



■ Features :

- Universal AC input/Full range
- Low leakage current <200uA
- Protections: Short circuit/Over load/Over voltage
- Free air convection for rated power and 23.5CFM forced air convection for peak load
- UL60601-1/IEC60601-1/EN60601-1 medical safety approved
- Fixed switching frequency at 65KHz
- 3 years warranty



SPECIFICATION

MODEL	199 - 999			200 - 005			200 - 011			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3
	DC VOLTAGE	5V	12V	-5V	5V	12V	-12V	5V	15V	-15V
	RATED CURRENT	6A	3A	0.5A	6A	3A	0.5A	6A	2.3A	0.5A
	CURRENT RANGE	0.6 ~ 8A	0.2 ~ 4A	0.1 ~ 1A	0.6 ~ 8A	0.2 ~ 4A	0.1 ~ 1A	0.6 ~ 8A	0.1 ~ 3A	0.1 ~ 1A
	RATED POWER	68.5W			72W			72W		
	PEAK LOAD (23.5CFM)	93W			100W			100W		
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	80mVp-p	120mVp-p	120mVp-p	80mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V								
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±5.0%	±2.0%	±6.0%	±5.0%	±2.0%	±8.0%	±5.0%
	LINE REGULATION	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%
	LOAD REGULATION	±1.5%	±3.0%	±1.0%	±1.5%	±3.0%	±1.0%	±1.5%	±3.0%	±1.0%
	SETUP, RISE TIME	500ms, 30ms/230VAC			500ms, 30ms/115VAC at full load					
HOLD TIME (Typ.)	100ms/230VAC			20ms/115VAC at full load						
INPUT	VOLTAGE RANGE	90 ~ 264VAC		127 ~ 370VDC						
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY(Typ.)	76%			77%			77%		
	AC CURRENT (Typ.)	1.5A/115VAC		1A/230VAC						
	INRUSH CURRENT (Typ.)	COLD START 25A/115VAC			50A/230VAC					
	LEAKAGE CURRENT	Earth leakage current <200uA / 264VAC, Patient leakage current <100uA/264VAC								
PROTECTION	OVER LOAD	140 ~ 180% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	CH1: 5.75 ~ 6.75V Protection type : Shut down o/p voltage, re-power on to recover								
ENVIRONMENT	WORKING TEMP.	-20 ~ +70°C (Refer to output load derating curve)								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60601-1, TUV EN60601-1 Approved								
	WITHSTAND VOLTAGE	I/P-O/P: 4KVAC I/P-FG: 1.5KVAC O/P-FG: 1.5KVAC								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC								
	EMI CONDUCTION & RADIATION	Compliance to EN55011 (CISPR11), EN55022 (CISPR22) Class B								
	HARMONIC CURRENT	Compliance to EN61000-3-2, -3								
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; ENV50204, EN55024, EN60601-1-2, EN61000-6-2, EN61204-3 heavy industry level, EN61204-3 Medical level, criteria A								
	MTBF	521.2K hrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	127*76.2*31mm (L*W*H)								
NOTE	PACKING	0.26Kg; 63pcs/17.4Kg/1.35CUFT								
		1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.								



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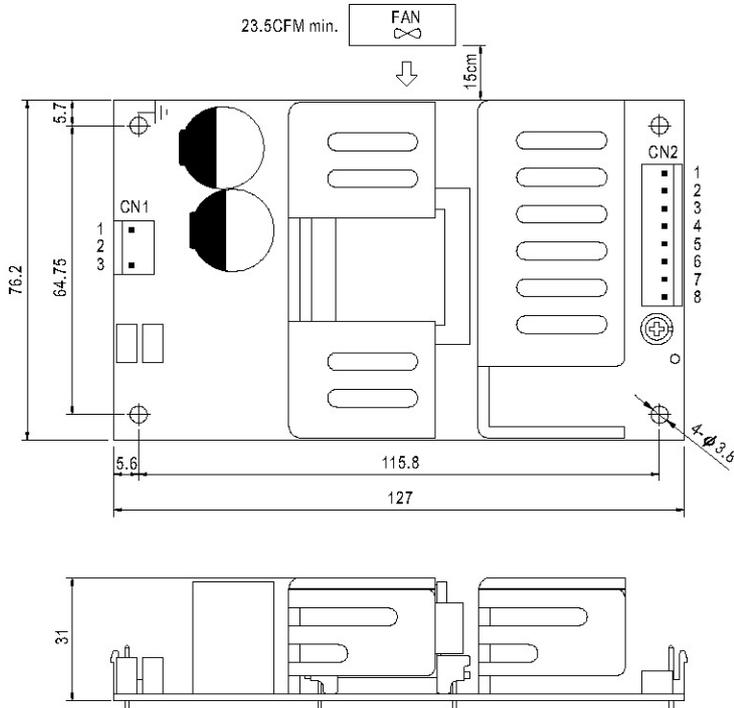
SPECIFICATION

MODEL		199-961			200-027		
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3
	DC VOLTAGE	5V	24V	12V	3.3V	5V	12V
	RATED CURRENT	5A	1.5A	1A	6A	6A	1A
	CURRENT RANGE	0.6 ~ 7A	0.1 ~ 2A	0.1 ~ 1A	0.7 ~ 7A	0 ~ 8A	0 ~ 1.5A
	RATED POWER	73W					
	PEAK LOAD (23.5CFM)	95W					
	RIPPLE & NOISE (max.) Note.2	80mVp-p	200mVp-p	120mVp-p	80mVp-p	120mVp-p	120mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V					
	VOLTAGE TOLERANCE Note.3	±2.0%	±8.0%	±8.0%	±4.0%	±6.0%	+10,-6%
	LINE REGULATION	±0.5%	±1.0%	±1.0%	±1.0%	±1.0%	±1.5%
	LOAD REGULATION	±1.5%	±3.0%	±3.0%	+3,-4%	+5,-4%	±6.0%
	SETUP, RISE TIME	500ms, 30ms/230VAC 500ms, 30ms/115VAC at full load					
HOLD TIME (Typ.)	100ms/230VAC 20ms/115VAC at full load						
INPUT	VOLTAGE RANGE	90 ~ 264VAC 127 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz					
	EFFICIENCY(Typ.)	79%			74%		
	AC CURRENT (Typ.)	1.5A/115VAC 1A/230VAC					
	INRUSH CURRENT (Typ.)	COLD START 25A/115VAC 50A/230VAC					
PROTECTION	OVER LOAD	140 ~ 180% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	CH1: 5.75 ~ 6.75V			CH1: 3.8 ~ 4.45V Protection type : Shut down o/p voltage, re-power on to recover		
ENVIRONMENT	WORKING TEMP.	-20 ~ +70°C (Refer to output load derating curve)					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)					
	VIBRATION	10 ~ 500Hz, 2G 10min /1cycle, period for 60min. each along X, Y, Z axes					
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	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC					
	EMI CONDUCTION & RADIATION	Compliance to EN55011 (CISPR11), EN55022 (CISPR22) Class B					
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3					
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN60601-1-2, EN61000-6-2, EN61204-3 heavy industry level, EN61204-3 Medical level, criteria A					
	MTBF	521.2K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	127*76.2*31mm (L*W*H)					
NOTE	PACKING	0.26Kg, 63pcs/17.4Kg/1.35CUFT					
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**Mechanical Specification**

Unit:mm



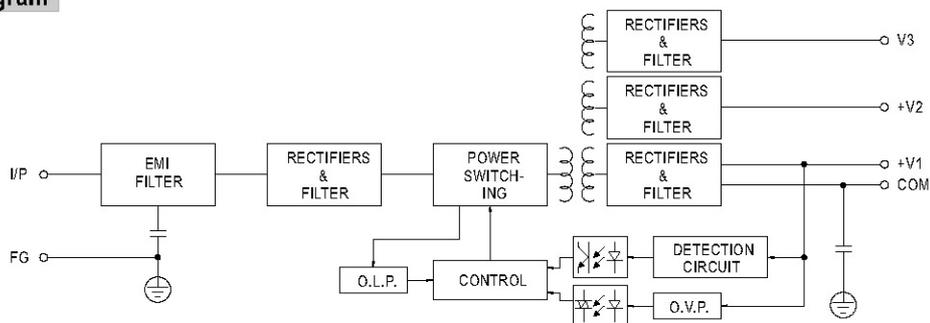
AC Input Connector (CN1) : JST B3P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	AC/N	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/L		

DC Output Connector (CN2) : JST B8P-VH or equivalent

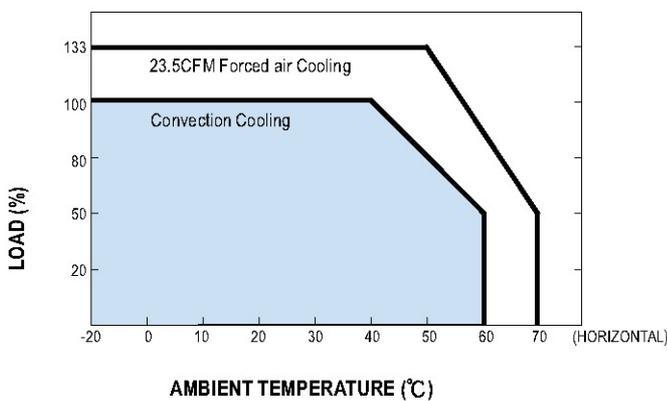
Pin No.	Assignment	Mating Housing	Terminal
1,2	V1	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
3,4,5	COM		
6,7	V2		
8	V3		

**Block Diagram**



fosc : 65KHz

**Derating Curve**



**Output Derating VS Input Voltage**

