



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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

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

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



# Switch Mode Power Supply

# S8VS (15/30/60/90/120/180/240/480-W Models)

## Multi-Function Indication Monitor for Production Site Visualization \*



- Status displayed on 3-digit, 7-segment display. \*
- Signal output notifications at 90 W or more. \*
- Conformity to various safety standards for global usability.
- Varied coverage with 3-year warranty.

\* Models with indication monitor



Refer to *Safety Precautions for All Power Supplies* and *Safety Precautions* on page 32.

### Recommended Noise Filter



Noise filter  
S8V-NF

For more information, refer to *S8V-NF Noise Filter Data Sheet* (Cat. No. T212-E1).

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

## Model Number Structure

### Model Number Legend

**Note:** Not all combinations are possible. Refer to *List of Models* in *Ordering Information*, below.

S8VS-         -

1    2    3    4    5    6

#### 1. Power Ratings

- 015: 15 W
- 030: 30 W
- 060: 60 W
- 090: 90 W
- 120: 120 W
- 180: 180 W
- 240: 240 W
- 480: 480 W

#### 3. Indication monitor

- None: Without indication monitor (standard model)
- A: With indication monitor (maintenance forecast monitor)
- B: With indication monitor (total run time monitor)
- BE: With indication monitor but without alarm output (total run time monitor)

#### 4. Alarm output

- None: Sinking (Emitter COM) \*
  - P: Sourcing (Collector COM)
- Note:** No alarm output possible with 60-W models.  
\* Both sinking and sourcing outputs are available for 480-W models.

#### 2. Output voltage

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

#### 5. UL Class 2 Output Standards (UL 1310)

- None: Does not conform. \*
  - S: Conforms.
- \* 15-W, 30-W, and 60-W models conform to Class 2 output standards (UL 1310).  
**Note:** The S option is available only for 90-W models.

#### 6. Terminal Block Form

- None: Screw terminal block
- F: Screwless terminal block

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

# S8VS

## Ordering Information

### List of Models

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

#### Models without Indication Monitor (Standard Models)

Power ratings	Input voltage	Output voltage	Output current	UL Class 2 Output standards	Model number (screw terminal block)	Model number (screwless terminal block)
15 W	100 to 240 VAC (allowable range: 85 to 264 VAC or 80 to 370 VDC *3)	5 V	2.0 A	Yes	S8VS-01505 *1	---
		12 V	1.2 A	Yes	S8VS-01512	
		24 V	0.65 A	Yes	S8VS-01524	
30 W		5 V	4.0 A	Yes	S8VS-03005 *2	
		12 V	2.5 A	Yes	S8VS-03012	
		24 V	1.3 A	Yes	S8VS-03024	
60 W		24 V	2.5 A	Yes	S8VS-06024	S8VS-06024-F
90 W				---	S8VS-09024	S8VS-09024-F
			Yes	S8VS-09024S	S8VS-09024S-F	
120 W			5 A	---	S8VS-12024	S8VS-12024-F
180 W			7.5 A	---	S8VS-18024	S8VS-18024-F
240 W			10 A	---	S8VS-24024	S8VS-24024-F
480 W	100 to 240 VAC		20 A Peak current 30 A (200 VAC)	---	S8VS-48024	S8VS-48024-F

\*1. The output capacity of the S8VS-01505 is 10 W.

\*2. The output capacity of the S8VS-03005 is 20 W.

\*3. The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

#### Models with Indication Monitor (Maintenance Forecast Monitor)

Power ratings	Input voltage	Output voltage	Output current	Alarm output *2	UL Class 2 Output standards	Model number (screw terminal block)	Model number (screwless terminal block)
60 W	100 to 240 VAC (allowable range: 85 to 264 VAC or 80 to 370 VDC *1)	24 V	2.5 A	---	Yes	S8VS-06024A	S8VS-06024A-F
90 W				Sinking	---	S8VS-09024A	S8VS-09024A-F
			Sinking	Yes	S8VS-09024AS	S8VS-09024AS-F	
			Sourcing	---	S8VS-09024AP	S8VS-09024AP-F	
			Sourcing	Yes	S8VS-09024APS	S8VS-09024APS-F	
120 W			5 A	Sinking	---	S8VS-12024A	S8VS-12024A-F
180 W				Sourcing	---	S8VS-12024AP	S8VS-12024AP-F
			240 W	7.5 A	Sinking	---	S8VS-18024A
Sourcing					---	S8VS-18024AP	S8VS-18024AP-F
240 W			10 A	Sinking	---	S8VS-24024A	S8VS-24024A-F
				Sourcing	---	S8VS-24024AP	S8VS-24024AP-F
480 W			100 to 240 VAC	20 A Peak current 30 A (200 VAC)	Sinking/ sourcing	---	S8VS-48024A

\*1. The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

\*2. In the Alarm output column, "sinking" indicates an emitter COM and "sourcing" indicates a collector COM.

#### Models with Indication Monitor (Total Run Time Monitor)

Power ratings	Input voltage	Output voltage	Output current	Alarm output *2	UL Class 2 Output standards	Model number (screw terminal block)	Model number (screwless terminal block)
60 W	100 to 240 VAC (allowable range: 85 to 264 VAC or 80 to 370 VDC) *1	24 V	2.5 A	---	Yes	S8VS-06024B	S8VS-06024B-F
90 W				---	---	S8VS-09024BE	S8VS-09024BE-F
			---	Yes	S8VS-09024BES	S8VS-09024BES-F	
			Sinking	---	S8VS-09024B	S8VS-09024B-F	
			Sinking	Yes	S8VS-09024BS	S8VS-09024BS-F	
			Sourcing	---	S8VS-09024BP	S8VS-09024BP-F	
			Sourcing	Yes	S8VS-09024BPS	S8VS-09024BPS-F	
120 W			5 A	---	---	S8VS-12024BE	S8VS-12024BE-F
				Sinking	---	S8VS-12024B	S8VS-12024B-F
180 W			7.5 A	Sourcing	---	S8VS-12024BP	S8VS-12024BP-F
				---	---	S8VS-18024BE	S8VS-18024BE-F
180 W			Sinking	---	---	S8VS-18024B	S8VS-18024B-F
	Sourcing	---		S8VS-18024BP	S8VS-18024BP-F		
240 W	10 A	---	---	S8VS-24024BE	S8VS-24024BE-F		
		Sinking	---	S8VS-24024B	S8VS-24024B-F		
240 W	Sourcing	---	---	S8VS-24024BP	S8VS-24024BP-F		
		---	---	S8VS-48024B	S8VS-48024B-F		
480 W	100 to 240 VAC	20 A Peak current 30 A (200 VAC)	Sinking/ sourcing	---	S8VS-48024B	S8VS-48024B-F	

\*1. The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

\*2. In the Alarm output column, "sinking" indicates an emitter COM and "sourcing" indicates a collector COM.

Note: Refer to pages 24 to 25 for the options that available.

# Specifications

## Ratings/Characteristics

Item	Power ratings		15 W			30 W			
	Output voltage		5 V	12 V	24 V	5 V	12 V	24 V	
Efficiency	With 100-VAC input		74% typical	79% typical	83% typical	74% typical	81% typical	85% typical	
	With 200-VAC input		73% typical	78% typical	80% typical	74% typical	80% typical	86% typical	
Input	Voltage *1		100 to 240 VAC (allowable range: 85 to 264 VAC, 80 to 370 VDC *5)						
	Frequency *1		50/60 Hz (47 to 450 Hz)						
	Current	With 100-VAC input	0.45 A max., 0.34 A typical				0.9 A max., 0.66 A typical		
		With 200-VAC input	0.25 A max., 0.22 A typical				0.6 A max., 0.4 A typical		
	Power factor		---						
	Harmonic current regulation		Conforms to EN61000-3-2						
	Leakage current	With 100-VAC input	0.5 mA max.						
		With 200-VAC input	1.0 mA max.						
Inrush current *2	With 100-VAC input	17.5 A max., 14 A typical							
	With 200-VAC input	35 A max., 28 A typical							
Output	Voltage adjustment range *3		-10% to 15% (with V.ADJ)						
	Ripple noise voltage (at rated I/O)		60 mV max.	70 mV max.	60 mV max.	60 mV max.	90 mV max.	150 mV max.	
	Input variation influence		0.5% max. (at 85- to 264-VAC input, 100% load)						
	Load variation influence (rated input voltage)		2.0% max. (5 V), 1.5% max. (12 V, 24 V), (with rated input, 0 to 100% load)						
	Temperature variation influence		0.05%/°C max.						
	Startup time (at rated I/O) *2	With 100-VAC input	580 ms typical	530 ms typical	600 ms typical	500 ms typical	560 ms typical	560 ms typical	
		With 200-VAC input	340 ms typical	360 ms typical	400 ms typical	360 ms typical	380 ms typical	400 ms typical	
	Output hold time (at rated I/O) *2	With 100-VAC input	39 ms typical	27 ms typical	28 ms typical	31 ms typical	22 ms typical	31 ms typical	
With 200-VAC input		187 ms typical	134 ms typical	134 ms typical	174 ms typical	123 ms typical	140 ms typical		
Additional functions	Overload protection *2		The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).						
	Overvoltage protection *2		Yes *4						
	Output voltage indication		No						
	Output current indication		No						
	Peak-hold current indication		No						
	Maintenance forecast monitor indication		No						
	Maintenance forecast monitor output		No						
	Total run time monitor indication		No						
	Total run time monitor output		No						
	Undervoltage alarm indication		Yes (color: red)						
	Undervoltage alarm output		No						
	Parallel operation		No (However, backup operation is possible. An external diode is required.)						
Series operation		Models with 24-V output: Possible for up to 2 Power Supplies (with external diode) Models with 5- or 12-V output: Not possible							
Other	Operating ambient temperature		Refer to the derating curve in <i>Engineering Data</i> . (with no icing or condensation)						
	Storage temperature		-25 to 65°C						
	Operating ambient 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 <sup>2</sup> , 3 times each in ±X, ±Y, and ±Z directions						
	Output indicator		Yes (color: green)						
	EMI	Conducted Emissions	Conforms to EN55011 Group1 Class B and based on FCC Class A						
		Radiated Emissions	Conforms to EN55011 Group1 Class B						
	EMS		Conforms to EN61204-3 high severity levels						
	Approved standards		UL508 (Listing, Class2 Output: Per 1310) UL60950-1, UL63268-1 CSA C22.2 No.107.1 (cUL) (Class2 Output: Per CSA C22.2 No.223) CSA C22.2 No.60950-1 (cUR) EN50178, EN60950-1, EN62368-1 EAC mark, RCM mark						
	SEMI		F47-0706 (With 200-VAC input)						
Weight		160 g max.				180 g max.			

\*1. 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.

\*2. For a cold start at 25°C. Refer to *Engineering Data* on page 18 for details.

\*3. 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 the load is not damaged.

\*4. To reset the protection, turn OFF the input power for three minutes or longer and then turn it back ON.

\*5. The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

Item	Power ratings		60 W			
	Type		Standard	Maintenance forecast monitor	Total run time monitor	
Efficiency	With 100-VAC input		84% typical	83% typical		
	With 200-VAC input		83% typical	85% typical		
Input	Voltage *1		100 to 240 VAC (allowable range: 85 to 264 VAC or 80 to 370 VDC *11)			
	Frequency *1		50/60 Hz (47 to 450 Hz)			
	Current	With 100-VAC input		1.7 A max., 1.3 A typical	1.7 A max., 1.3 A typical	
		With 200-VAC input		1.0 A max., 0.68 A typical	1.0 A max., 0.78 A typical	
	Power factor		---			
	Harmonic current regulation		Conforms to EN61000-3-2			
	Leakage current	With 100-VAC input		0.5 mA max.		
		With 200-VAC input		1.0 mA max.		
Inrush current *2	With 100-VAC input		17.5 A max., 14 A typical			
	With 200-VAC input		35 A max., 28 A typical			
Output	Voltage adjustment range *3		-10% to 15% (with V. ADJ) (The voltage cannot be adjusted for the S8VS-09024□□□S□.)			
	Ripple noise voltage (at rated I/O)		70 mV max.	90 mV max.		
	Input variation influence		0.5% max. (at 85- to 264-VAC input, 100% load)			
	Load variation influence (rated input voltage)		1.5% max. (with rated input, 0 to 100% load)			
	Temperature variation influence		0.05%/°C max.			
	Startup time (at rated I/O) *2	With 100-VAC input		620 ms typical	460 ms typical	
		With 200-VAC input		400 ms typical	290 ms typical	
	Output hold time (at rated I/O) *2	With 100-VAC input		34 ms typical	33 ms typical	
With 200-VAC input			158 ms typical	154 ms typical		
Additional functions	Overload protection *2		105% to 160% of rated load current (101% to 110% of rated load current for the S8VS-09024□□□S□), inverted L voltage drop, intermittent, automatic reset			
	Overvoltage protection *2, *4		Yes			
	Output voltage indication *5		No	Yes (selectable) *6		
	Output current indication *5		No	Yes (selectable) *7		
	Peak-hold current indication *5		No	Yes (selectable) *8		
	Maintenance forecast monitor indication *5		No	Yes (selectable)	No	
	Maintenance forecast monitor output		No			
	Total run time monitor indication *5		No	Yes (selectable)		
	Total run time monitor output *5		No			
	Undervoltage alarm indication *5		No	Yes (selectable)		
	Undervoltage alarm output terminals		No			
Parallel operation		No (However, backup operation is possible. An external diode is required.)				
Series operation		Yes for up to 2 Power Supplies (with external diode)				
Operating ambient temperature		Refer to the derating curve in . (with no icing or condensation)				
Storage temperature		-25 to 65°C				
Operating ambient humidity		25% to 85% (Storage humidity: 25% to 90%)				
Other	Dielectric strength		3.0 kVAC for 1 min. (between all inputs and outputs/ alarm 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/ alarm outputs and PE terminals; detection current for standard models: 30 mA, detection current for models with indication monitor: 20 mA)			
			500 VAC for 1 min. (between all outputs and alarm outputs; detection current: 20 mA)			
	Insulation resistance		100 MΩ min. (between all outputs/ alarm 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 10 to 150 Hz, 0.35-mm single amplitude (5 G max.) for 80 min each in X, Y, and Z directions			
	Shock resistance		150 m/s <sup>2</sup> , 3 times each in ±X, ±Y, and ±Z directions			
	Output indicator		Yes (color: green)			
EMI	Conducted Emissions		Models with indication monitor: Conforms to EN55011 Group1 Class A and based on FCC Class A, Conforms to EN55011 Group1 Class B *11 Standard models: Conforms to EN61204-3 EN55011 Group 1 Class B and based on FCC Class A			
	Radiated Emissions		Models with indication monitor: Conforms to EN55011 Group1 Class A, Conforms to EN55011 Group1 Class B *11 Standard models: Conforms to EN55011 Group1 Class B			
EMS		Conforms to EN61204-3 high severity levels				
Approved standards *11		Standard model: UL 508 (Listing; Class 2 Output: Per UL1310) UL 60950-1 (Recognition), UL63268-1 CSA C22.2 No.107.1 (cUL) (Class 2 Output: Per CSA C22.2 No. 223) CSA C22.2 No.60950-1 (cUR) EN 50178, EN 60950-1, EN62368-1 EAC mark, RCM mark With indication monitor: UL508 (Listing, Class2 Output: Per 1310) UL60950-1 (Recognition) CSA C22.2 No.107.1 (cUL) (Class2 Output: Per CSA C22.2 No.223) CSA C22.2 No.60950-1 (cUR) EN50178 (=VDE0160), EN60950-1 (=VDE0805 Teil1) EAC mark, RCM mark, KOSHA S Mark *10				
SEMI *11		F47-0706 (With 200-VAC input)				
Weight		330 g max.				

\*1. 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.  
 \*2. For a cold start at 25°C. Refer to *Engineering Data* on page 18 for details.  
 \*3. If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by more than +15% of the voltage adjustment range (by more than +10% for 240-W models with indication monitor). When adjusting the output voltage, confirm the actual output voltage from the Power Supply and be sure that the load is not damaged.  
 \*4. To reset the protection, turn OFF the input power for three minutes or longer and then turn it back ON.  
 \*5. Displayed on 7-segment LED. (character height: 8 mm)  
 \*6. Resolution of output voltage indication: 0.1 V, Precision of output voltage indication: ±2% (percentage of output voltage value, ±1 digit)  
 \*7. Resolution of output current indication: 0.1 A; Precision of output current indication: ±5% F.S. ±1 digit max. (specified by rated output voltage)  
 \*8. Resolution of peak-hold current indication: 0.1 A; Precision of peak-hold current indication: ±5% F.S. ±1 digit max. (specified by rated output voltage);  
 Signal width required for peak-hold current: 20 ms  
 \*9. A Type and B Type: Sinking, AP Type and BP Type: Sourcing, BE Type: No alarm output.  
 \*10. S8VS-06024A, S8VS-09024A/AP, S8VS-12024A/AP, S8VS-18024A/AP, and S8VS-24024A/AP only  
 \*11. The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

Item	Power ratings		90 W			
	Type		Standard	Maintenance forecast monitor	Total run time monitor	
Efficiency	With 100-VAC input		83% typical	83% typical		
	With 200-VAC input		84% typical	85% typical		
Input	Voltage *1	100 to 240 VAC (allowable range: 85 to 264 VAC or 80 to 370 VDC *11)				
	Frequency *1	50/60 Hz (47 to 450 Hz)				
	Current	With 100-VAC input	2.3 A max., 1.9 A typical		2.3 A max., 1.9 A typical	
		With 200-VAC input	1.4 A max., 1.0 A typical		1.4 A max., 1.2 A typical	
	Power factor	---				
	Harmonic current regulation	Conforms to EN61000-3-2				
	Leakage current	With 100-VAC input	0.5 mA max.			
		With 200-VAC input	1.0 mA max.			
	Inrush current *2	With 100-VAC input	17.5 A max., 14 A typical			
		With 200-VAC input	35 A max., 28 A typical			
Output	Voltage adjustment range *3	-10% to 15% (with V. ADJ) (The voltage cannot be adjusted for the S8VS-09024□□□S□.)				
	Ripple noise voltage (at rated I/O)	250 mV max.		150 mV max.		
	Input variation influence	0.5% max. (at 85- to 264-VAC input, 100% load)				
	Load variation influence (rated input voltage)	1.5% max. (with rated input, 0 to 100% load)				
	Temperature variation influence	0.05%/°C max.				
	Startup time (at rated I/O) *2	With 100-VAC input	460 ms typical		660 ms typical	
		With 200-VAC input	300 ms typical		420 ms typical	
	Output hold time (at rated I/O) *2	With 100-VAC input	28 ms typical		28 ms typical	
		With 200-VAC input	132 ms typical		136 ms typical	
	Additional functions	Overload protection *2	105% to 160% of rated load current (101% to 110% of rated load current for the S8VS-09024□□□S□), inverted L voltage drop, intermittent, automatic reset			
Overvoltage protection *2, *4		Yes				
Output voltage indication *5		No		Yes (selectable) *6		
Output current indication *5		No		Yes (selectable) *7		
Peak-hold current indication *5		No		Yes (selectable) *8		
Maintenance forecast monitor indication *5		No		Yes (selectable)		
Maintenance forecast monitor output		No		Yes (transistor output), 30 VDC max., 50 mA max. *9		
Total run time monitor indication *5		No		Yes (selectable)		
Total run time monitor output *5		No		Yes (transistor output), 30 VDC max., 50 mA max. *9		
Undervoltage alarm indication *5		No		Yes (selectable)		
Undervoltage alarm output terminals		No		Yes (transistor output), 30 VDC max., 50 mA max. *9		
Parallel operation		No (However, backup operation is possible. An external diode is required.)				
Series operation	Yes for up to 2 Power Supplies (with external diode)					
Other	Operating ambient temperature	Refer to the derating curve in . (with no icing or condensation)				
	Storage temperature	-25 to 65°C				
	Operating ambient humidity	25% to 85% (Storage humidity: 25% to 90%)				
	Dielectric strength	3.0 kVAC for 1 min. (between all inputs and outputs/ alarm 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/ alarm outputs and PE terminals; detection current for standard models: 30 mA, detection current for models with indication monitor: 20 mA)				
		500 VAC for 1 min. (between all outputs and alarm outputs; detection current: 20 mA)				
	Insulation resistance	100 MΩ min. (between all outputs/ alarm 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 10 to 150 Hz, 0.35-mm single amplitude (5 G max.) for 80 min each in X, Y, and Z directions				
	Shock resistance	150 m/s <sup>2</sup> , 3 times each in ±X, ±Y, and ±Z directions				
	Output indicator	Yes (color: green)				
	EMI	Conducted Emissions	Models with indication monitor: Conforms to EN55011 Group1 Class A and based on FCC Class A, Conforms to EN55011 Group1 Class B *11 Standard models: Conforms to EN61204-3 EN55011 Group 1 Class B and based on FCC Class A			
		Radiated Emissions	Models with indication monitor: Conforms to EN55011 Group1 Class A, Conforms to EN55011 Group1 Class B *11 Standard models: Conforms to EN55011 Group1 Class B			
	EMS	Conforms to EN61204-3 high severity levels				
	Approved standards *11	Standard model: UL 508 (Listing) (S8VS-09024S□□ only): UL508 (Listing, Class2 Output: Per 1310) UL 60950-1 (Recognition), UL63268-1 CSA C22.2 No.107.1 (cUL) (S8VS-09024S□□ only): CSA C22.2 No.107.1 (cUL) (Class2 Output: Per CSA C22.2 No.223) CSA C22.2 No.60950-1 (cUR) EN 50178, EN 60950-1, EN62368-1 EAC mark, RCM mark				
		With indication monitor: UL508 (Listing) (S8VS-09024□□□S□ only): UL508 (Listing, Class2 Output: Per 1310) UL60950-1 (Recognition) CSA C22.2 No.107.1 (S8VS-09024□□□S□ only): CSA C22.2 No.107.1 (cUL) (Class2 Output: Per CSA C22.2 No.223) CSA C22.2 No.60950-1 (cUR) EN50178 (=VDE0160), EN60950-1 (=VDE0805 Teil1) EAC mark, RCM mark, KOSHA S Mark *10				
	SEMI *11	F47-0706 (With 200-VAC input)				
Weight	490 g max.					

- \*1. 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.
- \*2. For a cold start at 25°C. Refer to *Engineering Data* on page 18 for details.
- \*3. If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by more than +15% of the voltage adjustment range (by more than +10% for 240-W models with indication monitor). When adjusting the output voltage, confirm the actual output voltage from the Power Supply and be sure that the load is not damaged.
- \*4. To reset the protection, turn OFF the input power for three minutes or longer and then turn it back ON.
- \*5. Displayed on 7-segment LED. (character height: 8 mm)
- \*6. Resolution of output voltage indication: 0.1 V, Precision of output voltage indication: ±2% (percentage of output voltage value, ±1 digit)
- \*7. Resolution of output current indication: 0.1 A; Precision of output current indication: ±5% F.S. ±1 digit max. (specified by rated output voltage)
- \*8. Resolution of peak-hold current indication: 0.1 A; Precision of peak-hold current indication: ±5% F.S. ±1 digit max. (specified by rated output voltage);  
Signal width required for peak-hold current: 20 ms
- \*9. A Type and B Type: Sinking, AP Type and BP Type: Sourcing, BE Type: No alarm output.
- \*10. S8VS-06024A, S8VS-09024A/AP, S8VS-12024A/AP, S8VS-18024A/AP, and S8VS-24024A/AP only
- \*11. The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC (85 to 264 VAC).

Item	Power ratings		120 W			180 W			
	Type		Standard	Maintenance forecast monitor	Total run time monitor	Standard	Maintenance forecast monitor	Total run time monitor	
Efficiency	With 100-VAC input		84% typical	83% typical		85% typical	85% typical		
	With 200-VAC input		87% typical	85% typical		88% typical	87% typical		
Input	Voltage *1		100 to 240 VAC (allowable range: 85 to 264 VAC or 80 to 370 VDC *11)						
	Frequency *1		50/60 Hz (47 to 63 Hz)						
	Current	With 100-VAC input		1.9 A max., 1.5 A typical			2.9 A max., 2.2 A typical		
		With 200-VAC input		1.1 A max., 0.71 A typical	1.1 A max., 0.72 A typical		1.6 A max., 1.1 A typical		
	Power factor		0.9 min.						
	Harmonic current regulation		Conforms to EN61000-3-2						
	Leakage current	With 100-VAC input		0.5 mA max.					
		With 200-VAC input		1.0 mA max.					
Inrush current *2	With 100-VAC input		17.5 A max., 14 A typical						
	With 200-VAC input		35 A max., 28 A typical						
Output	Voltage adjustment range *3		-10% to 15% (with V.ADJ)						
	Ripple noise voltage (at rated I/O)		60 mV max.	130 mV max.	50 mV max.	180 mV max.			
	Input variation influence		0.5% max. (at 85- to 264-VAC input, 100% load)						
	Load variation influence (rated input voltage)		1.5% max. (with rated input, 0 to 100% load)						
	Temperature variation influence		0.05%/°C max.						
	Startup time (at rated I/O) *2	With 100-VAC input		550 ms typical	650 ms typical	570 ms typical	580 ms typical		
		With 200-VAC input		400 ms typical	520 ms typical	470 ms typical	490 ms typical		
	Output hold time (at rated I/O) *2	With 100-VAC input		52 ms typical	56 ms typical	58 ms typical	70 ms typical		
With 200-VAC input		54 ms typical	56 ms typical	62 ms typical	70 ms typical				
Additional functions	Overload protection *2		105% to 160% of rated load current, inverted L voltage drop, automatic reset						
	Overvoltage protection *2, *4		Yes						
	Output voltage indication *5		No	Yes (selectable) *6		No	Yes (selectable) *6		
	Output current indication *5		No	Yes (selectable) *7		No	Yes (selectable) *7		
	Peak-hold current indication *5		No	Yes (selectable) *8		No	Yes (selectable) *8		
	Maintenance forecast monitor indication *5		No	Yes (selectable)		No	Yes (selectable)		
	Maintenance forecast monitor output		No	Yes (transistor output), 30 VDC max., 50 mA max. *9		No	Yes (transistor output), 30 VDC max., 50 mA max. *9		
	Total run time monitor indication *5		No	Yes (selectable)		No	Yes (selectable)		
	Total run time monitor output *5		No	Yes (transistor output), 30 VDC max., 50 mA max. *9		No	Yes (transistor output), 30 VDC max., 50 mA max. *9		
	Undervoltage alarm indication *5		No	Yes (selectable)		No	Yes (selectable)		
	Undervoltage alarm output terminals		No	Yes (transistor output), 30 VDC max., 50 mA max. *9		No	Yes (transistor output), 30 VDC max., 50 mA max. *9		
	Parallel operation		No (However, backup operation is possible. An external diode is required.)						
	Series operation		Yes for up to 2 Power Supplies (with external diode)						
Other	Operating ambient temperature		Refer to the derating curve in . (with no icing or condensation)						
	Storage temperature		-25 to 65°C						
	Operating ambient humidity		25% to 85% (Storage humidity: 25% to 90%)						
	Dielectric strength		3.0 kVAC for 1 min. (between all inputs and outputs/ alarm 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/ alarm outputs and PE terminals; detection current for standard models: 30 mA, detection current for models with indication monitor: 20 mA) 500 VAC for 1 min. (between all outputs and alarm outputs; detection current: 20 mA)						
	Insulation resistance		100 MΩ min. (between all outputs/ alarm 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 10 to 150 Hz, 0.35-mm single amplitude (5 G max.) for 80 min each in X, Y, and Z directions						
	Shock resistance		150 m/s <sup>2</sup> , 3 times each in ±X, ±Y, and ±Z directions						
	Output indicator		Yes (color: green)						
	EMI	Conducted Emissions		Models with indication monitor: Conforms to EN55011 Group1 Class A and based on FCC Class A, Conforms to EN55011 Group1 Class B *11 Standard models: Conforms to EN55011 Group1 Class B and based on FCC Class A					
		Radiated Emissions		Models with indication monitor: Conforms to EN55011 Group1 Class A, Conforms to EN55011 Group1 Class B *11 Standard models: Conforms to EN55011 Group1 Class B					
	EMS		Conforms to EN61204-3 high severity levels						
	Approved standards *11		UL 508 (Listing), UL 60950-1 (Recognition), CSA C22.2 No. 107.1 (cUL), CSA C22.2 No. 60950-1 (cUR), EN 50178 (= VDE 0160), EN 60950-1 (= VDE 0805 Teil 1) EAC mark, RCM mark, KOSHA S Mark *10						
	SEMI *11		F47-0706 (200-VAC input)						
Weight		550 g max.			850 g max.				

Note: Refer to page 5 for notes 1 to 11.

Item	Power ratings		240 W			480 W			
	Type		Standard	Maintenance forecast monitor	Total run time monitor	Standard	Maintenance forecast monitor	Total run time monitor	
Efficiency	With 100-VAC input		85% typical			85% typical			
	With 200-VAC input		88% typical			89% typical			
Input	Voltage *1		100 to 240 VAC (allowable range: 85 to 264 VAC or 80 to 370 VDC *11)			100 to 240 VAC (allowable range: 85 to 264 VAC)			
	Frequency *1		50/60 Hz (47 to 63 Hz)						
	Current	With 100-VAC input		3.8 A max., 2.9 A typical			7.4 A max., 5.8 A typical		
		With 200-VAC input		2.0 A max., 1.5 A typical			3.9 A max., 2.8 A typical		
	Power factor		0.9 min.			0.95 min.			
	Harmonic current regulation		Conforms to EN61000-3-2						
	Leakage current	With 100-VAC input		0.5 mA max.					
		With 200-VAC input		1.0 mA max.					
Inrush current *2	With 100-VAC input		17.5 A max., 14 A typical						
	With 200-VAC input		35 A max., 28 A typical						
Output	Voltage adjustment range *3		-10% to 15% (with V.ADJ)			-10% to 15% (with V.ADJ)			
	Ripple noise voltage (at rated I/O)		140 mV max.	160 mV max.		310 mV max.			
	Input variation influence		0.5% max. (at 85- to 264-VAC input, 100% load)						
	Load variation influence (rated input voltage)		1.5% max. (with rated input, 0 to 100% load)						
	Temperature variation influence		0.05%/°C max.						
	Startup time (at rated I/O) *2	With 100-VAC input		540 ms typical	510 ms typical		460 ms typical		
		With 200-VAC input		230 ms typical	510 ms typical		340 ms typical		
	Output hold time (at rated I/O) *2	With 100-VAC input		64 ms typical	46 ms typical		37 ms typical		
With 200-VAC input		64 ms typical	46 ms typical		41 ms typical				
Additional functions	Overload protection *2		105% to 160% of rated load current, inverted L voltage drop, automatic reset						
	Overvoltage protection *2, *4		Yes						
	Output voltage indication *5		No	Yes (selectable) *6		No	Yes (selectable) *6		
	Output current indication *5		No	Yes (selectable) *7		No	Yes (selectable) *7		
	Peak-hold current indication *5		No	Yes (selectable) *8		No	Yes (selectable) *8		
	Maintenance forecast monitor indication *5		No	Yes (selectable)	No		Yes (selectable)	No	
	Maintenance forecast monitor output		No	Yes (transistor output), 30 VDC max., 50 mA max. *9	No		Yes (transistor output), 30 VDC max., 50 mA max.	No	
	Total run time monitor indication *5		No		Yes (selectable)	No		Yes (selectable)	
	Total run time monitor output *5		No		Yes (transistor output), 30 VDC max., 50 mA max. *9	No		Yes (transistor output), 30 VDC max., 50 mA max. *9	
	Undervoltage alarm indication *5		No	Yes (selectable)		No	Yes (selectable)		
	Undervoltage alarm output terminals		No	Yes (transistor output), 30 VDC max., 50 mA max. *9		No	Yes (transistor output), 30 VDC max., 50 mA max. *9		
	Parallel operation		No (However, backup operation is possible. An external diode is required.)						
	Series operation		Yes for up to 2 Power Supplies (with external diode)						
	Other	Operating ambient temperature		Refer to the derating curve in . (with no icing or condensation)					
Storage temperature		-25 to 65°C							
Operating ambient humidity		25% to 85% (Storage humidity: 25% to 90%)							
Dielectric strength		3.0 kVAC for 1 min. (between all inputs and outputs/alarm 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/ alarm outputs and PE terminals; detection current for standard 240-W and 480-W models: 30 mA, detection current for 240-W models with indication monitor: 20 mA) 500 VAC for 1 min. (between all outputs and alarm outputs; detection current: 20 mA)							
Insulation resistance		100 MΩ min. (between all outputs/ alarm 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 10 to 150 Hz, 0.35-mm single amplitude (5 G max.) for 80 min each in X, Y, and Z directions: 240 W 10 to 150 Hz, 0.35-mm single amplitude (3 G max.) for 80 min each in X, Y, and Z directions: 480 W							
Shock resistance		150 m/s <sup>2</sup> , 3 times each in ±X, ±Y, and ±Z directions							
Output indicator		Yes (color: green)							
EMI		Conducted Emissions		Models with indication monitor: Conforms to EN55011 Group1 Class A and based on FCC Class A, Conforms to EN55011 Group1 Class B *11 Standard models: Conforms to EN55011 Group1 Class B and based on FCC Class A			Conforms to EN55011 Group1 Class A and based on FCC Class A Conforms to EN55011 Group1 Class B *11		
		Radiated Emissions		Models with indication monitor: Conforms to EN55011 Group1 Class A, Conforms to EN55011 Group1 Class B *11 Standard models: Conforms to EN55011 Group1 Class B			Conforms to EN55011 Group1 Class A Conforms to EN55011 Group1 Class B *11		
EMS		Conforms to EN61204-3 high severity levels							
Approved standards *11		UL 508 (Listing), UL 60950-1 (Recognition), CSA C22.2 No.107.1 (cUL), CSA C22.2 No. 60950-1 (cUR), EN 50178 (=VDE 0160), EN 60950-1 (=VDE 0805 Teil 1) EAC mark, RCM mark, KOSHA S Mark *10							
SEMI *11		F47-0706 (200-VAC input)							
Weight		1,150 g max.			1,700 g max.				

Note: Refer to page 5 for notes 1 to 11.

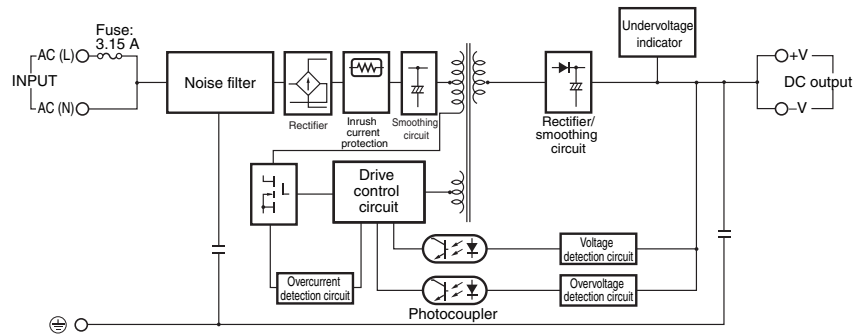


# S8VS

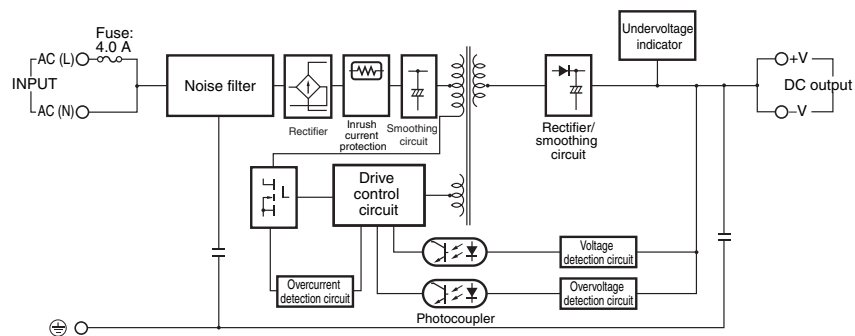
## Connections

### Block Diagrams

S8VS-015□□ (15 W)

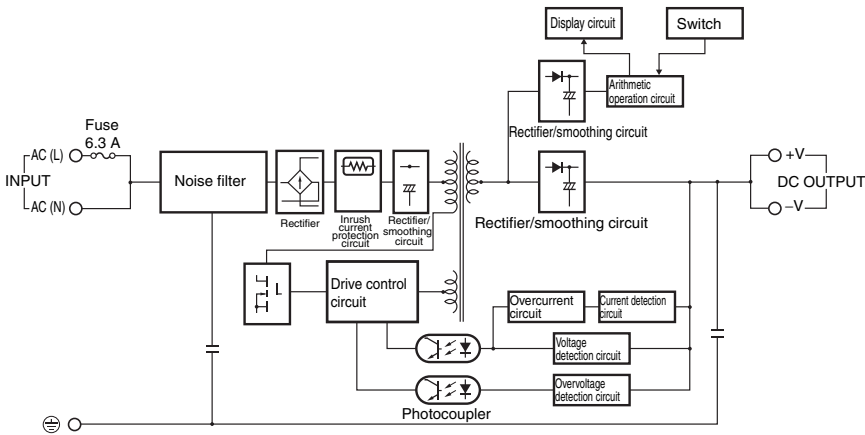


S8VS-030□□ (30 W)

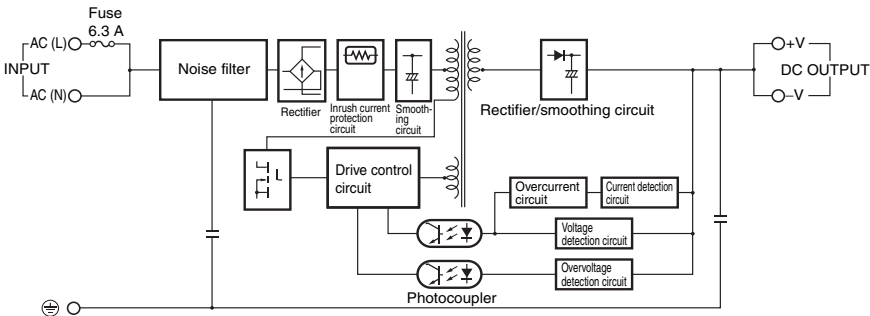


S8VS-06024A-□ (60 W)

S8VS-06024B-□ (60 W)



S8VS-06024-□ (60 W)



# S8VS

**S8VS-09024A**□□ (90 W)

**S8VS-09024B**□□ (90 W)

**S8VS-09024BE**□□ (90 W)

**S8VS-09024A**□S□ (90 W)

**S8VS-09024B**□S□ (90 W)

**S8VS-09024BES**□□ (90 W)

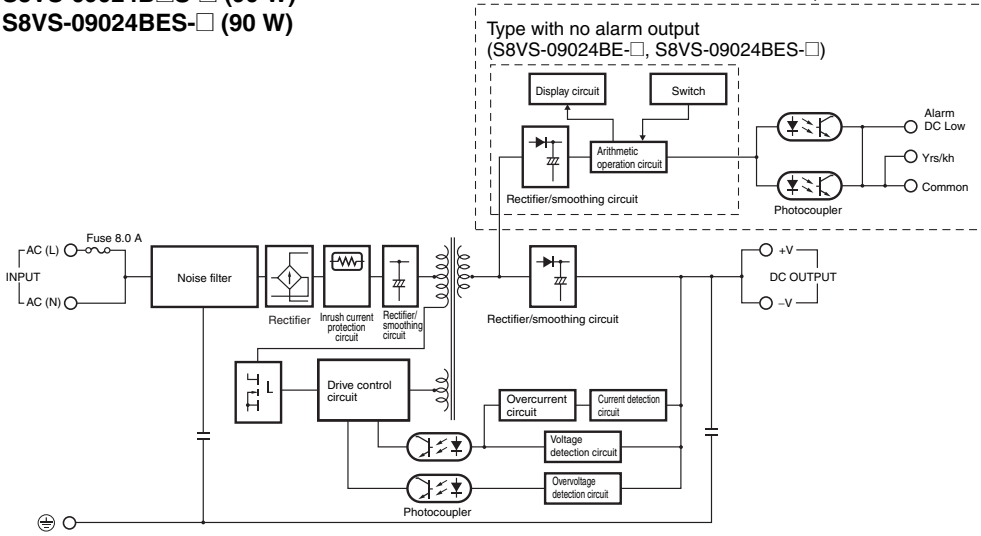
Sinking type

(S8VS-09024A□□, S8VS-09024B□□,  
S8VS-09024AS□□, S8VS-09024BS□□)

Sourcing type

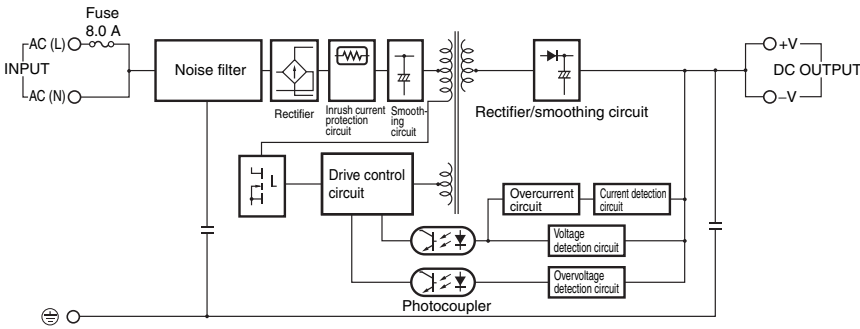
(S8VS-09024AP□□, S8VS-09024BP□□,  
S8VS-09024APS□□, S8VS-09024BPS□□)

Type with no alarm output  
(S8VS-09024BE□□, S8VS-09024BES□□)



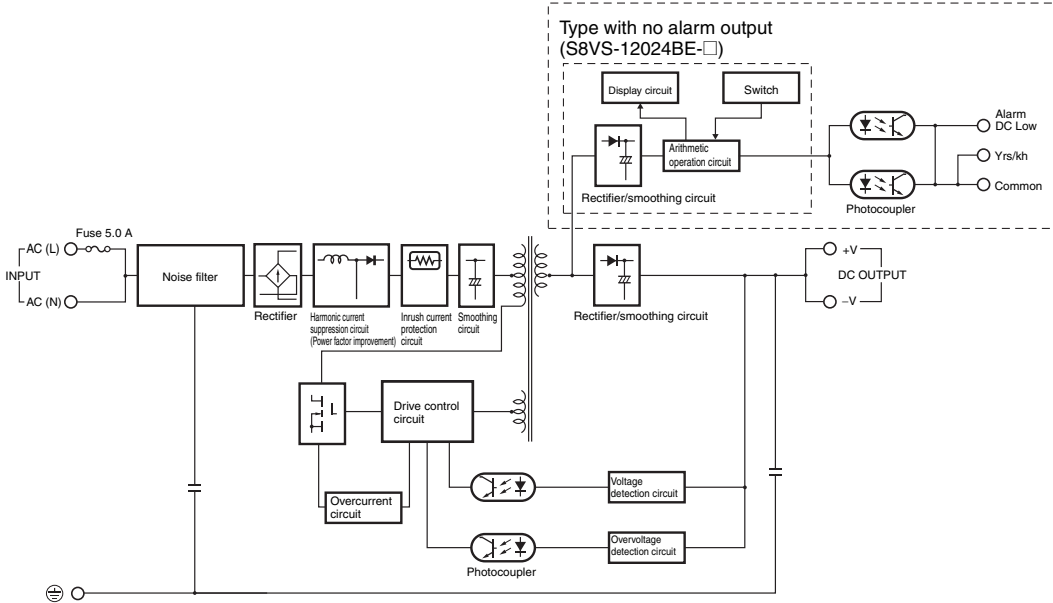
**S8VS-09024**□□ (90 W)

**S8VS-09024S**□□ (90 W)

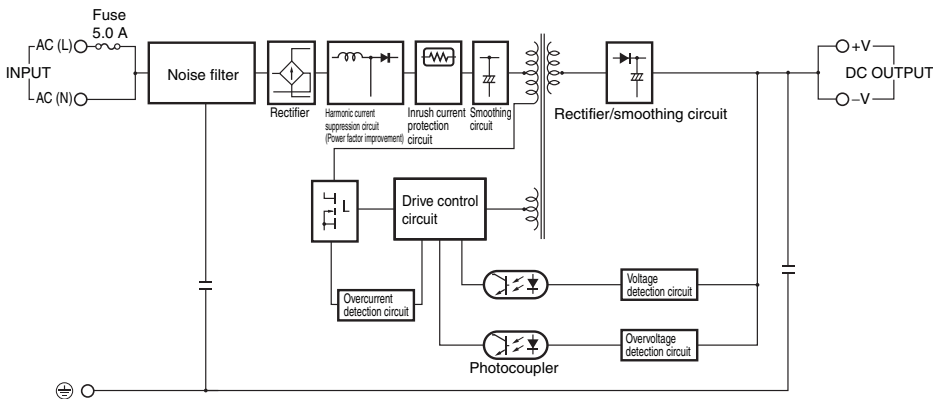


S8VS-12024A□-□ (120 W)  
 S8VS-12024B□-□ (120 W)  
 S8VS-12024BE-□ (120 W)

Sinking type  
 (S8VS-12024A-□, S8VS-12024B-□)  
 Sourcing type  
 (S8VS-12024AP-□ S8VS-12024BP-□)



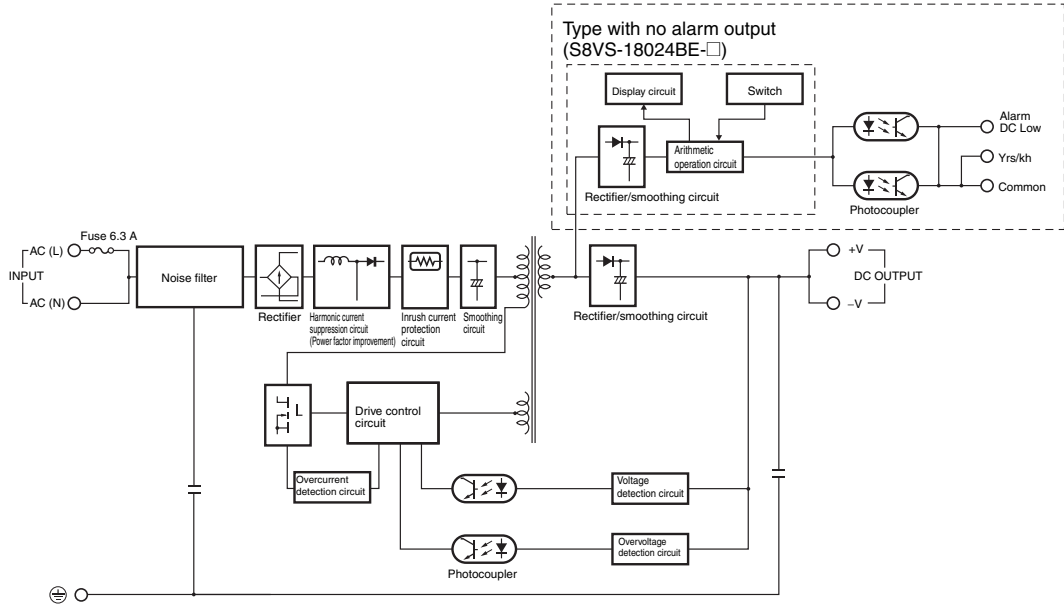
S8VS-12024-□ (120 W)



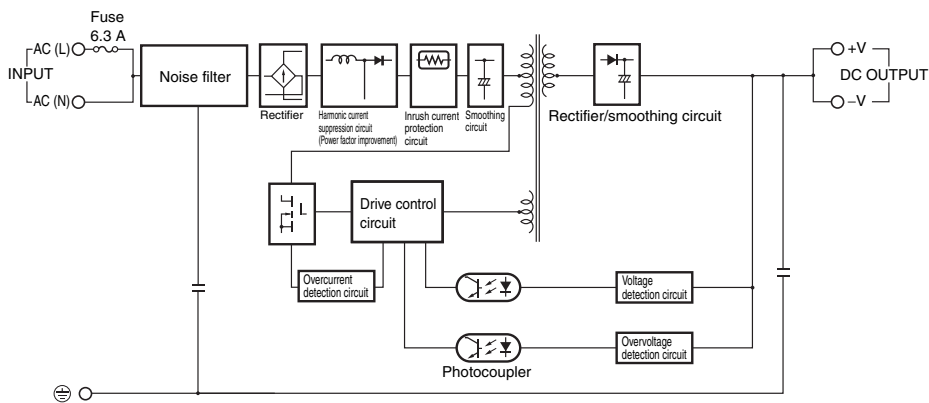
# S8VS

**S8VS-18024A**□-□ (180 W)  
**S8VS-18024B**□-□ (180 W)  
**S8VS-18024BE**□-□ (180 W)

Sinking type  
 (S8VS-18024A-□, S8VS-18024B-□)  
 Sourcing type  
 (S8VS-18024AP-□, S8VS-18024BP-□)

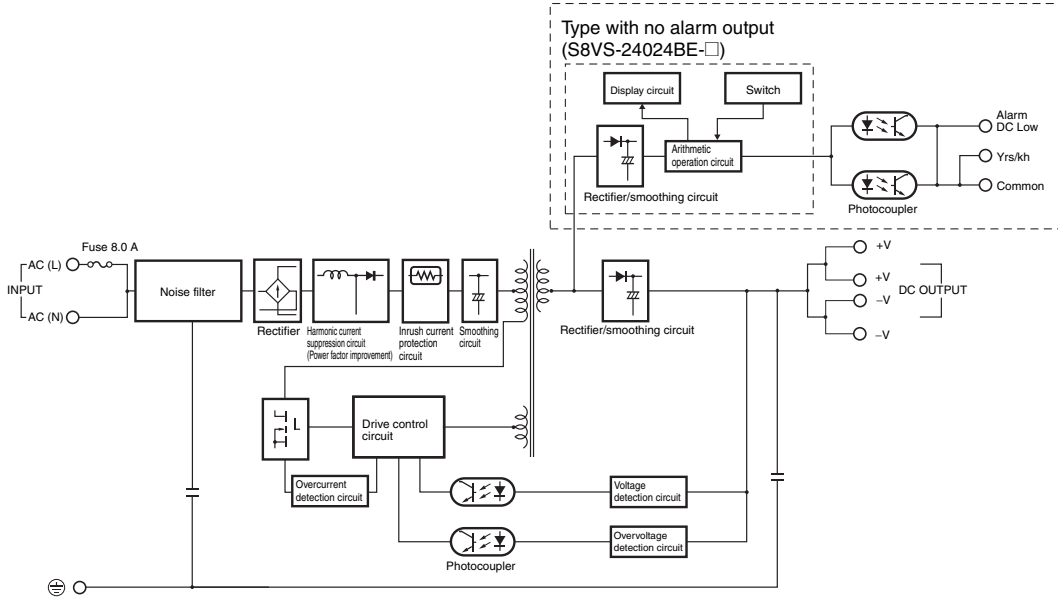


**S8VS-18024**□ (180 W)

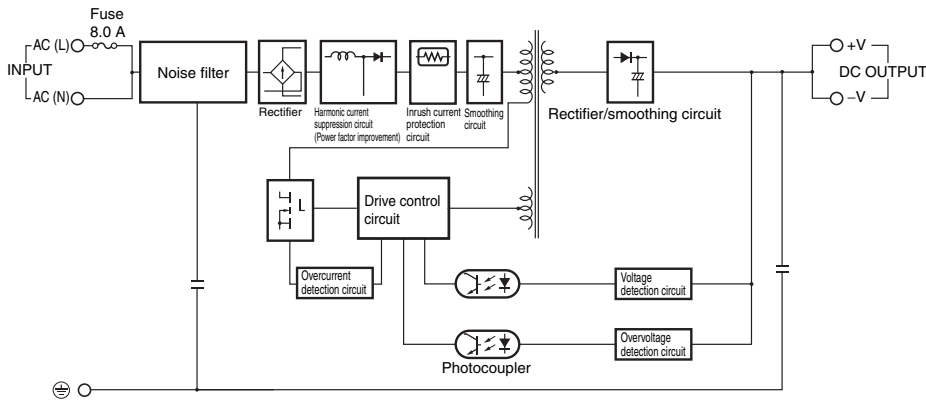


S8VS-24024A□-□ (240 W)  
 S8VS-24024B□-□ (240 W)  
 S8VS-24024BE-□ (240 W)

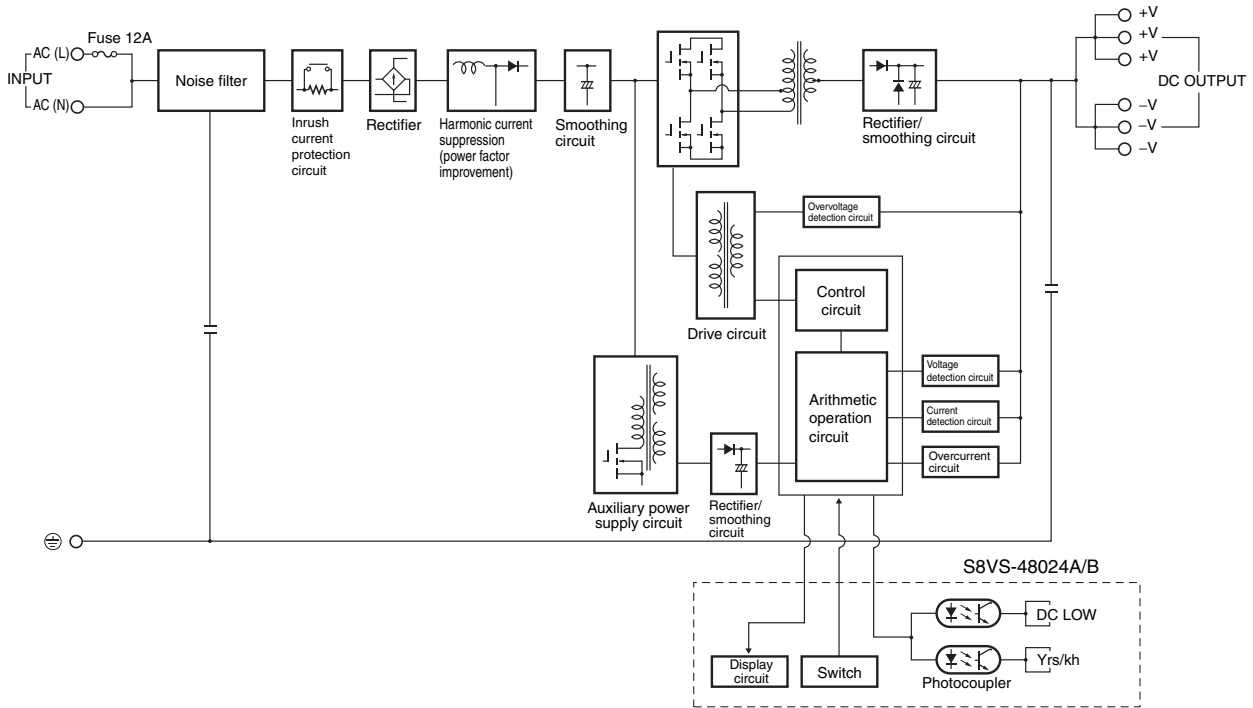
Sinking type  
 (S8VS-24024A-□, S8VS-24024B-□)  
 Sourcing type  
 (S8VS-24024AP-□, S8VS-24024BP-□)



S8VS-24024-□ (240 W)

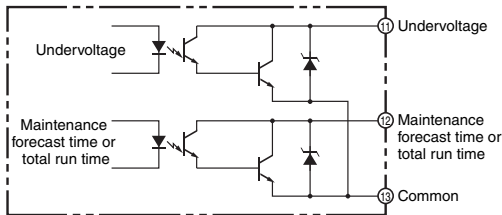


S8VS-48024-□ (480 W)  
 S8VS-48024A-□ (480 W)  
 S8VS-48024B-□ (480 W)

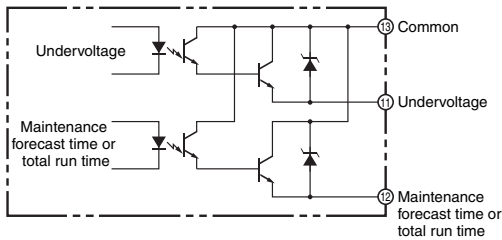


## Alarm Output Connections

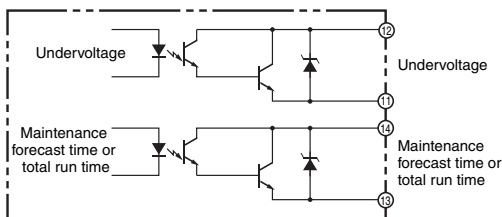
90, 120, 180, and 240 W (Sinking type)



90, 120, 180, and 240 W (Sourcing type)



480 W

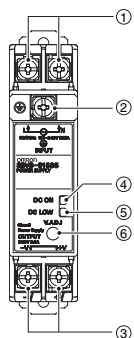


## Construction and Nomenclature

### Nomenclature

#### 15-W, 30-W Models

S8VS-015□□/S8VS-030□□



No.	Name	Function
1	Input terminals (L), (N)	Connect the input lines to these terminals. *1
2	Protective Earth terminal (PE)	Connect the ground line to this terminal. *2
3	DC Output terminals (-V), (+V)	Connect the load lines to these terminals.
4	Output indicator (DC ON: Green)	Lights while a direct current (DC) output is ON.
5	Undervoltage indicator (DC LOW: Red)	Lights when a drop is detected in the output voltage.
6	Output voltage adjuster (V.ADJ)	Use to adjust the voltage.

\*1. The fuse is located on the (L) side. For a DC input, connect the positive voltage to the L terminal.

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

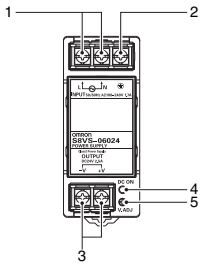
**Note:** The S8VS-01505 is shown above.



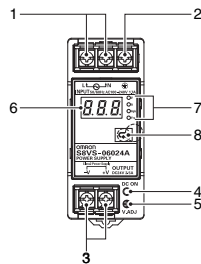
## Nomenclature

### 60-W Models

**Standard Model**  
S8VS-06024



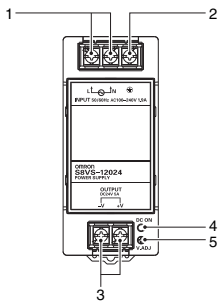
**Models with Indication Monitor**  
S8VS-06024□



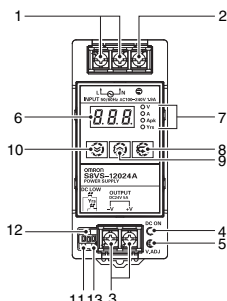
**Note:** The S8VS-06024A is shown above.

### 90-W/120-W Models

**Standard Models**  
S8VS-09024/S8VS-0924S/  
S8VS-12024



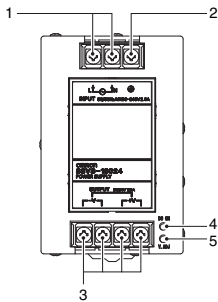
**Models with Indication Monitor**  
S8VS-09024□□□/□  
S8VS-09024□□□S/S8VS-12024□□□



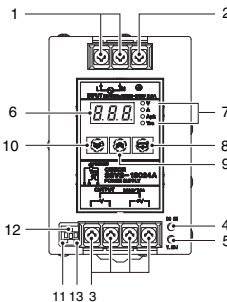
**Note:** The S8VS-12024A is shown above.

### 180-W Models

**Standard Model**  
S8VS-18024



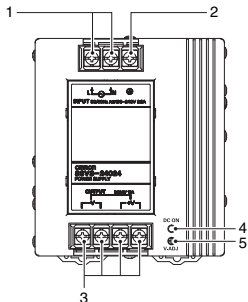
**Models with Indication Monitor**  
S8VS-18024□□□



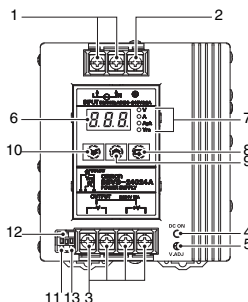
**Note:** The S8VS-18024A is shown above.

### 240-W Models

**Standard Model**  
S8VS-24024



**Models with Indication Monitor**  
S8VS-24024□□□



**Note:** The S8VS-24024A is shown above.

\* The terminal arrangement is the same for models with screwless terminal blocks and standard models.

No.	Name	Function	
1	Input terminals (L), (N)	Connect the input lines to these terminals. *1	
2	Protective Earth terminal (PE)	Connect the ground line to this terminal. *2	
3	DC Output terminals (-V), (+V)	Connect the load lines to these terminals.	
4	Output indicator (DC ON: Green)	Lights while a direct current (DC) output is ON.	
5	Output voltage adjuster (V.ADJ)	Use to adjust the voltage. *3	
6	Main display (Red) *4	Indicates the measurement or set value.	
7	Operation indicator (Orange) *4	V	Lights up when the output voltage is indicated. Blinks during setup of undervoltage alarm value.
		A	Lights up during indication of output current.
		Apk	Lights up during indication of peak hold current.
		Yrs	Lights up during indication of maintenance forecast monitor. Blinks during setup of maintenance forecast monitor setting. (S8VS-□□□24A□□)
		kh	Lights up during indication of total run time monitor. Blinks during setup of total run time monitor. (S8VS-□□□24B□□)
8	Mode Key *4	Use the Mode Key to change the indicated parameter or reset the peak hold current value.	
9	Up Key *5	Use the Up Key to change to the setting mode or to increase the set value.	
10	Down Key *5	Use the Down Key to change to the setting mode or to decrease the set value.	
11	Alarm outputs *5, *6	Undervoltage output terminal (DC Low)	Output when a drop is detected in the output voltage (voltage drop = transistor OFF).
Maintenance Forecast output terminal (Yrs) *7		Output when the set value for maintenance is reached (transistor OFF).	
Total run time output terminal (kh) *8		Output when the set value for total run time is reached (transistor OFF).	
Common terminal		Common terminal for terminals 11 and 12.	

\*1. The fuse is located on the (L) side. For a DC input, connect the positive voltage to the L terminal.

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

\*3. The output voltage cannot be adjusted for the S8VS-09024□□□S.

\*4. S8VS-□□□24A□□/□□□/BE□ only.

\*5. S8VS-□□□24A□□/□□□ only (except the S8VS-06024□).

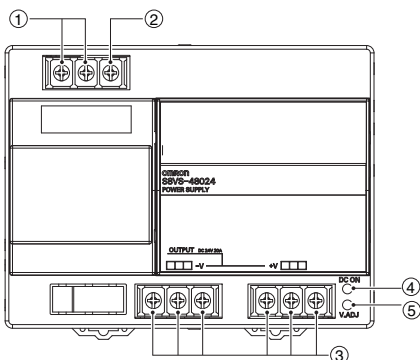
\*6. Both sinking and sourcing outputs are available.

\*7. S8VS-□□□24A□□ only (excluding S8VS-06024A).

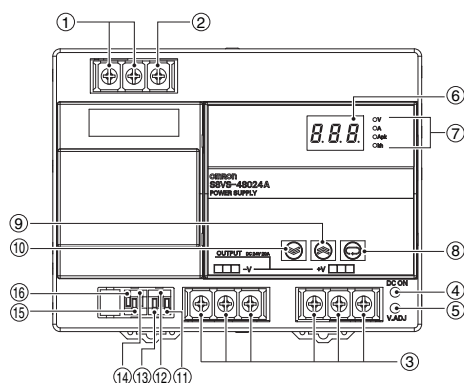
\*8. S8VS-□□□24B□□ only (excluding S8VS-06024B).

### 480-W Models

#### Standard Model S8VS-48024



#### Models with Indication Monitor S8VS-48024□



**Note:** The illustration shows the S8VS-48024A model.

\* The terminal arrangement is the same for models with screwless terminal blocks and standard models.

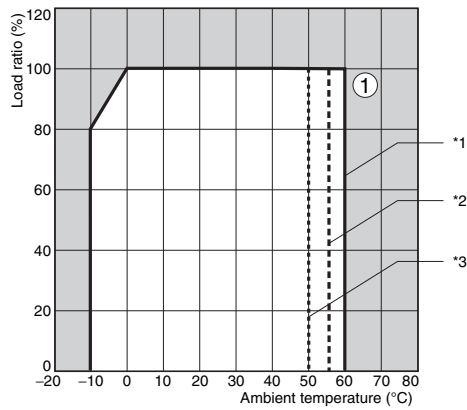
No.	Name	Function	
1	AC Input terminals (L), (N)	Connect the input lines to these terminals. *1	
2	Protective Earth terminal (PE)	Connect the ground line to this terminal. *2	
3	DC Output terminals (-V), (+V)	Connect the load lines to these terminals.	
4	Output indicator (DC ON: Green)	Lights while a direct current (DC) output is ON.	
5	Output voltage adjuster (V.ADJ)	Use to adjust the voltage.	
6	Main display (Red) *3	Indicates the measurement or set value.	
7	Operation indicator (Orange) *3	V	Lights up when the output voltage is indicated. Blinks during setup of undervoltage alarm value.
		A	Lights up during indication of output current.
		Apk	Lights up during indication of peak hold current.
		Yrs	Lights up during indication of maintenance forecast monitor. Blinks during setup of maintenance forecast monitor setting. (S8VS-48024A)
		kh	Lights up during indication of total run time monitor. Blinks during setup of total run time monitor. (S8VS-48024B)
8	Mode Key *3	Use the Mode Key to change the indicated parameter or reset the peak hold current value.	
9	Up Key *3	Use the Up Key to change to the setting mode or to increase the set value.	
10	Down Key *3	Use the Down Key to change to the setting mode or to decrease the set value.	
11	Alarm outputs *3	Undervoltage output terminal (DC Low) (Emitter side)	Output when a drop is detected in the output voltage (voltage drop = transistor OFF).
		Undervoltage output terminal (DC Low) (Collector side)	
13	Alarm outputs *3	Maintenance Forecast output terminal (Yrs) *4 (Emitter side)	Output when the set value for maintenance is reached (transistor OFF).
		Total run time output terminal (kh) *5 (Emitter side)	Output when the set value for total run time is reached (transistor OFF).
14	Alarm outputs *3	Maintenance Forecast output terminal (Yrs) *4 (Collector side)	Output when the set value for maintenance is reached (transistor OFF).
		Total run time output terminal (kh) *5 (Collector side)	Output when the set value for total run time is reached (transistor OFF).
15, 16	NC (Not connected)		

\*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. S8VS-48024A/B only.  
 \*4. S8VS-48024A only.  
 \*5. S8VS-48024B only.

## Engineering Data

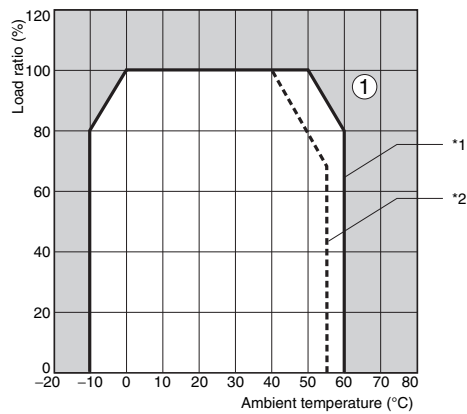
### Derating Curve

15 W <S8VS-015□□>



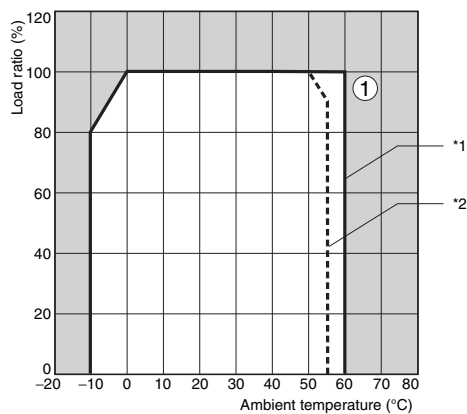
- \*1 Standard mounting
- \*2 Face-up mounting
- \*3 Horizontal mounting

30 W <S8VS-03005/S8VS-03012>



- \*1 Standard mounting
- \*2 Face-up mounting/Horizontal mounting

30 W <S8VS-03024>

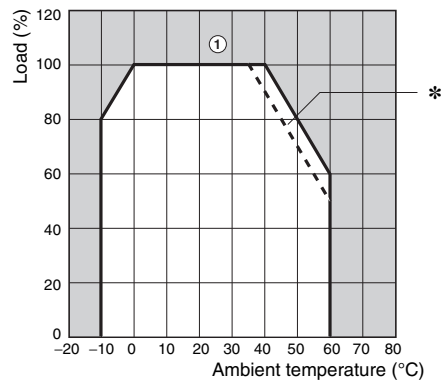


- \*1 Standard mounting
- \*2 Face-up mounting/Horizontal mounting

**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.
3. Provide a space of at least 20 mm when using standard mounting and horizontal mounting. If 20 mm is not available, make sure that the space is at least 10 mm. In this case, reduce the corresponding derating curve by 5°C.
4. DC Inputs  
If the input voltage is less than 100 VDC, reduce the load given in the above derating curve by at least the following factor.  
S8VS-03005: 0.7 max.  
S8VS-03012/03024: 0.85 max.

60, 90, 120, 180, 240, and 480 W



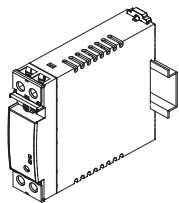
\* Using side mounting bracket for right-side mounting (excluding 240-W models). UL certification conditions do not apply if the side mounting bracket is used.

**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).

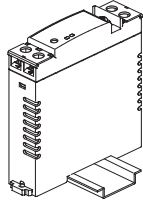
2. If there is a derating problem, use forced air-cooling.
3. When using a 480-W model at an input voltage of 95 VAC or less, derate the load by at least 80%.
4. DC Inputs  
If the input voltage is less than 100 VDC, reduce the load given in the above derating curve by at least the following factor.  
60-W models: 0.9 max.  
90-W models: 0.85 max.  
120-W/180-W/240-W models: 0.8 max.

## Mounting 15 and 30 W

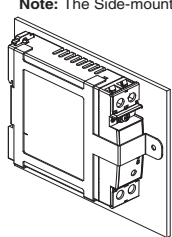
Standard mounting with DIN rail



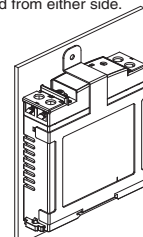
Face-up mounting with DIN rail



Standard mounting with S82Y-VS30P

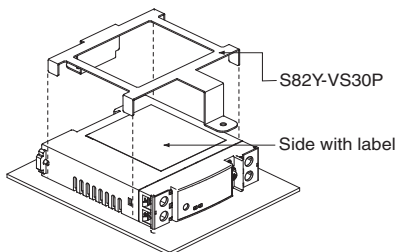


Face-up mounting with S82Y-VS30P



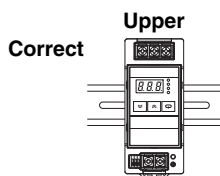
Note: The Side-mounting Bracket can be mounted from either side.

Horizontal mounting with S82Y-VS30P\*

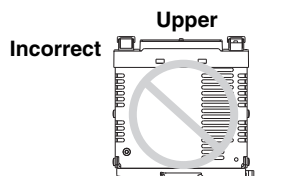


- Note: 1.** Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. Use the Product within the derating curve for the mounting direction that is used. Do not use the Power Supply mounted in any way not shown above.
- 2.** Use a mounting bracket (S82Y-VS30P, sold separately) when the Product is mounted horizontally.
- 3.** Heat dissipation will be adversely affected. When the Product is mounted facing horizontally, always place the side with the label facing horizontally.
- 4.** Use PFP-M End Plates on the top and bottom of the Power Supply when mounting horizontally on a DIN rail.

## 60, 90, 120, 180, 240, and 480 W



Standard mounting



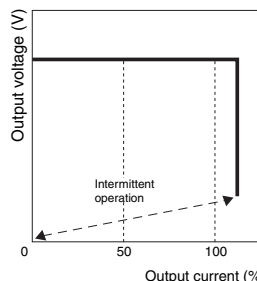
Face-up mounting

**Note:** Improper mounting will interfere with heat dissipation and may occasionally result in deterioration or damage of internal parts. It may also result in failure of the maintenance forecast monitor function. Use the standard mounting method only.

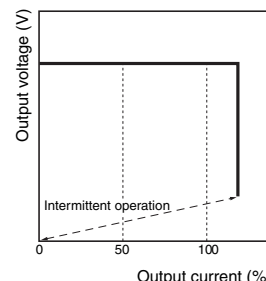
## Overload Protection

The load and the power supply are automatically protected from overcurrent damage by this function. Overload protection is activated if the output current rises above 105% of the rated current. When the output current returns within the rated range overload protection is automatically cleared.

15-W/30-W Models

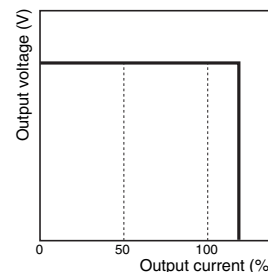


60-W/90-W Models



The values shown in the above diagrams are for reference only.

120-W/180-W/240-W/480-W Models



The values shown in the above diagrams are for reference only.

- Note: 1.** Internal parts may occasionally deteriorate or be damaged if a short-circuited or overcurrent state continues during operation.
- 2.** 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.

## Peak Output Current (S8VS-48024□ only)

The peak current must satisfy the following conditions.

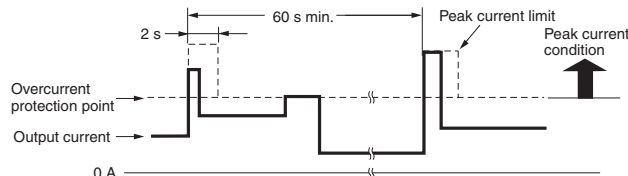
Input voltage range: 200 to 240 VAC

Peak current value: 30 A max.

Peak current pulse width: 2 s max.

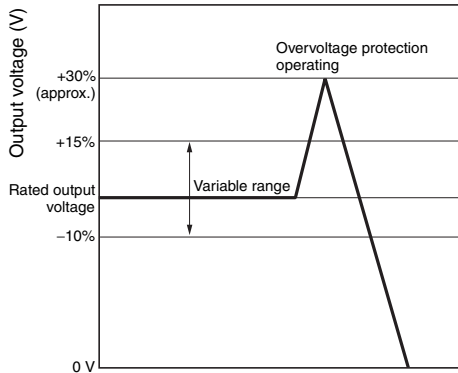
Cycle: 60 s min.

- Note: 1.** Two seconds after the peak current is reached, the peak current limiting function operates to stop the peak current flow.
- 2.** It takes 60 seconds for the peak current to be able to flow again.
- 3.** The peak current limiting function prevents the peak current from flowing at 100 to 120 VAC.



## Overvoltage Protection

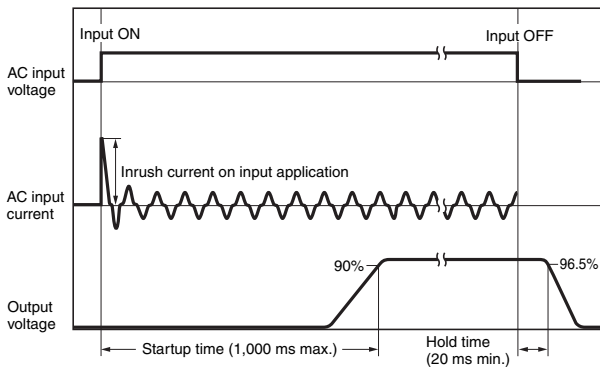
Consider the possibility of an overvoltage and design the system so that the load will not be subjected to an excessive voltage even if the feedback circuit in the Power Supply fails. If an excessive voltage that is approximately 130% of the rated voltage (but approximately 110% of the rated voltage for the S8VS-09024□□□S) or more is output, the output voltage is shut OFF. Reset the input power by turning it OFF for at least three minutes and then turning it back ON again.



The values shown in the above diagram is for reference only.

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

## Inrush Current, Startup Time, Output Hold Time



## Undervoltage Alarm Indication

LED (DC LOW: red) lights to warn of output voltage drop. Detection voltage is set to approx. 80% (75 to 90%) of the rated output voltage.

**Note:** This function monitors the voltage at the power supply output terminals. To check actual voltage, measure voltage on the load side.

## Undervoltage Alarm Function (Indication and Output) (S8VS-□□□24A□□/S8VS-□□□24B□□/ S8VS-□□□24BE□ Only)

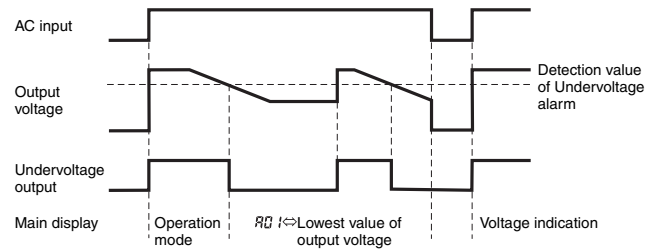
When output voltage drop is detected, an alarm (AL) and lowest output voltage value are indicated alternately. The preset value of detection voltage can be changed in the setting mode. (From 18.5 to 27.5 V in 0.1-V steps. The value is fixed at 20.0 V for the S8VS-06024A/S8VS-06024B.)

Further, an output (undervoltage output terminal (DC LOW)) to an external device is given from the transistor to notify of the error (excluding S8VS-06024A/S8VS-06024B/S8VS-□□□24BE□). (Output voltage drop = OFF, i.e., no continuity at the undervoltage output terminal (DC LOW).)

Example: Outputting an Alarm When the Voltage Output by the S8VS-09024A□□ Drops to the Set Value (19.0 V) or Lower



1. Operation begins after about three seconds since the AC power is supplied.
2. The alarm is not indicated in the setting mode.
3. Press the (Mode Key (8)) after the output voltage is restored, to reset alarm indication.
4. The undervoltage alarm function may also operate when an interruption in AC input is not restored within 20 ms.
5. The undervoltage alarm function monitors the output terminal voltage of the Power Supply. To check the voltage accurately, measure the voltage at the load end.



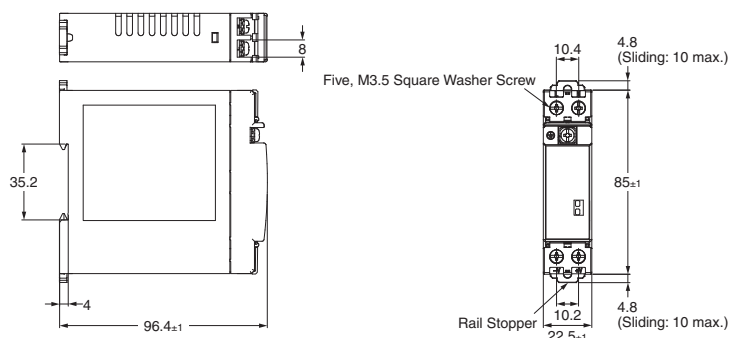
**Note:** Operation begins after about three seconds since the AC power is supplied.

## Dimensions

### Power Supplies with Screw Terminal Blocks

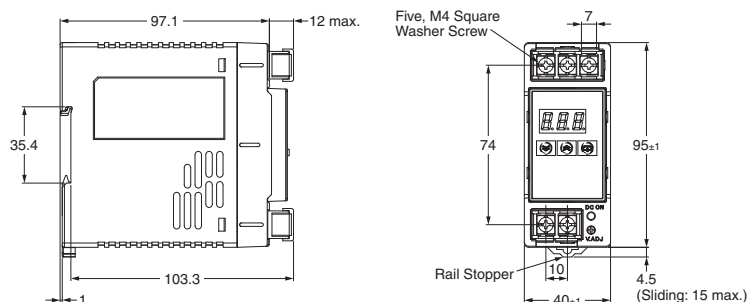
Note: All units are in millimeters unless otherwise indicated.

S8VS-015□□ (15 W)  
S8VS-030□□ (30 W)



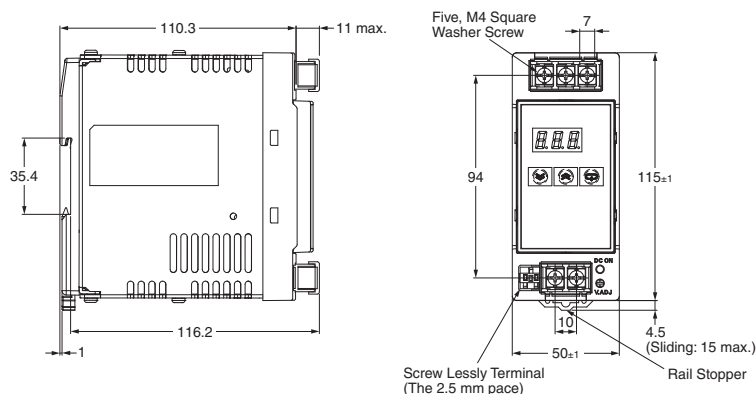
Note: The illustration is the S8VS-03024 model.

S8VS-06024 (60 W)  
S8VS-06024A (60 W)  
S8VS-06024B (60 W)



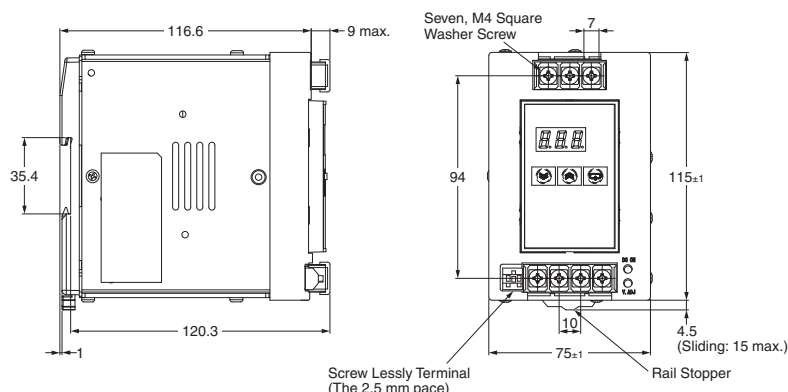
Note: The illustration is the S8VS-06024A model.

S8VS-09024 (90 W) /S8VS-09024S (90 W) /S8VS-12024 (120 W)  
S8VS-09024A□ (90 W) /S8VS-09024A□S (90 W) /S8VS-12024A□ (120 W)  
S8VS-09024B□ (90 W) /S8VS-09024B□S (90 W) /S8VS-12024B□ (120 W)  
S8VS-09024BE (90 W) /S8VS-09024BES (90 W) /S8VS-12024BE (120 W)



Note: The illustration is the S8VS-12024A model.

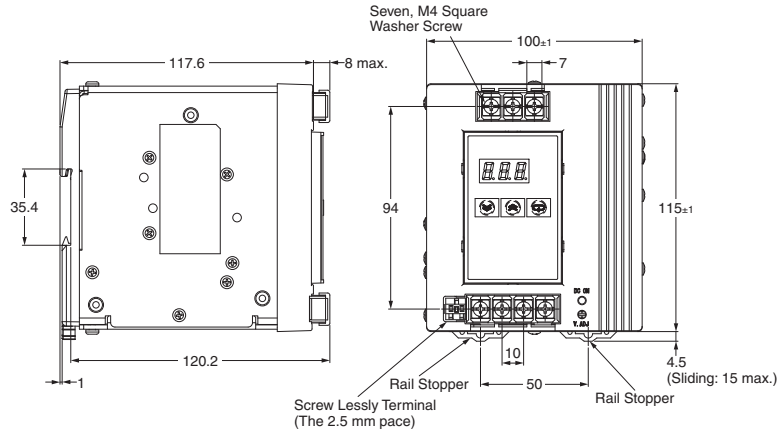
S8VS-18024 (180 W)  
S8VS-18024A□ (180 W)  
S8VS-18024B□ (180 W)  
S8VS-18024BE (180 W)



Note: The illustration is the S8VS-18024A model.

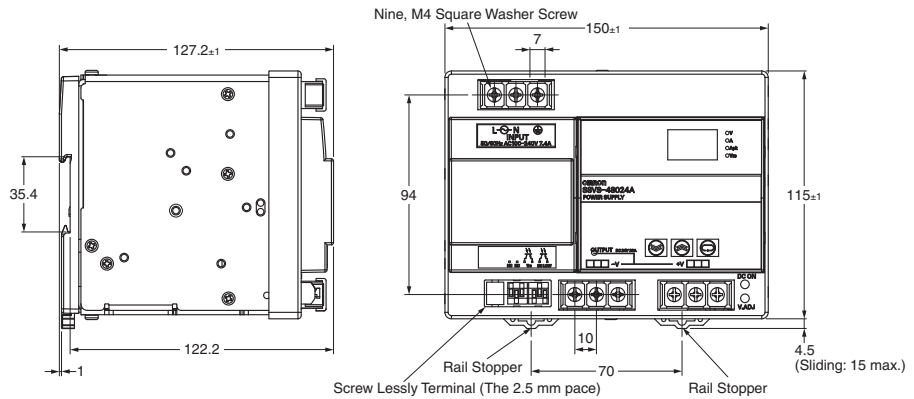
# S8VS

- S8VS-24024 (240 W)
- S8VS-24024A (240 W)
- S8VS-24024B (240 W)
- S8VS-24024BE (240 W)



Note: The illustration shows the S8VS-24024A model.

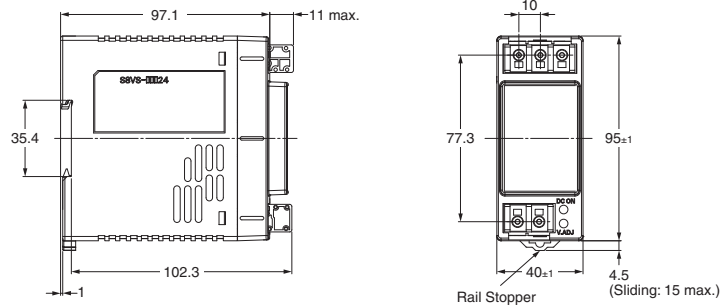
- S8VS-48024 (480 W)
- S8VS-48024A (480 W)
- S8VS-48024B (480 W)



Note: The illustration shows the S8VS-48024A model.

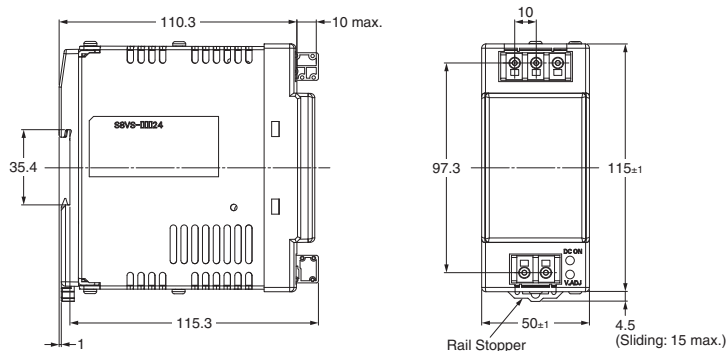
## Power Supplies with Screwless Terminal Blocks

- S8VS-06024-F (60 W)
- S8VS-06024A-F (60 W)
- S8VS-06024B-F (60 W)



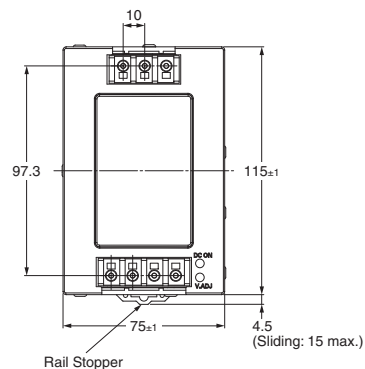
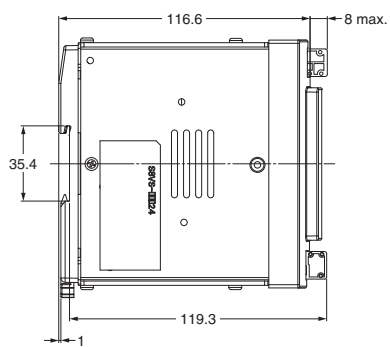
Note: The illustration shows the S8VS-06024-F model.

- S8VS-09024-F (90 W) /S8VS-09024S-F (90 W) /S8VS-12024-F (120 W)
- S8VS-09024A-F (90 W) /S8VS-09024AS-F (90 W) /S8VS-12024A-F (120 W)
- S8VS-09024B-F (90 W) /S8VS-09024BS-F (90 W) /S8VS-12024B-F (120 W)
- S8VS-09024BE-F (90 W) /S8VS-09024BES-F (90 W) /S8VS-12024BE-F (120 W)



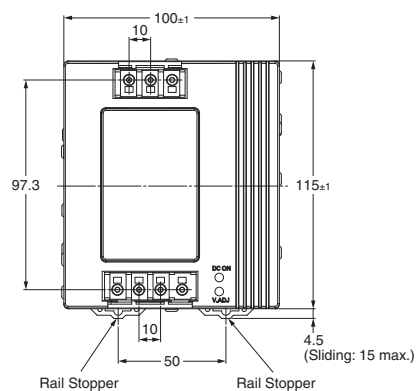
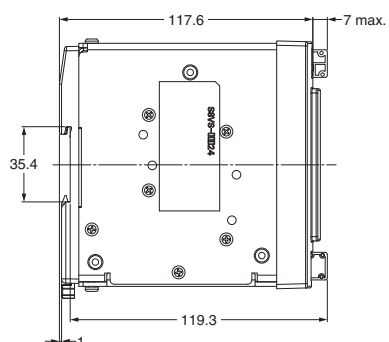
Note: The illustration shows the S8VS-12024-F model.

S8VS-18024-F (180 W)  
 S8VS-18024A□-F (180 W)  
 S8VS-18024B□-F (180 W)  
 S8VS-18024BE-F (180 W)



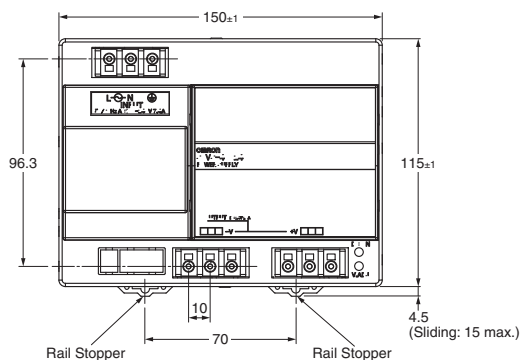
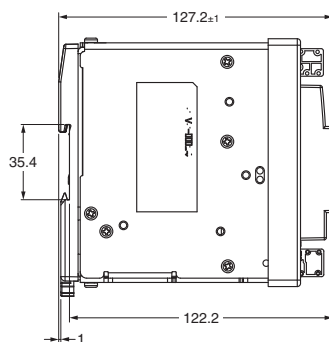
Note: The illustration shows the S8VS-18024-F model.

S8VS-24024-F (240 W)  
 S8VS-24024A□-F (240 W)  
 S8VS-24024B□-F (240 W)  
 S8VS-24024BE-F (240 W)



Note: The illustration shows the S8VS-24024-F model.

S8VS-48024-F (480 W)  
 S8VS-48024A-F (480 W)  
 S8VS-48024B-F (480 W)



Note: The illustration shows the S8VS-48024-F model.

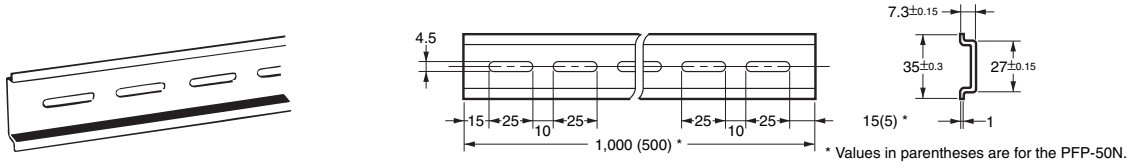


**DIN Rail (Order Separately)**

**Note:** All units are in millimeters unless otherwise indicated.

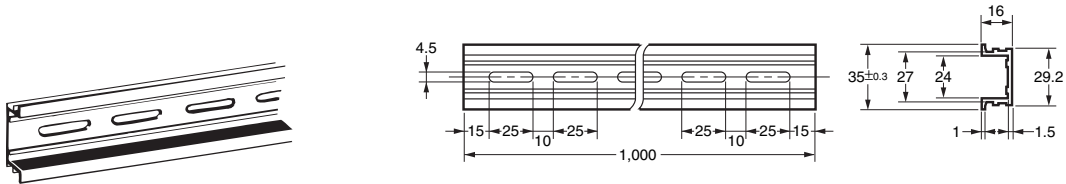
**Mounting Rail (Material: Aluminum)**

**PF-P-100N  
PF-P-50N**



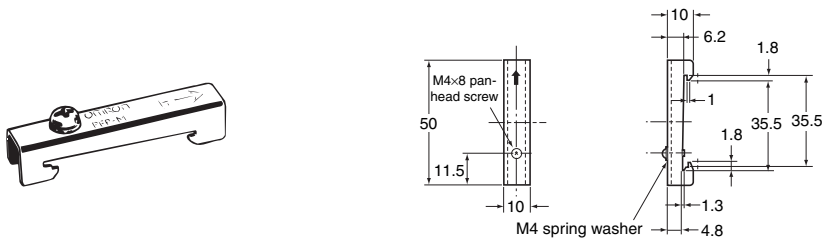
**Mounting Rail (Material: Aluminum)**

**PF-P-100N2**



**End Plate**

**PF-P-M**



**Note:** 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.

**Terminal Block Cover (Order Separately)**

S8VS	Input side	Output side
15W	S82Y-VS-C2P-S	
30W	S82Y-VS-C2P-S	
60W	S82Y-VS-C3P	S82Y-VS-C2P-M
90W	S82Y-VS-C3P	S82Y-VS-C2P-M
120W	S82Y-VS-C3P	S82Y-VS-C2P-M
180W	S82Y-VS-C3P	S82Y-VS-C4P
240W	S82Y-VS-C3P	S82Y-VS-C4P
480W	S82Y-VS-C3P	

**Note:** Terminal block cover attaches to the body. Please order from the loss time.

## Mounting Brackets

Name	Model
Side-mounting Bracket (for 15- and 30-W models)	<b>S82Y-VS30P</b>
Side-mounting Bracket (for 60-, 90-, and 120-W models)	<b>S82Y-VS10S</b>
Side-mounting Bracket (for 180-W models)	<b>S82Y-VS15S</b>
Side-mounting Bracket (for 240-W models)	<b>S82Y-VS20S</b>
Front-mounting Bracket (for 60-, 90-, 120-, 180-, and 240-W models) *	<b>S82Y-VS10F</b>

**Note:** Brackets cannot be used for 480-W models.

\* Two required to mount a 240-W model.

Type	Model	Dimensions	Appearance
Side-mounting Bracket (For 15-, 30-W models)	<b>S82Y-VS30P</b>		
Side-mounting Bracket (For 60-, 90-, 120-W models)	<b>S82Y-VS10S</b>		<p>Left-side mounting    Right-side mounting</p>
Side-mounting Bracket (For 180-W models)	<b>S82Y-VS15S</b>		<p>Left-side mounting</p> <p>*Right-side mounting also possible.</p>
Side-mounting Bracket (For 240-W models)	<b>S82Y-VS20S</b>		<p>Left-side mounting</p> <p>*Right-side mounting also possible.</p>
Front-mounting Bracket (For 60-, 90-, 120-, 180-, and 240-W models)	<b>S82Y-VS10F</b>		<p>(For 60-, 90-, 120-, 180-W types)    (For 240-W type)</p> <p>*Use two S82Y-VS10F brackets for the 240-W type.</p>