

# Switch Mode Power Supply S8JC-ZS

**S8JC-ZS, newly released Power Supply with CE marking.**

**S8JC-ZS is our best standard power supply for**

- material cost reduction
- time saving for installation by DIN-rail mounting
- CE marking EN 50178



## Model Number Structure

### Model Number Legend

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

S8JC-ZS        -

1      2    3 4    5

**1. Power Ratings**

- 015: 15 W
- 035: 35 W
- 050: 50 W
- 100: 100 W
- 150: 150 W
- 350: 350 W

**2. Output Voltage**

- 05: 5 V
- 12: 12 V
- 24: 24 V

**3. Configuration**

- C: Covered

**4. Configuration/mounting**

- None: Bottom-mounting
- D: DIN Rail-mounting

**5. Input Voltage**

- AC2: 200 to 240 VAC

## Line-up & Feature

### S8JC-ZS series (15/35/50/100/150/350-W models)

Voltage	Power ratings					
	15 W	35 W	50 W	100 W	150 W	350 W
5 V	●	●	●	●	●	●
12 V	●	●	●	●	●	●
24 V	●	●	●	●	●	●

**For More reliability !**

- Conformed to CE marking
- Expanded operating temperature: -20°C to +70°C
- Improved Dielectric strength

# S8JC

## Ordering Information

### List of Models in S8JC-ZS Series

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

Comformed standard	Configuration		Input voltage	Power ratings	Output voltage	Output current	Models
CE (EN50178)	Covered Power Supplies	Bottom-mounting	200 to 240 VAC	15 W	5 VDC	3.0 A	S8JC-ZS01505C-AC2
					12 VDC	1.3 A	S8JC-ZS01512C-AC2
					24 VDC	0.7 A	S8JC-ZS01524C-AC2
				35 W	5 VDC	7.0 A	S8JC-ZS03505C-AC2
					12 VDC	3.0 A	S8JC-ZS03512C-AC2
					24 VDC	1.5 A	S8JC-ZS03524C-AC2
				50 W	5 VDC	10.0 A	S8JC-ZS05005C-AC2
					12 VDC	4.2 A	S8JC-ZS05012C-AC2
					24 VDC	2.1 A	S8JC-ZS05024C-AC2
				100 W	5 VDC	20.0 A	S8JC-ZS10005C-AC2
					12 VDC	8.5 A	S8JC-ZS10012C-AC2
					24 VDC	4.5 A	S8JC-ZS10024C-AC2
				150 W	5 VDC	30.0 A	S8JC-ZS15005C-AC2
					12 VDC	12.5 A	S8JC-ZS15012C-AC2
					24 VDC	6.5 A	S8JC-ZS15024C-AC2
				350 W	5 VDC	60.0 A	S8JC-ZS35005C-AC2
					12 VDC	29.0 A	S8JC-ZS35012C-AC2
					24 VDC	14.6 A	S8JC-ZS35024C-AC2
		DIN Rail-mounting	200 to 240 VAC	15 W	5 VDC	3.0 A	S8JC-ZS01505CD-AC2
					12 VDC	1.3 A	S8JC-ZS01512CD-AC2
					24 VDC	0.7 A	S8JC-ZS01524CD-AC2
				35 W	5 VDC	7.0 A	S8JC-ZS03505CD-AC2
					12 VDC	3.0 A	S8JC-ZS03512CD-AC2
					24 VDC	1.5 A	S8JC-ZS03524CD-AC2
				50 W	5 VDC	10.0 A	S8JC-ZS05005CD-AC2
					12 VDC	4.2 A	S8JC-ZS05012CD-AC2
					24 VDC	2.1 A	S8JC-ZS05024CD-AC2
				100 W	5 VDC	20.0 A	S8JC-ZS10005CD-AC2
					12 VDC	8.5 A	S8JC-ZS10012CD-AC2
					24 VDC	4.5 A	S8JC-ZS10024CD-AC2
				150 W	5 VDC	30.0 A	S8JC-ZS15005CD-AC2
					12 VDC	12.5 A	S8JC-ZS15012CD-AC2
					24 VDC	6.5 A	S8JC-ZS15024CD-AC2
				350 W	5 VDC	60.0 A	S8JC-ZS35005CD-AC2
					12 VDC	29.0 A	S8JC-ZS35012CD-AC2
					24 VDC	14.6 A	S8JC-ZS35024CD-AC2

## Ratings, Characteristics, and Functions

### 15-/35-W Models

Item		Power ratings		15 W			35 W			
		Series name		S8JC-ZS			S8JC-ZS			
Certification		CE (EN 50178)			CE (EN 50178)					
Output	Output voltage (VDC)	5 V	12 V	24 V	5 V	12 V	24 V			
	Output current	3.0 A	1.3 A	0.7 A	7.0 A	3.0 A	1.5 A			
	Voltage adjustment range (typical)	-10% to 10%			-10% to 10%					
	Ripple (typical)	70 mV	60 mV	50 mV	40 mV	100 mV	100 mV			
	Startup time (typical)	260 ms	270 ms	300 ms	240 ms	260 ms	300 ms			
	Hold time (typical)	50 ms	65 ms	50 ms	30 ms	35 ms	40 ms			
Efficiency (typical)		76%	80%		76%	83%	84%			
Input	Voltage	200 to 240 VAC (185 to 264 VAC)			200 to 240 VAC (185 to 264 VAC)					
	Frequency 50/60 Hz (47 to 63 Hz)	50/60 Hz (47 to 64 Hz)			50/60 Hz (47 to 64 Hz)					
	Current (typical)	0.22 A			0.5 A					
	Leakage current	1 mA max.			1 mA max.					
	Inrush current (for a cold start at 25°C) (typical)	40 A			40 A					
Additional functions	Overload protection	105% of rated load current, voltage drop, intermittent, automatic reset			105% of rated load current, voltage drop, intermittent, automatic reset					
	Overvoltage protection	Yes			Yes					
	Parallel operation	No			No					
	Series operation	No			No					
Other	Ambient operating temperature *Refer to the derating curve in Engineering Data	*-20°C to 70°C			*-20°C to 70°C					
	Dielectric strength (detection current: 20 mA)	Between all inputs and outputs	3 kVAC for 1 min.			3 kVAC for 1 min.				
		Between all inputs and PE terminals	2 kVAC for 1 min.			2 kVAC for 1 min.				
		Between all outputs and PE terminals	1 kVAC for 1 min.			1 kVAC for 1 min.				
	Vibration resistance	10 to 55 Hz, 0.26-mm single amplitude for 2 h each in X, Y, and Z directions			10 to 55 Hz, 0.26-mm single amplitude for 2 h each in X, Y, and Z directions					
	MTBF	135,000 hrs			135,000 hrs					
	Output indicator	Yes (Color: Green)			Yes (Color: Green)					
	Dimensions (W×H×D)	Bottom-mounting model	36×97×80 mm			38×98×129 mm				
		DIN Rail-mounting model (See note 3.)	46×97×105 mm			46×98×154 mm				
	Weight (typical)	Bottom-mounting model	200 g			280 g				
DIN Rail-mounting model		370 g			450 g					

**Note: 1.** Unless otherwise specified, all parameters are measured with a 230-VAC input, at the rated load, and at an ambient temperature of 25°C.

**2.** Ripple and noise are measured at a bandwidth of 20 MHz.

**3.** Refer to the dimensional diagrams for details on DIN Rail-mounting Models (excluding terminal blocks and DIN Rail products).

# S8JC

## 50-/100-W Models

Power ratings		50 W			100 W			
Item	Series name	S8JC-ZS			S8JC-ZS			
Certification		CE (EN 50178)			CE (EN 50178)			
Output	Output voltage (VDC)	5 V	12 V	24 V	5 V	12 V	24 V	
	Output current	10 A	4.2 A	2.1 A	20 A	8.5 A	4.5 A	
	Voltage adjustment range (typical)	-10% to 10%			-10% to 10%			
	Ripple (typical)	80 mV	60 mV	50 mV	160 mV	140 mV	150 mV	
	Startup time (typical)	240 ms	260 ms	300 ms	250 ms	270 ms	300 ms	
	Hold time (typical)	35 ms	40 ms	30 ms	50 ms	55 ms	50 ms	
Efficiency (typical)		75%	83%		77%	81%	87%	
Input	Voltage	200 to 240 VAC (185 to 264 VAC)			200 to 240 VAC (185 to 264 VAC)			
	Frequency 50/60 Hz (47 to 63 Hz)	50/60 Hz (47 to 64 Hz)			50/60 Hz (47 to 64 Hz)			
	Current (typical)	0.65 A			1.4 A			
	Leakage current	1 mA max.			1 mA max.			
	Inrush current (for a cold start at 25°C) (typical)	40 A			40 A			
Additional functions	Overload protection	105% of rated load current, voltage drop, intermittent, automatic reset			105% of rated load current, voltage drop, intermittent, automatic reset			
	Overvoltage protection	Yes			Yes			
	Parallel operation	No			No			
	Series operation	No			No			
Other	Ambient operating temperature *Refer to the derating curve in Engineering Data	*-20°C to 70°C			*-20°C to 70°C			
	Dielectric strength (detection current: 20 mA)	Between all inputs and outputs	3 kVAC for 1 min.			3 kVAC for 1 min.		
		Between all inputs and PE terminals	2 kVAC for 1 min.			2 kVAC for 1 min.		
		Between all outputs and PE terminals	1 kVAC for 1 min.			1 kVAC for 1 min.		
	Vibration resistance	10 to 55 Hz, 0.26-mm single amplitude for 2h each in X, Y, and Z directions			10 to 55 Hz, 0.26-mm single amplitude for 2h each in X, Y, and Z directions			
	MTBF	135,000 hrs			135,000 hrs			
	Output indicator	Yes (Color: Green)			Yes (Color: Green)			
	Dimensions (W×H×D)	Bottom-mounting model	38×98×129 mm			50×98×159 mm	38×98×159 mm	
		DIN Rail-mounting model (See note 3.)	46×98×154 mm			52×98×186 mm	46×98×186 mm	
	Weight (typical)	Bottom-mounting model	280 g			440 g	380 g	370 g
DIN Rail-mounting model		450 g			620 g	550 g	540 g	

- Note:**
1. Unless otherwise specified, all parameters are measured with a 230-VAC input, at the rated load, and at an ambient temperature of 25°C.
  2. Ripple and noise are measured at a bandwidth of 20 MHz.
  3. Refer to the dimensional diagrams for details on DIN Rail-mounting Models (excluding terminal blocks and DIN Rail products).

## 150-/350-W Models

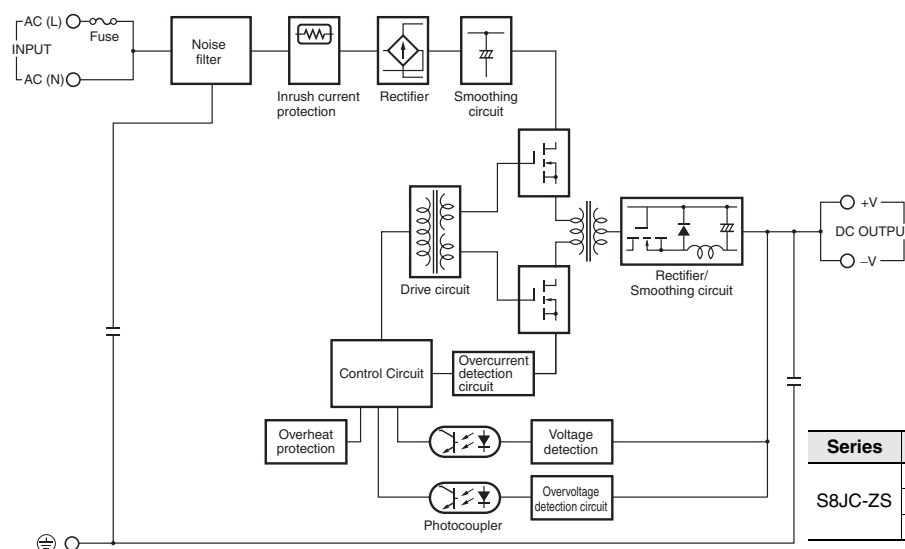
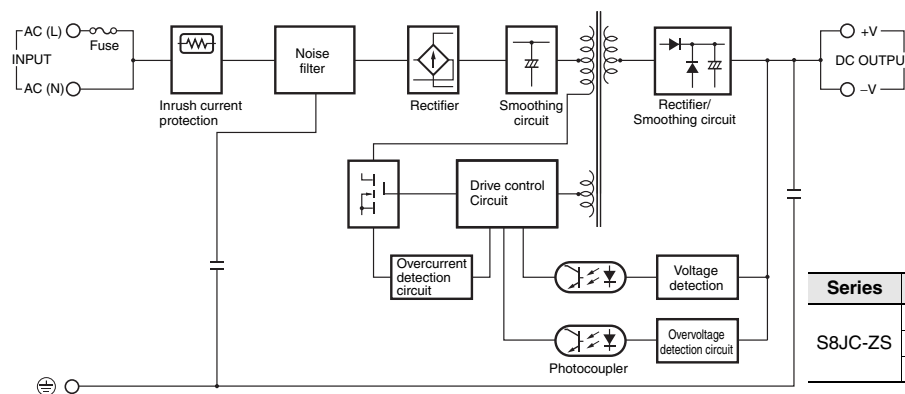
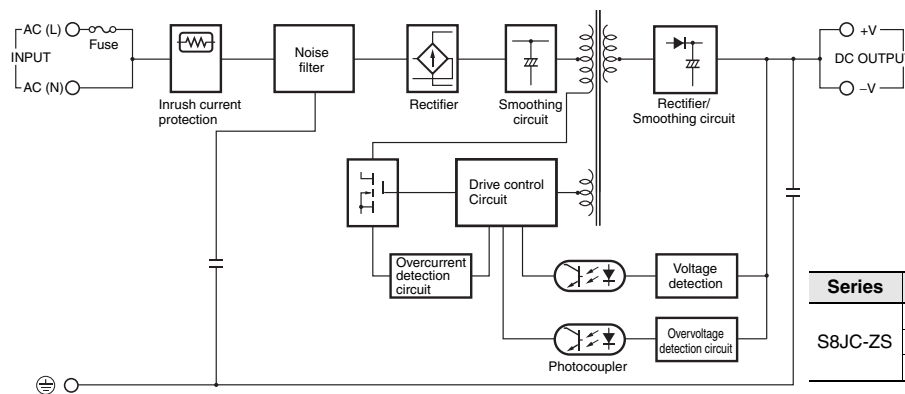
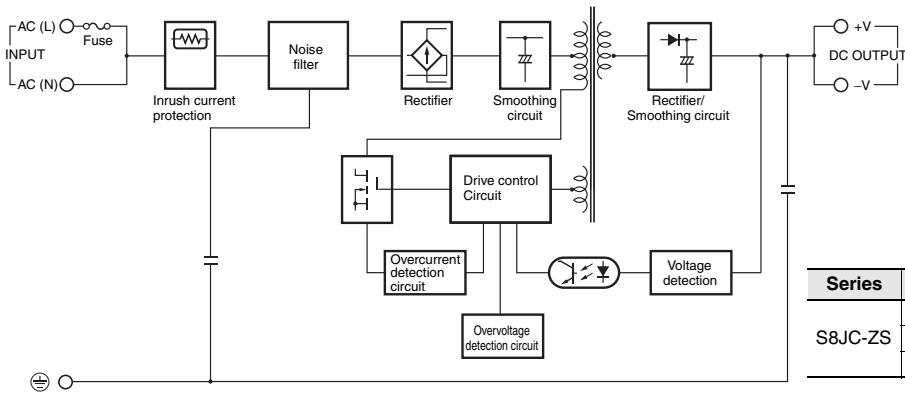
Item		Power ratings		150 W			350 W			
		Series name		S8JC-ZS			S8JC-ZS			
Certification		CE (EN 50178)			CE (EN 50178)					
Output	Output voltage (VDC)	5 V	12 V	24 V	5 V	12 V	24 V			
	Output current	30 A	12.5 A	4.5 A	60 A	29 A	14.6 A			
	Voltage adjustment range (typical)	-10% to 10%			-10% to 10%					
	Ripple (typical)	210 mV	210 mV	200 mV	300 mV	240 mV	200 mV			
	Startup time (typical)	250 ms	750 ms	300 ms	700 ms	700 ms	300 ms			
	Hold time (typical)	50 ms	70 ms	60 ms	25 ms					
Efficiency (typical)		79%	85%	87%	75%	78%	84%			
Input	Voltage	200 to 240 VAC (185 to 264 VAC)			200 to 240 VAC (185 to 264 VAC)					
	Frequency 50/60 Hz (47 to 63 Hz)	50/60 Hz (47 to 64 Hz)			40/60 Hz (47 to 64 Hz)					
	Current (typical)	2.0 A			4.2 A					
	Leakage current	1 mA max.			1 mA max.					
	Inrush current (for a cold start at 25°C) (typical)	40 A			40 A					
Additional functions	Overload protection	105% of rated load current, voltage drop, intermittent, automatic reset			105% of rated load current, voltage drop, intermittent, automatic reset					
	Overvoltage protection	Yes			Yes					
	Parallel operation	No			No					
	Series operation	No			No					
Other	Ambient operating temperature *Refer to the derating curve in Engineering Data		*-20°C to 70°C			*-20°C to 70°C				
	Dielectric strength (detection current: 20 mA)	Between all inputs and outputs	3 kVAC for 1 min.			3 kVAC for 1 min.				
		Between all inputs and PE terminals	2 kVAC for 1 min.			2 kVAC for 1 min.				
		Between all outputs and PE terminals	1 kVAC for 1 min.			1 kVAC for 1 min.				
	Vibration resistance		10 to 55 Hz, 0.26-mm single amplitude for 2h each in X, Y, and Z directions			10 to 55 Hz, 0.26-mm single amplitude for 2h each in X, Y, and Z directions				
	MTBF		135,000 hrs			135,000 hrs				
	Output indicator		Yes (Color: Green)			Yes (Color: Green)				
	Dimensions (W×H×D)	Bottom-mounting model	43×98×199 mm	50×98×159 mm		50×115×195 mm				
		DIN Rail-mounting model (See note 3.)	46×98×226 mm	52×98×186 mm		52×115×221 mm				
	Weight (typical)	Bottom-mounting model	560 g	530 g	450 g	788 g	800 g	774 g		
DIN Rail-mounting model		750 g	700 g	620 g	946 g	958 g	932 g			

**Note: 1.** Unless otherwise specified, all parameters are measured with a 230-VAC input, at the rated load, and at an ambient temperature of 25°C.

**2.** Ripple and noise are measured at a bandwidth of 20 MHz.

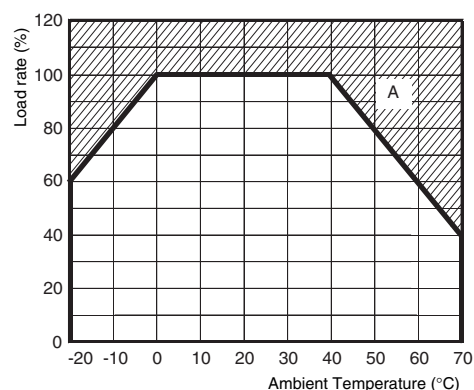
**3.** Refer to the dimensional diagrams for details on DIN Rail-mounting Models (excluding terminal blocks and DIN Rail products).

# Block Diagrams



## Engineering Data

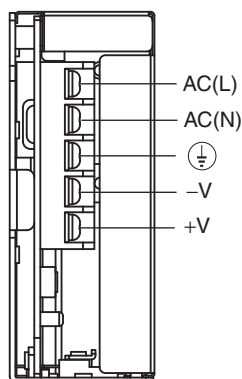
### Derating Curves for S8JC-ZS



- 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 "A" in the above graph).  
**2.** If there is a derating problem, use forced air-cooling.

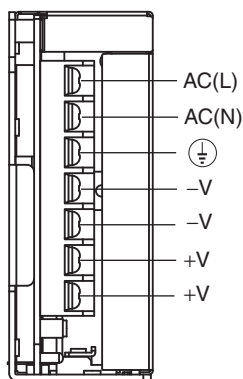
## Terminal Arrangement

### 15-/35-/50-W Models



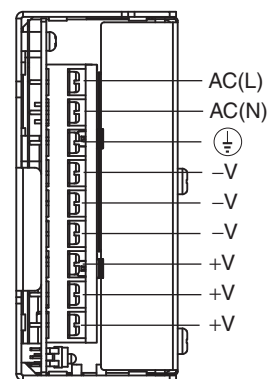
**Note:** The S8JC-S05024C is shown above.

### 100-/150-/350(24 V)-W Models



- Note: 1.** The S8JC-S10024C is shown above.  
**2.** The rated current for output terminals is 25 A per terminal. Be sure to use multiple terminals simultaneously for current that exceeds the terminal rating. When applying a current of 25 A or more, use at least two terminals each for the positive and negative wires.

### 350(5 V, 12 V)-W Models

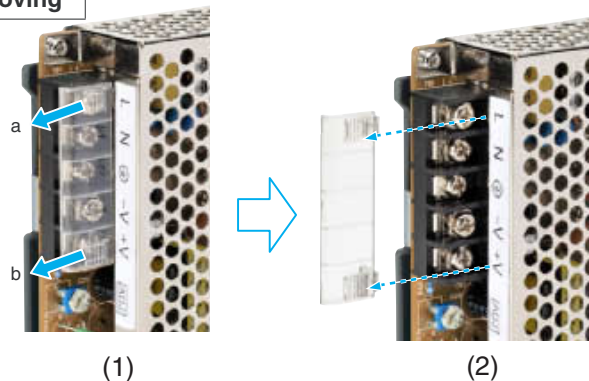


**Note:** The S8JC-S35005C is shown above.

## Terminal Cover Fitting

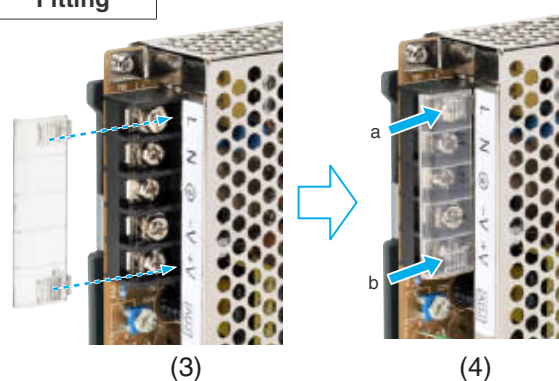
### S8JC-ZS□□□□C Models

#### Removing



### S8JC-ZS□□□□C Models

#### Fitting



- In (1) case, please push scratched parts (a, b) on the cover following the arrow "←"  
 In (2) case, please remove the cover following the arrow "←·····"  
 In (3) case, please remove the cover following the arrow "·····→"  
 In (4) case, please push scratched parts (a, b) on the cover following the arrow "→"

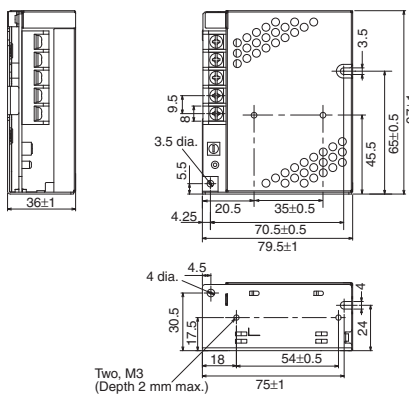
# S8JC

## Dimensions

(Unit: mm)

### Bottom-mounting Models

S8JC-ZS015□□C-AC2 (15 W)



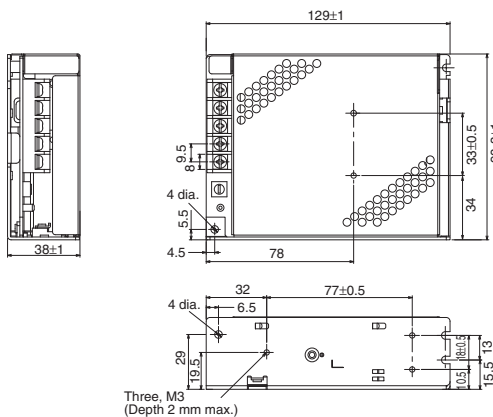
#### Panel mounting holes dimensions

Surface screw mounting	
Side Mounting	Two, M3 59.5±0.5 70.5±0.5
	Two, M3 6.5±0.5 70.5±0.5

**Note:** The screws must not protrude more than 2 mm inside the Power Supply when screw holes provided on the chassis are used. If the dimensions are not correct, the Power Supply may be damaged.

S8JC-ZS035□□C-AC2 (35 W)

S8JC-ZS050□□C-AC2 (50 W)

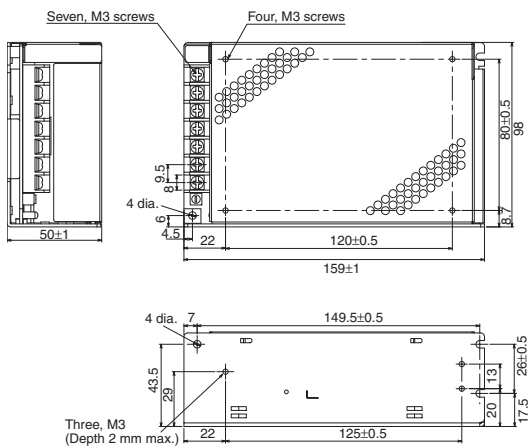


#### Panel mounting holes dimensions

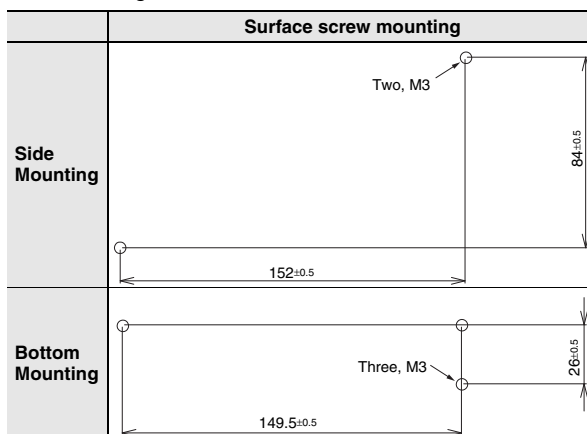
Surface screw mounting	
Side Mounting	Two, M3 85.5±0.5 122.5±0.5
	Three, M3 19±0.5 120±0.5



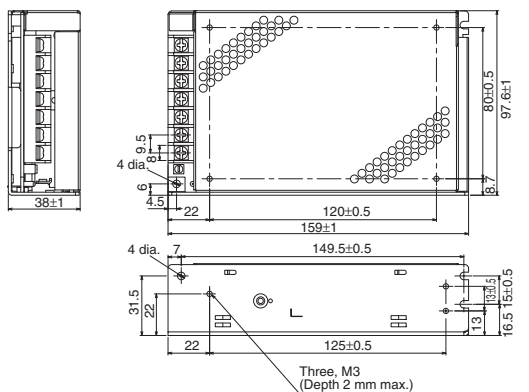
S8JC-ZS10005C-AC2 (100 W)



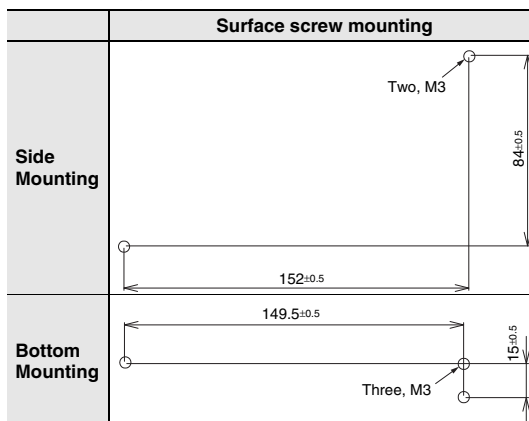
Panel mounting holes dimensions



S8JC-ZS10012C-AC2 (100 W)  
S8JC-ZS10024C-AC2 (100 W)

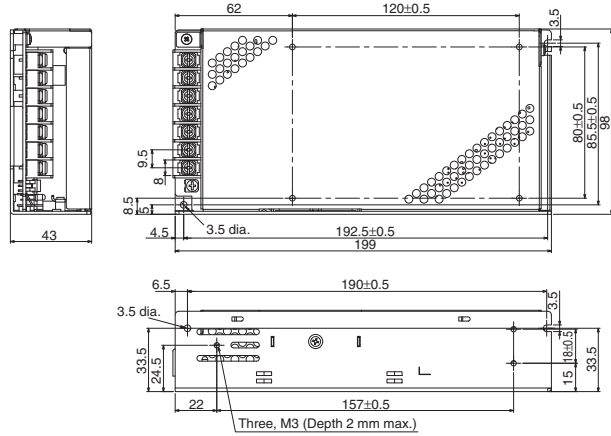


Panel mounting holes dimensions



# S8JC

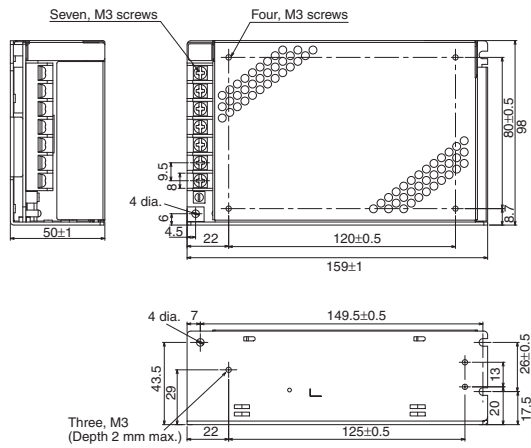
## S8JC-ZS15005C-AC2 (150 W)



### Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	<p>Two, M3 192.5±0.5 85.5±0.5</p>
Bottom Mounting	<p>Two, M3 190±0.5</p>

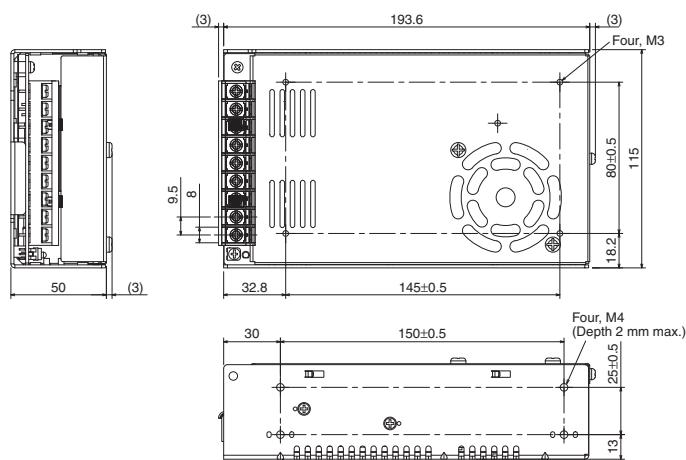
## S8JC-ZS15012C-AC2 (150 W) S8JC-ZS15024C-AC2 (150 W)



### Panel mounting holes dimensions

	Surface screw mounting
Side Mounting	<p>Two, M3 152±0.5 84±0.5</p>
Bottom Mounting	<p>Three, M3 149.5±0.5 26±0.5</p>

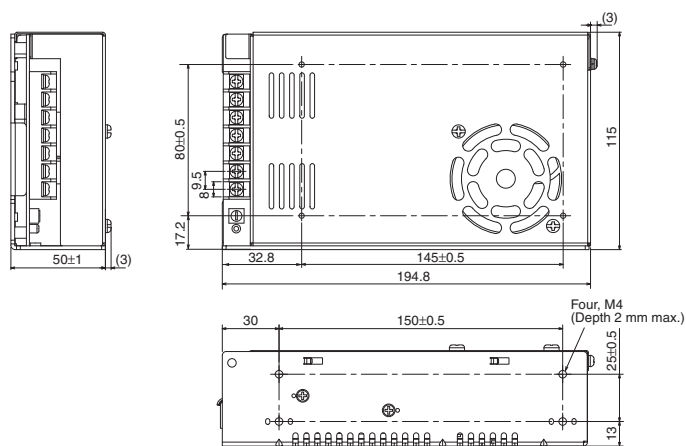
S8JC-ZS35005C-AC2 (350 W)  
S8JC-ZS35012C-AC2 (350 W)



Panel mounting holes dimensions

Surface screw mounting	
Side Mounting	Four, M3
	Four, M3
Bottom Mounting	Four, M4
	Four, M4

S8JC-ZS35024C-AC2 (350 W)



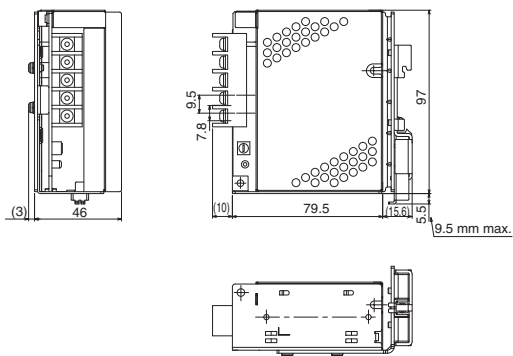
Panel mounting holes dimensions

Surface screw mounting	
Side Mounting	Four, M3
	Four, M3
Bottom Mounting	Four, M4
	Four, M4

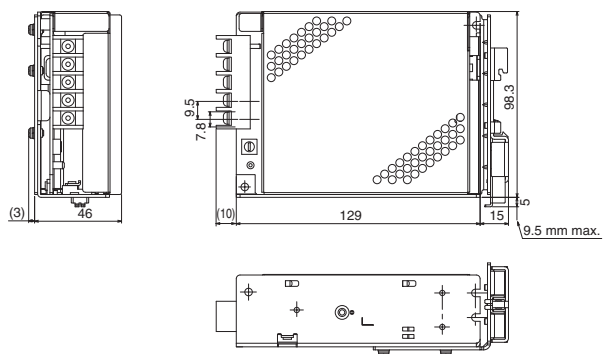
# S8JC

## DIN Rail-mounting Models

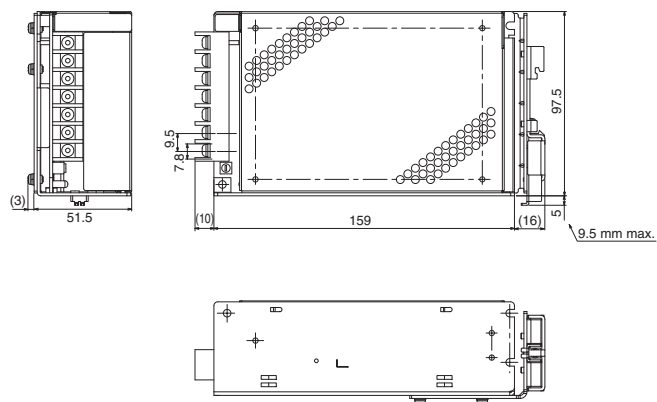
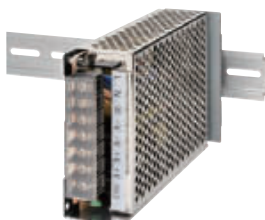
S8JC-ZS01524CD-AC2 (15 W)



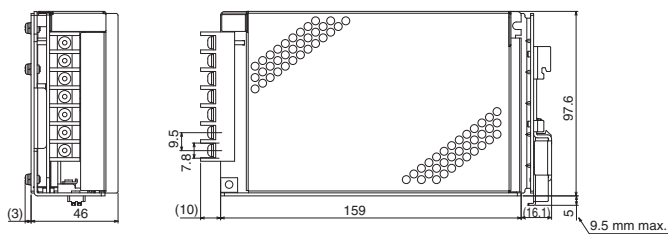
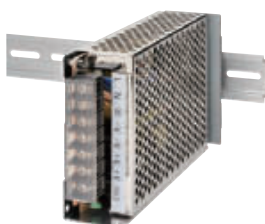
S8JC-ZS035□□CD-AC2 (35 W)  
S8JC-ZS050□□CD-AC2 (50 W)



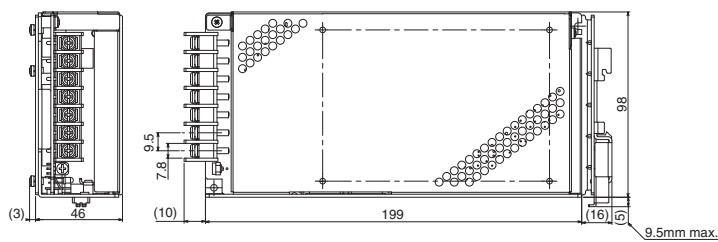
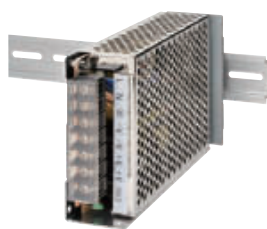
S8JC-ZS10005CD-AC2 (100 W)



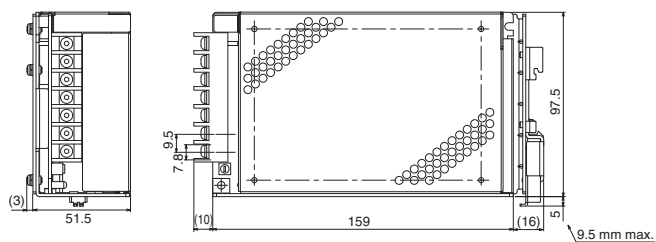
S8JC-ZS10012CD-AC2 (100 W)  
S8JC-ZS10024CD-AC2 (100 W)



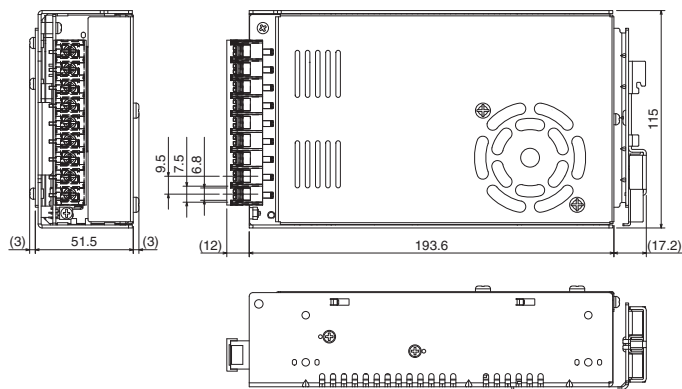
S8JC-ZS15005CD-AC2 (150W) W)



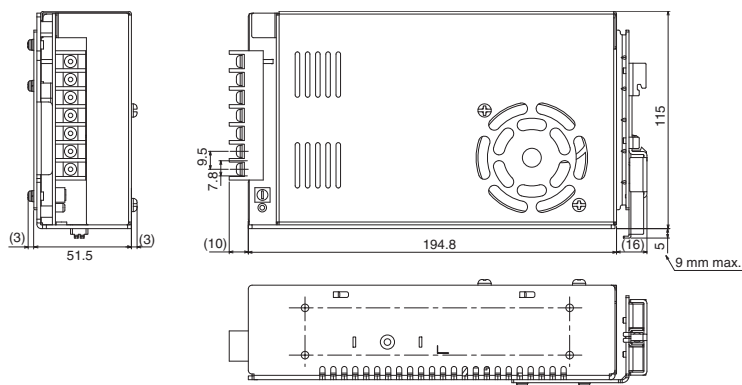
S8JC-ZS15012CD-AC2 (150 W)  
S8JC-ZS15024CD-AC2 (150 W)



S8JC-ZS35005CD-AC2 (350 W)  
S8JC-ZS35012CD-AC2 (350 W)



S8JC-ZS35024CD-AC2 (350 W)



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## Safety Precautions

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Refer to *Safety Precautions for All Power Supplies*.

### Precautions for Safe Use

- Minor burns may occasionally occur. Do not touch the Product while power is being supplied or immediately after power is turned OFF.
- Minor injury due to electric shock may occasionally occur. Do not touch the terminals while power is being supplied.
- Take adequate measures to ensure proper heat dissipation to increase the long-term reliability of the Product.
- Connect the ground completely. Electric shock or malfunction may occur if the ground is not connected completely.
- The service life of the fan is approximately 35,000 hours (at 25°C). The service life varies, however, depending on the ambient temperature or other surrounding environmental conditions such as dust. As a guide, replace the product within two years if it is used at an ambient temperature of 40°C. (For 350-W Models only.)
- The screws must not protrude more than 2 mm inside the Power Supply when screw holes provided on the chassis are used.
- Avoid places where the product is subjected to penetration of liquid, foreign substance, or corrosive gas (in particular, sulfide gas or ammonia gas).
- The rated current for output terminals is 25 A per terminal. Be sure to use multiple terminals simultaneously for current that exceeds the terminal rating. When applying a current of 25 A or more, use at least two terminals each for the positive and negative wires.

## Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

## Warranty and Limitations of Liability

### WARRANTY

OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, REGARDING NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS. ANY BUYER OR USER ACKNOWLEDGES THAT THE BUYER OR USER ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. OMRON DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

### LIMITATIONS OF LIABILITY

OMRON SHALL NOT BE RESPONSIBLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.

In no event shall the responsibility of OMRON for any act exceed the individual price of the product on which liability is asserted.

IN NO EVENT SHALL OMRON BE RESPONSIBLE FOR WARRANTY, REPAIR, OR OTHER CLAIMS REGARDING THE PRODUCTS UNLESS OMRON'S ANALYSIS CONFIRMS THAT THE PRODUCTS WERE PROPERLY HANDLED, STORED, INSTALLED, AND MAINTAINED AND NOT SUBJECT TO CONTAMINATION, ABUSE, MISUSE, OR INAPPROPRIATE MODIFICATION OR REPAIR.

## Application Considerations

### SUITABILITY FOR USE

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of products in the customer's application or use of the products.

At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

### PROGRAMMABLE PRODUCTS

OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

## Disclaimers

### CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons.

It is our practice to change model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

### DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

### PERFORMANCE DATA

Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of OMRON's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

### ERRORS AND OMISSIONS

The information in this document has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical, or proofreading errors, or omissions.

Cat. No. T011-EN-01

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

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