













Features

- · 5"×3" compact size
- Medical safety approved (2 x MOPP) accroding to ANSI/AAMI ES60601-1 and IEC/EN60601-1
- · 72W convection, 100W force air
- · EMI class B for class I configuration
- · Extremely low leakage current
- · Protections: Short circuit / Overload / Over voltage
- · Lifetime > 140K hours
- · 3 years warranty

Applications

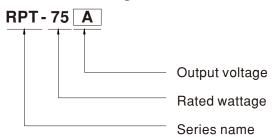
- Oral irrigator
- · Hemodialysis machine
- · Medical computer monitors
- · Sleep apnea devices

Description

RPT-75 is a 72W highly reliable PCB type medical power supply with a high power density on the 5" by 3" footprint. It accepts $90\sim264$ VAC input and offers triple output voltages .

RPT-75 is able to be used for Class $\, {
m I} \,$ system design. The extremely low leakage current is less than 150 μ A. In addition, it conforms to international medical regulations (2*MOPP) and EMC EN55011.

■ Model Encoding





SPECIFICATION

	MODEL		RPT-75A			RPT-75B			RPT-75C		
	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3	
ОИТРИТ	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			100W		
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	80mVp-p	80mVp-p	120mVp-p	80mVp-p	80mVp-p	120mVp-p	80mVp-p	
UIPUI	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5	ōV			•		•		•	
	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 UP TIME (Typ.)	90ms/230VAC 20ms/115VAC at full load									
	VOLTAGE RANGE	90 ~ 264VAC									
	FREQUENCY RANGE	47 ~ 63Hz									
IPUT	EFFICIENCY(Typ.)	76%			77%			77%			
PUI	AC CURRENT (Typ.)	1.5A/115VAC	1A/230	VAC	1			1			
	INRUSH CURRENT (Typ.)	COLD START	25A/115VAC	50A/23	0VAC						
	LEAKAGE CURRENT Note.4	Earth leakage	current < 15	0 μ A/264VAC	, Touch current	< 100 μA/264	VAC				
					·	· ·					
PROTECTION	OVERLOAD	140 ~ 180% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed									
		Ch1: 5.7 ~ 6.8V									
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover									
	WORKING TEMP.	-20 ~ +70°C (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
VVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing									
TTINONIII ENT	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)									
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes									
	OPERATING ALTITUDE Note.5										
	SAFETY STANDARDS	3000 meters									
	ISOLATION LEVEL	IEC60601-1, UL ANSI/AAMI ES60601-1, CAN/CSA-C22.2 No. 60601-1:14 - Edition 3 approved, TUV EN60601-1 approved									
	WITHSTAND VOLTAGE	Primary-Secondary:2xMOPP, Primary-Earth:1xMOPP									
	ISOLATION RESISTANCE	/P-O/P:4KVAC									
	IOULATION RESISTANCE		2 O/P EC:10	OM Ohme / 50	00/DC / 25°C /	70% DH					
	ISOLATION RESISTANCE		G, O/P-FG:10	00M Ohms / 50		70% RH		Toot Lovel	/ Note		
	ISOLATION RESISTANCE	Parameter	•	00M Ohms / 50	Standard			Test Level	/ Note		
		Parameter Conducted en	nission	00M Ohms / 50	Standard EN55011 (C	CISPR11)		Class B	/ Note		
	EMC EMISSION	Parameter Conducted emis	nission	00M Ohms / 50	Standard EN55011 (C EN55011 (C	CISPR11) CISPR11)		Class B Class B	/ Note		
		Parameter Conducted em Radiated emis Harmonic cur	nission ssion rrent	00M Ohms / 50	Standard EN55011 (C EN55011 (C EN61000-3	CISPR11) CISPR11)		Class B	/ Note		
AFETY &		Parameter Conducted em Radiated emis Harmonic cur Voltage flicker	nission ssion rrent r	00M Ohms / 50	Standard EN55011 (C EN55011 (C	CISPR11) CISPR11)		Class B Class B	/ Note		
МС		Parameter Conducted em Radiated emis Harmonic cur Voltage flicker EN60601-1-2	nission ssion rrent r	00M Ohms / 50	Standard EN55011 (0 EN55011 (0 EN61000-3 EN61000-3	CISPR11) CISPR11)		Class B Class B Class A			
МС		Parameter Conducted em Radiated emis Harmonic cur Voltage flicket EN60601-1-2 Parameter	nission ssion rrent r	00M Ohms / 50	Standard EN55011 (C EN55011 (C EN61000-3 EN61000-3	CISPR11) CISPR11) -2 -3		Class B Class B Class A Test Level	/ Note	010/	
МС		Parameter Conducted em Radiated emis Harmonic cur Voltage flicker EN60601-1-2	nission ssion rrent r	00M Ohms / 50	Standard EN55011 (0 EN55011 (0 EN61000-3 EN61000-3	CISPR11) CISPR11) -2 -3		Class B Class B Class A Test Level Level 4, 15	/ Note KV air ; Level 4	•	
МС		Parameter Conducted em Radiated emis Harmonic cur Voltage flicket EN60601-1-2 Parameter	nission ssion rrent r	00M Ohms / 50	Standard EN55011 (C EN55011 (C EN61000-3 EN61000-3	CISPR11) CISPR11) -2 -3		Class B Class B Class A Test Level Level 4, 15l Level 3, 10'	/ Note	.7GHz)	
MC	EMC EMISSION	Parameter Conducted em Radiated emis Harmonic cur Voltage flicker EN60601-1-2 Parameter ESD	nission ssion rrent r	00M Ohms / 50	Standard EN55011 (C EN55011 (C EN61000-3 EN61000-3 Standard EN61000-4	EISPR11) EISPR11) -2 -3 -2		Class B Class B Class A Test Level Level 4, 15l Level 3, 10'	/ Note KV air ; Level 4 V/m(80MHz~2 28V/m(385MH:	.7GHz)	
MC		Parameter Conducted em Radiated emis Harmonic cur Voltage flicker EN60601-1-2 Parameter ESD RF field susce	nission ssion rrent r	00M Ohms / 50	Standard EN55011 (C EN55011 (C EN61000-3 EN61000-3 Standard EN61000-4 EN61000-4	EISPR11) EISPR11) -2 -3 -2 -3 -4		Class B Class B Class A Test Level Level 4, 15 Level 3, 10' Table 9, 9~2 Level 3, 2K'	/ Note KV air ; Level 4 V/m(80MHz~2 28V/m(385MH:	.7GHz) z~5.78GHz)	
МС	EMC EMISSION	Parameter Conducted em Radiated emis Harmonic cur Voltage flicker EN60601-1-2 Parameter ESD RF field susce EFT bursts	nission ssion rrent r	00M Ohms / 50	Standard EN55011 (C EN55011 (C EN55011 (C EN61000-3 EN61000-3 Standard EN61000-4 EN61000-4 EN61000-4	CISPR11) CISPR11) -2 -3 -2 -3 -4 -5		Class B Class B Class A Test Level Level 4, 15 Level 3, 10' Table 9, 9~2 Level 3, 2K'	/ Note KV air ; Level 4 V/m(80MHz~2 28V/m(385MHz V KV/Line-FG ; 2k	.7GHz) z~5.78GHz)	
AFETY & MC Note 8)	EMC EMISSION	Parameter Conducted em Radiated emis Harmonic cur Voltage flicker EN60601-1-2 Parameter ESD RF field susce EFT bursts Surge suscep	nission ssion rrent r eptibility otibility usceptibility	00M Ohms / 50	Standard EN55011 (C EN55011 (C EN61000-3 EN61000-3 Standard EN61000-4 EN61000-4 EN61000-4	CISPR11) CISPR11) -2 -3 -2 -3 -4 -5 -6		Class B Class B Class A Test Level Level 4, 15 Level 3, 10' Table 9, 9~2 Level 3, 2K' Level 4, 4k	/ Note KV air ; Level 4 V/m(80MHz~2 28V/m(385MH: V KV/Line-FG ; 2k	.7GHz) z~5.78GHz)	
MC	EMC EMISSION	Parameter Conducted em Radiated emis Harmonic cur Voltage flicker EN60601-1-2 Parameter ESD RF field susce EFT bursts Surge suscep Conducted su	nission ssion rrent r eptibility otibility usceptibility d immunity	00M Ohms / 50	Standard EN55011 (C EN55011 (C EN61000-3 EN61000-3 Standard EN61000-4 EN61000-4 EN61000-4 EN61000-4 EN61000-4	CISPR11) -2 -3 -3 -4 -5 -6 -8		Class B Class B Class A Test Level Level 4, 15 Level 3, 10 Table 9, 9~2 Level 3, 2K Level 4, 4k Level 3, 10 Level 4, 30 100% dip 1 pe	/ Note KV air ; Level 4 V/m(80MHz~2 28V/m(385MH: V KV/Line-FG ; 2k	.7GHz) z~5.78GHz) (V/Line-Line	
MC	EMC EMISSION EMC IMMUNITY	Parameter Conducted em Radiated emis Harmonic cur Voltage flicker EN60601-1-2 Parameter ESD RF field susce EFT bursts Surge suscep Conducted su Magnetic field Voltage dip, in	eptibility otibility d immunity nterruption		Standard EN55011 (C EN55011 (C EN55011 (C EN61000-3 EN61000-3 Standard EN61000-4 EN61000-4 EN61000-4 EN61000-4 EN61000-4 EN61000-4 EN61000-4	CISPR11) -2 -3 -3 -4 -5 -6 -8		Class B Class B Class A Test Level Level 4, 15 Level 3, 10 Table 9, 9~2 Level 3, 2K Level 4, 4k Level 3, 10 Level 4, 30 100% dip 1 pe	/ Note KV air ; Level 4 V/m(80MHz~2 28V/m(385MH: V/ KV/Line-FG ; 2k/ V A/m eriods, 30% dip 25	.7GHz) z~5.78GHz) (V/Line-Line	
MC	EMC EMISSION	Parameter Conducted em Radiated emis Harmonic cur Voltage flicket EN60601-1-2 Parameter ESD RF field susce EFT bursts Surge suscep Conducted su Magnetic field	nission ssion rrent r eptibility otibility usceptibility d immunity nterruption n. MIL-HD	BK-217F (25°	Standard EN55011 (C EN55011 (C EN55011 (C EN61000-3 EN61000-3 Standard EN61000-4 EN61000-4 EN61000-4 EN61000-4 EN61000-4 EN61000-4 EN61000-4	CISPR11) -2 -3 -3 -4 -5 -6 -8		Class B Class B Class A Test Level Level 4, 15 Level 3, 10 Table 9, 9~2 Level 3, 2K Level 4, 4k Level 3, 10 Level 4, 30 100% dip 1 pe	/ Note KV air ; Level 4 V/m(80MHz~2 28V/m(385MH: V/ KV/Line-FG ; 2k/ V A/m eriods, 30% dip 25	.7GHz) z~5.78GHz) (V/Line-Line	

- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 °C of ambient temperature.
 Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μf & 47 μf parallel capacitor.
 Tolerance: includes set up tolerance, line regulation and load regulation.
 Touch current was measured from primary input to DC output.
 The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 3000m (6500ft).
 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.

- 7. Heat Sink HS1,HS2,HS3 can not be shorted.

NOTE

8. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)



SPECIFICATION

MODEL		RPT-75D			RPT-7503	RPT-7503				
	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3			
OUTPUT	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			61.8W					
	PEAK LOAD (23.5CFM)	95W			81.1W	81.1W				
	RIPPLE & NOISE (max.) Note.2	80mVp-p	200mVp-p	120mVp-p	80mVp-p	120mVp-p	120mVp-p			
DUTPUT	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 UP TIME (Typ.)	90ms/230VAC 20ms/115VAC at full load								
	VOLTAGE RANGE	90 ~ 264VAC								
	FREQUENCY RANGE	90 ~ 264 VAC 127 ~ 370 VDC 47 ~ 63Hz								
INPUT	EFFICIENCY(Typ.)	79%			74%					
	AC CURRENT (Typ.)	1.5A/115VAC	1A/230VAC		1 4 70					
	INRUSH CURRENT (Typ.)	1.5A/115VAC 1A/230VAC 1A/230VAC 50A/230VAC								
	LEAKAGE CURRENT Note.4			.C , Touch current < 10	00 W \ /264 \ / \ C					
	LEARAGE CORRENT Note.4	140 ~ 180% rated		.c , louch current < 10	00 M A/204 VAC					
	OVERLOAD				foult condition is now					
PROTECTION		Ch1: 5.7 ~ 6.8V	nccup mode, recove	rs automatically after	fault condition is remo					
	OVER VOLTAGE		No. 4 d							
		Protection type: Shut down o/p voltage, re-power on to recover								
	WORKING TEMP.	-20 ~ +70°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
NVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing								
	TEMP. COEFFICIENT	±0.03%/°C (0~45°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
	OPERATING ALTITUDE Note.5	3000 meters								
	SAFETY STANDARDS	IEC60601-1, UL ANSI/AAMI ES60601-1, CAN/CSA-C22.2 No. 60601-1:14 - Edition 3 approved, TUV EN60601-1 approved								
	ISOLATION LEVEL	Primary-Secondary:2xMOPP, Primary-Earth:1xMOPP								
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH								
	EMC EMISSION	Parameter	arameter Standard Test Level / N			te				
		Conducted emiss	ion	EN55011 (CISF	PR11)	Class B				
		Radiated emission		`	EN55011 (CISPR11)		Class B			
					EN61000-3-2		Class A			
AFETY &		Voltage flicker								
EMC (Note 8)		EN60601-1-2								
	EMC IMMUNITY	Parameter		Standard		Test Level / No	te			
		ESD		EN61000-4-2			ir ; Level 4, 8KV contac			
		RF field suscepti	bility	EN61000-4-3		Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz)				
		EFT bursts		EN61000-4-4		Level 3, 2KV				
		Surge susceptibi	lity			Level 4, 4KV/Line-FG; 2KV/Line-Lin				
		Conducted susce				-	/Line-FG; 2KV/Line-Line			
			. ,							
		Magnetic field im Voltage dip, inter	·	EN61000-4-8		Level 4, 30A/m 100% dip 1 periods 100% interruption	s, 30% dip 25 periods,			
	MTBF	521.2K hrs min.	MII -HDRK-217E (*	25°C.)		100 // Interruption	200 poriodo			
THERS										
TILKS	, ,	127*76.2*31mm or 5" * 3" *1.22" inch								
	PACKING	0.25Kg; 63pcs/17.3Kg/1.46CUFT Illy mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.								

- 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 0.1 µf & 47 µf parallel capacitor.
 3. Tolerance: includes set up tolerance, line regulation and load regulation.
 4. Touch current was measured from primary input to DC output.
 5. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 3000m (6500ft).

- 6. 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.
- 7. Heat Sink HS1,HS2,HS3 can not be shorted.

NOTE

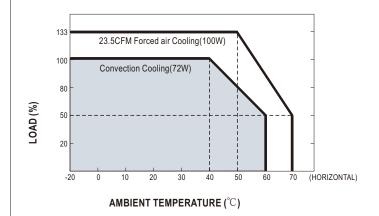
8. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)



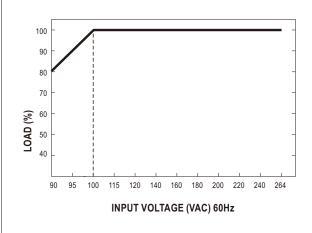
■ Block Diagram fosc:65KHz RECTIFIERS -○ V3 & FILTER RECTIFIERS ∘ +V2 & FILTER مغا RECTIFIERS RECTIFIERS EMI **POWER** -o +V1 & FILTER & FILTER FILTER -o COM **SWITCHING** DETECTION CIRCUIT CONTROL O.L.P.

O.V.P.

■ Derating Curve



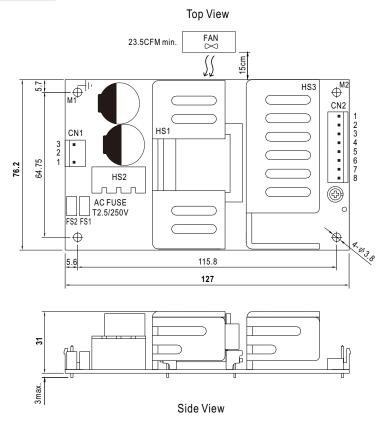
■ Output Derating VS Input Voltage



Unit:mm



■ Mechanical Specification



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

Pin No.	Assignment	Mating Housing	Terminal		
1	AC/N	ICTVUD	JST SVH-21T-P1.1		
2	No Pin	JST VHR or equivalent	or equivalent		
3	AC/L	0.094	or oquivalent		

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

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

 $\stackrel{\perp}{=}$: Grounding Required



1.HS1,HS2,HS3 cannot be shorted. 2.M1 is safety ground. For better EMC performance, Please secure an electrical connection between M1,M2 and chassis grounding.

■ Installation Manual

Please refer to: http://www.meanwell.com/manual.html