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-phase input usage.
- Wide operation temperature range: –40 to 70 °C
- Power Boost function at 120%
- Safety standards:
  UL508/62368-1, CSA C22.2 No. 107.1/62368-1
  EN 62477-1, EN62368-1.
  Lloyd's standards, EN60204-1 PELV
  Safety of Power Transformers: EN61558-2-16
- 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
- Three years Warranty ✻1

✻1.Refer to *Period and Terms of Warranty* on page 23.

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

Related Products

Noise Filter
S8V-NF

Note: Refer to the S8V-NF Datasheet (Cat. No. T212) for details.

DC Electronic Circuit Protector
S8V-CP

Note: Refer to the S8V-CP Datasheet (Cat. No. T226-E1) for details.

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 4

1. Input voltage type
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 (VDC)
05: 5 V
12: 12 V
24: 24 V
48: 48 V

4. Option
None: Standard model
400: Coationg

Ordering Information

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

Power ratings	Input voltage	Output Voltage (VDC)	Output current	Boost Current	Model number
15 W	Single phase 100 to 240 VAC 90 to 350 VDC	5 V	3 A	3.6 A	**S8VK-G01505**
		12 V	1.2 A	1.44 A	**S8VK-G01512**
		24 V	0.65 A	0.78 A	**S8VK-G01524**
30 W		5 V	5 A	6 A	**S8VK-G03005**
		12 V	2.5 A	3 A	**S8VK-G03012**
		24 V	1.3 A	1.56 A	**S8VK-G03024**
60 W		12 V	4.5 A	5.4 A	**S8VK-G06012**
		24 V	2.5 A	3 A	**S8VK-G06024**
120 W		24 V	5 A	6 A	**S8VK-G12024**
240 W		24 V	10 A	12 A	**S8VK-G24024**
		48 V	5 A	6 A	**S8VK-G24048**
480 W		24 V	20 A	24 A	**S8VK-G48024**
		48 V	10 A	12 A	**S8VK-G48048**

Specifications

Ratings, Characteristics, and Functions

Item			Power rating	15 W			30 W		
			Output voltage (VDC)	5 V	12 V	24 V	5 V	12 V	24 V
Efficiency		230 VAC input ✻6		77% typ.	77% typ.	80% typ.	79% typ.	82% typ.	86% typ.
Input	Voltage range ✻1			Single-phase, 85 to 264 VAC, 90 to 350 VDC ✻10					
	Frequency ✻1			50/60 Hz (47 to 450 Hz)					
	Current	115 VAC input ✻6		0.32 A typ.	0.3 A typ.	0.31 A typ.	0.5 A typ.	0.57 A typ.	0.58 A typ.
		230 VAC input ✻6		0.2 A typ.	0.21 A typ.	0.2 A typ.	0.32 A typ.	0.37 A typ.	0.36 A typ.
	Power factor ✻6	230 VAC input, 100% load		0.42 min.			0.43 min.	0.42 min.	0.43 min.
	Leakage current	115 VAC input		0.14 mA typ.			0.13 mA typ.		
		230 VAC input		0.25 mA typ.			0.24 mA typ.		
	Inrush current ✻2 (for a cold start at 25°C)	115 VAC input		16 A typ			16 A typ		
		230 VAC input		32 A typ.			32 A typ.		
Output	Rated output current			3 A	1.2 A	0.65 A	5 A	2.5 A	1.3 A
	Boost current			3.6 A	1.44 A	0.78 A	6 A	3 A	1.56 A
	Voltage adjustment range ✻3			–10% to 15% (with V.ADJ) (guaranteed)					
	Ripple & Noise voltage ✻4	100 to 240 VAC input, 100% load ✻6		60 mVp-p max. at 20 MHz of bandwidth	50 mVp-p max.at 20 MHz of bandwidth	30 mVp-p max. at 20 MHz of bandwidth	30 mVp-p max. at 20 MHz of bandwidth	30 mVp-p max. at 20 MHz of bandwidth	30 mVp-p max. at 20 MHz of bandwidth
	Input variation influence ✻8			0.4% max.			0.4% max.		
	Load variation influence ✻7			0.8% max.			0.8% max.		
	Temperature variation influence	115 to 230 VAC input		0.05%/°C max.			0.05%/°C max.		
	Start up time ✻2	115 VAC input ✻6		530 ms typ.	520 ms typ.	580 ms typ.	550 ms typ.	550 ms typ.	600 ms typ.
		230 VAC input ✻6		330 ms typ.	400 ms typ.	400 ms typ.	430 ms typ.	490 ms typ.	480 ms typ.
	Hold time ✻2	115 VAC input ✻6		28 ms typ.	29 ms typ.	32 ms typ.	33 ms typ.	36 ms typ.	23 ms typ.
		230 VAC input ✻6		134 ms typ.	138 ms typ.	134 ms typ.	177 ms typ.	170 ms typ.	154 ms typ.
Additional functions	Overload protection			Yes, automatic reset			Yes, automatic reset		
	Overvoltage protection ✻5			Yes, 130% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input again)					
	Series operation			Yes (For up to two Power Supplies, external diodes are required.)					
	Parallel operation			Yes (Refer to *Safety Precautions*) (For up to two Power Supplies)					
	Output indicator			Yes (LED: Green), lighting from 80% to 90% or more of rated voltage					
Insulation	Withstand voltage			3.0 kVAC for 1 min. (between all input terminals and output terminals), current cutoff 20 mA					
				2.0 kVAC for 1 min. (between all input terminals and PE terminals), current cutoff 20 mA					
				1.0 kVAC for 1 min. (between all output terminals and PE terminals), current cutoff 20 mA					
	Insulation resistance			100 MΩ min. (between all output terminals and all input terminals/PE terminals) at 500 VDC					
Environment	Ambient operating temperature ✻12			–40 to 70°C (Derating is required according to the temperature. Refer to *Engineering Data*) (with no condensation or icing)					
	Storage temperature			–40 to 85°C (with no condensation or icing)					
	Ambient operating humidity			0% to 95% (Storage humidity: 0% to 95%)					
	Vibration resistance			10 to 55 Hz, 0.375 mm half amplitude for 2 h each in X, Y, and Z directions					
	Shock resistance			150 m/s², 3 times each in ±X, ±Y, and ±Z directions					
Reliability	MTBF			135,000 hrs min.					
	Life expectancy ✻9			10 years min.					
Construction	Weight			150 g max.			195 g max.		
	Cooling fan			No					
	Degree of protection			IP20 by EN/IEC 60529					
Standards	Harmonic current emissions			Conforms to EN 61000-3-2					
	EMI	Conducted Emissions		Conforms to EN 61204-3 Class B, EN 55011 Class B					
		Radiated Emissions		Conforms to EN 61204-3 Class B, EN 55011 Class B					
	EMS			Conforms to EN 61204-3 high severity levels					
	Approved Standards			UL Listed: UL 508 (Listing, Class2 Output: Per UL 1310) UL UR: UL 62368-1 (Recognition) cUL: CSA C22.2 No.107.1 (Class2 Output: Per CSA C22.2 No.223) cUR:CSA C22.2 No.62368-1 EN: EN 62477-1, EN 62368-1					
	Conformed Standards			PELV (EN 60204-1, EN 62477-1)					
				EN 61558-2-16					
				RCM (EN61000-6-4)					
	Marine Standards			Lloyd's register ✻10 ✻11					
	SEMI			Conforms to F47-0706 (200 to 240 VAC input)					

✻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 9 to 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. Refer to *Overvoltage Protection* on page 10 for the time when input voltage shuts off and input turns on again.
✻6. The value is when both rated output voltage and rated output current are satisfied.
✻7. 100 to 240 VAC input, in the range of 0 A to the rated output current
✻8. This is the maximum variation in the output voltage when the input voltage is gradually changed within the allowable input voltage range at the rated output voltage and rated output current.
✻9. Refer to *Recommended Replacement Periods and Periodic Replacement for Preventive Maintenance* on page 23 for details.
✻10. Safety Standards for a DC Input
The following safety standards apply to a DC input: UL 62368-1, cUR (CSA C22.2 No. 62368-1), EN 62477-1, EN 62368-1, and Lloyd's.
For a DC input, safety is ensured by an external fuse.
Select an external fuse that meets the following conditions.
S8VK-G015□□: 350 VDC min, 3 A
S8VK-G030□□: 350 VDC min, 4 A
✻11. Clamp filter "ZCAT2035-0930" manufactured by TDK Corporation. or equivalent should be installed in the cable connected to the input - output terminals of S8VK-G series.
Noise filter "FN2080-10-06" manufactured by SCHAFFNER Corporation. or equivalent should be connected to the Input terminals of S8VK-G series.
✻12. At –40 to –25°C, time will be required before the rated output voltage is output after the input voltage is input.
Also, the ripple noise value may exceed the value shown in the above table.

Item		Power rating / Output voltage (VDC)	60 W 12 V	60 W 24 V	120 W 24 V
Efficiency		230 VAC input ✻6	85% typ.	88% typ.	89% typ.
Input	Voltage range ✻1		Single-phase, 85 to 264 VAC, 90 to 350 VDC ✻10		
	Frequency ✻1		50/60 Hz (47 to 450 Hz)		50/60 Hz (47 to 63 Hz)
	Current	115 VAC input ✻6	1.0 A typ.	1.1 A typ.	1.3 A typ.
		230 VAC input ✻6	0.6 A typ.	0.7 A typ.	0.7 A typ.
	Power factor ✻6	230 VAC input, 100% load	0.46 min.	0.45 min.	0.94 min.
	Leakage current	115 VAC input	0.16 mA typ.		0.24 mA typ.
		230 VAC input	0.30 mA typ.		0.38 mA typ.
	Inrush current ✻2 (for a cold start at 25°C)	115 VAC input	16 A typ.		16 A typ.
		230 VAC input	32 A typ.		32 A typ.
Output	Rated output current		4.5 A	2.5 A	5 A
	Boost current		5.4 A	3 A	6 A
	Voltage adjustment range ✻3		–10% to 15% (with V. ADJ) (guaranteed)		
	Ripple & Noise voltage ✻4	100 to 240 VAC input, 100% load ✻6	150 mVp-p max. at 20 MHz of bandwidth	50 mVp-p max. at 20 MHz of bandwidth	150 mVp-p max. at 20 MHz of bandwidth
	Input variation influence ✻8		0.4% max.		0.4% max.
	Load variation influence ✻7		0.8% max.		0.8% max.
	Temperature variation influence	115 to 230 VAC input	0.05%/°C max.		0.05%/°C max.
	Start up time ✻2	115 VAC input ✻6	570 ms typ.	650 ms typ.	790 ms typ.
		230 VAC input ✻6	430 ms typ.	500 ms typ.	750 ms typ.
	Hold time ✻2	115 VAC input ✻6	26 ms typ.	25 ms typ.	42 ms typ.
		230 VAC input ✻6	139 ms typ.	129 ms typ.	42 ms typ.
Additional functions	Overload protection		Yes, automatic reset		Yes, automatic reset
	Overvoltage protection ✻5		Yes, 130% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input again)		
	Series operation		Yes (For up to two Power Supplies, external diodes are required.)		
	Parallel operation		Yes (Refer to *Safety Precautions*) (For up to two Power Supplies)		
	Output indicator		Yes (LED: Green), lighting from 80% to 90% or more of rated voltage		
Insulation	Withstand voltage		3.0 kVAC for 1 min. (between all input terminals and output terminals), current cutoff 20 mA		
			2.0 kVAC for 1 min. (between all input terminals and PE terminals), current cutoff 20 mA		
			1.0 kVAC for 1 min. (between all output terminals and PE terminals), current cutoff 20 mA		
	Insulation resistance		100 MΩ min. (between all output terminals and all input terminals/PE terminals) at 500 VDC		
Environment	Ambient operating temperature ✻12		–40 to 70°C (Derating is required according to the temperature. Refer to *Engineering Data*) (with no condensation or icing)		
	Storage temperature		–40 to 85°C (with no condensation or icing)		
	Ambient operating humidity		0% to 95% (Storage humidity: 0% to 95%)		
	Vibration resistance		10 to 55 Hz, 0.375 mm half amplitude for 2 h each in X, Y, and Z directions		
	Shock resistance		150 m/s^2, 3 times each in ±X, ±Y, ±Z directions		
Reliability	MTBF		135,000 hrs min.		
	Life expectancy ✻9		10 years min.		
Construction	Weight		260 g max.		620 g max.
	Cooling fan		No		
	Degree of protection		IP20 by EN/IEC 60529		
Standards	Harmonic current emissions		Conforms to EN 61000-3-2		
	EMI	Conducted Emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B		
		Radiated Emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B		
	EMS		Conforms to EN 61204-3 high severity levels		
	Approved Standards		UL Listed: UL 508 (Listing, For 60 W only Class2 Output: Per UL 1310) UL UR: UL 62368-1 (Recognition) cUL: CSA C22.2 No.107.1 (For 60 W only Class2 Output: Per CSA C22.2 No.223) cUR: CSA C22.2 No.62368-1 EN: EN 62477-1, EN 62368-1		
	Conformed Standards		PELV (EN 60204-1, EN 62477-1)		
			EN 61558-2-16		
			RCM (EN61000-6-4)		
	Marine Standards		Lloyd's register ✻10 ✻11		
	SEMI		Conforms to F47-0706 (200 to 240 VAC input)		

✻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 9 to 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. Refer to *Overvoltage Protection* on page 10 for the time when input voltage shuts off and input turns on again.
✻6. The value is when both rated output voltage and rated output current are satisfied.
✻7. 100 to 240 VAC input, in the range of 0 A to the rated output current
✻8. This is the maximum variation in the output voltage when the input voltage is gradually changed within the allowable input voltage range at the rated output voltage and rated output current.
✻9. Refer to *Recommended Replacement Periods and Periodic Replacement for Preventive Maintenance* on page 23 for details.
✻10. Safety Standards for a DC Input
The following safety standards apply to a DC input: UL 62368-1, cUR (CSA C22.2 No. 62368-1), EN 62477-1, EN 62368-1, and Lloyd's.
For a DC input, safety is ensured by an external fuse.
Select an external fuse that meets the following conditions.
S8VK-G060□□: 350 VDC min, 6 A
S8VK-G12024: 350 VDC min, 5 A
✻11. Clamp filter "ZCAT2035-0930" manufactured by TDK Corporation. or equivalent should be installed in the cable connected to the input - output terminals of S8VK-G series.
Noise filter "FN2080-10-06" manufactured by SCHAFFNER Corporation. or equivalent should be connected to the Input terminals of S8VK-G series.
✻12. At –40 to –25°C, time will be required before the rated output voltage is output after the input voltage is input.
Also, the ripple noise value may exceed the value shown in the above table.

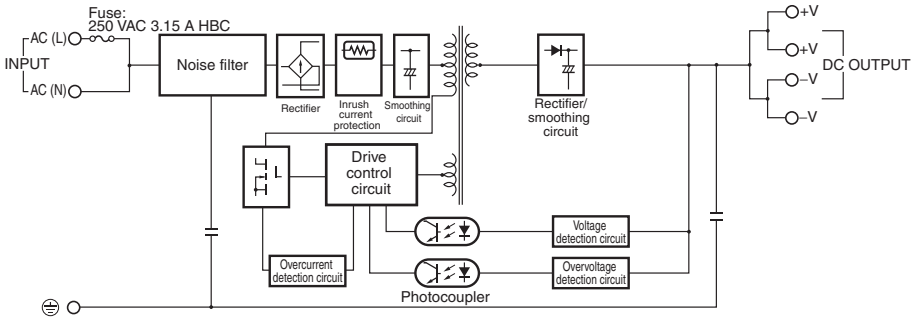
Item		Power rating / Output voltage (VDC)	240 W		480 W	
			24 V	48 V	24 V	48 V
Efficiency		230 VAC input ✻6	92% typ.		93% typ.	
Input	Voltage range ✻1		Single-phase, 85 to 264 VAC, 90 to 350 VDC ✻10			
	Frequency ✻1		50/60 Hz (47 to 63 Hz)			
	Current	115 VAC input ✻6	2.4 A typ.		4.7 A typ.	
		230 VAC input ✻6	1.3 A typ.		2.3 A typ.	
	Power factor ✻6	230 VAC input, 100% load	0.9 min.		0.97 min.	
	Leakage current	115 VAC input	0.23 mA typ.		0.3 mA typ.	
		230 VAC input	0.33 mA typ.		0.49 mA typ.	
	Inrush current ✻2 (for a cold start at 25°C)	115 VAC input	16 A typ.		16 A typ.	
		230 VAC input	32 A typ.		32 A typ.	
Output	Rated output current		10 A	5 A	20 A	10 A
	Boost current		12 A	6 A	24 A	12 A
	Voltage adjustment range ✻3		−10% to 15% (with V.ADJ) (guaranteed)			
	Ripple & Noise voltage ✻4	100 to 240 VAC input, 100% load ✻6	180 mVp-p max. at 20 MHz of bandwidth	350 mVp-p max. at 20 MHz of bandwidth	230 mVp-p max. at 20 MHz of bandwidth	470 mVp-p max. at 20 MHz of bandwidth
	Input variation influence ✻8		0.4% max.		0.4% max.	
	Load variation influence ✻7		0.8% max.		0.8% max.	
	Temperature variation influence	115 to 230 VAC input	0.05%/°C max.		0.05%/°C max.	
	Start up time ✻2	115 VAC input ✻6	250 ms typ.	290 ms typ.	380 ms typ.	
		230 VAC input ✻6	250 ms typ.	290 ms typ.	260 ms typ.	
	Hold time ✻2	115 VAC input ✻6	44 ms typ.	43 ms typ.	40 ms typ.	
		230 VAC input ✻6	44 ms typ.		50 ms typ.	
Additional functions	Overload protection		Yes, automatic reset		Yes, automatic reset	
	Overvoltage protection ✻5		Yes, 130% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input again)			
	Series operation		Yes (For up to two Power Supplies, external diodes are required.)			
	Parallel operation		Yes (Refer to *Safety Precautions*) (For up to two Power Supplies)			
	Output indicator		Yes (LED: Green), lighting from 80% to 90% or more of rated voltage			
Insulation	Withstand voltage		3.0 kVAC for 1 min. (between all input terminals and output terminals), current cutoff 20 mA			
			2.0 kVAC for 1 min. (between all input terminals and PE terminals), current cutoff 20 mA			
			1.0 kVAC for 1 min. (between all output terminals and PE terminals), current cutoff 20 mA			
	Insulation resistance		100 MΩ min. (between all output terminals and all input terminals/PE terminals) at 500 VDC			
Environment	Ambient operating temperature ✻12		−40 to 70 °C (Derating is required according to the temperature. Refer to *Engineering Data*) (with no condensation or icing)			
	Storage temperature		−40 to 85°C (with no condensation or icing)			
	Ambient operating humidity		0% to 95% (Storage humidity: 0% to 95%)			
	Vibration resistance		10 to 55 Hz, 0.375 mm half amplitude for 2 h each in X, Y, and Z directions			
	Shock resistance		150 m/s^2, 3 times each in ±X, ±Y, ±Z directions			
Reliability	MTBF		135,000 hrs min.			
	Life expectancy ✻9		10 years min.			
Construction	Weight		900 g max.		1,500 g max.	
	Cooling fan		No			
	Degree of protection		IP20 by EN/IEC 60529			
Standards	Harmonic current emissions		Conforms to EN 61000-3-2			
	EMI	Conducted Emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B			
		Radiated Emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B			
	EMS		Conforms to EN 61204-3 high severity levels			
	Approved Standards		UL Listed: UL 508 (Listing) UL UR: UL 62368-1 (Recognition) cUL: CSA C22.2 No.107.1 cUR: CSA C22.2 No.62368-1 EN: EN 62477-1, EN 62368-1			
	Conformed Standards		PELV (EN 60204-1, EN 62477-1)			
			EN 61558-2-16			
			RCM (EN61000-6-4)			
	Marine Standards		Lloyd's register ✻10 ✻11			
	SEMI		Conforms to F47-0706 (200 to 240 VAC input)			

✻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 9 to 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. Refer to *Overvoltage Protection* on page 10 for the time when input voltage shuts off and input turns on again.
✻6. The value is when both rated output voltage and rated output current are satisfied.
✻7. 100 to 240 VAC input, in the range of 0 A to the rated output current
✻8. This is the maximum variation in the output voltage when the input voltage is gradually changed within the allowable input voltage range at the rated output voltage and rated output current.
✻9. Refer to *Recommended Replacement Periods and Periodic Replacement for Preventive Maintenance* on page 23 for details.
✻10. Safety Standards for a DC Input
The following safety standards apply to a DC input: UL 62368-1, cUR (CSA C22.2 No. 62368-1), EN 62477-1, EN 62368-1, and Lloyd's.
For a DC input, safety is ensured by an external fuse.
Select an external fuse that meets the following conditions.
S8VK-G240□□: 350 VDC min, 8 A
S8VK-G480□□: 350 VDC min, 12 A
✻11. Clamp filter "ZCAT2035-0930" manufactured by TDK Corporation. or equivalent should be installed in the cable connected to the input - output terminals of S8VK-G series.
Noise filter "FN2080-10-06" manufactured by SCHAFFNER Corporation. or equivalent should be connected to the Input terminals of S8VK-G series.
✻12. At −40 to −25°C, time will be required before the rated output voltage is output after the input voltage is input.
Also, the ripple noise value may exceed the value shown in the above table.

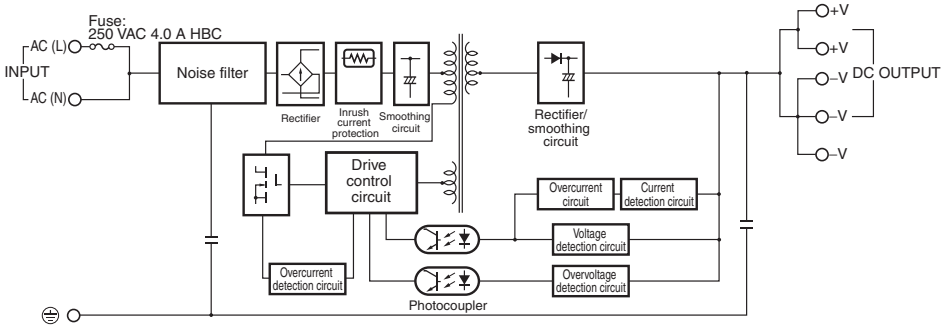
Connections

Block Diagrams

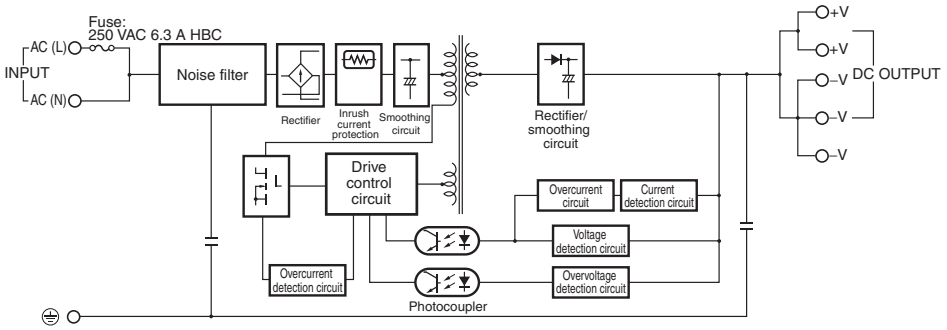
S8VK-G015□□ (15 W)



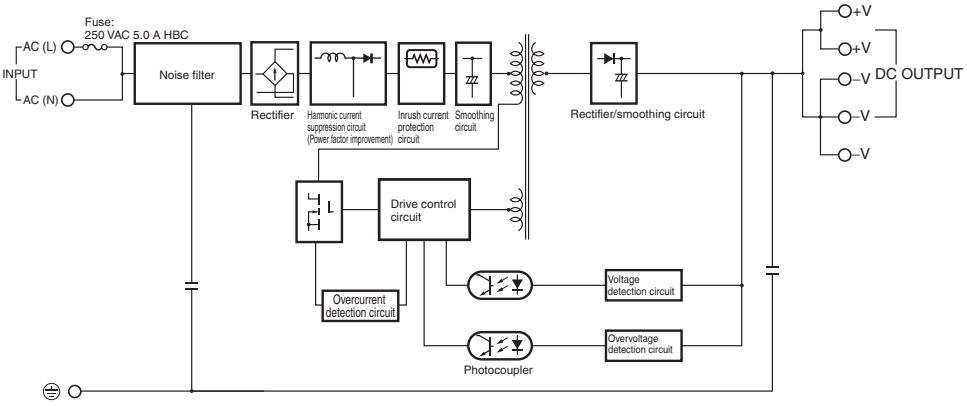
S8VK-G030□□ (30 W)



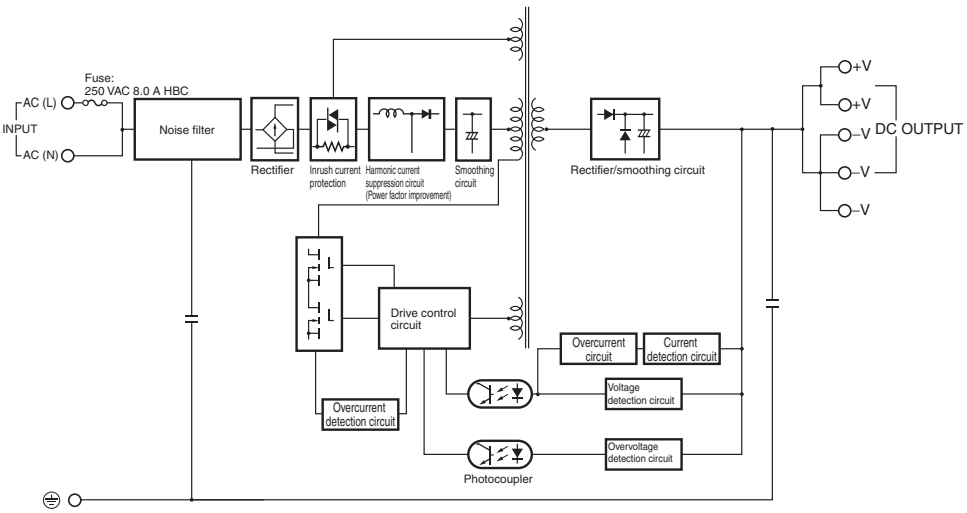
S8VK-G060□□ (60 W)



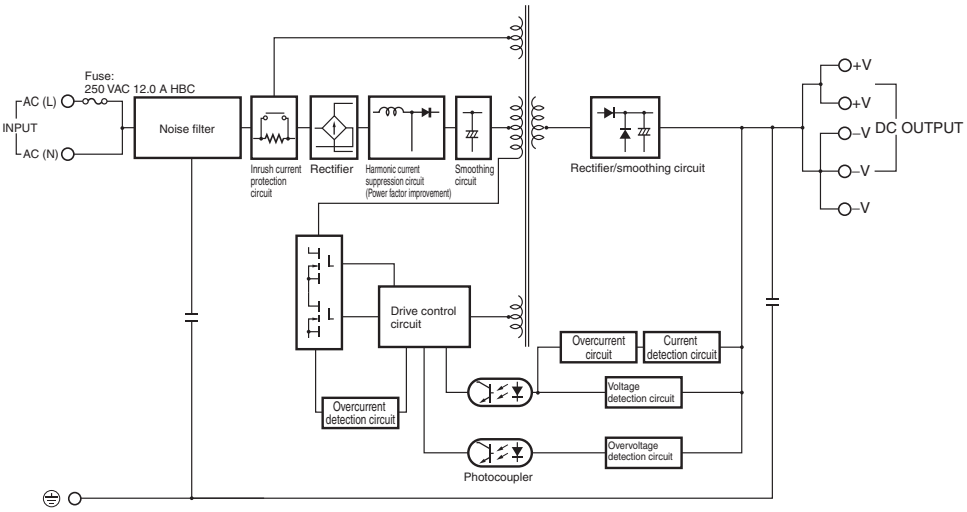
S8VK-G12024 (120 W)



S8VK-G240□□ (240 W)



S8VK-G480□□ (480 W)

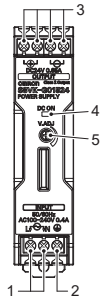


Construction and Nomenclature

Nomenclature

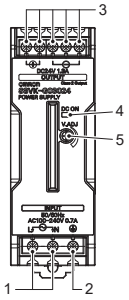
15-W Models

S8VK-G015□□



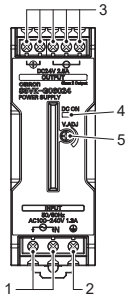
30-W Models

S8VK-G030□□



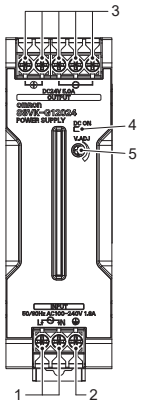
60-W Models

S8VK-G060□□



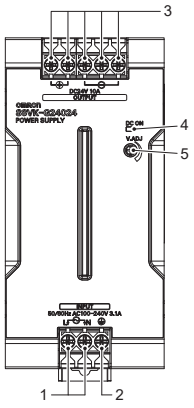
120-W Models

S8VK-G12024



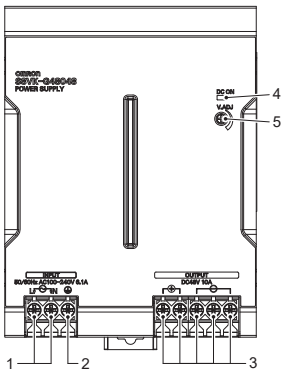
240-W Models

S8VK-G240□□



480-W Models

S8VK-G480□□



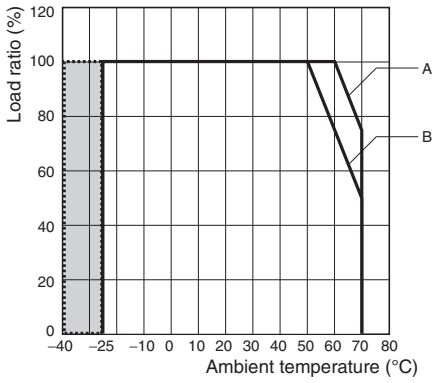
No.	Name	Function
1	Input terminals (L), (N)	Connect the input lines to these terminals. ✻1
2	Protective Earth terminal (PE)	Connect the ground line to this terminal. ✻2
3	DC Output terminals (–V), (+V)	Connect the load lines to these terminals.
4	Output indicator (DC ON: Green)	Lights while a direct current (DC) output is ON.
5	Output voltage adjuster (V.ADJ)	Use to adjust the voltage.

✻1. The fuse is located on the (L) side. It is not user-replaceable. For a DC input, connect the positive voltage to the L terminal.
✻2. This is the protective earth terminal specified in the safety standards. Always ground this terminal.

Engineering Data

Derating Curve

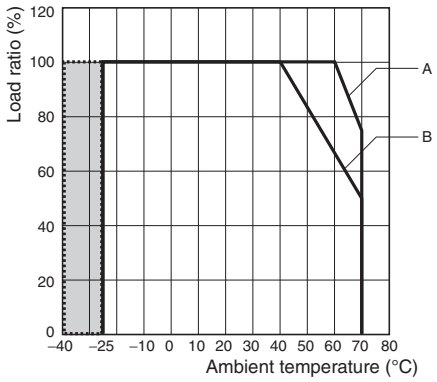
15, 30, 240 W (S8VK-G015□□, S8VK-G030□□, S8VK-G240□□)



Note: 1. At less than 90 VAC, the derating is 2.5%/V
2. For a DC power input, reduce the load given in the above derating curve by multiplying the following coefficients.
S8VK-G015□□: 1.0
S8VK-G030□□: 0.9
S8VK-G240□□: 0.8
3. This is the guaranteed value for startup.

A. Standard mounting
B. Face-up mounting / Side mounting (15W only)

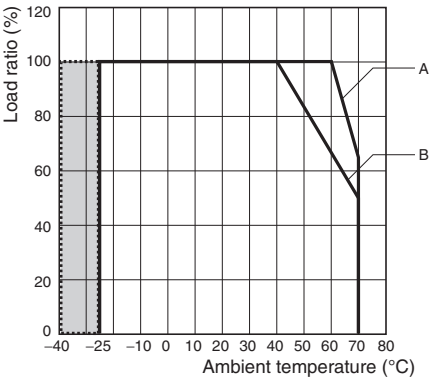
60 W (S8VK-G060□□)



Note: 1. At less than 90 VAC, the derating is 2.5%/V
2. For a DC power input, reduce the load given in the above derating curve by multiplying the following coefficients.
S8VK-G060□□: 0.9
3. This is the guaranteed value for startup.

A. Standard mounting
B. Face-up mounting

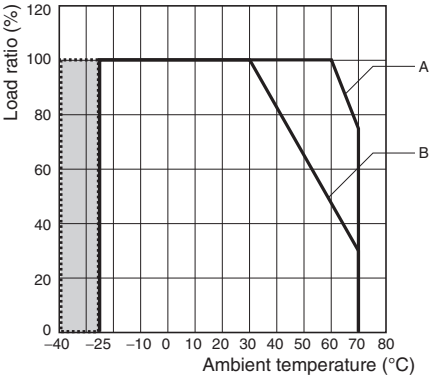
120 W (S8VK-G12024)



Note: 1. At less than 90 VAC, the derating is 2.5%/V
2. For a DC power input, reduce the load given in the above derating curve by multiplying the following coefficients.
S8VK-G12024: 0.9
3. This is the guaranteed value for startup.

A. Standard mounting
B. Face-up mounting

480 W (S8VK-G480□□)

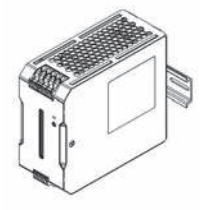


Note: 1. At less than 90 VAC, the derating is 2.5%/V
2. For a DC power input, reduce the load given in the above derating curve by multiplying the following coefficients.
S8VK-G480□□: 0.8
3. This is the guaranteed value for startup.

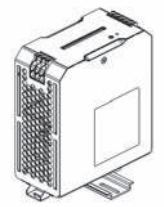
A. Standard mounting
B. Face-up mounting

Mounting

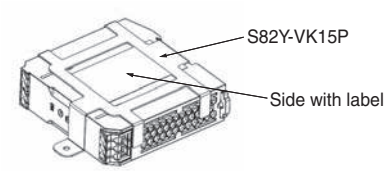
(A) Standard (Vertical) mounting



(B) Face-up mounting



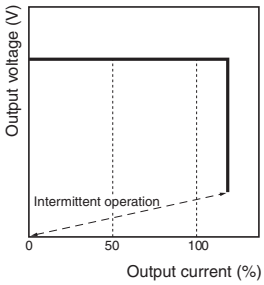
(C) Side mounting only for 15 W



Side mounting is only for S8VK-G015□□.
Use a mounting bracket (S82Y-VK15P, sold separately) when the product is mounted horizontally.
Heat dissipation will be adversely affected. When the product is mounted facing horizontally, always place the side with label facing upward.

Overload Protection

The load and the power supply are automatically protected from overcurrent damage by this function.
Overload protection is activated if the output current rises above 121% of the rated current.
When the output current returns within the rated range, overload protection is automatically cleared.

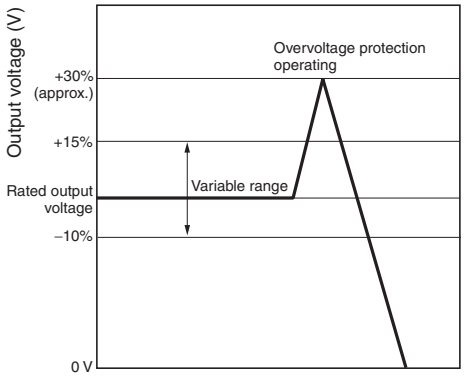


The values shown in the above diagrams are for reference only.

Note: 1. Internal parts may occasionally deteriorate or be damaged if a short-circuited or overcurrent state continues during operation.
2. Internal parts may possibly deteriorate or be damaged if the Power Supply is used for applications with frequent inrush current or overloading at the load end. Do not use the Power Supply for such applications.

Overvoltage Protection

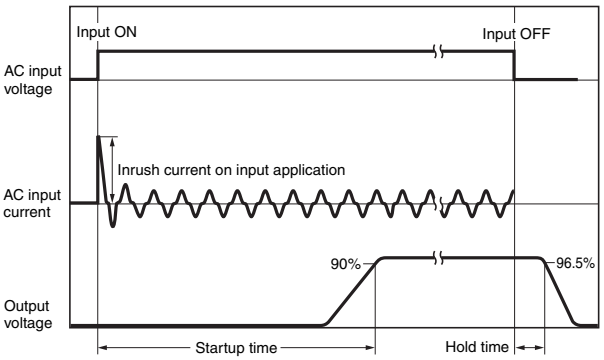
Consider the possibility of an overvoltage and design the system so that the load will not be subjected to an excessive voltage even if the feedback circuit in the Power Supply fails. If an excessive voltage that is approximately 130% of the rated voltage or more is output, the output voltage is shut OFF. Reset the input power by turning it OFF for at least three minutes and then turning it back ON again.



The values shown in the above diagram is for reference only.

Note: Do not turn ON the power again until the cause of the overvoltage has been removed.

Inrush Current, Startup Time, Output Hold Time



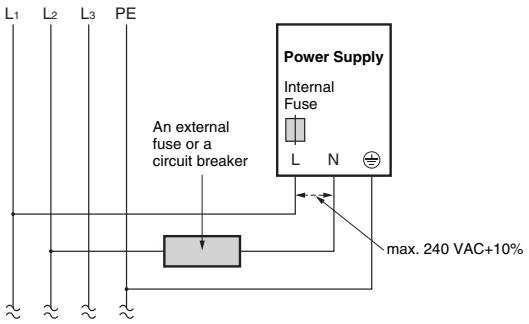
Note: Twice the input current or above will flow during the parallel operation or redundant system.
Therefore, check the fusing characteristics of fuses and operating characteristics of breakers making sure that the external fuses will not burn out and the circuit breakers will not be activated by the inrush current.

Two phases application for Single phase models

For All Single phase Models, S8VK-G

Basically OMRON single phase power supply can be used on two-phases of a 3–phase-system when some of conditions satisfy like below.

1. The supplying voltage is below the maximum rated input.
   OMRON Power supply allows the input voltage equivalent or less than 240 VAC+10%.
   Please confirm the input voltage between two lines if the input voltage satisfies this condition before connecting.
2. The external protector is needed on N input line to secure a safety.
   N line has no protection of a fuse internally.
   An appropriate fuse or circuit breaker should be connected on N input line like the following.



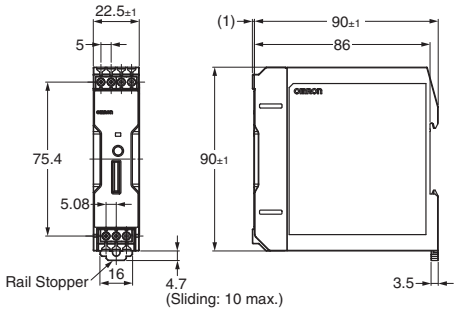
Reference Value

	Value
Reliability (MTBF)	Single phase model 15 W: 600,000 hrs 30 W: 580,000 hrs 60 W: 590,000 hrs 120 W: 450,000 hrs 240 W: 360,000 hrs 480 W: 230,000 hrs
Definition	MTBF stands for Mean Time Between Failures, which is calculated according to the probability of accidental device failures, and indicates reliability of devices. Therefore, it does not necessarily represent a life of the product.
Life expectancy	10 yrs. Min.
Definition	The life expectancy indicates average operating hours under the ambient temperature of 40°C and a load rate of 50%. Normally this is determined by the life expectancy of the built-in aluminum electrolytic capacitor.

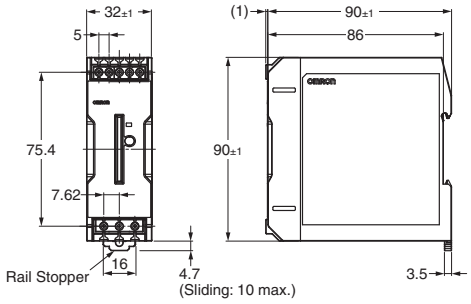
Dimensions

(Unit: mm)

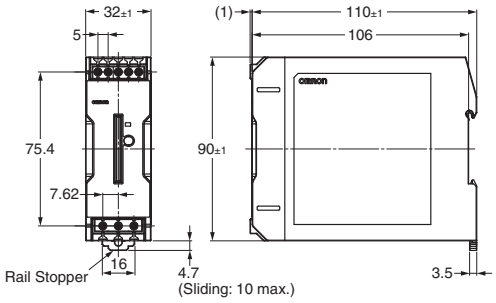
S8VK-G015□□ (15 W)



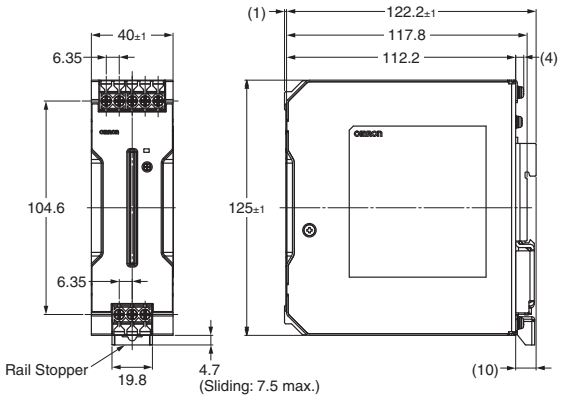
S8VK-G030□□ (30 W)



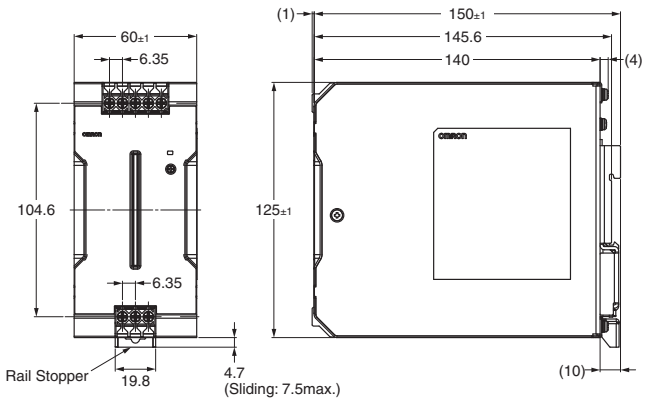
S8VK-G060□□ (60 W)



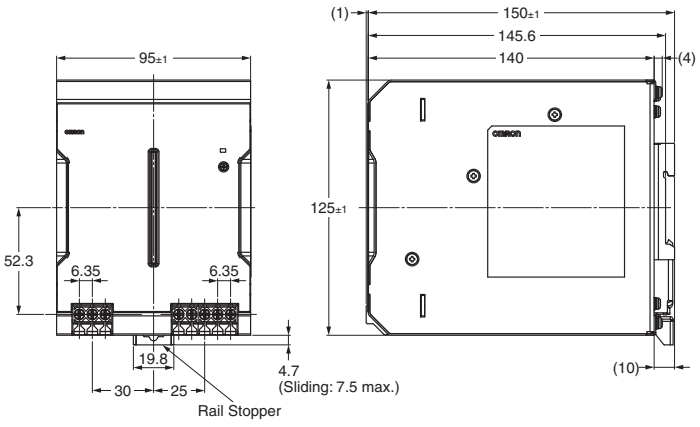
S8VK-G12024 (120 W)



S8VK-G240□□ (240 W)



S8VK-G480□□ (480 W)

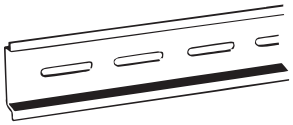


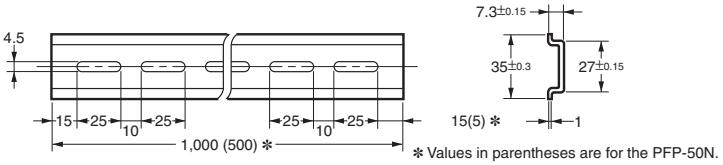
DIN Rail (Order Separately)

Note: All units are in millimeters unless otherwise indicated.

Mounting Rail (Material: Aluminum)

PFP-100N
PFP-50N

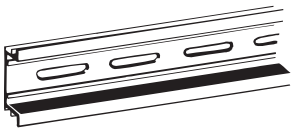


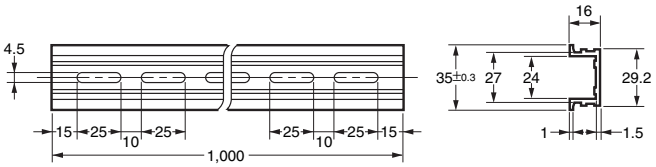


✻ Values in parentheses are for the PFP-50N.

Mounting Rail (Material: Aluminum)

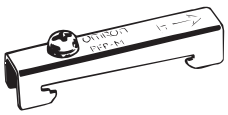
PFP-100N2

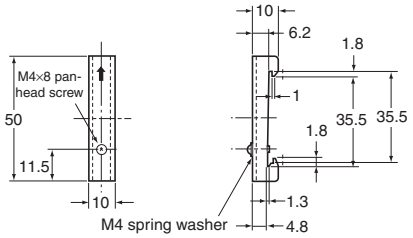




End Plate

PFP-M





Note: If there is a possibility that the Unit will be subject to vibration or shock, use a steel DIN Rail. Otherwise, metallic filings may result from aluminum abrasion.