

Item	Power rating		480 W	960 W (768 W *18)
	Output voltage		24 V	24 V
Efficiency	3-phase, 400 VAC input *11		91% typ.	92% typ.
Input	Voltage range *1		3-phase, 380 to 480 VAC (allowable range: 320 to 576 VAC) 2-phase, 380 to 480 VAC (allowable range: 340 to 576 VAC) 450 to 600 VDC (allowable range: 450 to 810 VDC) *8	3-phase, 380 to 480 VAC (allowable range: 320 to 576 VAC) 2-phase, 380 to 480 VAC (allowable range: 340 to 576 VAC)
	Frequency *1		50/60 Hz (47 to 63 Hz)	
	Current	3-phase, 400 VAC input *11	1.2 A typ.	2.1 A typ.
	Power factor		-	
	Leakage current	3-phase, 400 VAC input	3.5 mA max./1.0 mA typ.	3.5 mA max./1.2 mA typ.
	Inrush current (for a cold start at 25°C) *2	3-phase, 400 VAC input	28 A typ.	
Output	Rated output current		20 A	40 A at 3-phase (32 A at 2-phase)
	Boost current		24 A	48 A at 3-phase (Not possible at 2-phase)
	Voltage adjustment range *3		22.5 to 29.5 VDC (with V.ADJ) (guaranteed)	22.5 to 29.5 VDC (with V.ADJ) (guaranteed) *14
	Ripple & Noise voltage *4	3-phase, 400 VAC input *11	130 mV p-p max. at 20 MHz of bandwidth	90 mV p-p max. at 20 MHz of bandwidth
	Input variation influence *13		0.5% max.	
	Load variation influence *12		1.5% max.	
	Temperature variation influence	3-phase, 400 VAC input	0.05%/°C max.	
	Start up time *2	3-phase, 400 VAC input *11	500 ms typ.	700 ms typ.
Hold time *2	3-phase, 400 VAC input *11	20 ms typ.	20 ms typ.	
Additional functions	Overload protection		Yes, automatic reset	
	Overvoltage protection		Yes, 130% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input again) *5	
	Series operation		Yes (For up to two Power Supplies, external diodes are required.)	
	Parallel operation		Yes (Refer to Engineering Data) (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) cutoff current 20 mA 2.5 kVAC for 1 min. (between all input terminals and PE terminal) cutoff current 20 mA 1.0 kVAC for 1 min. (between all output terminals and PE terminal) cutoff current 30 mA	
	Insulation resistance		100 MΩ min. (between all output terminals and all input terminals / PE terminal) at 500 VDC	
Environment	Ambient operating temperature		-40 to 70°C (However, only startup is guaranteed for between -40°C to -25°C. (3-phase only)) (Derating is required according to the temperature.) (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 <sup>2</sup> , 3 times each in ±X, ±Y, and ±Z directions	
Reliability	MTBF		135,000 hrs min.	
	Life expectancy *10		10 years min.	
Construction	Weight		1,600 g max.	2,700 g max.
	Cooling fan		No	
	Degree of protection		IP20 by EN / IEC 60529	
Standards	Harmonic current emissions		Conforms to EN 61000-3-2 *15	
	EMI	Conducted Emission	Conforms to EN 61204-3 Class B EN 55011 Class B *16	
		Radiated Emission	Conforms to EN 61204-3 Class B EN 55011 Class B *16	
	EMS		Conforms to EN 61204-3 high severity levels	
	Approved Standards *6		UL Listed: UL 508 *7 UL UR: UL 60950-1 (Recognition) cUR: CSA C22.2 No.60950-1 CSA: CSA C22.2 No.60950-1 EN: EN 50178, EN 60950-1 Lloyd's standards ANSI/ISA 12.12.01 *7	
	Conformed Standards		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	
SEMI		Conforms to F47-0706 (3-phase, 380 to 480 VAC input) *17		

Note: Refer to page 4 for notes 1 to 18.

- 
- \*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 7 to 8 for details.
  - \*3. If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by more than 29.5 VDC 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 8 for the time when input voltage shuts off and input turns on again.
  - \*6. To meet safety standards, the S8VK-T must be protected with an external circuit-breaker or a fuse. Be sure to use an external circuit-breaker or a fuse. Refer to *Precautions for Safe Use* on page 13 for details.
  - \*7. The following supplementary Fuse/Circuit Breaker must be installed in accordance with NEC.:  
Model FAZ-D5/3-NA, FAZ-D5/3-RT or FAZ-D5/3-DU, EATON INDUSTRIES (AUSTRIA) GMBH (E235139), Model KLKD5, LITTELFUSE INC. (E10480)
  - \*8. Safety Standards for a DC Input  
The following standards apply to a 450 to 600 VDC input: UL 60950-1, EN 50178, EN 60950-1, and Lloyd's standards.
  - \*9. In the case of using side-mounting bracket (S82Y-VK10S, S82YVK20S), Lloyd's Standards are not applicable.
  - \*10. The value is when rated output current is 50% or less, the ambient operating temperature is 40°C or less, standard mounting, and rated input voltage.
  - \*11. The value is when both rated output voltage and rated output current are satisfied.
  - \*12. 380 to 480 VAC input, in the range of 0 A to the rated output current.
  - \*13. 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.
  - \*14. Use at 26.4 VDC or lower for 2-phase input.
  - \*15. The S8VK-T Power Supply conforms to EN 61000-3-2 under the following conditions for 2-phase input.  
480 W: rated output voltage, and 65% or less of rated output current  
960 W: rated output voltage, and 45% or less of rated output current
  - \*16. The S8VK-T Power Supply conforms to EMI under the following conditions for 2-phase input.  
480 W: Conforms to class B: rated output voltage, and 65% or less of rated output current/  
Conforms to class A: rated output voltage, and 65% to 100% of rated output current  
960 W: Conforms to class B: rated output voltage, and 45% or less of rated output current/  
Conforms to class A: rated output voltage, and 45% to 100% of rated output current
  - \*17. 480 W: rated output voltage, and 50% or less of rated output current.  
960 W: rated output voltage, and 92.5% or less of rated output current.
  - \*18. When using 2-phase input. Refer to *2-Phase Input Operation For 960 W Model in Precautions for Safe Use* on page 16 for details.