

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



- 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.

Refer to *Safety Precautions* on page 30.

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 (Allowable range: Three-phase / single-phase / two-phase 170 to 264 VAC, 240 to 350 VDC)	24 V	10 A	15 A	S8VK-WA24024
480 W		24 V	20 A	30 A	S8VK-WA48024
960 W		24 V	40 A	60 A	S8VK-WA96024
2000 W	Three-phase / single-phase / two-phase 200 to 240 VAC (Allowable range: Three-phase / single-phase / two-phase 170 to 264 VAC, 240 to 384 VDC)	24 V	85 A	127.5 A	S8VK-WA20224
		48 V	45 A	67.5 A	S8VK-WA20248

Accessories (Order separately)

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

Ratings, Characteristics, and Functions

Power rating		240 W	480 W	960 W	2000 W		
Item	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 con- ditions	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 character- istics	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 volt- age *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 vari- ation 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.	No
	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

Power rating		240 W	480 W	960 W	2000 W	
Item	Output voltage (VDC)	24 V	24 V	24 V	24 V	48 V
Additional functions	INPUT OK Indicator	Yes (LED: Green)				
	DC OK Indicator	Yes (LED: Green)				
	Iout > 100% Indicator	Yes (LED: Yellow)				
	DC OK Signal Output	Yes (MOS FET relay output 30 VDC max., 50 mA max.)				
	Iout > 100% signal output	Yes (MOS FET relay output 30 VDC max., 50 mA max.)				
Insulation	Withstand voltage	3.0 kVAC for 1 min. (between all input terminals and all output terminals, signal output terminals), cutoff current 20 mA				
		2.0 kVAC for 1 min. (between all input terminals and PE terminals), cutoff current 20 mA				
		1.0 kVAC for 1 min. (between all output terminals, signal output terminals and PE terminals), cutoff current 25 mA (240 W/480 W/960 W)				
		1.0 kVAC for 1 min. (between all output terminals, signal output terminals and PE terminals), cutoff current 40 mA (2000 W)				
		0.5 kVAC for 1 min. (between all output terminals and all signal output terminals), cutoff current 10 mA				
	Insulation resistance	100 MΩ min. (between all output terminals, signal output terminals and all input terminals / PE terminals) at 500 VDC				
Environment	Ambient operating temperature *10	-40 to 70°C (Derating is required according to the temperature. Refer to <i>Engineering Data</i> on page 13.) (with no condensation or icing)				
	Storage temperature	-40 to 85°C (with no condensation or icing)				
	Ambient operating humidity	95% max. (Storage humidity: 95% max.)				
	Vibration resistance *11	10 to 55 Hz, maximum 5 G, 0.42 mm single amplitude for 2 h each in X, Y, and Z directions				
	Shock resistance *11	294 m/s², 3 times each in ±X, ±Y, ±Z directions			147 m/s², 3 times each in ±X, ±Y, ±Z directions	
Reliability	MTBF *12	290,000 hrs typ.	230,000 hrs typ.	170,000 hrs typ.	90,000 hrs	
	Expected life *13	10 years min.				
Construction	Weight	800 g max.	1,050 g max.	1,750 g max.	3200 g max.	
	Cooling fan	No				
	Degree of protection	IP20 by EN/IEC 60529				
Standards	Harmonic current emissions		Conforms to EN 61000-3-2 (single-phase, two-phase *14) Complies with JIS C 61000-3-2 (single-phase, two-phase, three-phase)		Conforms to EN 61000-3-2 (single-phase, two-phase) *14 Complies with JIS C 61000-3-2 (single-phase, two-phase, three-phase) *15	
	EMI	Conducted emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B (three-phase) Conforms to EN 61204-3 Class A, EN 55011 Class A (single-phase, two-phase)		Conforms to EN 61204-3 Class B, EN 55011 Class B (single-phase, two-phase, three-phase)	
		Radiated emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B (three-phase) Conforms to EN 61204-3 Class A, EN 55011 Class A (single-phase, two-phase)			
	EMS		Conforms to EN 61204-3 high severity levels			
	Safety standards *17		• UL 508 (Listing) • CSA C22.2 No.107.1 (cUL) • UL 62368-1 (Recognition) OVC II (≤ 3000 m) Pol2 • CSA C22.2 No.62368-1 (cUR) OVC II (≤ 3000 m) Pol2 • EN/IEC 62477-1 OVC III (≤ 2000 m) OVC II (2000 m < and ≤ 3000 m) Pol2 • EN/IEC 62368-1 OVC II (≤ 3000 m) Pol2 • RCM (EN61000-6-4) • Complies with PELV (EN/IEC 60204-1) • Complies with EN/IEC 61558-2-16 • BIS: IS 13252 (Part1) (960 W only)		• UL 508 (Listing) • CSA C22.2 No.107.1 (cUL) • UL 62368-1 (Recognition) OVC II (≤ 3000 m) Pol2 • CSA C22.2 No.62368-1 (cUR) OVC II (≤ 3000 m) Pol2 • EN/IEC 62477-1 OVC III (≤ 2000 m) OVC II (2000 m < and ≤ 3000 m) Pol2 • EN/IEC 62368-1 OVC II (≤ 3000 m) Pol2 • RCM (EN61000-6-4) • Complies with PELV (EN/IEC 60204-1) • Complies with EN/IEC 61204-7	
	SEMI		Complies with SEMI F47-0706 (three-phase / single-phase / two-phase 200 to 240 VAC input)			

*1. The value is when both rated output voltage and rated output current are satisfied.

*2. Do not use an inverter output for the product. Inverters with an output frequency of 50/60 Hz are available, but the rise in the internal temperature of the product may result in ignition or burning. If the input is connected to a UPS, do not connect a UPS with a square-wave output. Doing so will cause the internal temperature of the product to increase, possibly causing smoking or burning.

*3. The value is determined according to the Electrical Appliances and Material Safety Act.

*4. Values for a cold start at 25°C. Refer to *Inrush Current, Startup Time, and Output Hold Time* on page 6.

*5. If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by more than the voltage adjustment range.

When adjusting the output voltage, confirm the actual output voltage from the product and be sure that the load is not damaged.

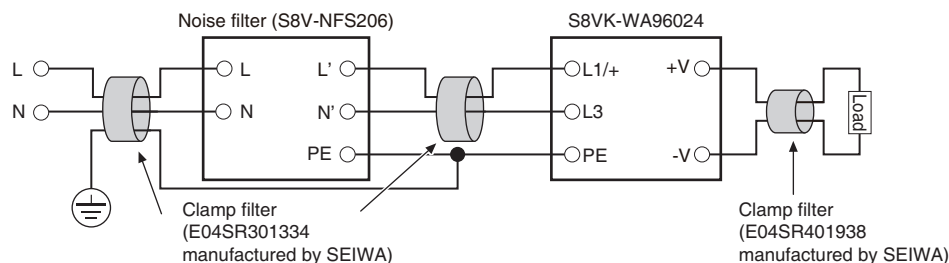
*6. The value is when both rated output voltage and rated output current are satisfied. A characteristic when the ambient operating temperature is 25°C.

*7. 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.

*8. 200 to 240 VAC input, in the range of 0 A to the rated output current.

*9. This is the value when both rated output voltage and rated output current are satisfied and at room temperature (25°C). Refer to *Inrush Current, Startup Time, and Output Hold Time* on page 6 for details.

- *10. At -40 to -25°C, time will be required before the rated output voltage is output after the input voltage is input.
- *11. If there is a possibility that the Unit will be subject to vibration or shock, use a steel DIN Rail.
- *12. MTBF is calculated according to JEITA RCR-9102.
- *13. Refer to *Recommended Replacement Periods and Periodic Replacement for Preventive Maintenance* on page 39 for details.
- *14. EN61000-3-2 does not applied to three-phase 200 to 240 VAC input models.
When using 2000 W models, conforms to EN 61000-3-2 under the following condition.
2000 W: At the rated output voltage, and 75% or less than the rated output current
- *15. Complies with JIS C 61000-3-2 (single-phase, two-phase, three-phase) under the following condition.
Three-phase: at the rated output voltage and 75 or less than the rated output current
Single-phase or two-phase: at the rated output voltage and the rated output current.
- *16. Class B compliance was met with the following configuration.

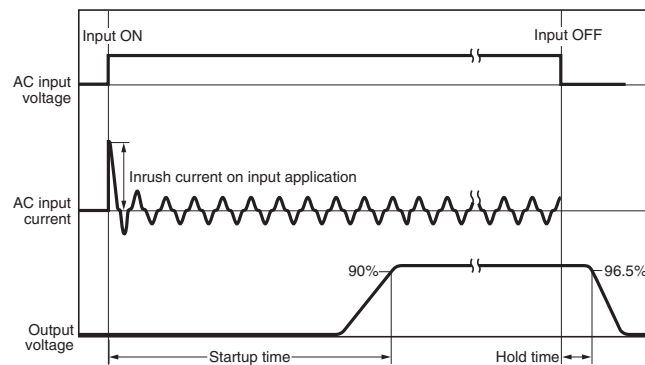


- *17. Refer to *Standard Compliance* below for details.

Standard Compliance

- To comply with PELV output requirements for EN/IEC 60204-1, ground the negative side of the output (-V) to a protective earth (PE).
 - EN/IEC 61558-2-16, EN/IEC 61204-7
When certification was received for EN/IEC 60204-1 (Machinery Safety), it was necessary to go through a control transformer to the control circuits. However, a control transformer is not always necessary for product that have been certified for the safety standard for OVCI or for product that use a transformer that complies with EN/IEC 61558-2-16 or EN/IEC 61204-7.
 - Safety Standards for a DC Input
<S8VK-WA240, 380, 960>
The following safety standards apply to a DC input: UL 62368-1, cUR (CSA C22.2 No. 62368-1), EN/IEC 62368-1, EN/IEC 62477-1, EN/IEC 61558-2-16
<S8VK-WA202>
The following safety standards apply to a DC input: UL 62368-1, cUR (CSA C22.2 No. 62368-1), EN/IEC 62368-1, EN/IEC 62477-1, EN/IEC 61204-7. Safety standard compliance is achievable by connecting a safety standard certified fuse to the (L1/+) side.
For a DC power input, connect (L1/+) side to (+), and (L3/-) side to (-).
To select a safety standard fuse, refer to *Recommended circuit breakers and fuses* on page 31.
- This BIS Standard is an Indian standard that has been in effect for this product since April 2021, and certification has been acquired for some models to enable individual product export to India. (960 W only)

Inrush Current, Startup Time, and Output Hold Time



Note: Twice the normal inrush current will flow during parallel operation or for backup operation. 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.

Overload Protection

The overload protection circuit will protect the product from short-circuit currents and overcurrents.

<S8VK-WA240, 480, 960> *1 *2

When the load current reaches 151% to 175% of the rated current, the output voltage is automatically lowered. When the overload status is cleared, the output voltage is automatically recovered to the normal status.

<S8VK-WA202>

(switch for parallel operation: SINGLE) *1 *2 *3

When the load current reaches 151% to 175% of the rated current, the output voltage is automatically lowered. When the overload status is cleared, the output voltage is automatically recovered to the normal status.

The output voltage is cut off under the following conditions.

- A current exceeding the rating continues for more than 5 seconds
- The overload status continues for three seconds or longer while the output voltage is lowered due to overload protection

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

<S8VK-WA202>

(switch for parallel operation: PARALLEL) *1 *2 *3

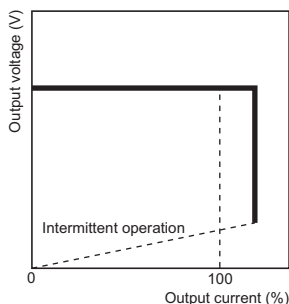
When the load current reaches 81% to 110% of the rated current, the output voltage is automatically lowered. When the overload status is cleared, the output voltage is automatically recovered to the normal status.

The output voltage is cut off under the following conditions.

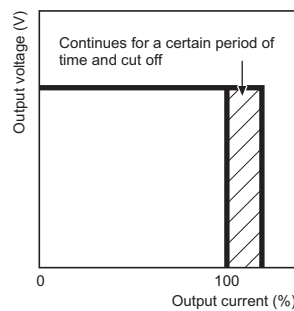
- The overload status continues for three seconds or longer while the output voltage is lowered due to overload protection.

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

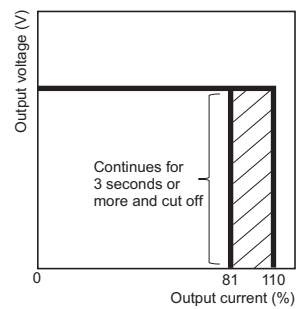
S8VK-WA 240, 480, 960



S8VK-WA202 (SINGLE)



S8VK-WA202 (PARALLEL)



- *1. Internal parts may occasionally deteriorate or be damaged if a short-circuited or overload status continues during operation. Use the product after verifying that the $I_{out} > 100\%$ indicator is not lit or the $I_{out} > 100\%$ signal output is OFF.
- *2. Internal parts may possibly deteriorate or be damaged if the Power Supply is used for applications with inrush current or overloading at the load end. Do not use the Power Supply for such applications.
- *3. Do not turn ON the power again until the cause of the overvoltage has been removed.

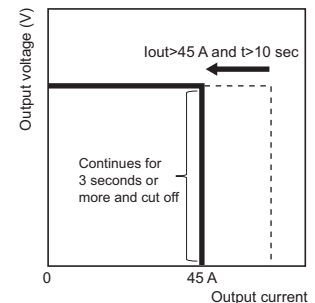
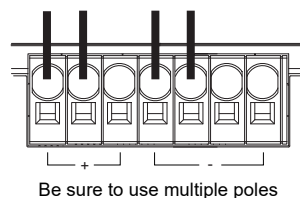
<Only S8VK-WA20224> (for terminal block)

If use continues for longer than 10 seconds while a current exceeds a 45 A output current for each terminal of output, overload protection is activated. The maximum current of each terminal is limited so that it will be 45 A or lower and the output voltage is also lowered.

When the overload status is cleared, the output current and the output voltage are automatically recovered to the normal status.

The output voltage is cut off when the overload status continues for three seconds or longer while the output voltage is lowered due to overload protection. To reset the protection, turn OFF the input power for three minutes or longer and then turn it back ON.

When a 45 A output current is exceeded



- Note:**
1. The rated current per pole of the output terminals will be 45 A. If a current exceeding 45 A will flow, wire using multiple poles at the same time.
 2. If overload protection is activated for even one output terminal pole, the output voltage of all terminals will be lowered.
 3. Make the length and thickness of the wires connected to the load the same so that the current flowing through them will be the same.

Overvoltage Protection

Overvoltage will be detected to prevent the load from being subjected to excessive voltage when the feedback circuit in the Power Supply fails, etc.

When an excessive voltage that is approximately 130% of the rated output voltage or more is output, the output voltage is cut OFF, preventing damage to the load due to overvoltage.

Reset the input power by turning it OFF for at least three minutes and then turning it back ON again.

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

INPUT OK Indicator

The INPUT OK indicator will light when the input voltage exceeds the lower limit value of the permissible range.

Note: The voltage may be applied even if the indicator does not light. Be sure to check the input voltage when performing wiring.

DC OK Indicator/Signal Output

The DC OK indicator will light when the output voltage is more than 90% of the rated output voltage, and the internal MOS FET relay is conducted (turned ON).

- Note:**
1. The output voltage may be generated even if the indicator does not light. Be sure to check the output voltage when connecting to the load.
 2. This function monitors the voltage at the power output terminals.
To check the voltage accurately, measure the voltage at the load end.
 3. If the output voltage is set to less than 90% of the rated output voltage, the indicator may go off and the signal output may be turned OFF.

lout > 100% Indicator/Signal Output

The lout > 100% indicator lights up when the output current exceeds the rated output current, and the internal MOS FET relay is conducted (turned ON).

- Note:**
1. The lout > 100% Indicator may light up, and the lout > 100% Signal Output may turn ON during peak current operation, however, the Power Supply can be used as long as the operating conditions specified in *Peak current* (P.33) are satisfied.
 2. Even when the operating conditions for parallel operation are satisfied, the lout > 100% Indicator / Signal Output may operate, so do not use the lout > 100% Indicator / Signal Output.
 3. During a short-circuit, the indicator will operate intermittently due to the overload protection function. When this happens, the indicator will blink in accordance with the intermittent operation, and the lout > 100% signal output will repeated turn ON and OFF.
The shortest ON time of the lout > 100% signal output during intermittent operation is 5 ms. (Other than S8VK-WA202)

Specifications of the Signal Output Terminals (between DC OK Signal Output Terminal and COM Terminal, and between lout > 100% Signal Output Terminal and COM Terminal)

Since the Signal Output is composed of the MOS FET relay, it does not have any polarity.

30 VDC max., 50 mA max.

Residual voltage when the function is ON: 2 V max.

Leakage current when the function is OFF: 0.1 mA max.

- Note:**
1. Internal current control circuits are not provided internally for output signals. Do not allow the output current to exceed 50 mA.
 2. After completing wiring, confirm that the circuits operate correctly.

Identification of error locations at the input, product, and load side by the Indicator or Signal Output, and troubleshooting for the same (Maintenance point indicator)

Error locations at the input, product, and load side can be identified by the INPUT OK, DC OK, lout > 100% Indicator / Signal Output.

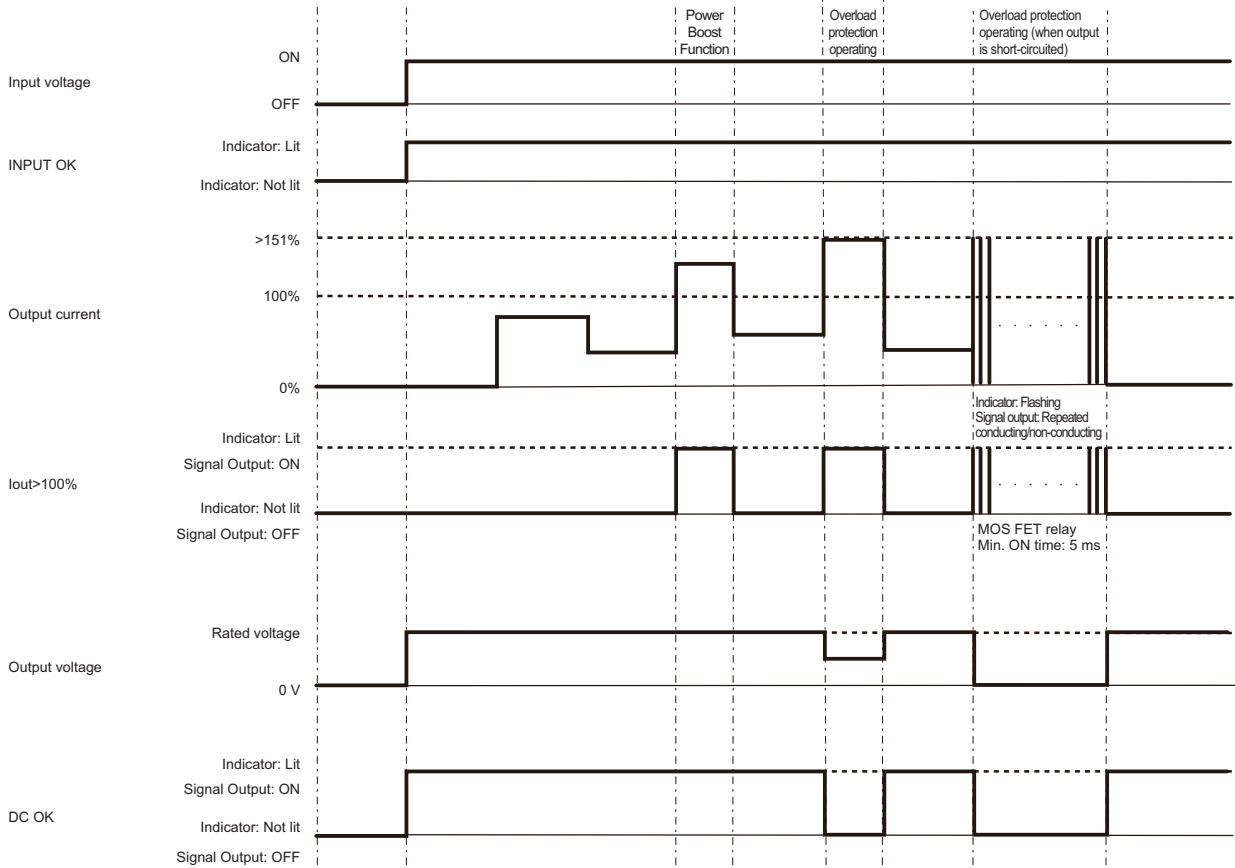
INPUT OK Indicator	DC OK Indicator/Signal Output	lout > 100% Indicator/Signal Output	Product operating status	Troubleshooting methods
●	●	○	---	(Normal)
●	●	●	Operation is being performed in excess of the rated output current of the product.	Change to a product with less load or larger output capacity. However, the Power Supply can be used as long as the operating conditions specified in <i>Peak current</i> (P.33) are satisfied.
●	○	●	Overload protection is activated for the product, and the output voltage drops.	Make sure the output line and the load are not short-circuited. If there is no short-circuiting, change to a product with less load or larger output capacity.
●	○	⦿		
●	○	○	The product may have failed, or the overvoltage protection may have been activated for the product.	If there is no output voltage even after checking the following, replace the product because it is likely to have failed. Checking overvoltage protection status <S8VK-WA240, 480, 960, 202> Turn OFF the input power for three minutes or longer and then turn it back ON. Checking overload protected status <Only S8VK-WA202> Check whether the load is in overload status or is short-circuited. Remove the load wires when checking. Turn OFF the input power for three minutes or longer and then turn it back ON.
○	○	○	No input voltage is being supplied.	Make sure the circuit breaker connected to the input side has not tripped, or the fuse connected to the input side has not blown. Turn ON the circuit breaker or replace the fuse. Turn the input power ON again, and if no output voltage is output, the product may have failed. Replace the product.

●: Lit / ON

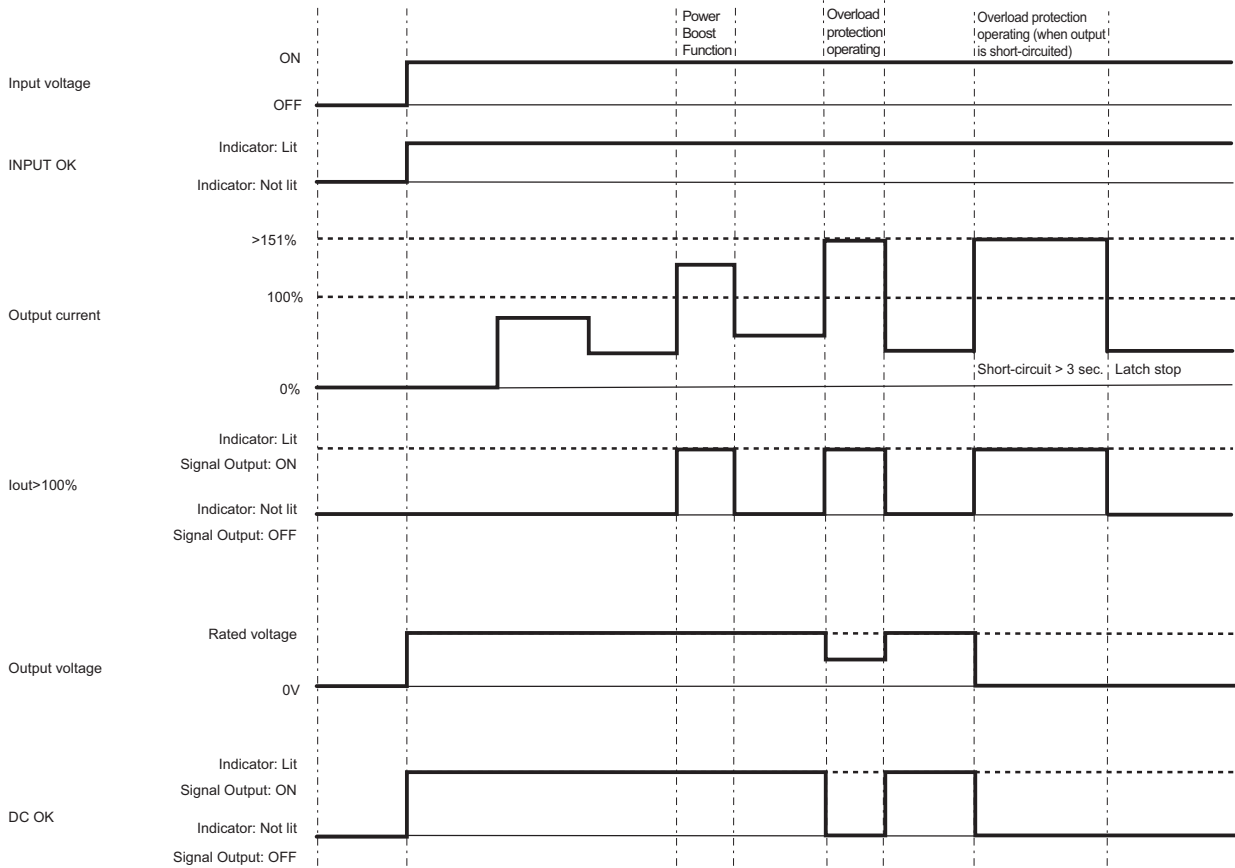
○: Not lit / OFF

⦿: Flashing / ON · OFF

Time chart (Operation of the Indicator/Signal Output according to the product status)
S8VK-WA 240, 480, 960



S8VK-WA202



S8VK-WA

S8VK-WB

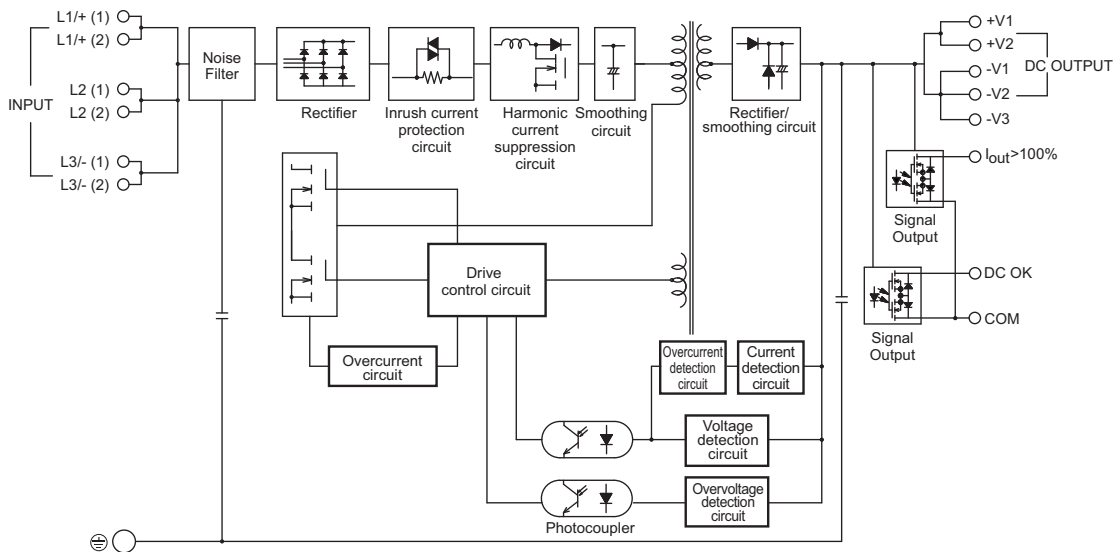
Common Precautions

Common Accessories

Connections

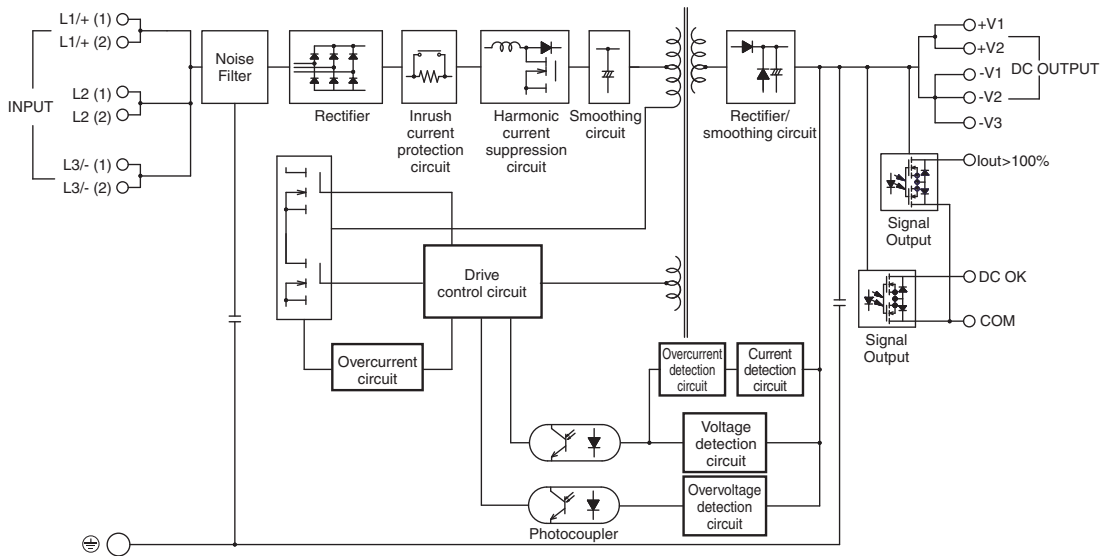
Block Diagrams

S8VK-WA24024 (240 W)



S8VK-WA48024 (480 W)

S8VK-WA96024 (960 W)



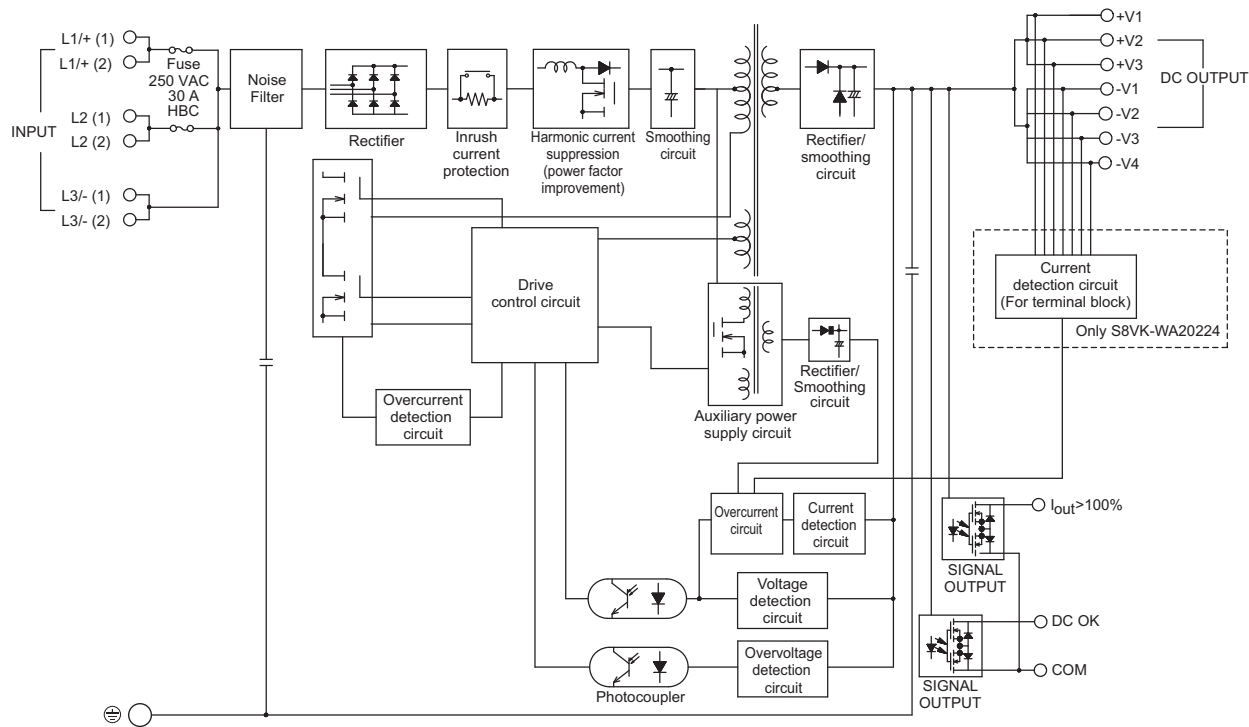
S8VK-WA

S8VK-WB

Common Precautions

Common Accessories

S8VK-WA202□□ (2000 W)



Construction and Nomenclature

Nomenclature

240 W

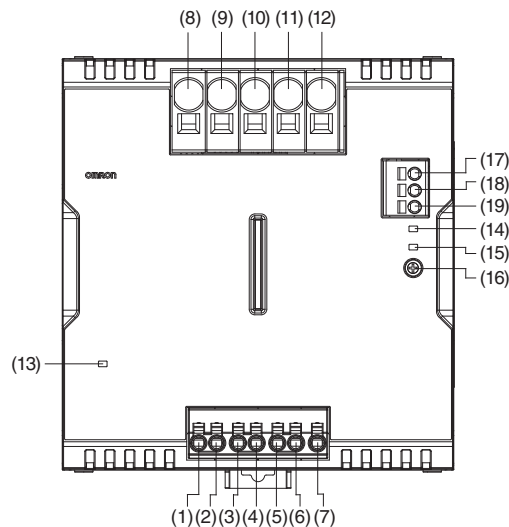
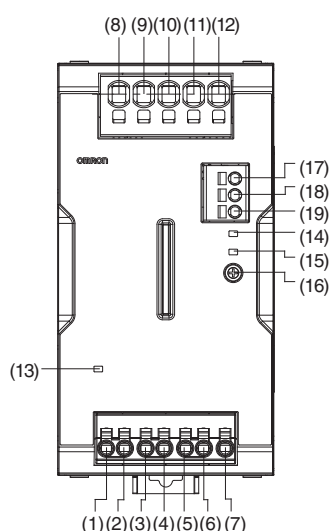
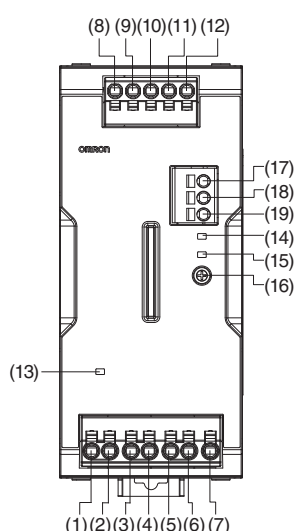
S8VK-WA24024

480 W

S8VK-WA48024

960 W

S8VK-WA96024



No.	Terminal name	Name	Function
(1)	L1/+ (1)	Input terminals	Connect the input lines to these terminals. *1
(2)	L1/+ (2)		
(3)	L2 (1)		
(4)	L2 (2)		
(5)	L3/- (1)		
(6)	L3/- (2)	Protective Earth terminal (⊕)	Connect the ground line to this terminal. *2
(7)	PE		
(8)	+V1	DC Output terminals	Connect the load lines to these terminals.
(9)	+V2		
(10)	-V1		
(11)	-V2		
(12)	-V3		
(13)	---	INPUT OK Indicator (INPUT OK: Green)	Lights up when the input voltage exceeds the lower limit value of the permissible range.
(14)	---	lout > 100% Indicator (lout > 100%: Yellow)	The lout > 100% Indicator lights up when the output current exceeds the rated output current.
(15)	---	DC OK Indicator (DC OK: Green)	Lights up when the output voltage is more than 90% of the rated output voltage.
(16)	---	Output voltage adjuster (V.ADJ)	Use to adjust the output voltage.
(17)	lout > 100%	lout > 100% Signal Output Terminal	The lout > 100% Signal Output is output when the output current exceeds the rated output current.
(18)	DC OK	DC OK Signal Output Terminal	Outputs when the output voltage is more than 90% of the rated output voltage.
(19)	COM	COM Terminal	Common terminal for Signal Output (17) and (18).

*1. For a single-phase/two-phase power input, connect to (L1/+) and (L3/-).

For a DC power input, connect (L1/+) to (+), and (L3/-) to (-).

(Refer to the wiring diagrams illustrated in *Recommended circuit breakers and fuses* on page 31.)

*2. This is the protective earth terminal specified in the safety standards. Always ground this terminal.

S8VK-WA

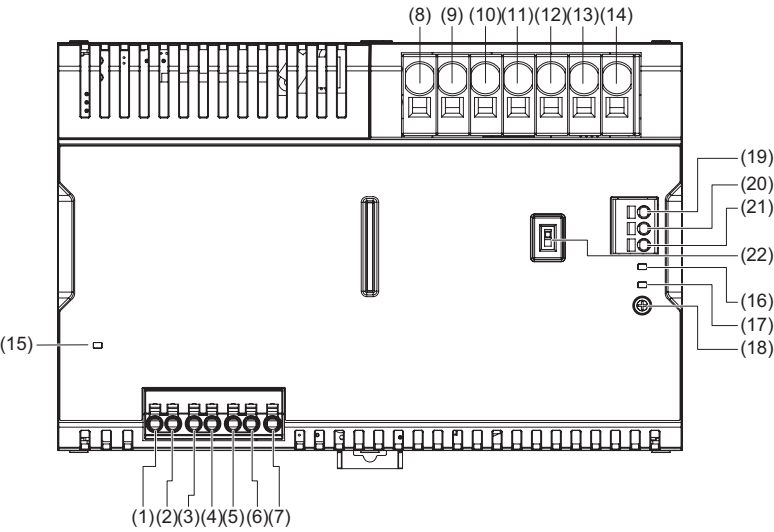
S8VK-WB

Common Precautions

Common Accessories

2000 W

S8VK-WA202□□



No.	Terminal name	Name	Function
(1)	L1/+ (1)	Input terminals	Connect the input lines to these terminals. *1
(2)	L1/+ (2)		
(3)	L2 (1)		
(4)	L2 (2)		
(5)	L3/- (1)		
(6)	L3/- (2)		
(7)	PE	Protective Earth terminal (⊕)	Connect the ground line to this terminal. *2
(8)	+V1	DC Output terminals	Connect the load lines to these terminals.
(9)	+V2		
(10)	+V3		
(11)	-V1		
(12)	-V2		
(13)	-V3		
(14)	-V4		
(15)	---	INPUT OK Indicator (INPUT OK: Green)	Lights up when the input voltage exceeds the lower limit value of the permissible range.
(16)	---	lout > 100% Indicator (lout > 100%: Yellow)	The lout > 100% Indicator lights up when the output current exceeds the rated output current.
(17)	---	DC OK Indicator (DC OK: Green)	Lights up when the output voltage is more than 90% of the rated output voltage.
(18)	---	Output voltage adjuster (V.ADJ)	Use to adjust the output voltage.
(19)	lout > 100%	lout > 100% Signal Output Terminal	The lout > 100% Signal Output is output when the output current exceeds the rated output current.
(20)	DC OK	DC OK Signal Output Terminal	Outputs when the output voltage is more than 90% of the rated output voltage.
(21)	COM	COM Terminal	Common terminal for Signal Output (19) and (20).
(22)	---	Operation switch (OPERATION)	Set the switch to "PARALLEL" if the units are in parallel operation. SINGLE : The output current can use 100% of the rated output current. PARALLEL : Overcurrent protection limits the output current to 80% of the rated output current.

*1. For a single-phase/two-phase power input, connect to (L1/+) and (L3/-).
For a DC power input, connect (L1/+) to (+), and (L3/-) to (-).
(Refer to the wiring diagrams illustrated in *Recommended circuit breakers and fuses* on page 31.)

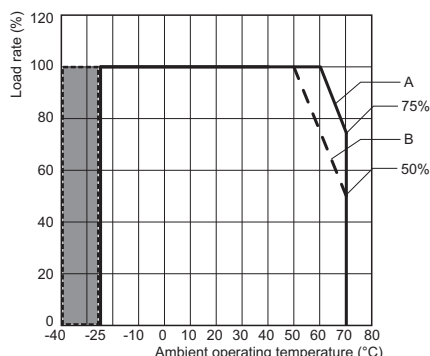
*2. This is the protective earth terminal specified in the safety standards. Always ground this terminal.

Engineering Data

Derating Curves

240 W

<Horizontal separation: 15 mm or more>

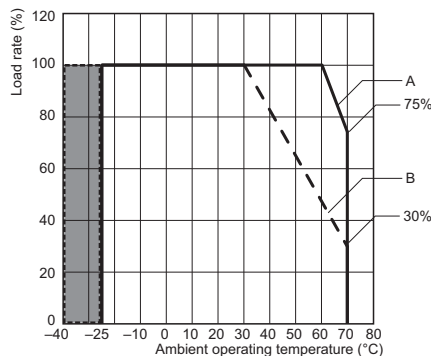


- Note:** 1. Multiply the above-shown load ratio by the coefficient of load reduction to input voltage.
2. In the shaded area, time is required to reach the rated output voltage after the input voltage is applied.

A. Standard mounting
B. Face-up mounting

480 W

<Horizontal separation: 15 mm or more>

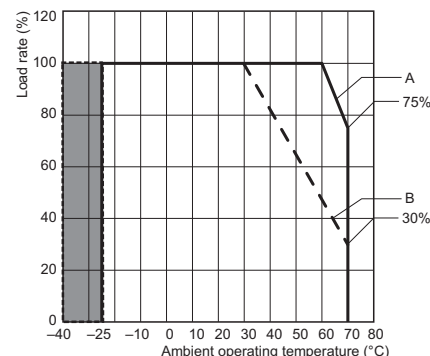


- Note:** 1. Multiply the above-shown load ratio by the coefficient of load reduction to input voltage.
2. In the shaded area, time is required to reach the rated output voltage after the input voltage is applied.

A. Standard mounting
B. Face-up mounting

960 W

<Horizontal separation: 15 mm or more>

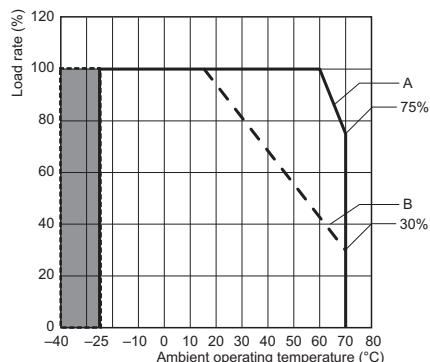


- Note:** 1. Multiply the above-shown load ratio by the coefficient of load reduction to input voltage.
2. In the shaded area, time is required to reach the rated output voltage after the input voltage is applied.

A. Standard mounting
B. Face-up mounting

2000 W

<Horizontal separation 15 mm or more>

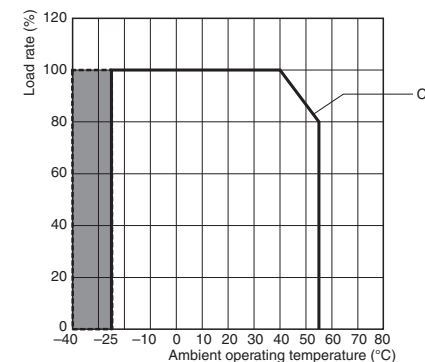


- Note:** 1. Multiply the above-shown load ratio by the coefficient of load reduction to input voltage.
2. In the shaded area, time is required to reach the rated output voltage after the input voltage is applied.

A. Standard mounting
B. Face-up mounting

240 W/480 W/960 W/2000 W

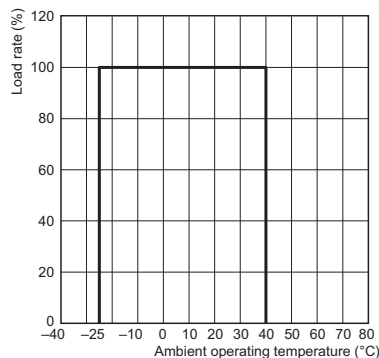
<Horizontal separation: less than 15 mm>



- Note:** 1. Apply the rated input voltage for three-phase, single-phase and two-phase.
2. In the shaded area, time is required to reach the rated output voltage after the input voltage is applied.

C. Front, side-by-side mounting

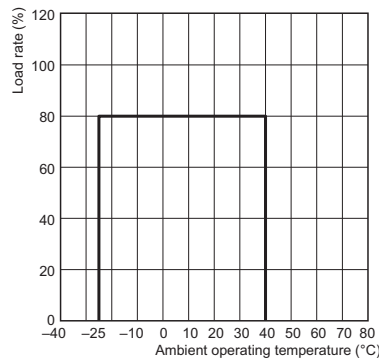
Parallel operation (240 W/480 W/960 W)



- Note:** Multiply the above-shown load ratio by the coefficient of load reduction to input voltage.

A. Standard mounting

Parallel operation (2000 W)



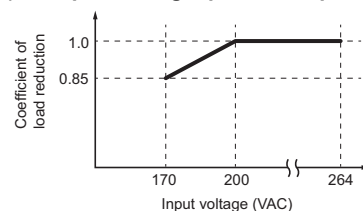
- Note:** Multiply the above-shown load ratio by the coefficient of load reduction to input voltage.

A. Standard mounting

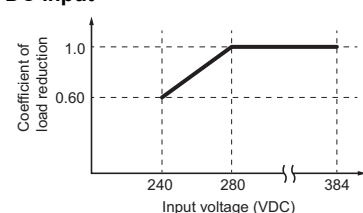
Coefficient of load reduction to input voltage

AC input

(three-phase/single-phase/two-phase)



DC input



S8VK-WA

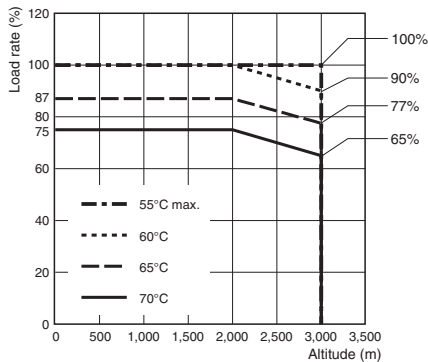
S8VK-WB

Common Precautions

Common Accessories

This Power Supply can be used at an altitude of up to 3,000 m.
Between 2,000 and 3,000 m, derate the load according to the following derating curve.

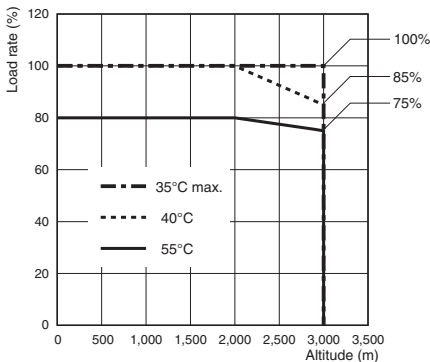
240 W/480 W/960 W/2000 W
<Horizontal separation: 15 mm or more>



Note: Multiply the above-shown load ratio by the coefficient of load reduction to input voltage.

A. Standard mounting

240 W/480 W/960 W/2000 W
<Horizontal separation: less than 15 mm>

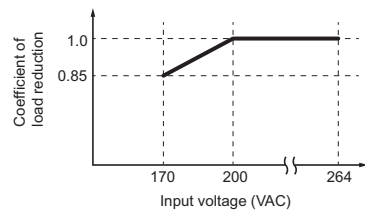


Note: Apply the rated input voltage for three-phase, single-phase and two-phase.

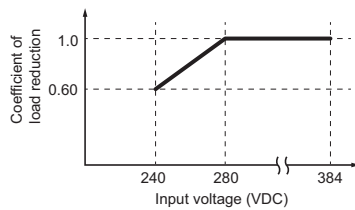
C. Front, side-by-side mounting

Coefficient of load reduction to input voltage

AC input
(three-phase/single-phase/two-phase)



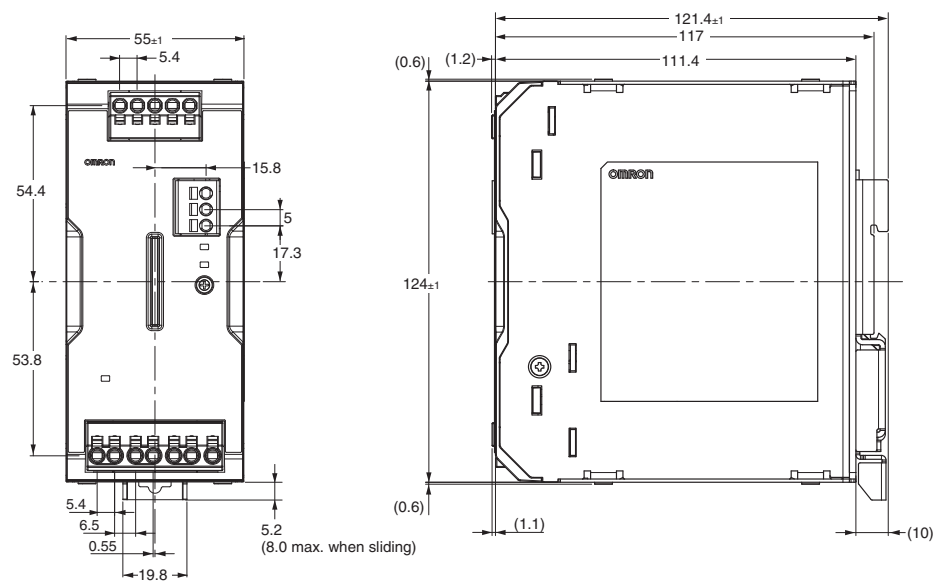
DC input



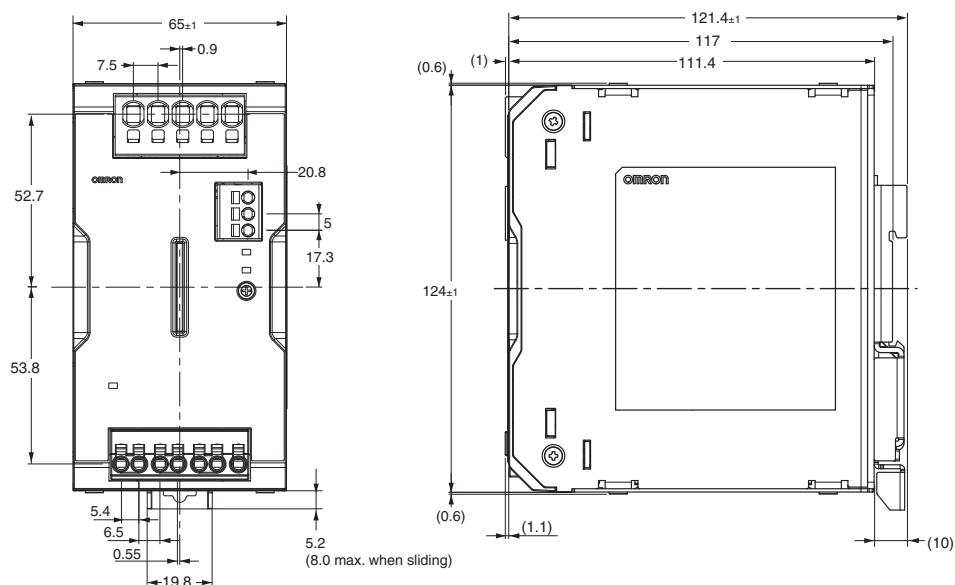
Dimensions

(Unit: mm)

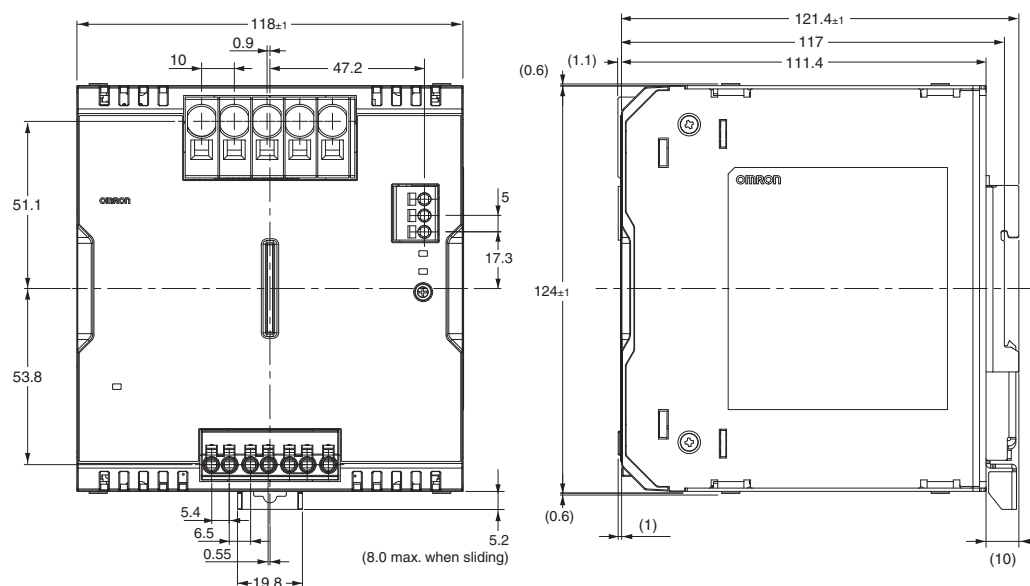
S8VK-WA24024



S8VK-WA48024



S8VK-WA96024



S8VK-WA

S8VK-WB

Common Precautions

Common Accessories

S8VK-WA20224

