

## Switch Mode Power Supply

**S8VK-C** (60/120/240/480-W Models)

**Cost-effective Single Phase Power Supply**  
**Universal input and Safety standards**  
**for worldwide applications**  
**Space-saving Compact Design**



- Universal input for worldwide applications:  
100 to 240 VAC (85 to 264 VAC)
- DC input can be available: 90 to 350 VDC
- Operation temperature range: -25 to 60 °C
- Compact Dimension for small space
- Flexible installation by special mounting brackets
- Safety standards:  
UL508/60950-1, CSA C22.2 No.107.1/60950-1  
EN50178, EN60950-1
- EMS: Conform to EN61204-3  
EMI: EN55011 Class A
- Three years Warranty

**Note:** Three years warranty conditions: Rated input voltage, 80% load,  
Ambient operating temperature: 40 °C, Standard mounting

Refer to *Safety Precautions for All Power Supplies* and *Safety Precautions* on page 11.

## Model Number Structure

### Model Number Legend

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

**S8VK-C**          **24**  
1 2

#### 1. Power Ratings

060: 60 W  
120: 120 W  
240: 240 W  
480: 480 W

#### 2. Output voltage

24: 24 V

## Ordering Information

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

Power ratings	Input voltage	Output Voltage	Output current *1	Model number
60 W	Single phase 100 to 240 VAC 90 to 350 VDC	24 V	2.5 A	<b>S8VK-C06024</b>
120 W		24 V	5 A	<b>S8VK-C12024</b>
240 W		24 V	10 A	<b>S8VK-C24024</b>
480 W		24 V	20 A	<b>S8VK-C48024</b>

\*1. For rated output current of DC input, refer to Derating Curve on Page 4.

# S8VK-C

## Specifications

### Ratings, Characteristics, and Functions

Item	Power ratings		60 W	120 W	240 W	480 W
	Output voltage		24 V	24 V	24 V	24 V
Efficiency (Typical)	230 VAC input		88%	88%	87%	91%
Input	Voltage *1		100 to 240 VAC, 90 to 350 VDC (allowable range: 85 to 264 VAC) *6			
	Frequency *1		50/60 Hz (47 to 450 Hz)			
	Current (Typical)	115 VAC input	1.0 A	2.2 A	2.5 A	4.8 A
		230 VAC input	0.7 A	1.4 A	1.3 A	2.4 A
	Power factor (Typical)	230 VAC input	0.44	0.45	0.92	0.97
	Harmonic current emissions		---			
	Leakage current (Typical)	115 VAC input	0.19 mA	0.19 mA	0.24 mA	0.26 mA
		230 VAC input	0.34 mA	0.36 mA	0.54 mA	0.65 mA
Inrush current (Typical) *2	115 VAC input	16 A				
	230 VAC input	32 A				
Output	Voltage adjustment range *3		-10% to 15% (with V.ADJ) (guaranteed)			
	Ripple at 20 MHz (Typical) *4	230 VAC input	70 mV	120 mV	150 mV	130 mV
	Input variation influence		0.5% max. (at 85 to 264 VAC input, 100% load)			
	Load variation influence (Rated input voltage)		1.5% max., at 0% to 100% load			
	Temperature variation influence		0.05%/°C max.			
	Start up time (Typical) *2	115 VAC input	530 ms	800 ms	790 ms	770 ms
		230 VAC input	410 ms	760 ms	750 ms	670 ms
	Hold time (Typical) *2	115 VAC input	24 ms	27 ms	34 ms	21 ms
230 VAC input		117 ms	128 ms	36 ms	22 ms	
Additional functions	Overload protection *2		105% to 160% of rated load current			
	Overvoltage protection *2		Yes *5			
	Parallel operation		No			
	Series operation		Possible for up to two Power Supplies (with external diode)			
Others	Ambient operating temperature		-25 to 60°C (Refer to Engineering Data)			
	Storage temperature		-25 to 65°C			
	Ambient operating humidity		20% to 90% (Storage humidity: 10% to 95%)			
	Dielectric strength (detection current: 20 mA)		3.0 kVAC for 1 min. (between all inputs and outputs) 2.0 kVAC for 1 min. (between all inputs and PE terminal) 1.0 kVAC for 1 min. (between all outputs and PE terminal)			
	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 10 to 150 Hz, 0.35-mm single amplitude (5 G max for 60W, 120W, 240 W, 3 G max for 480 W) 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), lighting from 80% to 90% or more of rated voltage			
	EMI	Conducted Emission	Conforms to EN61204-3 EN55011 Class A and based on FCC Class A			
		Radiated Emission	Conforms to EN61204-3 EN55011 Class A			
	EMS		Conforms to EN61204-3 high severity levels			
	Approved Standards		UL Listed: UL508 (Listing) UL UR: UL60950-1 (Recognition) cUL: CSA C22.2 No.107.1 cUR: CSA C22.2 No.60950-1 EN/VDE: EN50178, EN60950-1			
	Fulfilled Standards		SELV (EN60950-1/EN50178/UL60950-1) EN50274 for Terminal parts			
	Degree of protection		IP20 by EN / IEC60529			
	SEMI		F47-0706 (200 to 240 VAC)			
Weight		260 g	580 g	940 g	1,550 g	

\*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 5 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. A characteristic when the ambient operating temperature is between -25 to 60°C.

\*5. To reset the protection, turn OFF the input power for three minutes or longer and then turn it back ON.

\*6. Safety Standard for a DC Input

The following safety standards apply to a DC input: UL 60950-1, cUR (CSA C22.2 No.60950-1), EN 50178, EN60950-1.

For a DC input, safety is ensured by external fuse.

Select an external fuse that meets the following conditions.

S8VK-C06024: 350 VDC min, 6A

S8VK-C12024: 350 VDC min, 8A

S8VK-C24024: 350 VDC min, 8A

S8VK-C48024: 350 VDC min, 12A