## **Switch Mode Power Supply** S8VS (15/30/60/90/120/180/240/480-W Models)

CSM\_S8VS\_DS\_E\_6\_1

## 60/90/120/180/240/480-W Models

## Improved Versions of **Standard-type Power Supplies without Indication** Monitor (60 to 240 W). **EMI Class B Compliant.**

- New 90-W models that conform to UL Class 2 standards.
- New models with screwless terminal blocks and without indication monitor (except that 480-W models have an indication monitor).
- Status displayed on 3-digit, 7-segment display.

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- · Safety standards: UL508/60950-1, CSA C22.2 No. 14/60950-1
  - (15-W, 30-W, 60-W to 240-W models with Indication monitor), CSA C22.2 No. 107.1/60950-1 (60-W to 240-W standard, 480-W models),
  - EN 50178 (= VDE0160),
- EN 60950-1 (= VDE0805 Teil 1)
- Compact:  $150 \times 115 \times 127.2$  mm (W  $\times$  H  $\times$  D) (480-W models).

## 15/30-W Models

## **Compact, Thin Power Supplies That Mount Just About Anywhere** to Contribute to Control Panel Downsizing

- Compact and thin:  $22.5 \times 85 \times 96.5$  mm (W  $\times$  H  $\times$  D).
- Three mounting directions (standard, horizontal, facing horizontal).
- Mounting directly to the panel is possible.
- · Safety standards: UL508/60950-1/1604, cUL: CSA C22.2 No. 14/60950-1/213, EN50178 (= VDE0160), EN60950-1 (= VDE0805 Teil 1).

## Features Common to All Models

- Mount to DIN Rail.
- Complies with SEMI F47-0200 (200-VAC input).
- RoHS-compliant.





### **Model Number Structure**

#### Model Number Legend

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

S8VS-				]	-
	1	2	34	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

#### 2. Output voltage

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

#### 3. Indication monitor

- None: Without indication monitor (standard model)
- A: With indication monitor (maintenance forecast monitor)
- B: With indication monitor (total run time monitor)

#### 4. Alarm output

- None: Sinking \* P:
- Sourcing

Note: No alarm output possible with 60-W models.

\* Both sinking and sourcing outputs are available for 480-W models.

#### 5. UL Class 2 Standards

- None: Does not conform. \*
- S: Conforms.
- \*15-W, 30-W, and 60-W models conform to Class 2 standards.

#### 6. Terminal Block Form

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

## **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	Model number (screw terminal block)	Model number (screwless terminal block)	
	_	5 V	2.0 A	S8VS-01505 *1		
15 W		12 V	1.2 A	S8VS-01512		
		24 V	0.65 A	S8VS-01524		
		5 V	4.0 A	S8VS-03005 *2		
30 W		12 V	2.5 A	S8VS-03012		
		24 V	1.3 A	S8VS-03024		
60 W	-		2.5 A	S8VS-06024	S8VS-06024-F	
00.10/	100 to 240 VAC		3.75 A	S8VS-09024	S8VS-09024-F	
90 W				S8VS-09024S	S8VS-09024S-F	
120 W	-		5 A	S8VS-12024	S8VS-12024-F	
180 W	-	24 V	7.5 A	S8VS-18024	S8VS-18024-F	
240 W	-		10 A	S8VS-24024	S8VS-24024-F	
480 W			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.

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

Power ratings	Input voltage	Output voltage	Output current	Alarm output	Model number (screw terminal block)	Model number (screwless terminal block)	
60 W			2.5 A		S8VS-06024A		
90 W			3.75 A	Sinking	S8VS-09024A		
90 W				Sourcing	S8VS-09024AP	*	
120 W			5 A	Sinking	S8VS-12024A		
120 W		AC 24 V		Sourcing	S8VS-12024AP		
100.10/	100 to 240 VAC		7.5 A	Sinking	S8VS-18024A		
180 W	240 W			Sourcing	S8VS-18024AP		
040 \\			10 A	Sinking	S8VS-24024A		
240 W				Sourcing	S8VS-24024AP		
480 W			20 A Peak current 30 A (200 VAC)	Sinking/ sourcing	S8VS-48024A	S8VS-48024A-F	

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

Power ratings	Input voltage	Output voltage	Output current	Alarm output	Model number (screw terminal block)	Model number (screwless terminal block)	
60 W		VAC 24 V	2.5 A		S8VS-06024B		
90 W			3.75 A	Sinking	S8VS-09024B		
90 W				Sourcing	S8VS-09024BP		
100 W	20 W		5 A	Sinking	S8VS-12024B		
120 W				Sourcing	S8VS-12024BP		
180 W	100 to 240 VAC		7.5 A	Sinking	S8VS-18024B		
180 W	_			Sourcing	S8VS-18024BP		
240 W			10 A	Sinking	S8VS-24024B		
240 W				Sourcing	S8VS-24024BP		
480 W			20 A Peak current 30 A (200 VAC)	Sinking/ sourcing	S8VS-48024B	S8VS-48024B-F	

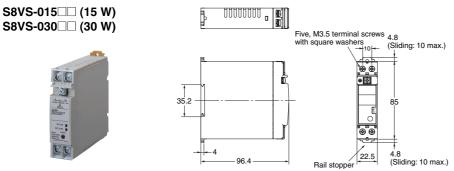
Note: Refer to pages 27 to 28 for the options that available.

		Power ratings		120 W	<b>T</b> -1		180 W	<b></b>		
Item		Туре	Standard	Maintenance forecast monitor	Total run time monitor	Standard	Maintenance forecast monitor	Total run time monitor		
Efficiency (	(typical)		80% min.							
	Voltage *1		100 to 240 VAC (85 to 264 VAC)							
	Frequency *1		50/60 Hz (47 to 63 Hz)							
	Current	100-V input	1.9 A max.			2.9 A max.				
		200-V input	1.1 A max. 1.6 A max.							
Input	Power factor		0.95 min.							
	Harmonic current emission		Conforms to EN61	000-3-2						
	Leakage current	100-V input	0.5 mA max.							
		200-V input	1.0 mA max.							
	Inrush current *2	100-V input	25 A max. (for a cold start at 25°C)							
	Maltana additional and an and a	200-V input	50 A max. (for a co	,						
	Voltage adjustment range	K3	-10% to 15% (with V.ADJ)							
	Ripple			t rated input/output vol	•					
	Input variation influence		0.5% max. (at 85-	to 264-VAC input, 1009	% load)					
Output	Load variation influence (rated input voltage)		1.5% max. (with ra	ted input, 0 to 100% lo	ad)					
	Temperature variation influ	ence	0.05%/°C max.							
	Startup time *2		1,000 ms max. (at	rated input/output volta	ige)					
	Hold time *2			d input/output voltage)						
	Overload protection *2		105% to 160% of r	ated load current, volta	ge drop, automatic res	et				
	Overvoltage protection *2,		Yes	ſ		1	1			
	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 indicatio		No	Yes (selectable) *8	1	No	Yes (selectable) *8	T		
	Maintenance forecast moni	tor indication *5	No	Yes (selectable)	No	No	Yes (selectable)	No		
	Meintenance forecast menitor output		No	Yes (transistor output), 30 VDC	No	No	Yes (transistor output), 30 VDC	No		
dditional	Maintenance forecast mon	Maintenance forecast monitor output		max., 50 mA max. *9	110	NO	max., 50 mA max. *9	110		
unctions	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 output),		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							
	Series operation			ver Supplies (with exte	rnal diode)					
	Operating ambient tempera	iture	Yes for up to 2 Power Supplies (with external diode) Refer to the derating curve in <i>Engineering Data (60-W, 90-W, 120-W, 180-W, 240-W, and 480-W Models)</i> . (with no icing or							
	Storage temperature		condensation) -25 to 65°C							
	Operating ambient humidit		25% to 85% (Storage humidity: 25% to 90%)							
	Dielectric strength	<u>,                                     </u>	3.0 kVAC for 1 min. (between all inputs and PE terminals; 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 M $\Omega$ 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							
Other	Output indicator		Yes (color: green)	lion monitor Orafan	rmo to ENG1004.2 ENEE011 Close A and based on ECO Close A Conference to ENG1004					
	EMI	Conducted Emissions	Models with indication monitor: Conforms to EN61204-3 EN55011 Class A and based on FCC Class A, Conforms to EN61204 EN55011 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 EN61204-3 EN55011 Class A, Conforms to EN61204-3 EN55011 Standard models: Conforms to EN61204-3 EN55011 Group 1 Class B							
	EMS		Conforms to EN61	204-3 high severity lev						
	Approved standards		UL: UL508 (Listing), UL60950-1 cUL for standard models: CSA C22.2 No. 107.1 cUL for models with indication monitor: CSA C22.2 No.14 cUR: CSA No. 60950-1 EN/VDE: EN50178 (= VDE0160), EN60950-1 (SELV) (= VDE0805 Teil 1) According to VDE0106/P100, IP20 (except terminal block) KOSHA S Mark *10							
	SEMI		F47-0200 (200-VAC input)							
			550 g max. 850 g max.							

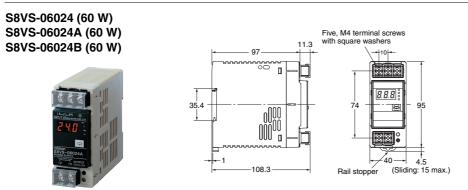
## **Dimensions**

#### **Power Supplies with Screw Terminal Blocks**

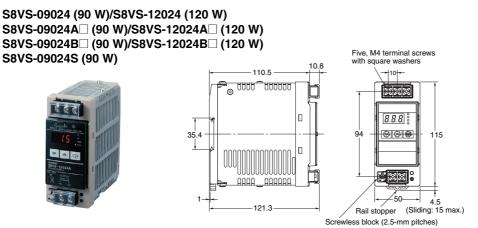
Note: All units are in millimeters unless otherwise indicated.



Note: The illustration is the S8VS-03024 model.



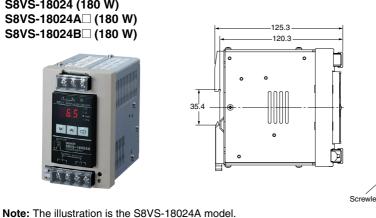
Note: The illustration is the S8VS-06024A model.



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

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





Seven, M4 terminal screws with square washers +10+ 8.8.8. 888 115 00 4.5 -75 Rail stopper (Sliding: 15 max.) Screwless block (2.5-mm pitches)