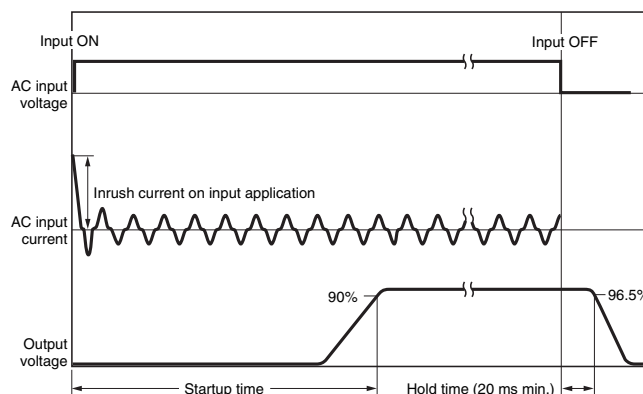
Note: Do not turn ON the power again until the cause of the overvoltage has been removed.

Overheat Protection

600-W Model

If the internal temperature rises excessively as a result of fan failure or any other reason, the overheat protection circuit will be triggered to protect the internal parts and simultaneously the protection-ON alarm indicator will be lit. Reset the input power by turning it OFF for at least three minutes and then turning it back ON again.

Inrush Current, Startup Time, Output Hold Time



Note: A maximum startup time of 500 ms is required. Construct a system configuration that considers the startup time of other devices.

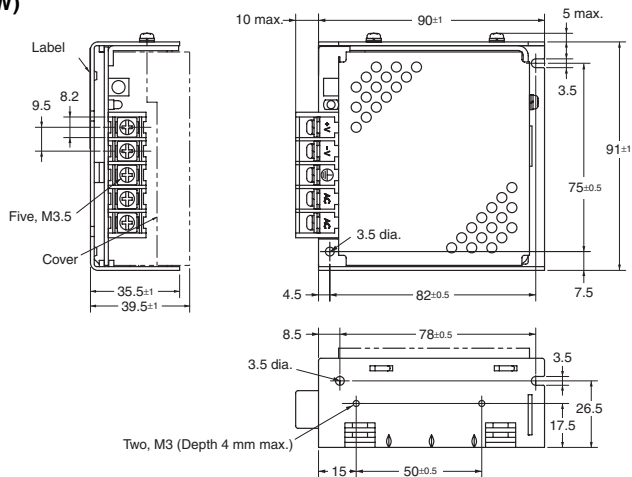
S8JX

Dimensions

(Unit: mm)

Front-mounting Models

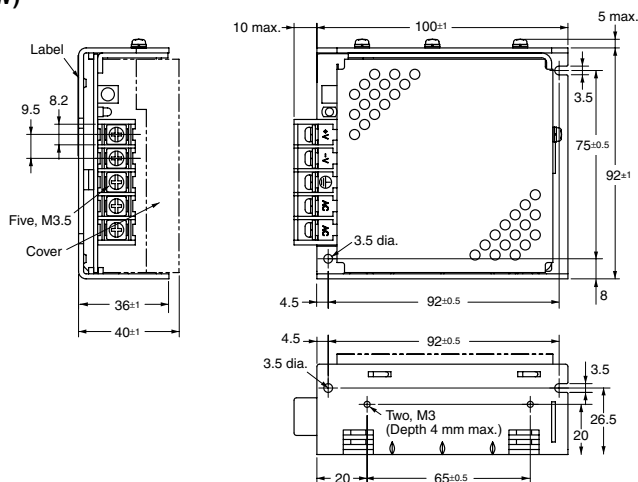
- S8JX-G015□□ (15 W)
- S8JX-G015□□C (15 W)
- S8JX-G035□□ (35 W)
- S8JX-G035□□C (35 W)



Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	Two, M3 75±0.5 82±0.5
Bottom Mounting	Two, M3 78±0.5

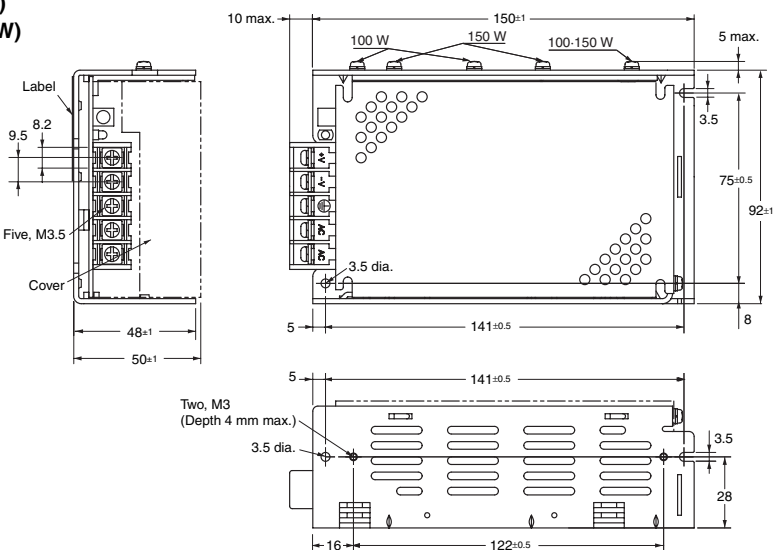
- S8JX-G050□□ (50 W)
- S8JX-G050□□C (50 W)



Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	Two, M3 75±0.5 92±0.5
Bottom Mounting	Two, M3 92±0.5

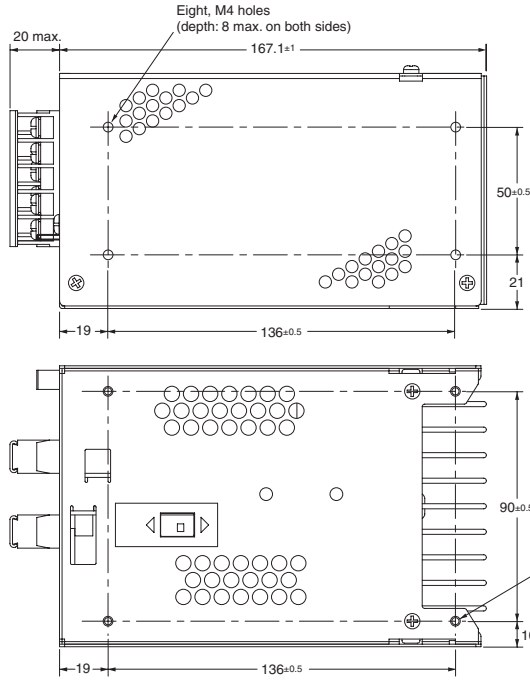
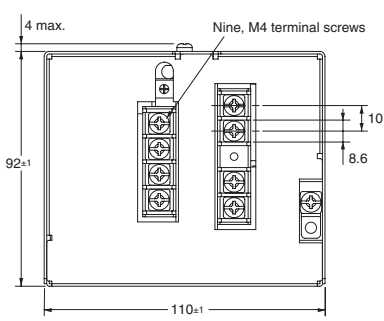
- S8JX-G100□□ (100 W)
- S8JX-G100□□C (100 W)
- S8JX-G15024 (150 W)
- S8JX-G15024C (150 W)



Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	Two, M3 75±0.5 141±0.5
Bottom Mounting	Two, M3 141±0.5

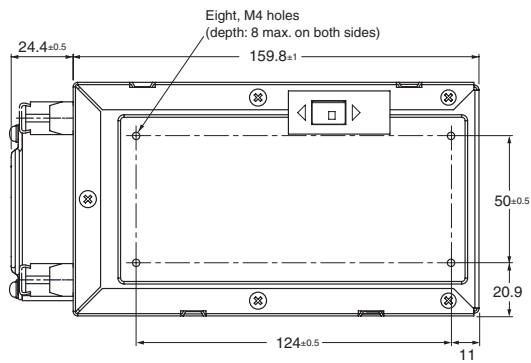
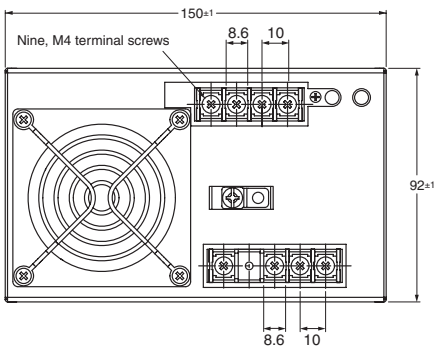
S8JX-G30024C (300 W)



Panel mounting holes dimensions

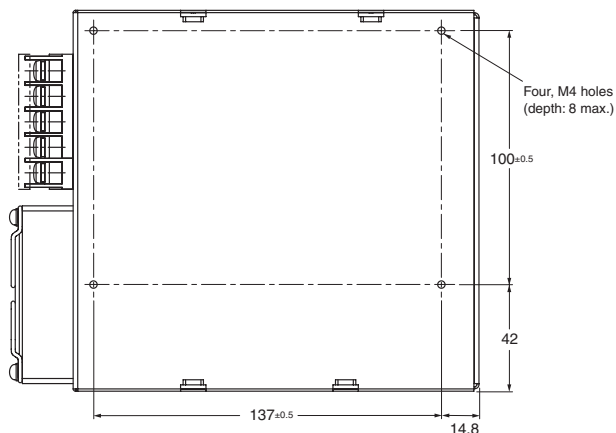
Surface screw mounting	
Side Mounting	Four, 4.5 dia. 50±0.5 136±0.5
	Four, 4.5 dia. 90±0.5 136±0.5

S8JX-G60024C (600 W)



Panel mounting holes dimensions

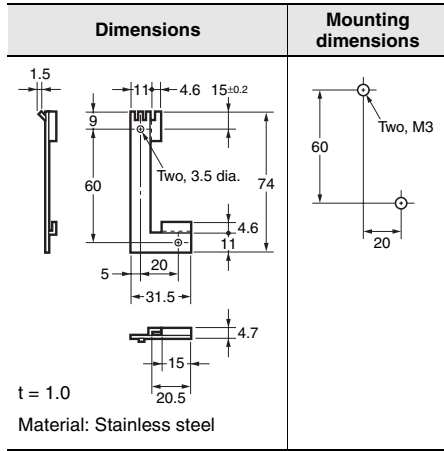
Surface screw mounting	
Side Mounting	Four, 4.5 dia. 50±0.5 124±0.5
	Four, 4.5 dia. 100±0.5 137±0.5



Mounting Bracket Provided with Front-mounting Power Supplies (A)

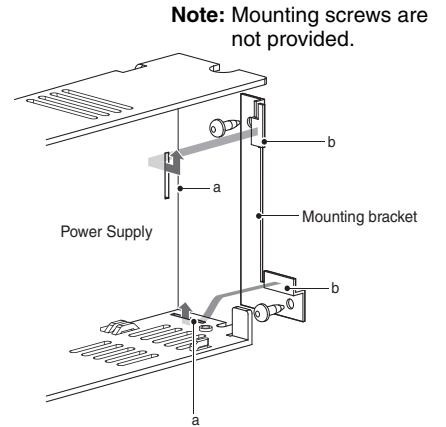
15-/35-/50-/100-/150-W Models

Front-mounting Bracket



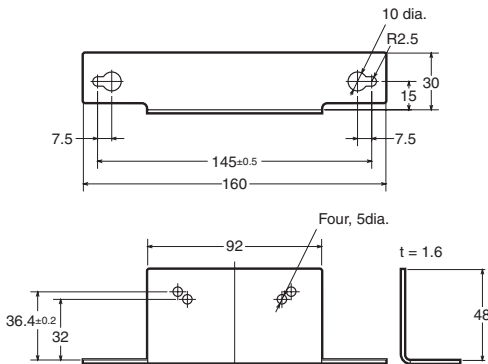
Front-mounting Method

Temporarily attach the enclosed mounting bracket as shown in the illustration on the right, hook the holes (parts a) in the Power Supply on hooks on the mounting bracket (parts b), and secure the Power Supply with two mounting screws.



300-/600-W Models

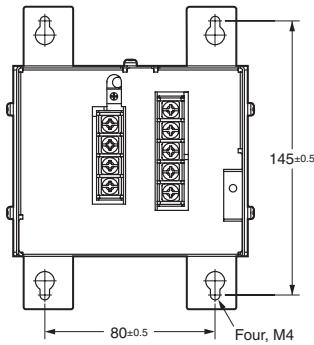
Front-mounting Bracket



Note: Mounting Brackets are provided in a set, one for the right side and one for the left side.

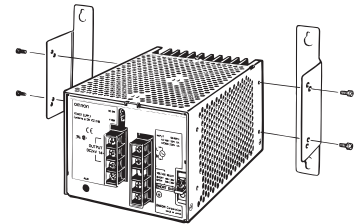
Dimensions with Mounting Brackets

300-W Model



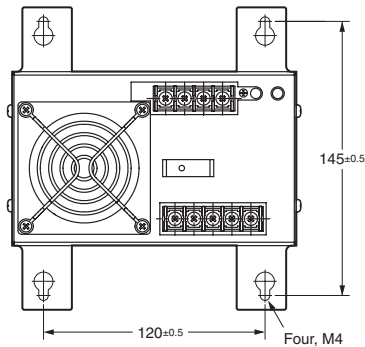
Attaching the Mounting Brackets

300-W Model

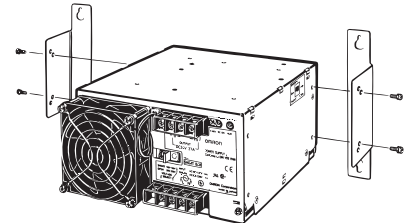


Note: To provide ventilation space, the body will shift forward by 21.6 mm from the mounting surface.

600-W Model



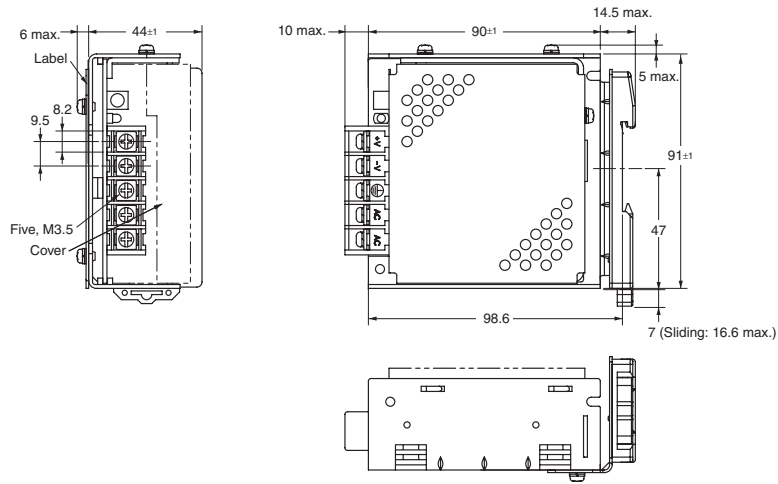
600-W Model



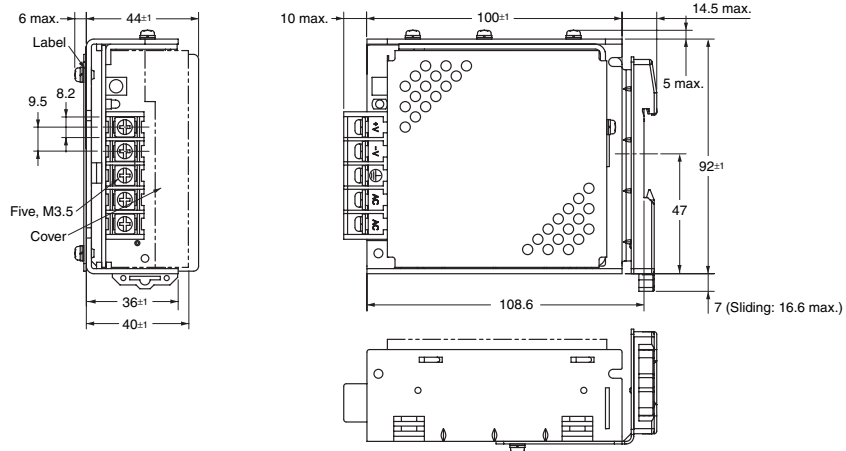
Note: To provide ventilation space, the body will shift forward by 23.6 mm from the mounting surface.

DIN Rail-mounting Models

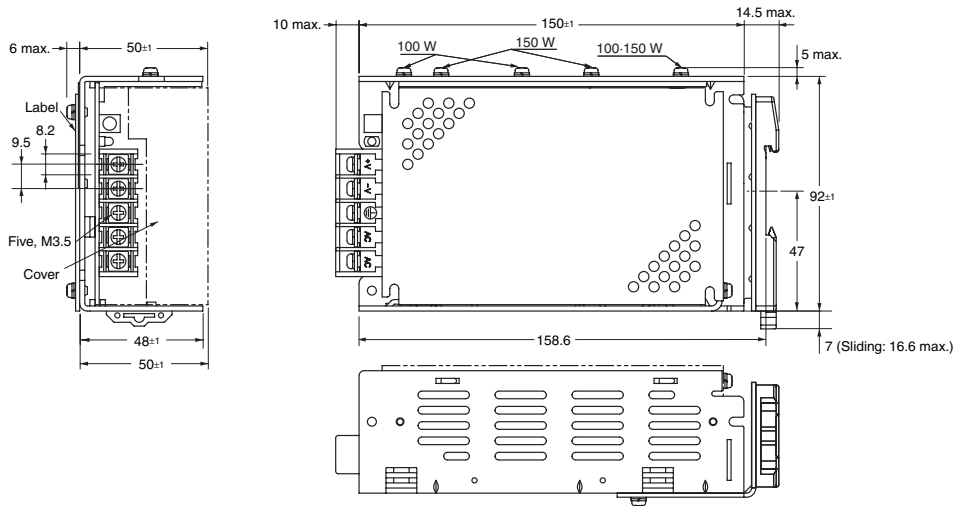
- S8JX-G015□□ (15 W)
- S8JX-G015□□CD (15 W)
- S8JX-G035□□ (35 W)
- S8JX-G035□□CD (35 W)



- S8JX-G050□□D (50 W)
- S8JX-G050□□CD (50 W)

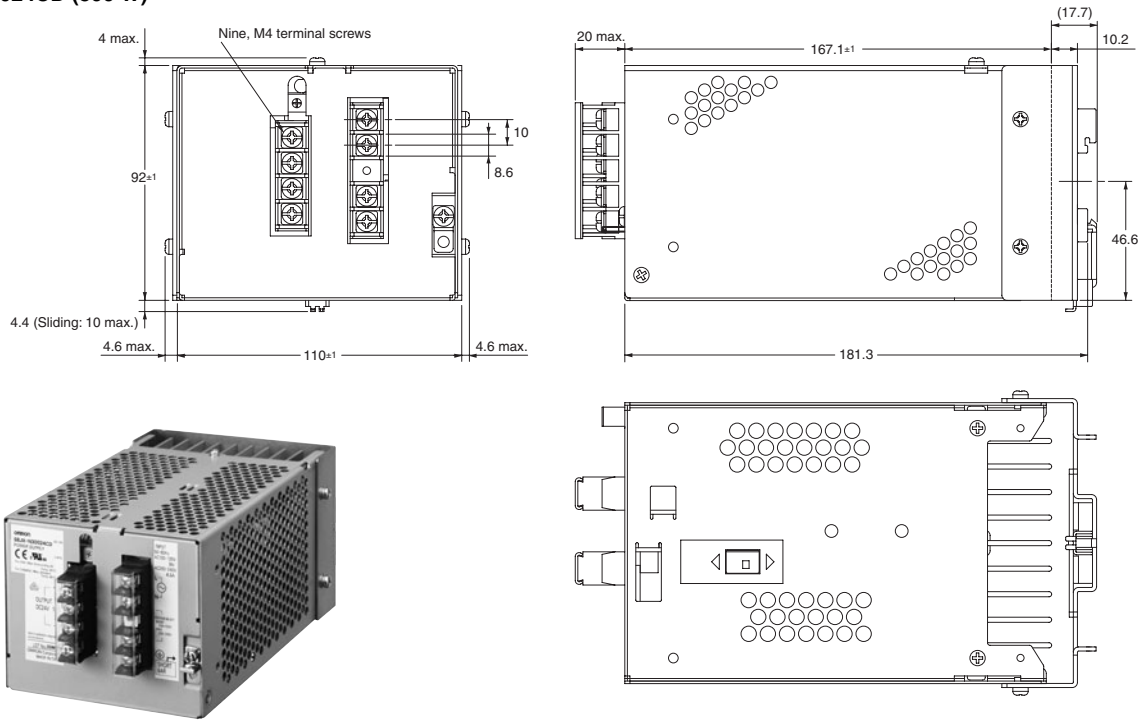


- S8JX-G100□□D (100 W)
- S8JX-G100□□CD (100 W)
- S8JX-G15024D (150 W)
- S8JX-G15024CD (150 W)



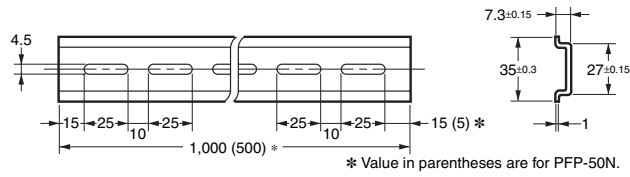
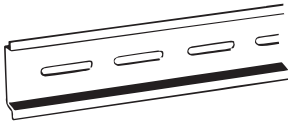
S8JX

S8JX-G30024CD (300 W)



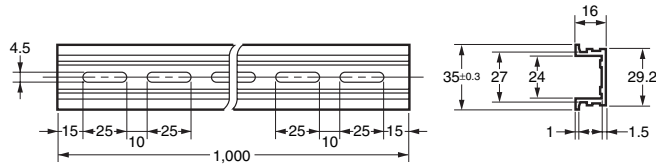
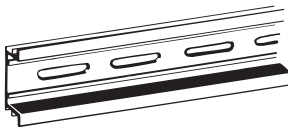
DIN Rail (Order Separately)

Mounting Rail (Material: Aluminum)



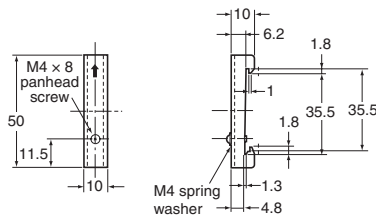
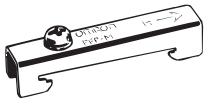
Model
PFP-100N
PFP-50N

Mounting Rail (Material: Aluminum)



Model
PFP-100N2

End Plate



Model
PFP-M

- Note:**
1. If there is a possibility that the Unit will be subject to vibration or shock, use a steel DIN Rail. Otherwise, metallic filings may result from aluminum abrasion.
 2. If the Unit may be subjected to sliding to either side, attach an End Plate (model PFP-M) on each side of the Unit.

Safety Precautions

Refer to *Safety Precautions for All Power Supplies*.

CAUTION

Minor electric shock, fire, or Product failure may occasionally occur. Do not disassemble, modify, or repair the Product to touch the interior of the Product.



Minor burns may occasionally occur. Do not touch the Product while power is being supplied or immediately after power is turned OFF.



Fire may occasionally occur. Tighten terminal screws to the specified torque of 1.13 N·m.



Minor injury due to electric shock may occasionally occur. Do not touch the terminals while power is being supplied. Always close the terminal cover after wiring.



Minor electric shock, fire, or Product failure may occasionally occur. Do not allow any pieces of metal or conductors or any clippings or cuttings resulting from installation work to enter the Product.



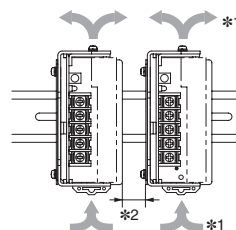
Precautions for Safe Use

Mounting

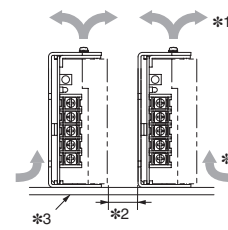
- Take adequate measures to ensure proper heat dissipation to increase the long-term reliability of the Product.
- Be sure to allow convection in the atmosphere around devices when mounting. Do not use in locations where the ambient temperature exceeds the range of the derating curve. (except 600 W)
- The S8JX-□60024□ is designed to radiate heat by means of forced air-flow. Do not cover the air holes (provided at fan mounted side and the opposite side) to have enough air-cooling.
- The screws must not protrude more than 8 mm inside the Power Supply when screw holes provided on the chassis are used. (300 W, 600 W)
Mounting screw tightening torque (recommended value) : 0.54 N·m.
- Rear mounting is possible using provided mounting bracket.
- When cutting out holes for mounting, make sure that cuttings do not enter the interior of the Products.
- Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. Use the standard mounting method only.
- The internal parts may occasionally deteriorate and be broken due to adverse heat radiation. Do not loosen the screw on the side face of the main body.
- When mounting two or more Power Supplies side-by-side, allow at least 20 mm spacing between them.
- Provide a space of at least 20 mm back and forth when mounting 300-W and 600-W models as well.
- Use the metal plate as the mounting panel.

15-/35-/50-/100-/150-W Models

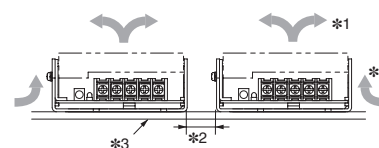
Standard Mounting
(Front-mounting and DIN Rail-mounting)



Standard Mounting
(Bottom-mounting)

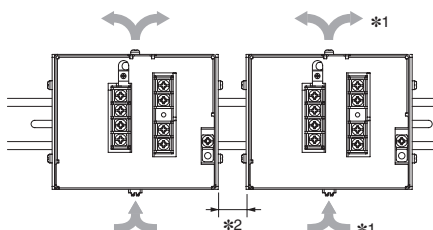


Standard Mounting
(Horizontal Mounting)

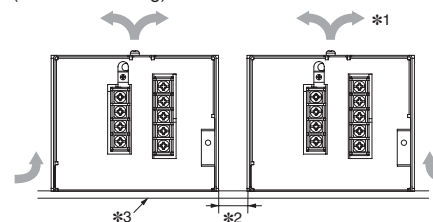


300-W Model

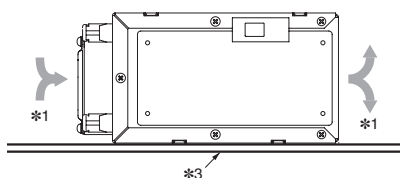
Standard Mounting
(Front-mounting and DIN Rail-mounting)



Standard Mounting
(Bottom-mounting)



600-W Model



*1. Convection of air

*2. 20 mm max.

*3. Use a metal plate as the mounting surface.

Wiring

- Connect the ground completely. A protective earthing terminal stipulated in safety standards is used. Electric shock or malfunction may occur if the ground is not connected completely.
- Minor fire may possibly occur. Ensure that input and output terminals are wired correctly.
- Do not apply more than 75 N force to the terminal block when tightening it.
- Be sure to remove the sheet covering the Product for machining before power-ON so that it does not interfere with heat dissipation.
- Use the following material for the wires to be connected to the S8JX to prevent smoking or ignition caused by abnormal loads.

Recommended Wire Type

15 W, 35 W	AWG12 to AWG20 (a cross section of 0.517 to 3.309 mm ²) UL-certified temperature of a t least 75°C
50W, 100W, 150 W	AWG12 to AWG16 (a cross section of 1.309 to 3.309 mm ²) UL-certified temperature of a t least 60°C or 60/75°C
300 W, 600 W	AWG12 to AWG20 (a cross section of 0.517 to 3.309 mm ²) UL-certified temperature of a t least 60°C or 60/75°C

Installation Environment

- Do not use the Power Supply in locations subject to shocks or vibrations. In particular, install the Power Supply as far away as possible from contactors or other devices that are a vibration source.
- Install the Power Supply well away from any sources of strong, high-frequency noise and surge.

Ambient Operating and Storage Environments

- Store the Power Supply at a temperature of -25 to 65°C and a humidity of 25% to 90%.
- The Internal parts may occasionally deteriorate or be damaged. Do not use the Power Supply outside the derating range (i.e., the area shown by shading ① in the derating curve diagram on page 9.)
- Use the Power Supply at a humidity of 25% to 85%.
- Do not use the Power Supply in locations subject to direct sunlight.
- Do not use locations where liquids, foreign matter, or corrosive gases may enter the interior of the Product.

Overload Protection

- Internal parts may possibly deteriorate or be damaged if a short-circuited or overload state continues during operation.
- Internal parts may possibly deteriorate or be damaged if the Power Supply is used for applications with frequent inrush current or overloading at the load end. Do not use the Power Supply for such applications.

Charging a Battery

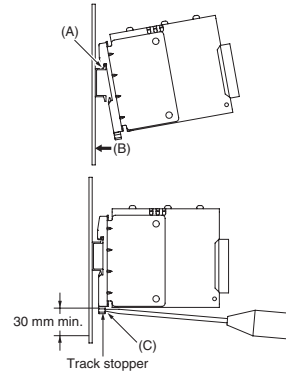
When connecting a battery at the load, connect an overcurrent limiting circuit and overvoltage protection circuit.

Output Voltage Adjuster (V.ADJ)

- The output voltage adjuster (V.ADJ) may possibly be damaged if it is turned with unnecessary force. Do not turn the adjuster with excessive force.
- After completing output voltage adjustment, be sure that the output capacity or output current does not exceed the rated output capacity or rated output current.

DIN Rail-mounting

To mount the Power Supply to a DIN Rail, pull down the rail stopper until you hear it clicks open, hook portion (A) of the Power Supply onto the DIN Rail, press the Power Supply in direction (B), and then push up the rail stopper to lock the Power Supply in place.

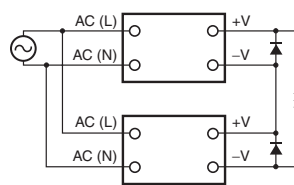


To dismount the Power Supply, pull down portion (C) with a flat-blade screwdriver and pull out the Power Supply.

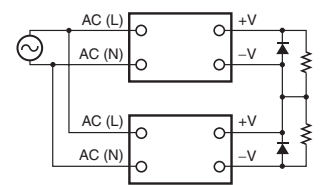
Series Operation

Two power supplies can be connected in series. The (±) voltage output can be accomplished with two Power Supplies.

Series Operation Correct



Output Voltage (±) Correct



Note: 1. If the load is short-circuited, a reverse voltage will be generated inside the Power Supply. If this occurs the Power Supply may possibly deteriorate or be damaged. Always connect a diode as shown in the figure. Select a diode having the following ratings.

Type	Schottky Barrier diode
Dielectric strength (V _{RRM})	Twice the rated output voltage or above
Forward current (I _F)	Twice the rated output current or above

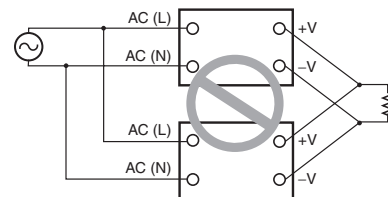
2. Although Products having different specifications can be connected in series, the current flowing through the load must not exceed the smaller rated output current.

Parallel Operation

15-/35-/50-/100-/150-W Models

The Product is not designed for parallel operation.

Parallel Operation Incorrect

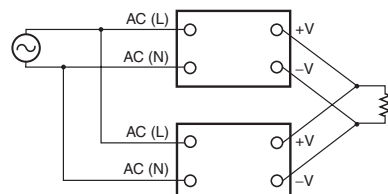


300-/600-W Models

Parallel operation is possible under 80% of the rated value.

- To operate in parallel, set the switch to the "PARALLEL" side.
- The length and thickness of each wire connected to the load must be the same so that there is no difference in voltage drop value between the load and the output terminals of each Power Supply.
- It is desirable to set the same value on the voltage adjuster of each Power Supply.

Parallel Operation Correct



In Case There Is No Output Voltage

The possible cause for no output voltage may be that the overcurrent or overvoltage protection has operated. The internal protection may operate if a large amount of surge voltage such as a lightning surge occurs while turning ON the Power Supply.

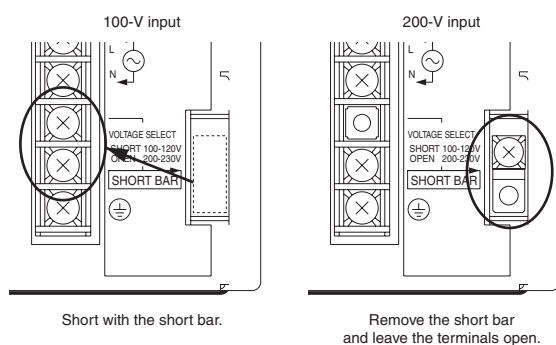
In case there is no output voltage, please check the following points before contacting us:

- Checking overcurrent protected status:
Check whether the load is in overcurrent status or is short-circuited. Remove wires to load when checking.
- Checking overvoltage or internal protection:
Turn the power supply OFF once, and leave it OFF for at least 7 minutes. Then turn it ON again to see if this clears the condition.

Switching the AC Input Voltage between 100 and 200 VAC

300-/600-W Models

The input voltage can be switched between 100 and 200 V by shorting or opening the input voltage selection terminals. Set the required voltage as shown below. (The voltage is factory-set to 200 V.)

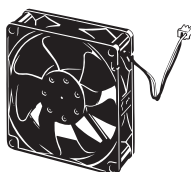


Note: A 300-W model is shown above.

Fan Replacement

600-W Model

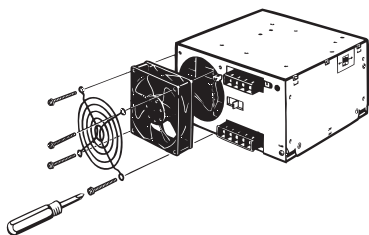
The service life of the fan is approximately 50,000 hours (at 25°C). The service life varies, however, depending on the ambient temperature or other surrounding environmental conditions such as dust. As a preventive maintenance measure, replace the fan within approx. two years if it is used at an ambient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



Fan Set:

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

Replace the fan as shown in the following illustration.



S8JX

Typical Values

For Reference Only

Item		Power ratings	15 W	35 W	50 W	100 W	150 W	300 W	600 W	
Efficiency		5-V models	75%	79%	80%	81%	---	---	---	
		12-V models	80%	84%	85%	86%	---	---	---	
		15-V models	80%	84%	---	---	---	---	---	
		24-V models	81%	84%	86%	88%	90%	88%	81%	
Input	Current	230 V input	0.19 A	0.43 A	0.6 A	1.1 A	1.9 A	3.5 A	7.3 A	
	Leakage current		0.30 mA	0.30 mA	0.35 mA	0.30 mA	0.45 mA	0.7 mA	0.6 mA	
	Inrush current (See Note 1.)		40 A	40 A	40 A	37 A	42 A	35 A	35 A	
Output	Ripple	f = 20 MHz measuring	5-V models	0.35%(p-p)	0.35%(p-p)	0.60%(p-p)	1.25%(p-p)	---	---	---
			12-V models	0.20%(p-p)	0.20%(p-p)	0.30%(p-p)	0.50%(p-p)	---	---	---
			15-V models	0.15%(p-p)	0.15%(p-p)	---	---	---	---	---
			24-V models	0.10%(p-p)	0.15%(p-p)	0.15%(p-p)	0.25%(p-p)	0.45%(p-p)	0.75%(p-p)	0.60%(p-p)
		f = 100 MHz measuring	5-V models	0.50%(p-p)	0.55%(p-p)	0.75%(p-p)	1.50%(p-p)	---	---	---
			12-V models	0.30%(p-p)	0.35%(p-p)	0.35%(p-p)	0.70%(p-p)	---	---	---
			15-V models	0.20%(p-p)	0.30%(p-p)	---	---	---	---	---
			24-V models	0.20%(p-p)	0.20%(p-p)	0.20%(p-p)	0.40%(p-p)	0.60%(p-p)	1.10%(p-p)	0.60%(p-p)
	Start up time (See note 1.)	at 100% load	200 ms	200 ms	210 ms	220 ms	250 ms	350 ms	115 ms	
	Hold time (See note 1.)	at 100% load	5-V models	200 ms	200 ms	190 ms	180 ms	---	---	---
12-V models			200 ms	200 ms	190 ms	170 ms	---	---	---	
15-V models			210 ms	200 ms	---	---	---	---	---	
24-V models			200 ms	200 ms	210 ms	170 ms	210 ms	50 ms	50 ms	

Note: 1. Refer to the *Engineering Data* on pages 9 to 11 for details.

2. The typical values indicate the values for an input condition of 230 VAC. All items are measured at a frequency of 50 Hz.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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