

160W Triple Output Medical Type

RPT-160 series



■ Features :

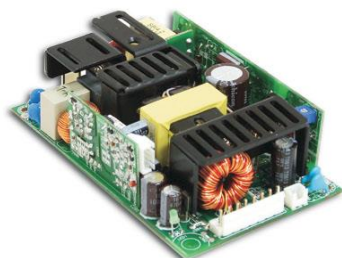
- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 5"x3" compact size
- Standby 5V@1A function (Optional)
- Free air convection for 100W and 150W with 20.5 CFM forced air
- With power good and fail signal output
- No load power consumption under 0.5W by PS-ON control (Optional)
- 3 years warranty



SPECIFICATION

MODEL		424-459				424-443				424-447			
		CH1	CH2	CH3	STANDBY	CH1	CH2	CH3	STANDBY	CH1	CH2	CH3	STANDBY
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	STANDBY	CH1	CH2	CH3	STANDBY	CH1	CH2	CH3	STANDBY
	DC VOLTAGE	5V	12V	-5V	5VSB	5V	12V	-12V	5VSB	5V	15V	-15V	5VSB
	RATED CURRENT (20.5CFM)	14A	5.5A	1A	1A	14A	5A	1A	1A	14A	3.6A	1A	1A
	CURRENT RANGE (convection)	0.6 ~ 9A	0.2 ~ 3.8A	0.1 ~ 1A	0 ~ 1A	0.6 ~ 9A	0.2 ~ 3.4A	0.1 ~ 0.8A	0 ~ 1A	0.6 ~ 9A	0.1 ~ 2.6A	0.1 ~ 0.8A	0 ~ 1A
	CURRENT RANGE (20.5CFM)	0.6 ~ 14A	0.2 ~ 5.5A	0.1 ~ 1A	0 ~ 1A	0.6 ~ 14A	0.2 ~ 5A	0.1 ~ 1A	0 ~ 1A	0.6 ~ 14A	0.1 ~ 3.6A	0.1 ~ 1A	0 ~ 1A
	RATED POWER (convection)	100.6W				100.4W				101W			
	RATED POWER (20.5CFM)	146W				147W				144W			
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	50mVp-p	80mVp-p	120mVp-p	120mVp-p	50mVp-p	80mVp-p	150mVp-p	150mVp-p	50mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V											
	VOLTAGE TOLERANCE Note.3	2.0%	6.0%	5.0%	2.0%	2.0%	6.0%	5.0%	2.0%	2.0%	8.0%	5.0%	2.0%
INPUT	LINE REGULATION	0.5%	1.0%	1.0%	0.5%	0.5%	1.0%	1.0%	0.5%	0.5%	1.0%	1.0%	0.5%
	LOAD REGULATION	1.5%	3.0%	1.0%	2.0%	1.5%	3.0%	1.0%	2.0%	1.5%	3.0%	1.0%	2.0%
	SETUP, RISE TIME	500ms, 30ms/230VAC				500ms, 30ms/115VAC at full load							
	HOLD UP TIME (Typ.)	16ms/230VAC				16ms/115VAC at full load							
	VOLTAGE RANGE Note.6	90 ~ 264VAC				127 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz											
	POWER FACTOR (Typ.)	PF>0.94/230VAC				PF>0.98/115VAC at full load							
	EFFICIENCY(Typ.)	82%				82%				82%			
	AC CURRENT (Typ.)	1.8A/115VAC				0.9A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 35A/115VAC				70A/230VAC							
PROTECTION	LEAKAGE CURRENT	<200uA / 240VAC											
	OVERLOAD	105 ~ 135% rated output power (Rated power is under fan cooling condition)				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							
	OVER TEMPERATURE	110°C (TSW1)detect on heatsink of power transistor				Protection type : Shut down o/p voltage, recovers automatically after temperature goes down							
FUNCTION	PS-ON INPUT SIGNAL (OPTIONAL)	Power on: PS-ON = "Hi" or ">2V" ; Power off: PS-ON = "Low" or "<0.5V"											
	POWER GOOD / POWER FAIL	500ms>PG>10ms PF>1ms											
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 ~ 50°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: 0.5KVAC											
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC 25°C 70%RH											
	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, EN61204-3, medical level, criteria A											
	MTBF	K hrs min. MIL-HDBK-217F (25°C)											
	DIMENSION	127*76.2*33mm (L*W*H)											
NOTE	PACKING	Kg											
	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. HS1,HS2 & HS3 can not be shorted. 6. Derating may be needed under low input voltages. Please check the derating curve for more details.												

File Name: RPT-160-SPEC 2007-05-10


■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 5"x3" compact size
- Standby 5V@1A function (Optional)
- Free air convection for 100W and 150W with 20.5 CFM forced air
- With power good and fail signal output
- No load power consumption under 0.5W by PS-ON control (Optional)
- 3 years warranty

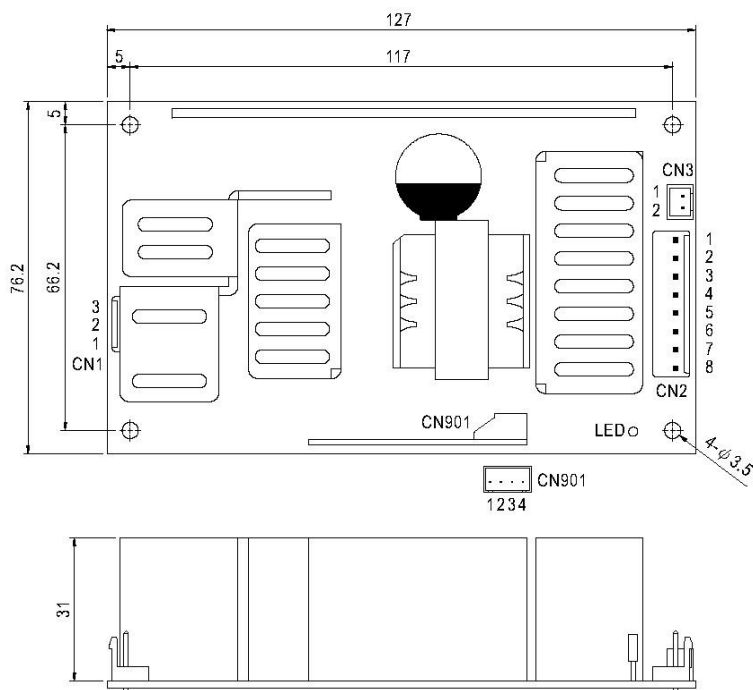

SPECIFICATION

MODEL		424-403			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	STANDBY
	DC VOLTAGE	5V	12V	24V	5VSB
	RATED CURRENT (20.5CFM)	11A	5A	1.2A	1A
	CURRENT RANGE (convection)	0.3 ~ 8A	0.2 ~ 2.6A	0.15 ~ 1A	0 ~ 1A
	CURRENT RANGE (20.5CFM)	0.3 ~ 11A	0.2 ~ 5A	0.15 ~ 1.2A	0 ~ 1A
	RATED POWER (convection)	100.2W			
	RATED POWER (20.5CFM)	148.8W			
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	200mVp-p	50mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V			
	VOLTAGE TOLERANCE Note.3	2.0%	7.0%	7.0%	2.0%
	LINE REGULATION	0.5%	1.0%	1.0%	0.5%
	LOAD REGULATION	1.5%	3.0%	3.0%	2.0%
SETUP, RISE TIME	500ms, 30ms/230VAC 500ms, 30ms/115VAC at full load				
HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load				
INPUT	VOLTAGE RANGE Note.6	90 ~ 264VAC 127 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR (Typ.)	PF>0.94/230VAC PF>0.98/115VAC at full load			
	EFFICIENCY(Typ.)	83%			
	AC CURRENT (Typ.)	1.8A/115VAC 0.9A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 35A/115VAC 70A/230VAC			
LEAKAGE CURRENT	<200uA / 240VAC				
PROTECTION	OVERLOAD	105 ~ 135% rated output power (Rated power is under fan cooling condition) 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			
	OVER TEMPERATURE	110℃(TSW1)detect on heatsink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down			
FUNCTION	PS-ON INPUT SIGNAL (OPTIONAL)	Power on: PS-ON = "Hi" or ">2V" Power off: PS-ON = "Low" or "<0.5V"			
	POWER GOOD / POWER FAIL	500ms>PG>10ms PF>1ms			
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT	0.03%/℃ (0 ~ 50℃)			
	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:0.5KVAC			
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC 25℃ 70%RH			
	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, EN61204-3, medical level, criteria A			
	MTBF	K hrs min. MIL-HDBK-217F (25℃)			
	DIMENSION	127*76.2*33mm (L*W*H)			
NOTE	PACKING	Kg			
	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. HS1, HS2 & HS3 can not be shorted. 6. Derating may be needed under low input voltages. Please check the derating curve for more details.				

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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

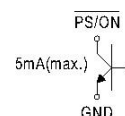
Pin No.	Assignment	Mating Housing	Terminal
1,2,3,4	COM	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
5,6	CH1		
7	CH2		
8	CH3		

Power Good Connector(CN3):JST B2B-XH or equivalent

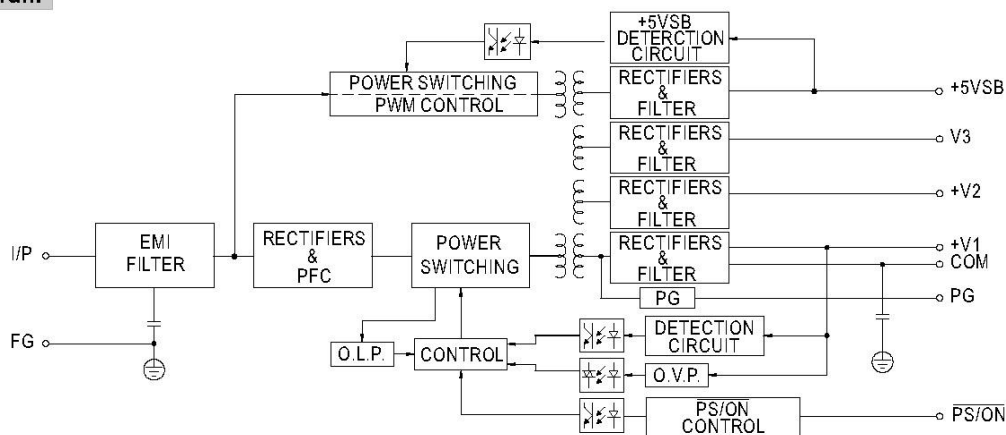
Pin No.	Status	Mating Housing	Terminal
1	PG	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	GND		

5VSB Connector(CN901) : JST B-XH or equivalent

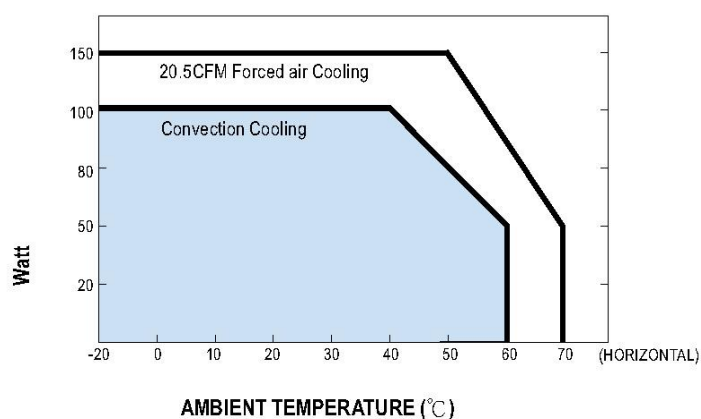
Pin No.	Assignment	Mating Housing	Terminal
1	PS/ON	JST XHP or equivalent	JST SXH-001T or equivalent
2,4	GND		
3	5VSB		



Block Diagram



Derating Curve



Output Derating VS Input Voltage

