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OMRON

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

S8JX-G Series

Easy-to-use, Widely range from 15 W to 600 W (Output Voltage: 5 V to 48 V)

- Easy Mounting:
  Front-mounted type, DIN rail-mounted type are available.
  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) Over voltage category III
  EN 60950-1 (= VDE 0805 Teil 1)
- EMC: Conforms to EN 61204-3.
  (EMI:EN55011 ClassA)
- Input conditions:
  The input voltage range of 15-W, 35-W, 50-W, 100-W, and 150-W models has been increased to 80 to 370 VDC (EC Directives and safety standards do not apply.).

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

S8JX-P Series

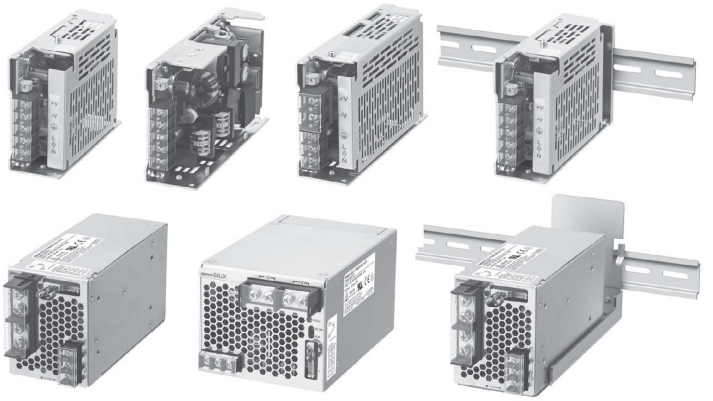
S8JX-P Series with EMI ClassB and Power Factor Correction is newly added to S8JX Series.

(Applicable to all capacities from 50 W to 600 W)

- Limits for harmonic current emissions (conforms to EN61000-3-2)
- Conforms to EMI EN55011 Class B
- Applicable to input free voltage: 100 to 240 VAC
- Extended DC input voltage range: 80 to 370 VDC
  * DC input is not subject to EC directives and safety standards.
- Easy mounting: Front-mounting bracket type and DIN-Rail mounting type are included as standard with the product.
  Screw-mount at the top.
  (except 300-/600-W models)
- Safety standards
  - UL508/60950-1, cUL CSA C22.2 No.107.1, cUR CSA C22.2 No.60950-1
  - EN50178 (=VDE0160) Over voltage category III EN60950-1 (=VDE0805 Teil1)

<Applicable only for 300 W and 600 W>

- High capacity application-covered functions are included as standard with the product.
- Alarm detection function, Remote control function, Remote sensing function



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

⚠ Refer to *Safety Precautions* on page 55.

Model Number Structure

Model Number Legend

Note: Not all combinations are possible. Refer to *List of Models* in *Ordering Information* on page 3.

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
48: 48 V

3. Configuration (15/35/50/100/150 W model)
None: Open type
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
05: 5V
12: 12 V
24: 24 V
48: 48 V

3. Configuration/mounting (covered type)
C: Front-mounting
CD: DIN Rail-mounting

Note: Estimates can be provided for coatings and other specifications that are not given in the datasheet. Ask your OMRON representative for details.

Ordering Information

List of Models

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

DIN Rail-mounting *

Configuration	Input voltage	Power ratings	Output voltage (VDC)	Output current	Built-in fan	Model
Covered Power Supplies	100 to 240 VAC (free) (80 to 370 VDC *) S8JX-G15005□□: Switchable between 100 to 120 VAC and 200 to 240 VAC. (DC power cannot be input.)	15 W	5 V	3 A	No	**S8JX-G01505CD**
			12 V	1.3 A		**S8JX-G01512CD**
			15 V	1 A		**S8JX-G01515CD**
			24 V	0.65 A		**S8JX-G01524CD**
			48 V	0.35 A		**S8JX-G01548CD**
		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**
			48 V	0.75 A		**S8JX-G03548CD**
		50 W	5 V	10 A		**S8JX-G05005CD**
			12 V	4.2 A		**S8JX-G05012CD**
			24 V	2.1 A		**S8JX-G05024CD**
			48 V	1.1 A		**S8JX-G05048CD**
		100 W	5 V	20 A		**S8JX-G10005CD**
			12 V	8.5 A		**S8JX-G10012CD**
			24 V	4.5 A		**S8JX-G10024CD**
			48 V	2.1 A		**S8JX-G10048CD**
		150 W	5 V	30 A		**S8JX-G15005CD**
			12 V	13 A		**S8JX-G15012CD**
			24 V	6.5 A		**S8JX-G15024CD**
			48 V	3.3 A		**S8JX-G15048CD**
	100 to 120 VAC 200 to 240 VAC (Switchable)	300 W	5 V	60 A	Yes	**S8JX-G30005CD**
			12 V	27 A		**S8JX-G30012CD**
			24 V	14A	No	**S8JX-G30024CD**
			48 V	7A		**S8JX-G30048CD**

* The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

DIN Rail-mounting *

Configuration	Input voltage	Power ratings	Output voltage (VDC)	Output current	Built-in fan	Model
Open type Power Supplies	100 to 240 VAC (free) (80 to 370 VDC *) S8JX-G15005□□: Switchable between 100 to 120 VAC and 200 to 240 VAC. (DC power cannot be input.)	15 W	5 V	3 A	No	**S8JX-G01505D**
			12 V	1.3 A		**S8JX-G01512D**
			15 V	1 A		**S8JX-G01515D**
			24 V	0.65 A		**S8JX-G01524D**
			48 V	0.35 A		**S8JX-G01548D**
		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**
			48 V	0.75 A		**S8JX-G03548D**
		50 W	5 V	10 A		**S8JX-G05005D**
			12 V	4.2 A		**S8JX-G05012D**
			24 V	2.1 A		**S8JX-G05024D**
			48 V	1.1 A		**S8JX-G05048D**
		100 W	5 V	20 A		**S8JX-G10005D**
			12 V	8.5 A		**S8JX-G10012D**
			24 V	4.5 A		**S8JX-G10024D**
			48 V	2.1 A		**S8JX-G10048D**
		150 W	5 V	30 A		**S8JX-G15005D**
			12 V	13 A		**S8JX-G15012D**
			24 V	6.5 A		**S8JX-G15024D**
			48 V	3.3 A		**S8JX-G15048D**

* The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

Front-mounting *

Configuration	Input voltage	Power ratings	Output voltage (VDC)	Output current	Built-in fan	Front-mounting bracket	Model
Covered Power Supplies	100 to 240 VAC (free) (80 to 370 VDC *) S8JX-G15005□□: Switchable between 100 to 120 VAC and 200 to 240 VAC. (DC power cannot be input.)	15 W	5 V	3 A	No	Provided	**S8JX-G01505C**
			12 V	1.3 A			**S8JX-G01512C**
			15 V	1 A			**S8JX-G01515C**
			24 V	0.65 A			**S8JX-G01524C**
			48 V	0.35 A			**S8JX-G01548C**
		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**
			48 V	0.75 A			**S8JX-G03548C**
		50 W	5 V	10 A			**S8JX-G05005C**
			12 V	4.2 A			**S8JX-G05012C**
			24 V	2.1 A			**S8JX-G05024C**
			48 V	1.1 A			**S8JX-G05048C**
		100 W	5 V	20 A			**S8JX-G10005C**
			12 V	8.5 A			**S8JX-G10012C**
			24 V	4.5 A			**S8JX-G10024C**
			48 V	2.1 A			**S8JX-G10048C**
		150 W	5 V	30 A			**S8JX-G15005C**
			12 V	13 A			**S8JX-G15012C**
			24 V	6.5 A			**S8JX-G15024C**
			48 V	3.3 A			**S8JX-G15048C**
	100 to 120 VAC 200 to 240 VAC (Switchable)	300 W	5 V	60 A	Yes	No	**S8JX-G30005C**
			12 V	27 A			**S8JX-G30012C**
			24 V	14A	No		**S8JX-G30024C**
			48 V	7A			**S8JX-G30048C**
		600 W	5 V	120A	Yes		**S8JX-G60005C**
			12 V	53A			**S8JX-G60012C**
			24 V	27A			**S8JX-G60024C**
			48 V	13A			**S8JX-G60048C**

* The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

Front-mounting *

Configuration	Input voltage	Power ratings	Output voltage (VDC)	Output current	Built-in fan	Front-mounting bracket	Model
Open type Power Supplies	100 to 240 VAC (free) (80 to 370 VDC *) S8JX-G15005□□: Switchable between 100 to 120 VAC and 200 to 240 VAC. (DC power cannot be input.)	15 W	5 V	3 A	No	Provided	**S8JX-G01505**
			12 V	1.3 A			**S8JX-G01512**
			15 V	1 A			**S8JX-G01515**
			24 V	0.65 A			**S8JX-G01524**
			48 V	0.35 A			**S8JX-G01548**
		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**
			48 V	0.75 A			**S8JX-G03548**
		50 W	5 V	10 A			**S8JX-G05005**
			12 V	4.2 A			**S8JX-G05012**
			24 V	2.1 A			**S8JX-G05024**
			48 V	1.1 A			**S8JX-G05048**
		100 W	5 V	20 A			**S8JX-G10005**
			12 V	8.5 A			**S8JX-G10012**
			24 V	4.5 A			**S8JX-G10024**
			48 V	2.1 A			**S8JX-G10048**
		150 W	5 V	30 A			**S8JX-G15005**
			12 V	13 A			**S8JX-G15012**
			24 V	6.5 A			**S8JX-G15024**
			48 V	3.3 A			**S8JX-G15048**

* The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

Ratings, Characteristics, and Functions

Item			Input specification / Power ratings *1	100 to 240 V input 15 W	100 to 240 V input 35 W
Efficiency				68% min.	73% min.
Input	Voltage *2			100 to 240 VAC (allowable range: 85 to 264 VAC, 80 to 370 VDC *9)	
	Frequency *2			50/60 Hz (47 to 450 Hz)	
	Current *3	100 V input		0.4 A max.	1 A max.
		200 V input		0.25 A max.	0.6 A max.
	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.	
Output *4	Voltage adjustment range *5			−10% to 15% (with V. ADJ) (48-V models: ±10%)	
	Ripple *3			2% (p-p) max.	
	Input variation influence			0.4% max. with AC input voltage	
	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 175% of rated load current, voltage drop, intermittent, automatic reset	
	Overvoltage protection *7			Yes	
	Overheat protection			No	
	Parallel operation			No (However, backup operation is possible; external diodes required.)	
	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 *Engineering Data* on page 17 (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 2 h each in X, Y, and Z directions	
	Shock resistance			150 m/s², 3 times each in ±X, ±Y, ±Z directions	
	Output indicator			Yes (Color: Green)	
	EMI	Conducted Emissions		Conforms to EN 55011 Group 1 Class A and based on FCC Class A *9	
		Radiated Emissions		Conforms to EN 55011 Group 1 Class A *9	
	EMS	Electrostatic Discharge		Conforms to EN61000-4-2	
		Radiated Electromagnetic Field		Conforms to EN61000-4-3	
		Electrical Fast Transient/Burst		Conforms to EN61000-4-4	
		Surge		Conforms to EN61000-4-5	
		Conducted Disturbance		Conforms to EN61000-4-6	
		Voltage Dips/Short Interruptions		Conforms to EN61000-4-11	
	Approved standards *9			UL Listed: UL 508 (Listing), UL UR: UL 60950-1 (Recognition)	
				cUL Listed: CSA C22.2 No.107.1 cUR: CSA C22.2 No. 60950-1	
				EN/VDE: EN50178 (= VDE 0160) Over voltage category III, EN 60950-1 (= VDE 0805 Teil 1) (Terminal block: Based on DIN 50274 (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 20.
***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 the allowable voltage 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 20.
***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 Supply.
***9.** The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

Item		Input specification / Power ratings *1	100 to 240 V input	
			50 W	100 W
Efficiency		5 V Models	76% min.	76% min.
		12 V Models	81% min.	81% min.
		24 V Models	83% min.	83% min.
		48 V Models	82% min.	83% min.
Input	Voltage *2		100 to 240 VAC (allowable range: 85 to 264 VAC, 80 to 370 VDC ***9**)	
	Frequency *2		50/60 Hz (47 to 450 Hz)	
	Current *3	100 V input	1.4 A max.	2.5 A max.
		200 V input	0.8 A max.	1.5 A max.
	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.	
Output *4	Voltage adjustment range *5		−10% to 15% (with V. ADJ) (48-V models: ±10%)	
	Ripple *3		2% (p-p) max.	
	Input variation influence		0.4% max. (with AC input voltage)	
	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 175% of rated load current, voltage drop, intermittent, automatic reset	
	Overvoltage protection *7		Yes	
	Overheat protection		No	
	Parallel operation		No (However, backup operation is possible; external diodes required.)	
	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 *Engineering Data* on page 17 (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 2 h each in X, Y, and Z directions	
	Shock resistance		150 m/s^2, 3 times each in ±X, ±Y, ±Z directions	
	Output indicator		Yes (Color: Green)	
	EMI	Conducted Emissions	Conforms to EN 55011 Group 1 Class A and based on FCC Class A ***9**	
		Radiated Emissions	Conforms to EN 55011 Group 1 Class A ***9**	
	EMS	Electrostatic Discharge	Conforms to EN61000-4-2	
		Radiated Electromagnetic Field	Conforms to EN61000-4-3	
		Electrical Fast Transient/Burst	Conforms to EN61000-4-4	
		Surge	Conforms to EN61000-4-5	
		Conducted Disturbance	Conforms to EN61000-4-6	
		Voltage Dips/Short Interruptions	Conforms to EN61000-4-11	
	Approved standards *9		UL Listed: UL 508 (Listing), UL UR: UL 60950-1 (Recognition)	
			cUL Listed: CSA C22.2 No.107.1 cUR: CSA C22.2 No. 60950-1	
			EN/VDE: EN50178 (= VDE 0160) Over voltage category III, EN 60950-1 (= VDE 0805 Teil 1) (Terminal block: Based on DIN 50274 (VDE 0660-514))	
	SEMI		SEMI F47-0200 (200-VAC input)	
	Weight *8		300 g max.	550 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 20.
***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 the allowable voltage 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 20.
***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 Supply.
***9.** The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

Item		Input specification / Power ratings *1	100/200 V switchable	100 to 240 V input	
			150 W at 5 V	150 W at 12 V	150 W at 24 or 48 V
Efficiency		5 V Models	78% min.	---	---
		12 V Models	---	79% min.	---
		24 V Models	---	---	86% min.
		48 V Models	---	---	85% min.
Input	Voltage *2		Switchable between 100 to 120 VAC (allowable range: 85 to 132 VAC) and 200 to 240 VAC (allowable range: 170 to 264 VAC).	100 to 240 VAC (allowable range: 85 to 264 VAC, 80 to 370 VDC *9)	
	Frequency *2		50/60 Hz (47 to 450 Hz)		
	Current *3	100 V input	3.5 A max.	3.6 A max.	3.5 A max.
		200 V input	2.1 A max.	2.2 A max.	2.1 A max.
	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.		
Output *4	Voltage adjustment range *5		−10% to 15% (with V. ADJ) (48-V models: ±10%)		
	Ripple *3		2% (p-p) max.		
	Input variation influence		0.4% max. (with AC input voltage)		
	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 175% of rated load current, voltage drop, automatic reset	105% to 175% of rated load current, voltage drop, intermittent, automatic reset	
	Overvoltage protection *7		Yes		
	Overheat protection		No		
	Parallel operation		No (However, backup operation is possible; external diodes required.)		
	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 *Engineering Data* on page 17 (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 2 h each in X, Y, and Z directions		
	Shock resistance		150 m/s^2, 3 times each in ±X, ±Y, ±Z directions		
	Output indicator		Yes (Color: Green)		
	EMI	Conducted Emissions	Conforms to EN 55011 Group 1 Class A and based on FCC Class A *9		
		Radiated Emissions	Conforms to EN 55011 Group 1 Class A *9		
	EMS	Electrostatic Discharge	Conforms to EN61000-4-2		
		Radiated Electromagnetic Field	Conforms to EN61000-4-3		
		Electrical Fast Transient/Burst	Conforms to EN61000-4-4		
		Surge	Conforms to EN61000-4-5		
		Conducted Disturbance	Conforms to EN61000-4-6		
		Voltage Dips/Short Interruptions	Conforms to EN61000-4-11		
	Approved standards *9		UL Listed: UL 508 (Listing), UL UR: UL 60950-1 (Recognition)		
			cUL Listed: CSA C22.2 No.107.1 cUR: CSA C22.2 No. 60950-1		
			EN/VDE: EN50178 (= VDE 0160), Over voltage category III, EN 60950-1 (= VDE 0805 Teil 1) (Terminal block: Based on DIN 50274 (VDE 0660-514))		
	SEMI		---	SEMI F47-0200 (200-VAC input)	
	Weight *8		800 g max.	700 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 20.
***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 the allowable voltage 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 20.
***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 Supply.
***9.** The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

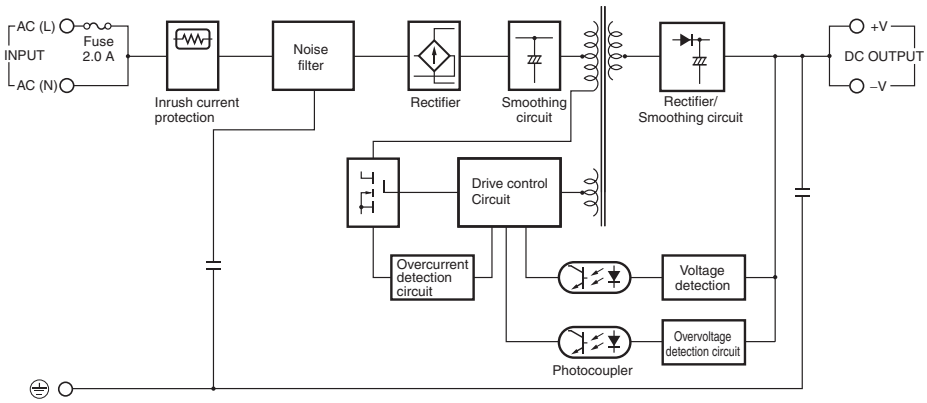
Item		Input specification / Power ratings *1	100/200 V (Selected) 300 W	600 W
Efficiency		5 V models	71% min.	72% min.
		12 V models	75% min.	78% min.
		24 V models	82% min.	80% min.
		48 V models	82% min.	80% min.
Input	Voltage *2		100 to 120 VAC (allowable range: 85 to 132 VAC) 200 to 240 VAC (allowable range: 170 to 264 VAC) (Switchable)	
	Frequency *2		50/60 Hz (47 to 450 Hz)	
	Current *3	100 V input	8 A max.	16 A max.(5V, 12V, 48V) 14 A max.(24V)
		200 V input	4.5 A max.	9 A max.(5V, 12V, 48V) 8 A max.(24V)
	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.
Output *4	Voltage adjustment range *5		−10% to 15% (with V. ADJ) (48-V models: ±10%)	
	Ripple *3		2.8% (p-p) max.(5V) *6 2% (p-p) max.(12V, 24V, 48V)	3.8% (p-p) max.(5V) *6 2% (p-p) max.(12V) *6 2% (p-p) max.(24V, 48V)
	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 *7		105% to 175% of rated load current, Inverted L voltage drop, the circuit will be shut OFF when the overload exceeds 5 s.(5V, 12V) *10 voltage drop, intermittent, automatic reset. (24V, 48V)	105% to 175% of rated load current, Inverted L voltage drop, the circuit will be shut OFF when the overload exceeds 5 s. *10
	Overvoltage protection *8		Yes (5V, 12V) *10 Yes (24V, 48V) *10	Yes *10
	Overheat protection		Yes (5V, 12V) *10 N0 (24V, 48V) *10	Yes *10
	Parallel operation		Yes (up to 5 units)	
	Series operation		Yes (For up to two Power Supplies; external diodes required.)	
	Protective circuit operation indicator		Yes (color: red) (5V, 12V) No (24V, 48V)	Yes (color: red)
Other	Ambient operating temperature		Refer to the derating curve in *Engineering Data* on page 17 (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 2 h each in X, Y, and Z directions	
	Shock resistance		150 m/s², 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 *11	
		Radiated Emissions	Conforms to EN 55011 Group 1 Class A *11 *12	
	EMS	Electrostatic Discharge	Conforms to EN61000-4-2	
		Radiated Electromagnetic Field	Conforms to EN61000-4-3	
		Electrical Fast Transient/Burst	Conforms to EN61000-4-4	
		Surge	Conforms to EN61000-4-5	
		Conducted Disturbance	Conforms to EN61000-4-6	
		Voltage Dips/Short Interruptions	Conforms to EN61000-4-11	
	Approved standards *13		UL UR: UL 508 (Recognition), UL 60950-1 (Recognition)	
			cUR: CSA C22.2 No. 60950-1	
			EN/VDE: EN50178 (= VDE 0160), Over voltage category III, EN 60950-1 (= VDE 0805 Teil 1) (Terminal block: Based on DIN 50274 (VDE 0660-514))	
	Weight *9		1,800 g max. (5V, 12V) 1,600 g max. (24V, 48V)	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 20.
***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 the allowable voltage range. When adjusting the output voltage, confirm the actual output voltage from the Power Supply and be sure that load is not damaged.
***6.** Measurement methods are based on JEITA standard RC-9131A. Refer to *Ripple Noise Voltage* on page 57.
***7.** For details, refer to *Overload Protection* on page 20.
***8.** To reset the protection, turn OFF the input power for three minutes or longer and then turn it back ON.
***9.** The weight indicated is for Front-mounting Power Supply.
***10.** 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.
***11.** Noise values depend on the wiring methods and other factors. Insert noise filters and cores in the input and output lines.
300 W, 5 V: Two E04SR401938 (manufactured by SEIWA) on the output line.
300 W, 12 V: One E04SR401938 (manufactured by SEIWA) on the output line.
600 W, 5 V or 12 V: One FN2450G-16-61 (manufactured by Schaffner) on the input line.
One E04RC613620 (manufactured by SEIWA) on the output line.
***12.** For the 600-W, 5-V and 12-V models, class A compliance was met with an aluminum plate placed under the Power Supply.
***13.** The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

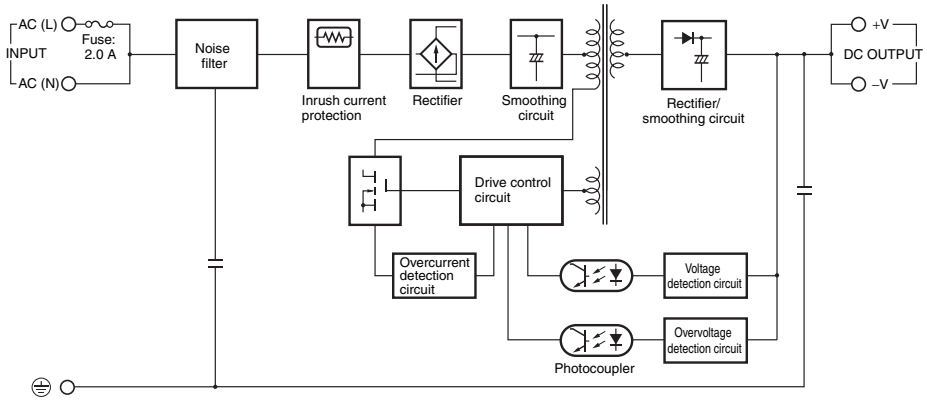
Connections

Block Diagrams

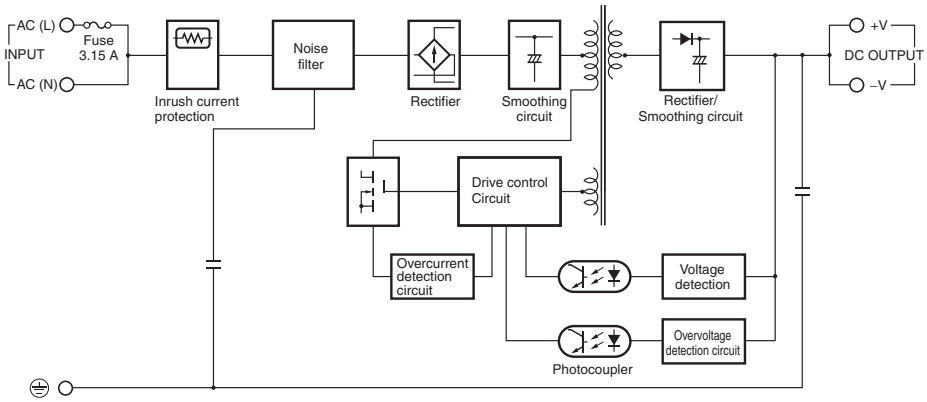
S8JX-G01505□□ (15 W)
S8JX-G01512□□ (15 W)
S8JX-G01515□□ (15 W)
S8JX-G01524□□ (15 W)



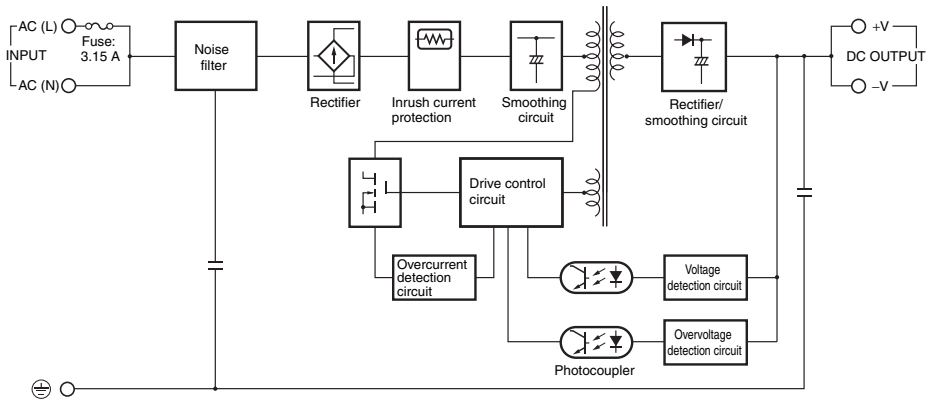
S8JX-G01548□□ (15 W)



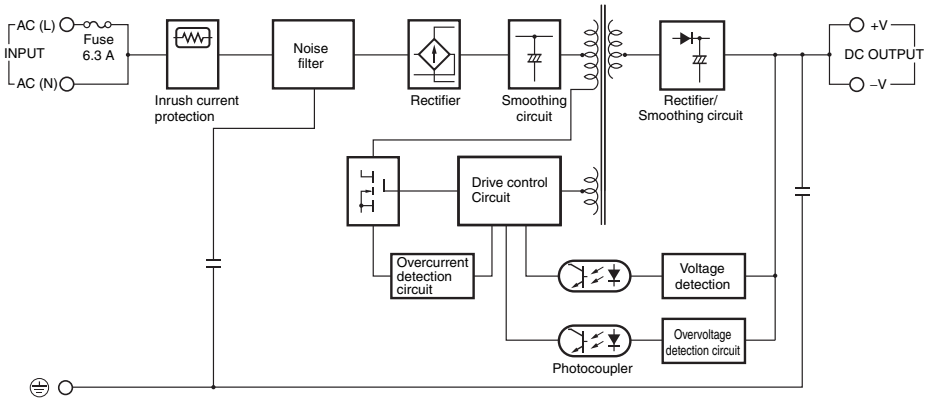
S8JX-G03505□□ (35 W)
S8JX-G03512□□ (35 W)
S8JX-G03515□□ (35 W)
S8JX-G03524□□ (35 W)



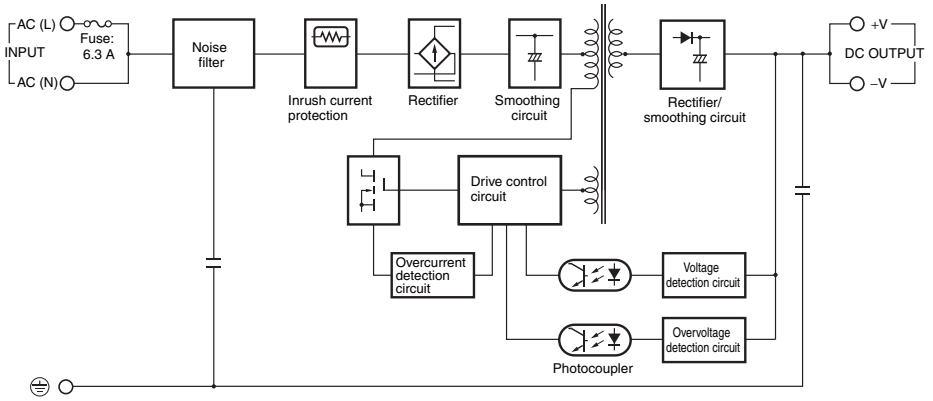
S8JX-G03548□□ (35 W)



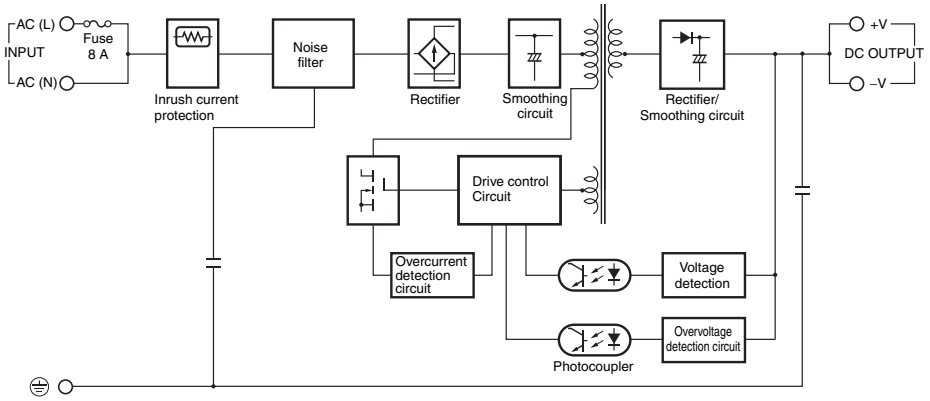
S8JX-G05005□□ (50 W)
S8JX-G05012□□ (50 W)
S8JX-G05024□□ (50 W)



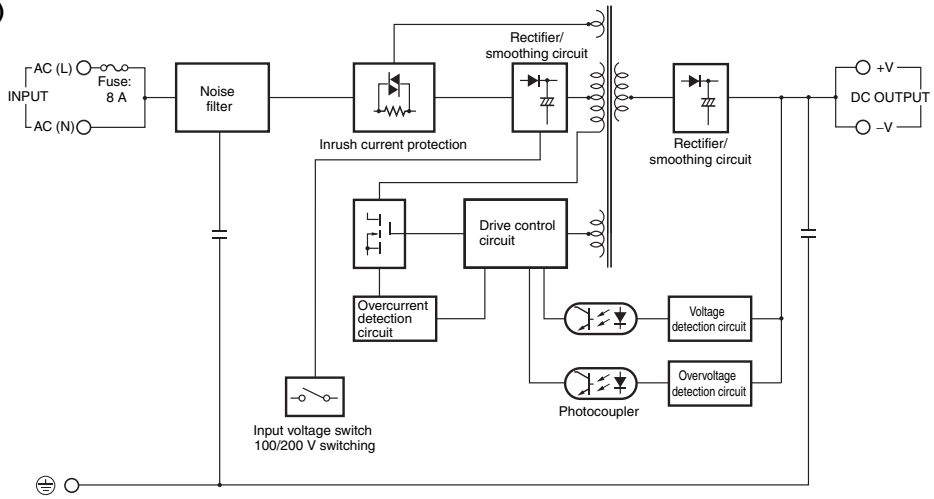
S8JX-G05048□□ (50 W)



S8JX-G100□□□□ (100 W)

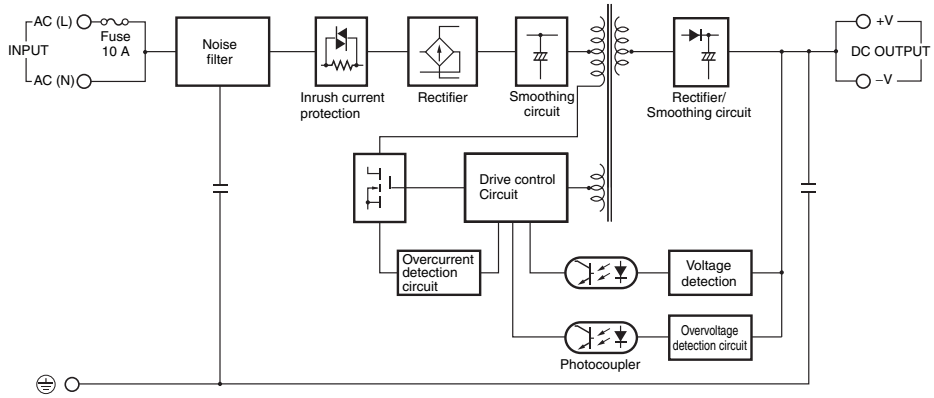


S8JX-G15005□□ (150 W)

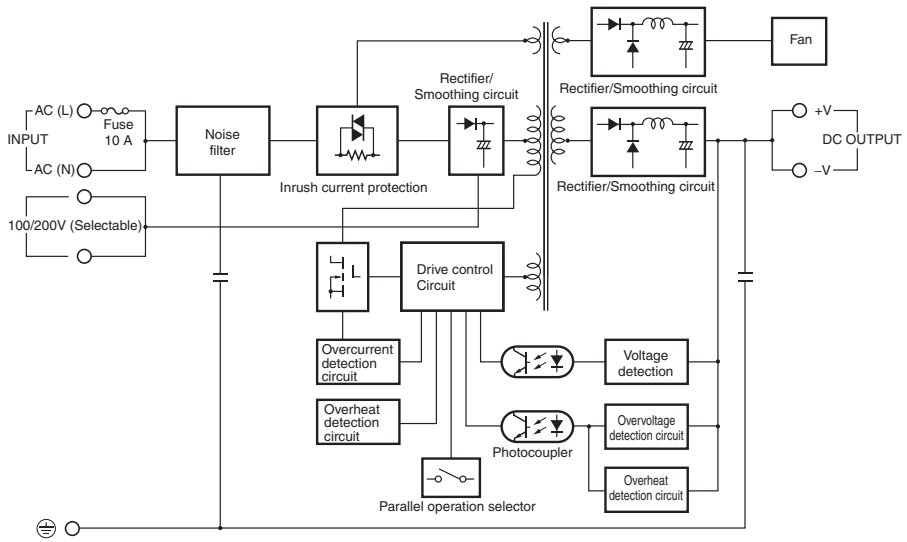


Note: Set the input voltage switch to "115V" for 100 to 120 VAC and to "230V" for 200 to 240 VAC.

S8JX-G15012□□ (150 W)
S8JX-G15024□□ (150 W)
S8JX-G15048□□ (150 W)

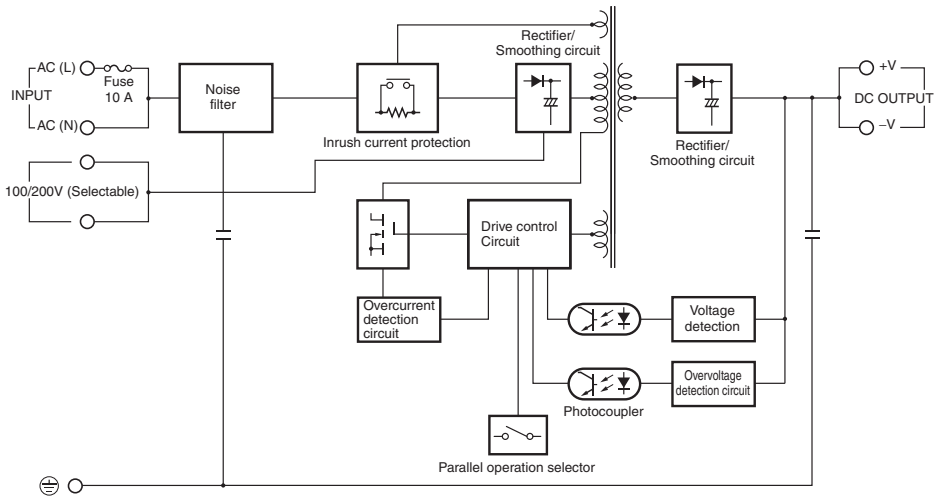


S8JX-G30005□□ (300 W)
S8JX-G30012□□ (300 W)



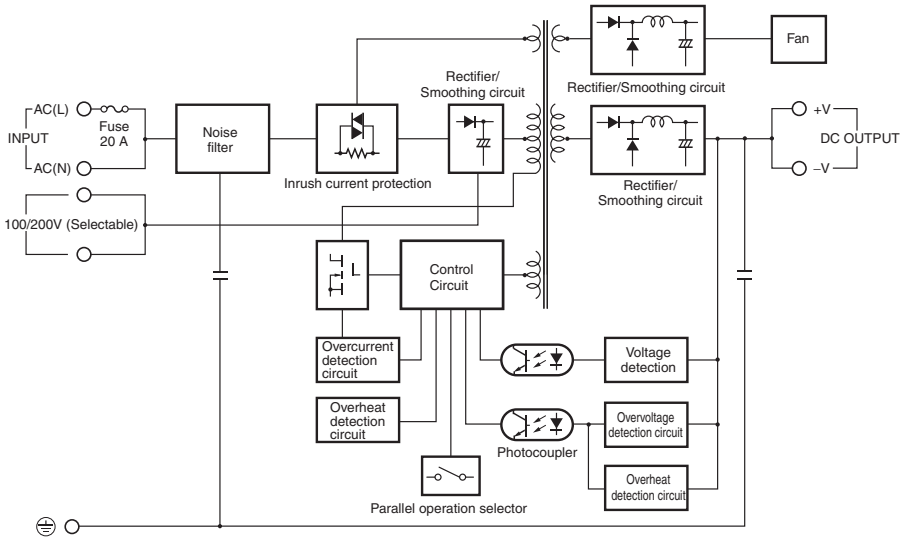
Note: Short-circuit the input voltage selector terminals if the input is 100 to 120 VAC. Keep the terminals open if the input is 200 to 240 VAC.

S8JX-G30024□□ (300 W)
S8JX-G30048□□ (300 W)



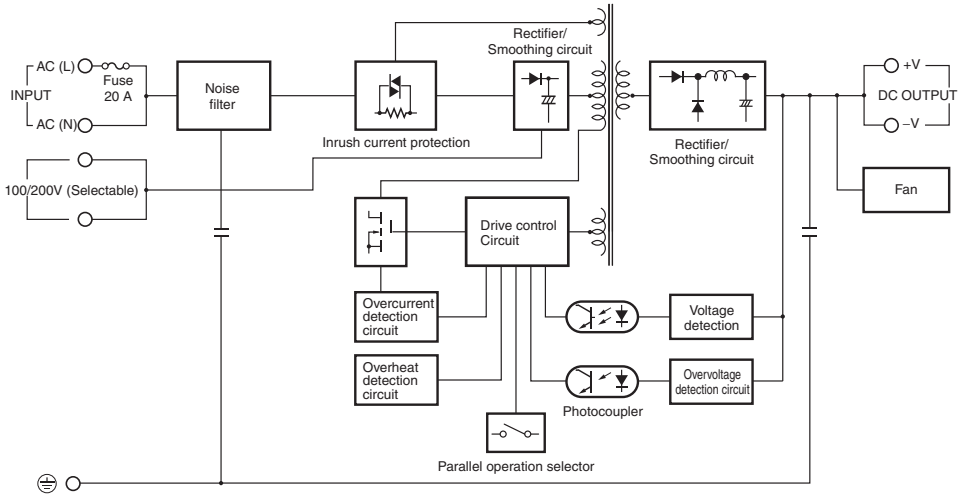
Note: Short-circuit the input voltage selector terminals if the input is 100 to 120 VAC.
Keep the terminals open if the input is 200 to 240 VAC.

S8JX-G60005□ (600 W)
S8JX-G60012□ (600 W)
S8JX-G60048□ (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-G60024□ (600 W)

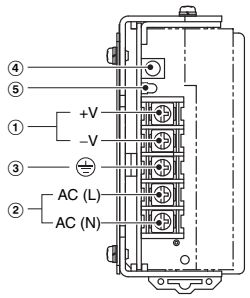


Note: Short-circuit the input voltage selector terminals if the input is 100 to 120 VAC.
Keep the terminals open if the input is 200 to 240 VAC.

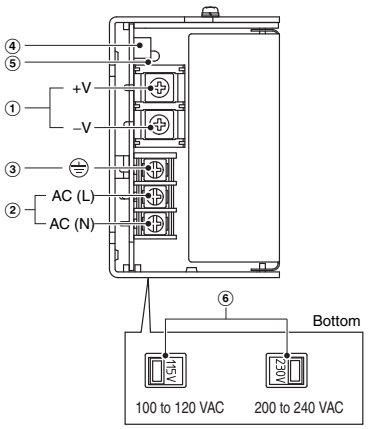
Construction and Nomenclature

Nomenclature

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



Note: The S8JX-G05024CD is shown above.

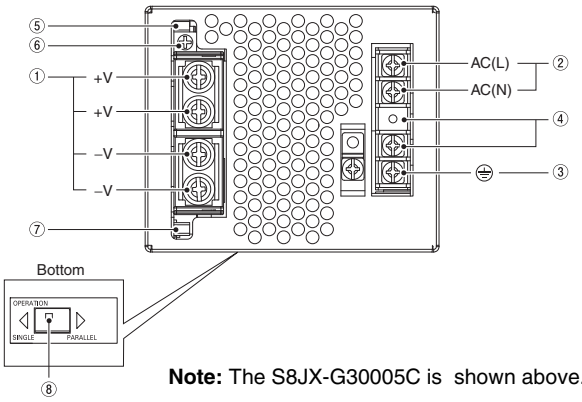


Note: The S8JX-G15005C is shown above.

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) (⏚)	Connect the ground line to these terminals. *2
4	Output Voltage Adjuster (V. ADJ)	It is possible to increase or decrease the output voltage.
5	Output Indicator (DC ON: Green)	Lights green while a direct current (DC) output is ON.
6	Input voltage switch *3	Switches the internal circuits according to the input voltage. "115V": 100 to 120 VAC "230V": 200 to 240 VAC

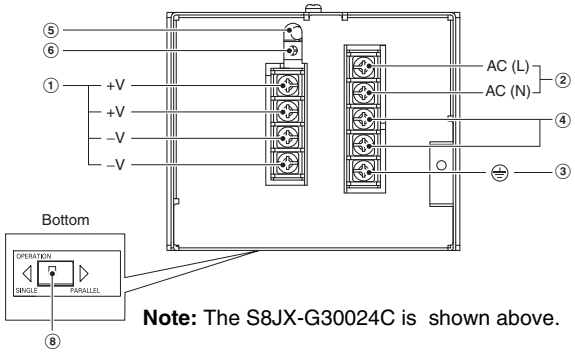
***1.** The fuse is located on the (L) side. It is NOT user-replaceable. For a DC power input, connect the low side to the positive (+) terminal.
***2.** This is the protective earth terminal specified in the safety standards. Always ground this terminal.
***3.** This item is applicable only to the S8JX-G15005□□.

300-W 5V, 12V Model



Note: The S8JX-G30005C is shown above.

300-W 24V, 48V Model



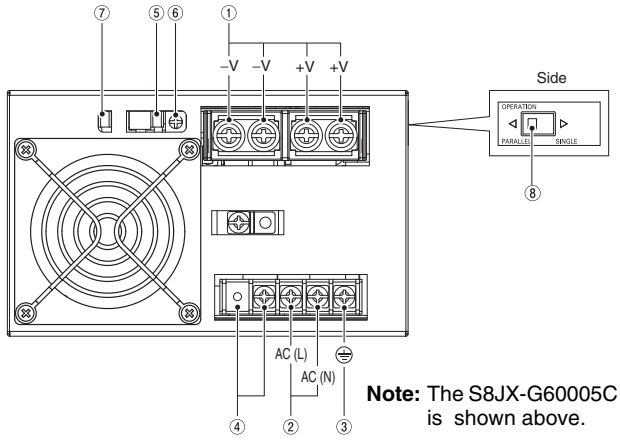
Note: The S8JX-G30024C is shown above.

300-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 Earth Terminal (PE) (⏚)	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 240 VAC.
5	Output Indicator (DC ON: Green)	Lights green 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 (ALM: Red)	The red indicator will be lit if the overvoltage or overheat protection circuit is triggered. This indicator will also be lit when overload is detected. *3
8	Selector of Parallel Operation	Set the selector to PARALLEL if the Units are in parallel operation.

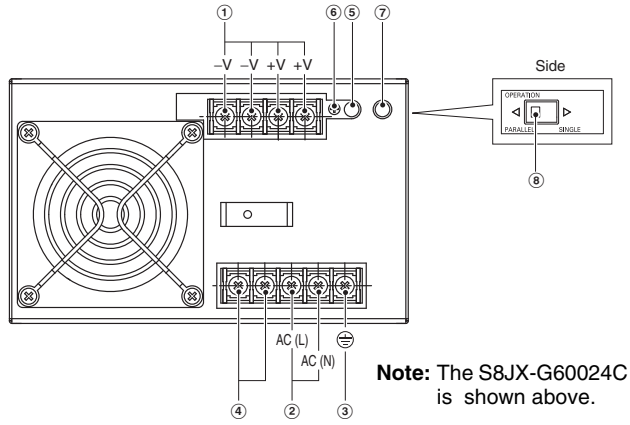
***1.** The fuse is located on the (L) side. It is NOT user-replaceable.
***2.** This is the protective earth terminal specified in the safety standards. Always ground this terminal.
***3.** This is not applicable to 24-V and 48-V models.

600-W 5V, 12V Model



Note: The S8JX-G60005C is shown above.

600-W 24V, 48V Model



Note: The S8JX-G60024C is shown above.

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 Earth Terminal (PE) (⏚)	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 240 VAC.
5	Output Indicator (DC ON: Green)	Lights green 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 (ALM: Red)	The red indicator will be lit if the overvoltage or overheat protection circuit is triggered. This indicator will also be lit when overload 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

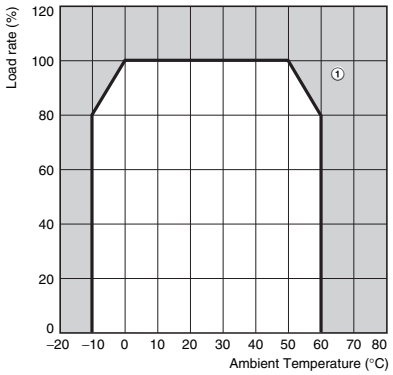
Reliability (MTBF)	S8JX-G15012□□ and S8JX-G15005□□	S8JX-G30005□□ and S8JX-G300012□□	S8JX-G6000□□□	Other models
	240,000 hrs	200,000 hrs	170,000 hrs	250,000 hrs
Definition	MTBF stands for Mean Time Between Failures, which is calculated according to the probability of accidental device failures, and indicates 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

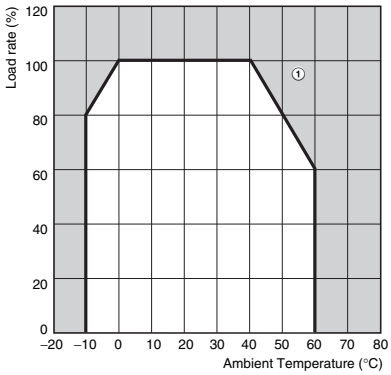
Derating Curves (Standard Mounting)

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

Open type 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).

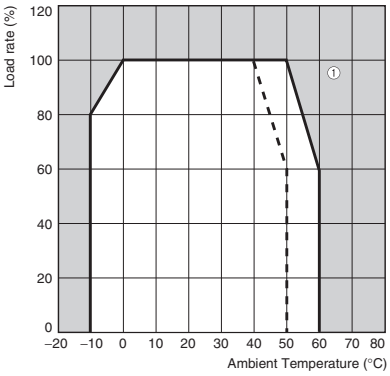
2. If there is a derating problem, use forced air-cooling.

3. For Customers Using a DC Input
When using an input voltage of less than 100 VDC, reduce the load calculated with the above derating curve by at least the following coefficients.

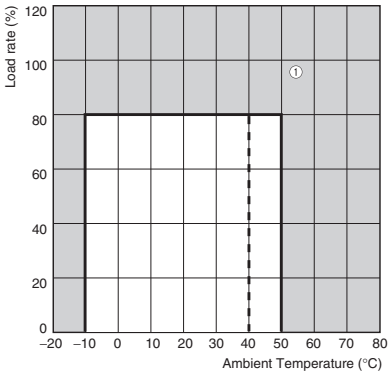
35-W and 100-W (5-V or 12-V output) models: 0.8
50-W/150-W models: 0.85 (DC power cannot be input only to the S8JX-G15005□□.)
15-W and 100-W (24-V or 48-V output): 0.9

300-/600-W 24V, 48V Models

Single Unit Operation



Parallel Operation



Solid line — Front-mounting, Bottom-mounting, DIN Rail mounting, Side mounting (300W 5V, 12V/ 600W 24V, 48V Models)

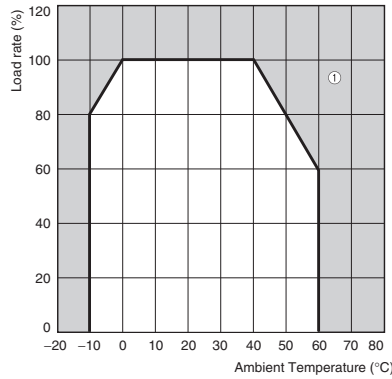
Dotted line - - - - - - Side mounting (300W 24V, 48V Models)

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).

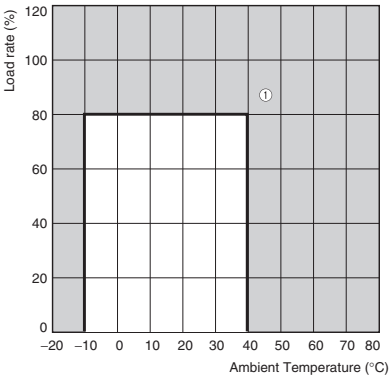
2. If there is a derating problem, use forced air-cooling.

600-W 5V, 12V Models

Single Unit Operation



Parallel Operation

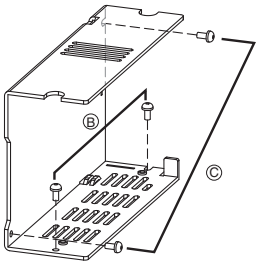


Note: 1. Internal parts may occasionally deteriorate or be damaged. Do not use the Power Supply in areas outside the derating curve (i.e., the area shown by shading ① in the above graph).

Mounting

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

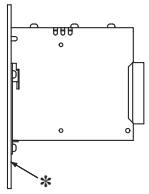
The following three mounting methods are possible.
Ⓐ. Front-mounting: Refer to *Mounting Bracket Provided with Front-mounting Power Supplies* Ⓐ on page 26.
Ⓑ. Bottom-mounting
Ⓒ. Side-mounting
Note: Additional mounting methods are also available using DIN Rail-mounting models.



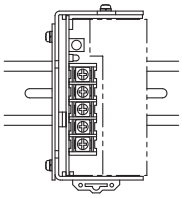
Standard Mounting

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

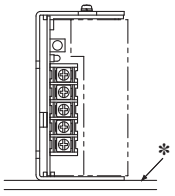
Front-mounting



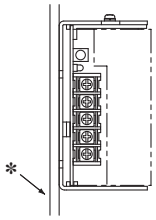
DIN Rail-mounting



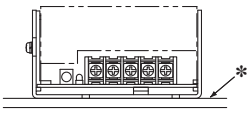
Bottom-mounting



Vertical Side-mounting



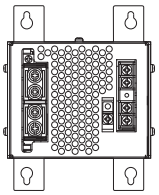
Horizontal Side-mounting



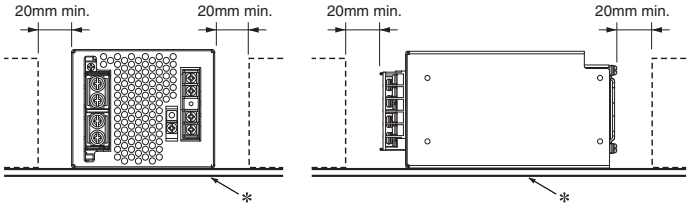
Note: 1. Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. Use the standard mounting method only.
2. When mounting the Power Supply, mounting it to a metal plate (*) is recommended.
3. Install the Power Supply so that the air flow circulates around the Power Supply, as the Power Supply is designed to radiate heat by means of natural air flow.

300-W 5V, 12V Model

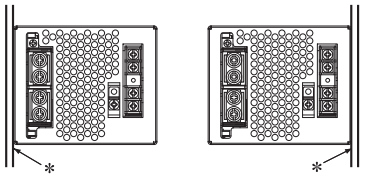
Front-mounting



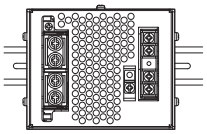
Bottom-mounting



Side-mounting



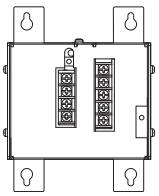
DIN Rail mounting



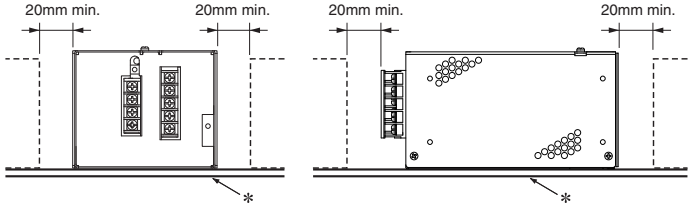
Note: 1. Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. Use the standard mounting method only.
2. When mounting the Power Supply, mounting it to a metal plate (*) is recommended.
3. Do not cover the air holes (provided at fan mounted side and the opposite side) to have enough air-cooling.

300-W 24V, 48V Model

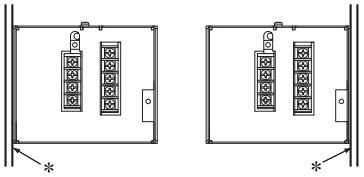
Front-mounting



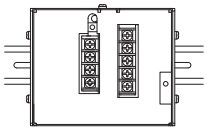
Bottom-mounting



Side-mounting



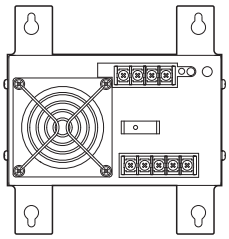
DIN Rail mounting



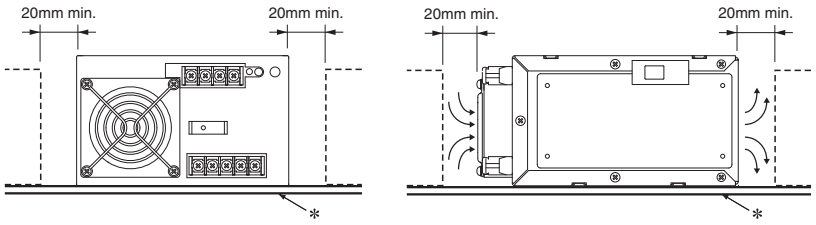
Note: 1. Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. Use the standard mounting method only.
2. When mounting the Power Supply, mounting it to a metal plate (*) is recommended.
3. Install the Power Supply so that the 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

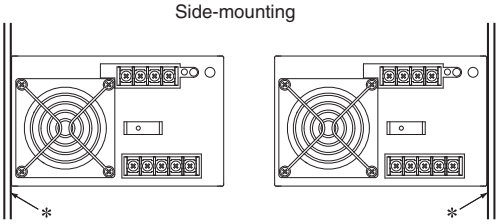
Front-mounting



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. Do not cover the air holes (provided at fan mounted side and the opposite side) to have enough air-cooling.

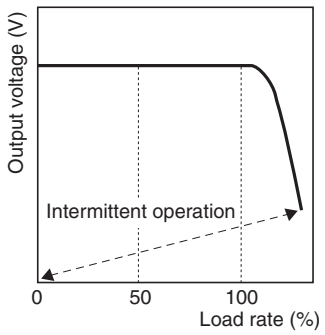
Overload Protection

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% to 175% 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.

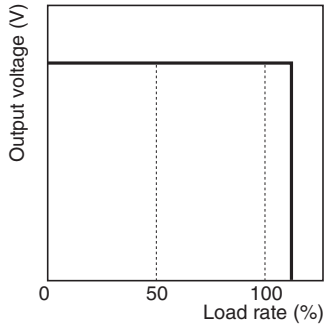
Note: 1. When a load is connected that has a built-in DC-DC converter, the overload protection may operate at startup and the power supply may not start.
2. Internal parts may occasionally deteriorate or be damaged if a short-circuited or overcurrent state continues during operation.
3. Internal parts 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.

(Reference value)

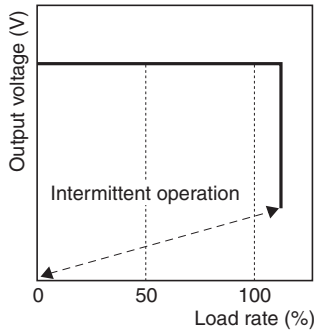
15-/35-/50-/100-/150-W (12-/24-/48-V) Models



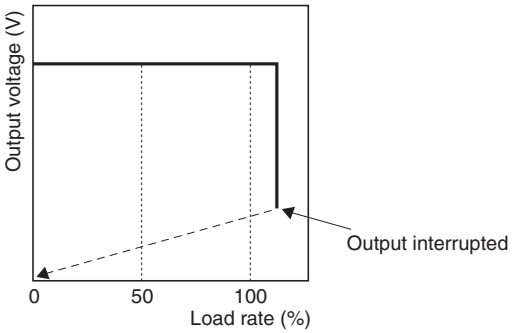
150-W, 5-V Models



300-W 24V, 48V Model



300-W 5V, 12V/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.

Overvoltage Protection

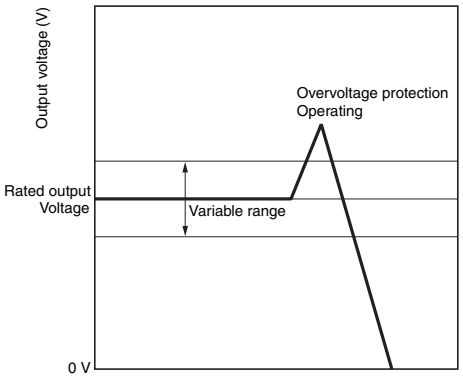
15-/35-/50-/100-/150-W Models

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 120% of the rated voltage or more is output, the output voltage is shut OFF, preventing damage to the load due to overvoltage (Except 300-W 24V, 48V models). Reset the input power by turning it OFF for at least three minute and then turning it back ON again.

(Reference value)



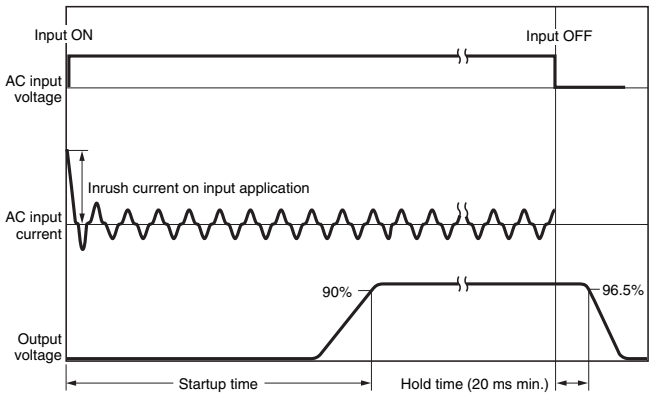
Note: Do not turn ON the power again until the cause of the overvoltage has been removed.

Overheat Protection

300-W 5V, 12V/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 shut OFF the output voltage 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



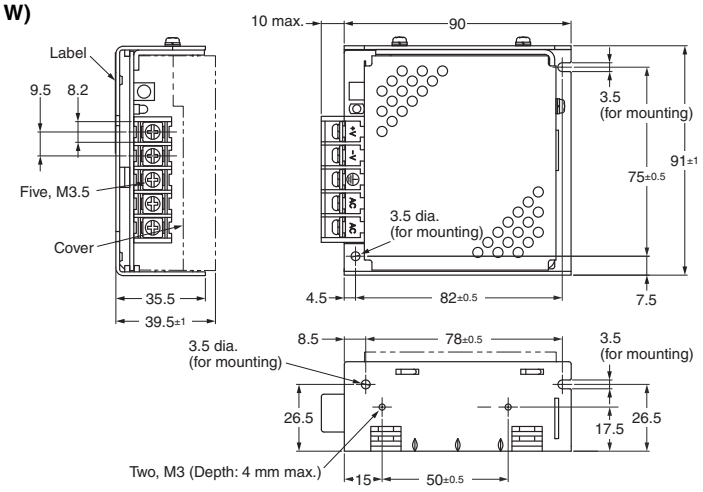
Note: A maximum startup time of 500 ms is required (650 ms for 300 W). Construct a system configuration that considers the startup time of other devices.

Dimensions

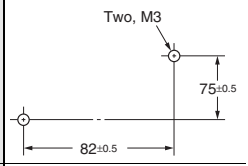
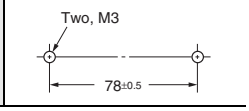
(Unit: mm)

Front-mounting Models

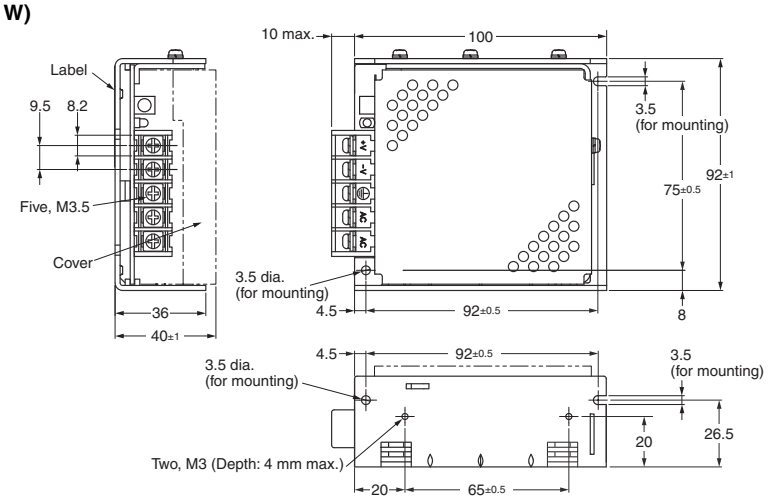
S8JX-G015□□ (15 W)
S8JX-G015□□C (15 W)
S8JX-G035□□ (35 W)
S8JX-G035□□C (35 W)



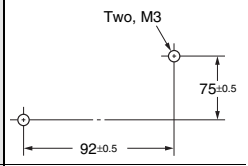
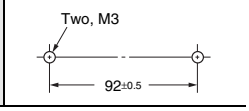
Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting	

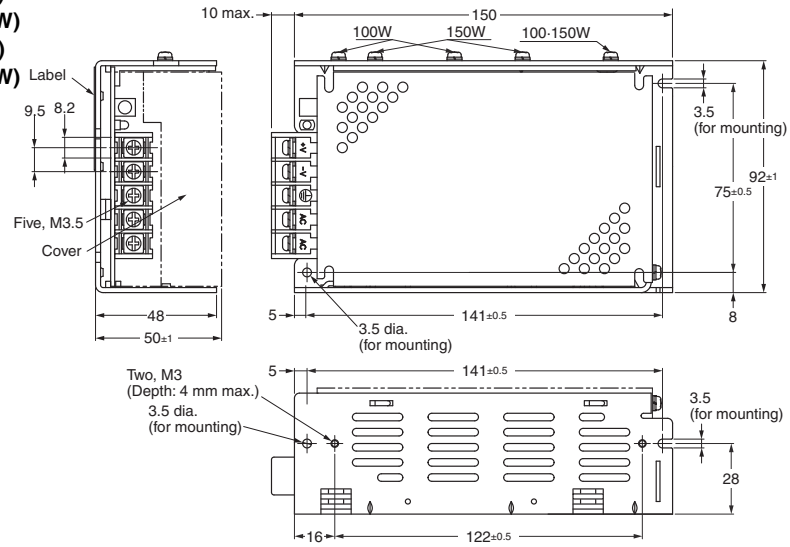
S8JX-G050□□ (50 W)
S8JX-G050□□C (50 W)



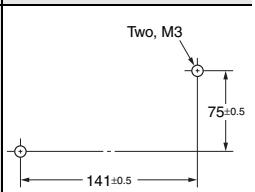
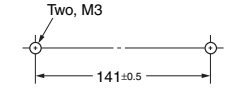
Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting	

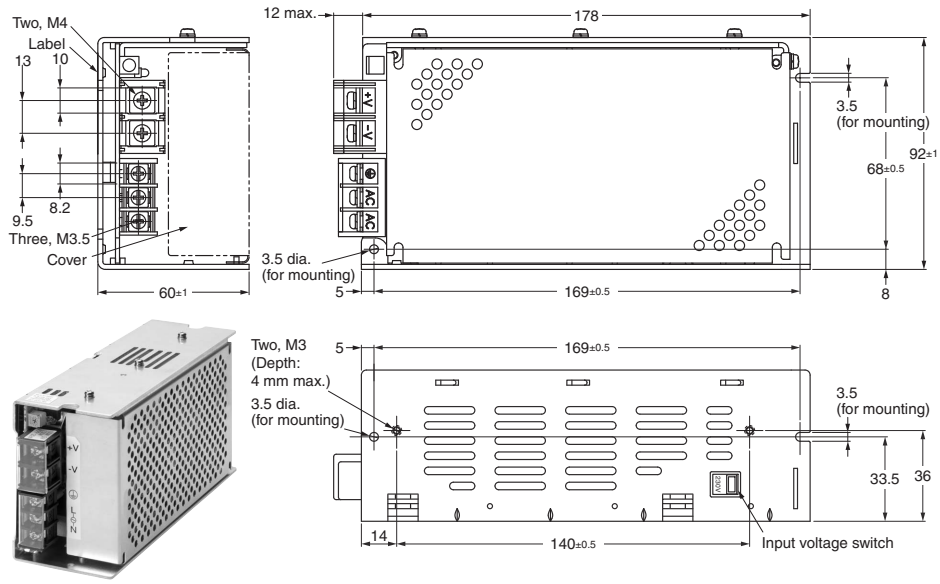
S8JX-G100□□ (100 W)
S8JX-G100□□C (100 W)
S8JX-G15024 (150 W)
S8JX-G15024C (150 W)
S8JX-G15048 (150 W)
S8JX-G15048C (150 W)



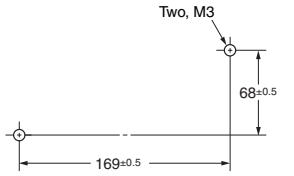
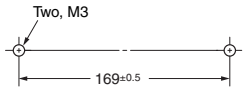
Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting	

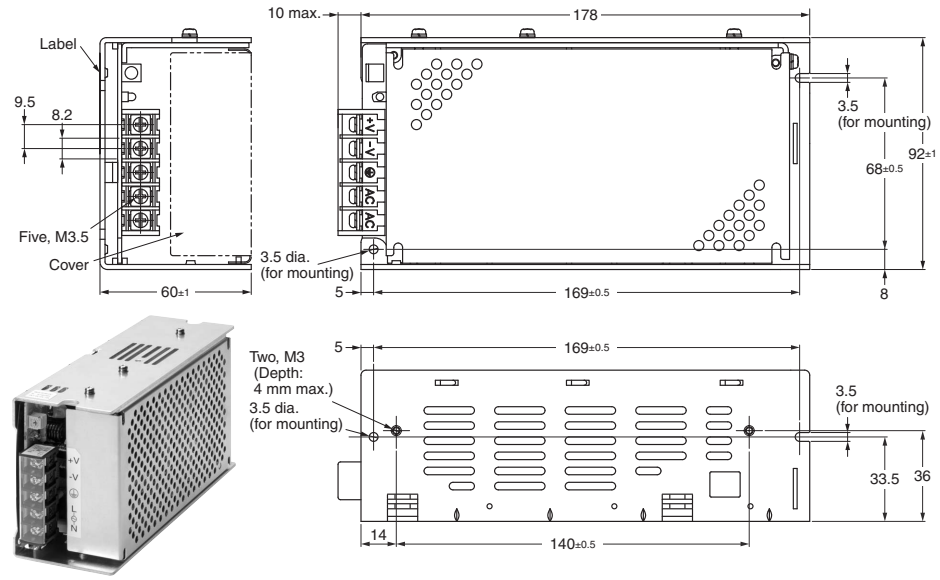
S8JX-G15005 (150 W)
S8JX-G15005C (150 W)



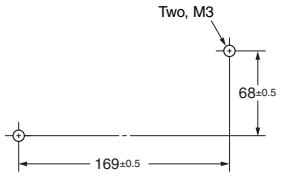
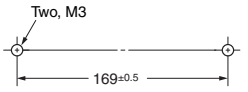
Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting	

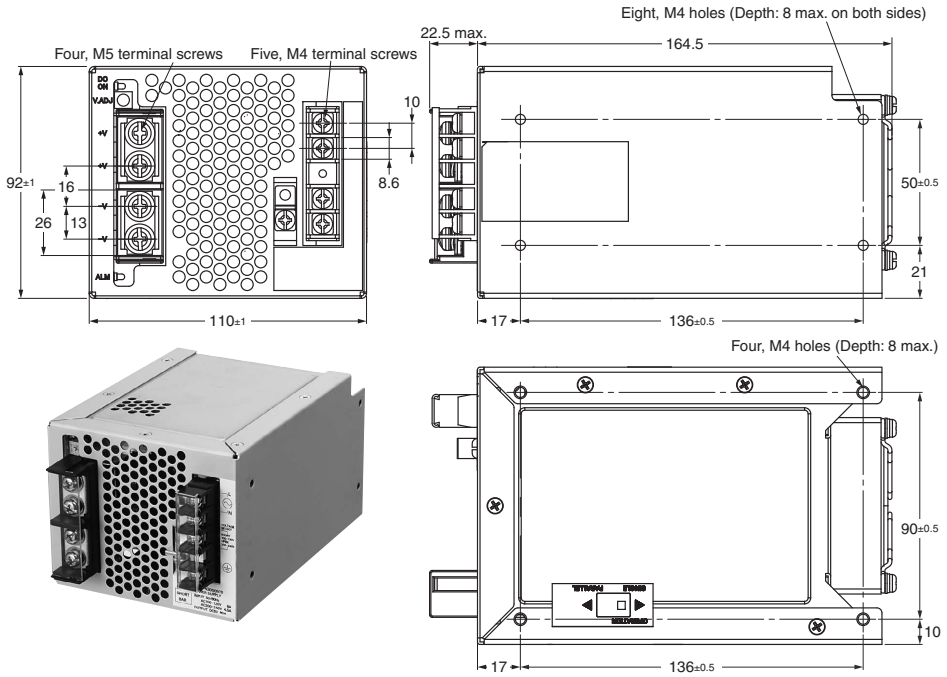
S8JX-G15012 (150 W)
S8JX-G15012C (150 W)



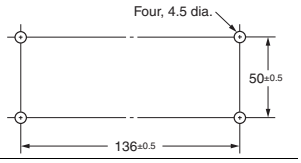
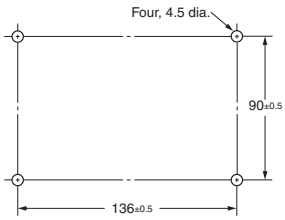
Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting	

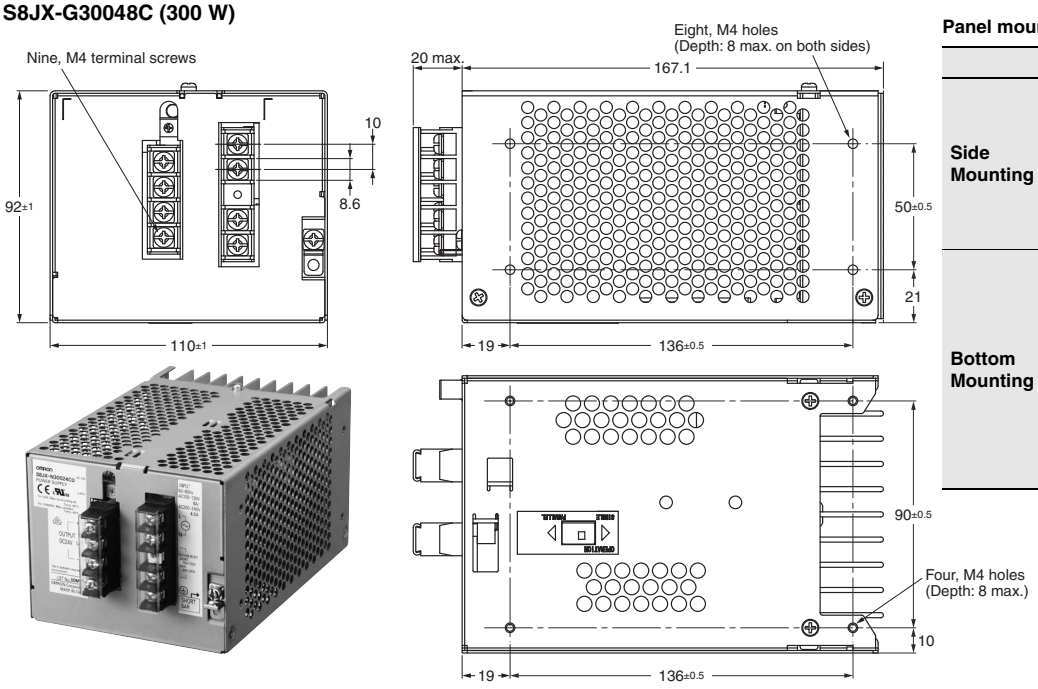
S8JX-G30005C (300 W)
S8JX-G30012C (300 W)



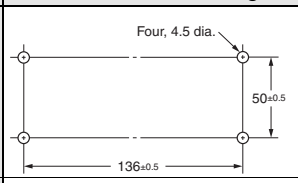
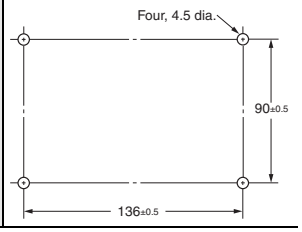
Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting	

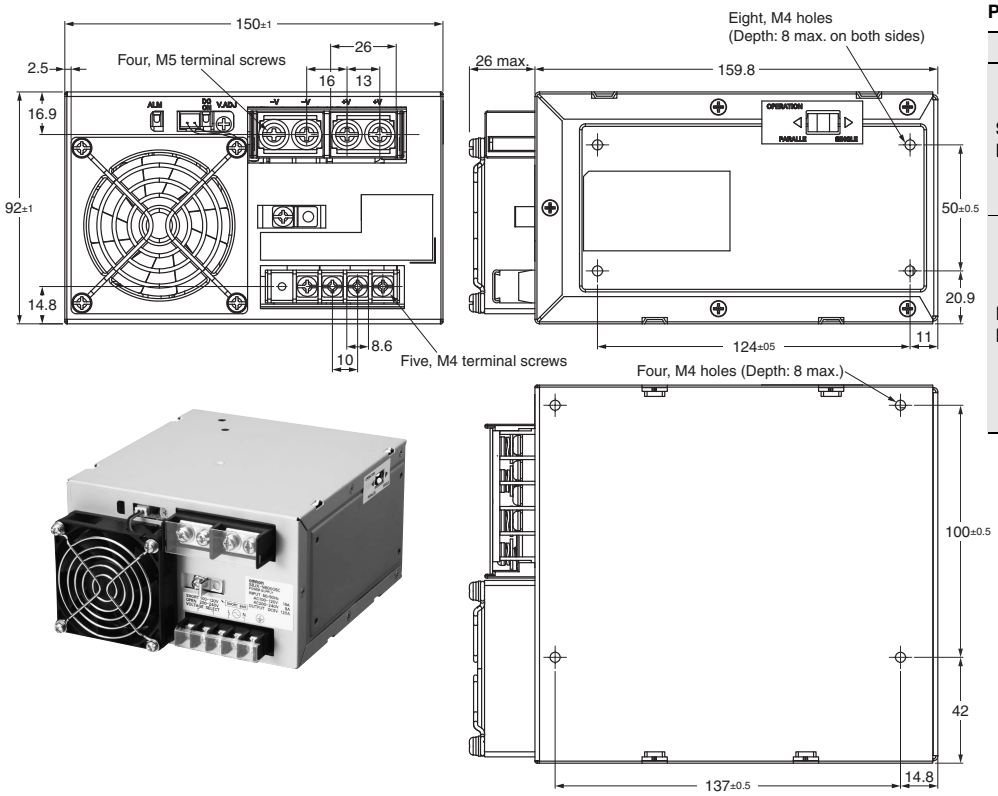
S8JX-G30024C (300 W)
S8JX-G30048C (300 W)



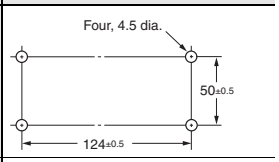
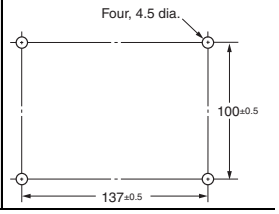
Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting	

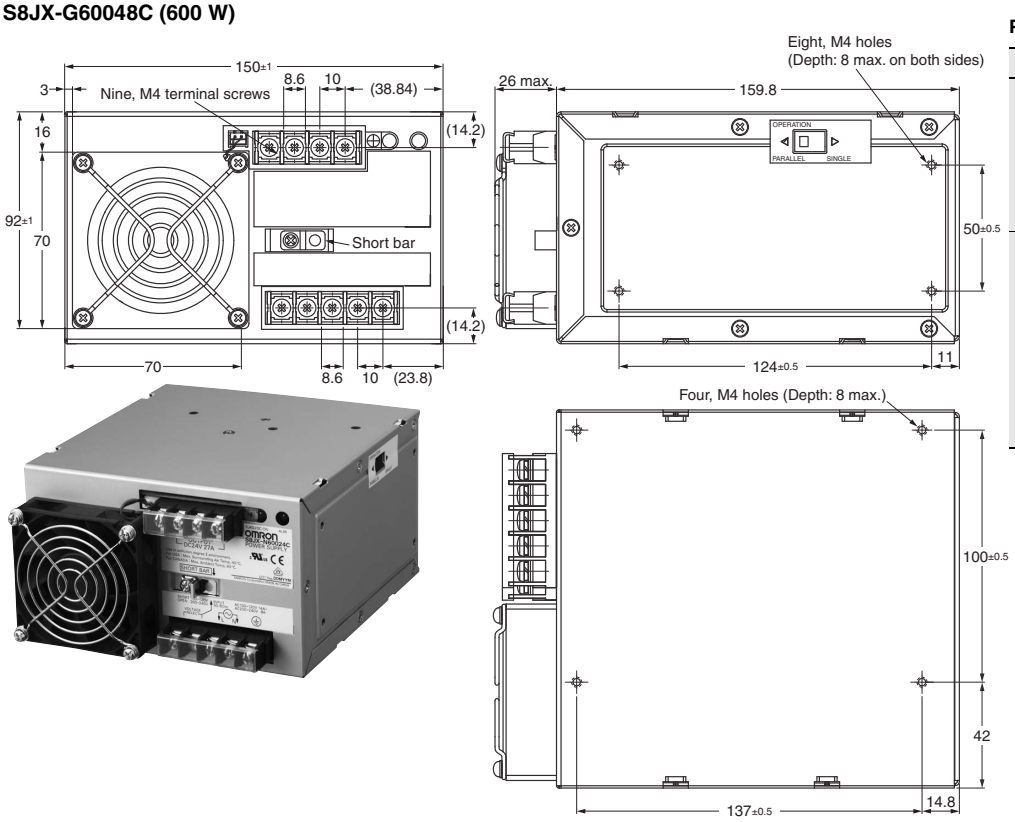
S8JX-G60005□ (600 W)
S8JX-G60012□ (600 W)



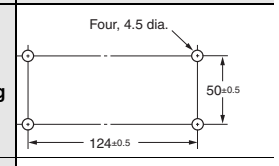
Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting	

S8JX-G60024C (600 W)
S8JX-G60048C (600 W)



Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	
Bottom Mounting