

## Switch Mode Power Supply

# S8VK-G (15/30/60/120/240/480-W Models)

**Reliable and Easy Operation-Worldwide Power Supply**

**Resistant in tough environments**

**Easy and fast installation**

**The most compact class on the market**

- Universal input for worldwide applications:  
100 to 240 VAC (85 to 264 VAC)
- DC input can be available: 90 to 350 VDC
- Possible for 2 phases input usage.
- Wide operation temperature range: -40 to 70 °C
- Power Boost function at 120%
- Safety standards:  
UL 508/60950-1, CSA C22.2 No. 107.1/60950-1  
ANSI/ISA 12.12.01  
EN 50178, EN 60950-1.  
Lloyd's standards, EN 60204-1 PELV  
Safety of Power Transformers: EN 61558-2-16
- 15-W, 30-W, and 60-W models conform to  
UL Class 2 output Standards
- EMS: EN 61204-3
- EMI: EN 61204-3 Class B
- RoHS Compliant



Refer to *Safety Precautions for All Power Supplies and Safety Precautions* on page 17.

# S8VK-G

## Model Number Structure

### Model Number Legend

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

**S8VK-**   
1    2    3

#### 1. Input voltage types

G: Single phase

#### 2. Power Ratings

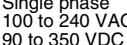
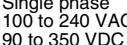
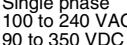
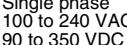
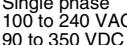
015: 15 W  
030: 30 W  
060: 60 W  
120: 120 W  
240: 240 W  
480: 480 W

#### 3. Output voltage

05: 5 V  
12: 12 V  
24: 24 V  
48: 48 V

## Ordering Information

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

Power ratings	Input voltage	Output Voltage	Output current	Boost Current	Model number
15 W		5 V	3 A	3.6 A	<b>S8VK-G01505</b>
		12 V	1.2 A	1.44 A	<b>S8VK-G01512</b>
		24 V	0.65 A	0.78 A	<b>S8VK-G01524</b>
30 W		5 V	5 A	6 A	<b>S8VK-G03005</b>
		12 V	2.5 A	3 A	<b>S8VK-G03012</b>
		24 V	1.3 A	1.56 A	<b>S8VK-G03024</b>
60 W		12 V	4.5 A	5.4 A	<b>S8VK-G06012</b>
		24 V	2.5 A	3 A	<b>S8VK-G06024</b>
		24 V	5 A	6 A	<b>S8VK-G12024</b>
120 W		24 V	10 A	12 A	<b>S8VK-G24024</b>
		48 V	5 A	6 A	<b>S8VK-G24048</b>
		24 V	20 A	24 A	<b>S8VK-G48024</b>
480 W		48 V	10 A	12 A	<b>S8VK-G48048</b>

# Specifications

## Ratings, Characteristics, and Functions

Item	Power ratings		15 W			30 W								
	Output voltage		5 V	12 V	24 V	5 V	12 V	24 V						
Efficiency (Typical)	230 VAC input	77%	80%	79%	82%	86%								
<b>Voltage *1</b>		100 to 240 VAC, 90 to 350 VDC (allowable range: 85 to 264 VAC)												
<b>Frequency *1</b>		50/60 Hz (47 to 450 Hz)												
Input	Current (Typical)	115 VAC input	0.32 A	0.3 A	0.31 A	0.5 A	0.57 A	0.58 A						
		230 VAC input	0.2 A	0.21 A	0.2 A	0.32 A	0.37 A	0.36 A						
Power factor (Typical)	230 VAC input	0.42			0.43	0.42	0.43							
<b>Harmonic current emissions</b>		Conforms to EN61000-3-2												
Leakage current (Typical)	115 VAC input	0.14 mA			0.13 mA									
	230 VAC input	0.25 mA			0.24 mA									
Inrush current (Typical) *2	115 VAC input	16 A												
	230 VAC input	32 A												
<b>Voltage adjustment range *3</b>		-10% to 15% (with V.ADJ) (guaranteed)												
Ripple *4	at 20 MHz (Typical)	60 mV	50 mV	30 mV	30 mV	30 mV	30 mV	30 mV						
<b>Input variation influence</b>		0.5% max. (at 85 to 264 VAC input, 100% load)												
<b>Load variation Influence (Rated Input voltage)</b>		3.0% max. (5 V), 2.0% max. (12 V), 1.5% max. (24 V), at 0% to 100% load												
Output	<b>Temperature variation influence</b>		0.05%/°C max.											
	Start up time (Typical) *2	115 VAC input	530 ms	520 ms	580 ms	550 ms	550 ms	600 ms						
		230 VAC input	330 ms	400 ms	400 ms	430 ms	490 ms	480 ms						
Hold time (Typical) *2	115 VAC input	28 ms	29 ms	32 ms	33 ms	36 ms	23 ms							
	230 VAC input	134 ms	138 ms	134 ms	177 ms	170 ms	154 ms							
<b>Overload protection *2</b>		121% to 160% of rated load current (130% typ value)												
<b>Overvoltage protection *2</b>		Yes *5												
<b>Power Boost</b>		120% of rated current (Refer to Engineering Data)												
<b>Parallel operation</b>		Yes (Refer to Engineering Data)												
<b>Series operation</b>		Possible for up to two Power Supplies (with external diode)												
<b>Ambient operating temperature</b>		-40 to 70°C (Refer to Engineering Data)												
<b>Storage temperature</b>		-40 to 85°C												
<b>Ambient operating humidity</b>		0% to 95% (Storage humidity: 0% to 95%)												
<b>Dielectric strength (detection current: 20 mA)</b>		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)												
<b>Insulation resistance</b>		100 MΩ min. (between all outputs and all inputs/ PE terminals) at 500 VDC												
<b>Vibration resistance</b>		10 to 55 Hz, 0.375-mm single amplitude for 2 h each in X, Y, and Z directions												
<b>Shock resistance</b>		10 to 150 Hz, 0.35-mm single amplitude (5 G max.) for 80 min. each in X, Y, and Z directions												
<b>Output indicator</b>		150 m/s <sup>2</sup> , 3 times each in ±X, ±Y, and ±Z directions												
Others	<b>Output indicator</b>		Yes (color: green), lighting from 80% to 90% or more of rated voltage											
	EMI	Conducted Emission	Conforms to EN 61204-3 EN55011 Class B and based on FCC Class A											
<b>EMI</b>		Radiated Emission	Conforms to EN 61204-3 EN55011 Class B											
<b>EMS</b>		Conforms to EN 61204-3 high severity levels												
<b>Approved Standards</b>		UL Listed: UL 508 (Listing, Class2 Output: Per UL 1310) UL UR: UL 60950-1 (Recognition) ANSI/ISA 12.12.01 cUL: CSA C22.2 No.107.1 (Class2 Output: Per CSA C22.2 No.223) cUR: CSA C22.2 No.60950-1 EN/VDE: EN 50178, EN 60950-1 Lloyd's standards												
<b>Fulfilled Standards</b>		SELV (EN 60950-1/EN 50178/UL 60950-1), PELV (EN 60204-1, EN 50178), Safety of Power Transformers (EN 61558-2-16) EN 50274 for Terminal parts												
<b>Degree of protection</b>		IP20 by EN/IEC 60529												
<b>SEMI</b>		F47-0706 (200 to 240 VAC)												
<b>Weight</b>		150 g		195 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 11 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 70°C.

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