

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 (=VDE0160), EN60950-1 (=VDE0805)
- EMS: Conform to EN61204-3
EMI: EN55011 Class A



⚠ 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
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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	Model number
60 W	Single phase 100 to 240 VAC 90 to 350 VDC	24 V	2.5 A	S8VK-C06024
120 W		24 V	5 A	S8VK-C12024
240 W		24 V	10 A	S8VK-C24024
480 W		24 V	20 A	S8VK-C48024

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%	89%	89%	92%	
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	2.0 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	70 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	720 ms	790 ms	770 ms	
		230 VAC input	410 ms	510 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 ² , 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 (=VDE0160), EN60950-1 (=VDE0805)				
	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. 90 to 350 VDC's UL standards are scheduled to obtain certification in June, 2013.