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Sanken
SWG030-05

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Specifications and Standards

Model SWG030 Series

Parameter			Model		
			SWG030-05	SWG030-12	SWG030-24
Input Conditions	Rated Input Voltage		100 to 240 VAC (140 to 340 VDC)		
	Allowable Input Voltage		85 to 264 VAC (110 to 370 VDC)		
	Input Current (typ)		.7 A (100 VAC) / 0.4 A (200 VAC)		
	Rated Frequency		50 / 60 Hz		
	Allowable Frequency Range		47 to 440 Hz or DC		
	Efficiency (typ)	AC 100 V	74%	76%	78%
		AC 200 V	77%	78%	81%
	Inrush Current (typ)[1,2]		15 A (V_{IN} = 100 V) / 30 A (V_{IN} = 200 V) I_O = 100% at Cold Start		
	Leakage Current (max)		0.30 mA (V_{IN} = 100 V) / 0.65 mA (V_{IN} = 240 V) 60 Hz I_O = 100% per measuring method of IEC60950-1 and PSE		
Output Conditions	Rated Output Voltage		5 V	12 V	24 V
	Rated Output Current		6 A	2.5 A	1.3 A
	Static Input Variation		20 mV max	48 mV max	96 mV max
	Static Load Variation		40 mV max	100 mV max	150 mV max
	Ripple[3]	0° to 50° C	80 mVp-pmax	120 mVp-pmax	120 mVp-pmax
		-10° to 0° C	140 mVp-pmax	160 mVp-pmax	160 mVp-pmax
	Ripple Noise[3]	0° to 50° C	120 mVp-pmax	150 mVp-pmax	150 mVp-pmax
		-10° to 0° C	160 mVp-pmax	180 mVp-pmax	180 mVp-pmax
	Ambient Temperature Variation	0° to 50° C	50 mV max	120 mV max	240 mV max
		-10° to 0° C	60 mV max	150 mV max	290 mV max
	Time Course Drift[4]		20 mV max	48 mV max	96 mV max
	Startup Time[1]		200ms typ (V_{IN} = 100 V I_O = 100%) 700ms if the interval before reapply AC is less than 1 min.		
	Output Holding Time[1]		20 ms typ (V_{IN} = 100 V I_O = 100%)		
	Voltage Variation Range[9]		4.50 to 5.50 V	10.0 to 13.2 V	19.2 to 27.0 V
	Voltage Set Point		5.00 to 5.15 V	12.00 to 12.48 V	24.00 to 24.96 V
Additional Functions	Overcurrent Protection		Detection above 105% of rated current (automatic recovery)		
	Overvoltage Protection[5]		5.75 to 7.00 V	15.0 to 18.0 V	30.0 to 37.0 V
	Operations Display		LED Display: Green		
Environmental Conditions	Operating Temperature Range		–10°C to 71°C (with derating)		
	Storage Temperature Range		–20°C to 75°C		
	Operating Humidity Range		20% to 90% RH (no condensation)		
	Storage Humidity Range		20% to 90% RH (no condensation)		
	Cooling Requirements		Natural air cooling		
	Vibration Resistance	Vibration Frequency	10 to 55 Hz		
		Sweep Time	3 minutes		
		Acceleration	19.6 m/s² (2 G)		
		Vibration Direction	x, y, z		
		Vibration Time	One hour in each of three directions		
	Shock Resistance		196.1m/s² (20G) 11 ms One each of three directions x, y, z		
	Installation Conditions		Derating may be required due to mounting orientation		

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Model SWG030 Series

Parameter			Model		
			SWG030-05	**SWG030-12**	**SWG030-24**
Insulation[7]	Insulation Withstand Voltage	Input-Output	3000 VAC one minute (leakage current 10 mA or less)		
		Input-FG	2000 VAC one minute (leakage current 10 mA or less)		
		Output-FG	500 VAC one minute (leakage current 25 mA or less)		
	Insulation Resistance	Input-Output	50 MΩ (measured with 500 VDC Megger)		
		Input-FG			
		Output-FG			
Others	Input/Output Type		Terminal Stand		
	Dimensions		31 mm (W) X 78 mm (H) X 103 mm (D) (without terminal stand)		
	Weight		270g maximum (without cover)		
	Safety Standards		UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178, PSE		
	EMI Safety		Designed to meet FCC Class B, VCCI Class B, CISPR22 Class B, EN55011 Class B, EN55022 Class B		
	Harmonic Current		Designed to meet IEC61000-3-2 (no power factor correction circuit)		
	Electromagnetic Susceptibility		Designed to meet EN61000-4-2 (for electrostatic discharge)		
			Designed to meet EN61000-4-3 (for radiated, radio-frequency, electromagnetic field)		
			Designed to meet EN61000-4-4 (for transient burst)		
			Designed to meet EN61000-4-5 (for lightning surge)		
			Designed to meet EN61000-4-6 (for conductive radio frequency electromagnetic field)		
			Designed to meet EN61000-4-8 (for power supply frequency electromagnetic field immunity)		
			Designed to meet EN61000-4-11 (for voltage dip/variation)		
	Environmental Response		Designed to meet RoHS directive		
Options	Remote On/Off		N/A		
	Connector		JST		
	Cover[8]		Yes		

1. Specified under rated input/output conditions at an ambient temperature of 25°C.
2. More current above noted values may flow at restart (ambient temperature of 25°C).
3. Ripple noise is measured with a 100 MHz oscilloscope using a 1:1 probe.
4. Time-course drift is measured between 30 minutes to 8 hours after applying input voltage at rated input/output at an ambient temperature 25ºC.
5. Reset is performed by reapplying input voltage.
6. Output derating may be required.
7. Insulation conditions are specified at normal temperature and humidity.
8. Derating may be required for the power supply with cover.
9. In the case where output voltage is variable, set a voltage such that Output Voltage Variation, Rated Output Current, and Rated Output Power are not exceeded.