

# Switch Mode Power Supply (240/480/960/2000-W Models) S8VK-W

**Three-phase Input Power Supplies harmonized with Value design for Panel concept. Saves space and contributes to reducing the wiring time.**

**With a line-up that includes two model types, 200 to 240 V input and 380 to 480 V input.**


**Suitable for international use in a wide range of regions.**

**Supports quick identification of error locations with three status monitoring LEDs.**

**Enables stable operation of devices with the power boost function.**

- Can operate at an ambient temperature of -40 to +70°C \*1
- Side-by-side Mounting enabled \*1 \*2
- Complies with SEMI F47-0706 standard \*3
- Certification for 3,000 m altitude \*3
- Coated PCBs for Better Resistance to Environment
- Equipped with signal output that indicates DC OK and the overload status

\*1. For details, refer to *Derating Curves* on page 13 and 26.  
 \*2. Refer to the Front, Side-by-side mounting on page 30.  
 \*3. For details, refer to *Standard Compliance* on page 5 and 21.

 Refer to *Safety Precautions* on page 30.

## S8VK-W Series

S8VK-WA Three-phase 200V Input.....	from page 2
S8VK-WB Three-phase 400V input.....	from page 17

## Common items

Common Accessories (order separately).....	from page 28
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For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Switch Mode Power Supply (240/480/960/2000-W Models)

# S8VK-WA

## 200 V Three-phase Input Power Supplies

### A solution to three-phase balance problems



Refer to *Safety Precautions* on page 30.

- Can operate at an ambient temperature of -40 to +70°C \*1
- Side-by-side Mounting enabled \*1 \*2
- Complies with SEMI F47-0706 standard \*3
- Certification for 3,000 m altitude \*3
- Coated PCBs for Better Resistance to Environment
- Equipped with signal output that indicates DC OK and the overload status

\*1. For details, refer to *Derating Curves* on page 13.  
 \*2. Refer to the Front, Side-by-side mounting on page 30.  
 \*3. For details, refer to *Standard Compliance* on page 5.

### Lineup

Output voltage	Power rating			
	240 W	480 W	960 W	2000 W
24 V	•	•	•	•
48 V				•

### Model Number Structure

**Model Number Legend** Not all combinations are possible. Refer to List of Models in Ordering Information, below.

**S8VK-WA**

Series name (1) (2) (3)

#### (1) Rated input voltage

Code	Rated input voltage
A	200 to 240 VAC

#### (2) Power rating

Code	Power rating
240	240 W
480	480 W
960	960 W
202	2000 W

#### (3) Output voltage

Code	Output voltage (VDC)
24	24 V
48	48 V

### Ordering Information

#### List of Models

Power rating	Rated input voltage	Rated output voltage (VDC)	Rated output current	Maximum boost current	Model
240 W	Three-phase / single-phase / two-phase 200 to 240 VAC	24 V	10 A	15 A	<b>S8VK-WA24024</b>
480 W	(Allowable range: Three-phase / single-phase / two-phase 170 to 264 VAC, 240 to 350 VDC)	24 V	20 A	30 A	<b>S8VK-WA48024</b>
960 W		24 V	40 A	60 A	<b>S8VK-WA96024</b>
2000 W	Three-phase / single-phase / two-phase 200 to 240 VAC	24 V	85 A	127.5 A	<b>S8VK-WA20224</b>
	(Allowable range: Three-phase / single-phase / two-phase 170 to 264 VAC, 240 to 384 VDC)	48 V	45 A	67.5 A	<b>S8VK-WA20248</b>

### Accessories (Order separately)

Refer to page 28 for S8VK-WA/S8VK-WB Common Accessories.

S8VK-WA

S8VK-WB

Common Precautions

Common Accessories

## Ratings, Characteristics, and Functions

Item	Power rating		240 W	480 W	960 W	2000 W		
	Output voltage (VDC)		24 V	24 V	24 V	24 V	48 V	
Efficiency *1	Three-phase 200 VAC input		93% typ.	94% typ.	95% typ.	95% typ.	96% typ.	
	Single-phase/ two-phase 200 VAC input		92% typ.	93% typ.	94% typ.	95% typ.	95% typ.	
	Three-phase 230 VAC input		93% typ.	94% typ.	95% typ.	96% typ.	96% typ.	
	Single-phase/ two-phase 230 VAC input		93% typ.	94% typ.	95% typ.	95% typ.	96% typ.	
Input conditions	Input voltage range *2		Three-phase/single-phase/two-phase 170 to 264 VAC, 265 to 300 VAC (1 second) 240 to 350 VDC			Three-phase/single-phase/two-phase 170 to 264 VAC, 265 to 300 VAC (1 second) 240 to 384 VDC		
	Frequency *2		50/60 Hz (47 to 63 Hz)					
	Input current *1	Three-phase 200 VAC input		0.80 A typ.	1.6 A typ.	3.1 A typ.	6.5 A typ.	6.9 A typ.
		Single-phase/ two-phase 200 VAC input		1.4 A typ.	2.6 A typ.	5.2 A typ.	11 A typ.	12 A typ.
		Three-phase 230 VAC input		0.70 A typ.	1.4 A typ.	2.7 A typ.	5.7 A typ.	6.0 A typ.
		Single-phase/ two-phase 230 VAC input		1.2 A typ.	2.3 A typ.	4.5 A typ.	9.5 A typ.	10 A typ.
	Power factor *1		0.9 min.					
	Leakage current *3	Three-phase 200 VAC input		1 mA max.			3.5 mA max.	3.5 mA max.
		Three-phase 230 VAC input		1 mA max.			3.5 mA max.	3.5 mA max.
	Inrush current *4 (for a cold start at 25°C)	Three-phase 200 VAC input		13 A typ.	13 A typ.	14 A typ.	18 A typ.	22 A typ.
Three-phase 230 VAC input		15 A typ.	15 A typ.	16 A typ.	16 A typ.	16 A typ.		
Output characteristics	Rated output current		10 A	20 A	40 A	85 A	45 A	
	Power Boost Function		15 A	30 A	60 A	127.5 A	67.5 A	
	Voltage adjustment range *5		24 to 29.5 V (with V.ADJ)			24 to 28 V (with V.ADJ)		48 to 56 V (with V.ADJ)
	Ripple noise voltage *6	Three-phase 200 to 240 VAC input		50 mVp-p max. at 20 MHz of bandwidth	120 mVp-p max. at 20 MHz of bandwidth	60 mVp-p max. at 20 MHz of bandwidth	170 mVp-p max. at 20 MHz of bandwidth	190 mVp-p max. at 20 MHz of bandwidth
		Input variation influence *7		0.5% max.				
	Load variation influence *8		1.5% max.					
	Temperature variation influence	200 to 240 VAC input		0.05%/°C max.				
		Startup time *9	Three-phase 200 VAC input		1,000 ms max.			
	Three-phase 230 VAC input		1,000 ms max.					
	Output hold time *9	Three-phase 200 VAC input		35 ms typ.	30 ms typ.	25 ms typ.	25 ms typ.	25 ms typ.
Three-phase 230 VAC input		35 ms typ.	30 ms typ.	25 ms typ.	25 ms typ.	25 ms typ.		
Additional functions	Overload protection		Yes, automatic reset, intermittent operation type Refer to <i>Overload Protection</i> on page 6.			Yes, inverted L voltage drop, automatic reset, power cut off if higher of rated output current continues and turn on the input again. Refer to the <i>Overload Protection</i> on page 6.		
	Overload protection for terminals		No			Yes, inverted L voltage drop, automatic reset, power cut off if overprotection (terminal blocks) continues and turn on the input again. Refer to the <i>Overload Protection</i> on page 6.		
	Overvoltage protection		Yes, 130% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input again), Refer to <i>Overvoltage Protection</i> on page 6.					
	Series operation		Yes (For up to two Power Supplies; external diodes required.)					
	Parallel operation		Yes (For up to two Power Supplies), Refer to <i>Parallel Operation</i> on page 34.			Yes (For up to two Power Supplies), Refer to <i>Parallel Operation</i> on page 34. Use with the switch for parallel operation set to the "PARALLEL" side (the rated output current limited to 80%).		

Note: For \*1 to \*9, refer to page 4.

S8VK-WA

S8VK-WB

Common Precautions

Common Accessories