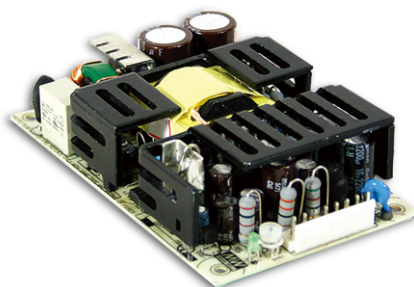




72W Reliable Triple Output Medical Grade

**RPT-75** series



## ■ Features

- 5"×3" compact size
- Medical safety approved (2 x MOPP) according 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

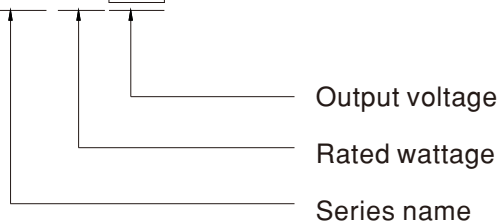
## ■ Description

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 90~264VAC input and offers triple output voltages .

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

## ■ Model Encoding

**RPT - 75 A**



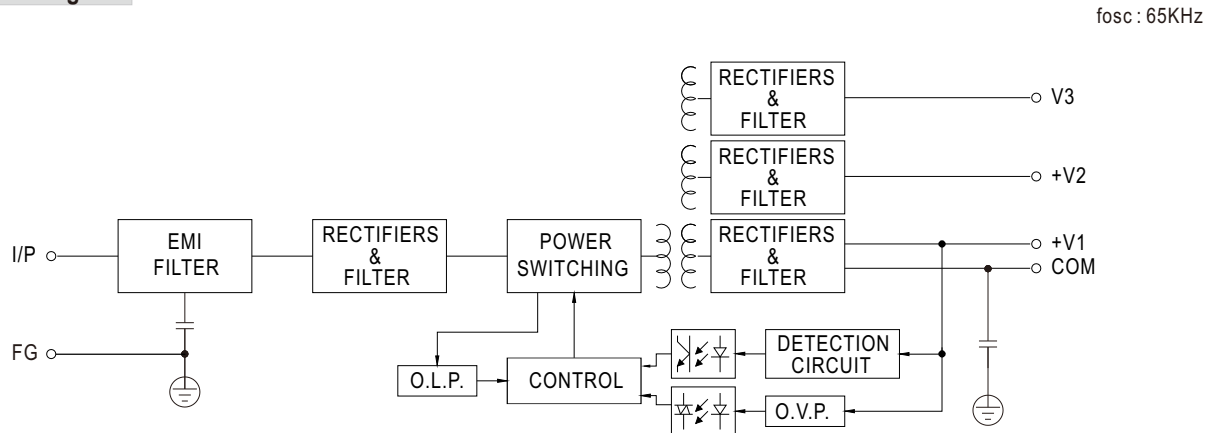
# SPECIFICATION

MODEL		RPT-75A			RPT-75B			RPT-75C		
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.) <small>Note.2</small>	80mVp-p	120mVp-p	80mVp-p	80mVp-p	120mVp-p	80mVp-p	80mVp-p	120mVp-p	80mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V								
	VOLTAGE TOLERANCE <small>Note.3</small>	±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					
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 <small>Note.4</small>	Earth leakage current < 150 $\mu$ A/264VAC , Touch current < 100 $\mu$ A/264VAC								
PROTECTION	OVERLOAD	140 ~ 180% rated output power								
		Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	Ch1: 5.7 ~ 6.8V								
		Protection type : Shut down o/p voltage, re-power on to recover								
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing								
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 45℃)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
	OPERATING ALTITUDE <small>Note.5</small>	3000 meters								
SAFETY & EMC (Note 8)	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℃ / 70% RH								
	EMC EMISSION	Parameter					Standard	Test Level / Note		
		Conducted emission					EN55011 (CISPR11)	Class B		
		Radiated emission					EN55011 (CISPR11)	Class B		
		Harmonic current					EN61000-3-2	Class A		
		Voltage flicker					EN61000-3-3	-----		
	EMC IMMUNITY	EN60601-1-2								
		Parameter					Standard	Test Level / Note		
		ESD					EN61000-4-2	Level 4, 15KV air ; Level 4, 8KV contact		
		RF field susceptibility					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 susceptibility					EN61000-4-5	Level 4, 4KV/Line-FG ; 2KV/Line-Line		
Conducted susceptibility						EN61000-4-6	Level 3, 10V			
Magnetic field immunity						EN61000-4-8	Level 4, 30A/m			
Voltage dip, interruption						EN61000-4-11	100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods			
OTHERS	MTBF	521.2K hrs min. MIL-HDBK-217F (25℃)								
	DIMENSION (L*W*H)	127*76.2*31mm or 5" * 3" *1.22" inch								
	PACKING	0.25Kg; 63pcs/17.3Kg/1.46CUFT								
NOTE	<div>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.</div> <div>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1<math>\mu</math>f &amp; 47<math>\mu</math>f parallel capacitor.</div> <div>3. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>4. Touch current was measured from primary input to DC output.</div> <div>5. The ambient temperature derating of 5℃/1000m is needed for operating altitude greater than 3000m (6500ft).</div> <div>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.</div> <div>7. Heat Sink HS1,HS2,HS3 can not be shorted.</div> <div>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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</div>									

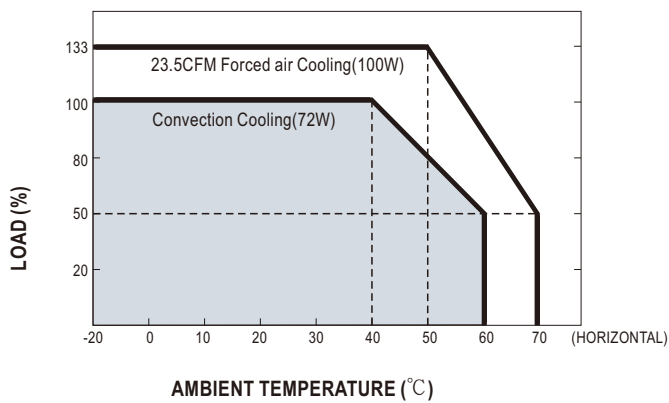
# SPECIFICATION

MODEL		RPT-75D			RPT-7503		
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			61.8W		
	PEAK LOAD (23.5CFM)	95W			81.1W		
	RIPPLE & NOISE (max.) <small>Note.2</small>	80mVp-p	200mVp-p	120mVp-p	80mVp-p	120mVp-p	120mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V			-----		
	VOLTAGE TOLERANCE <small>Note.3</small>	± 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						
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					
	LEAKAGE CURRENT <small>Note.4</small>	Earth leakage current < 150μA/264VAC , Touch current < 100μA/264VAC					
PROTECTION	OVERLOAD	140 ~ 180% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	Ch1: 5.7 ~ 6.8V				Ch1: 3.8 ~ 4.5V	
		Protection type : Shut down o/p voltage, re-power on to recover					
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing					
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 45℃)					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes					
	OPERATING ALTITUDE <small>Note.5</small>	3000 meters					
SAFETY & EMC (Note 8)	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℃ / 70% RH					
	EMC EMISSION	Parameter	Standard			Test Level / Note	
		Conducted emission	EN55011 (CISPR11)			Class B	
		Radiated emission	EN55011 (CISPR11)			Class B	
		Harmonic current	EN61000-3-2			Class A	
		Voltage flicker	EN61000-3-3			-----	
	EMC IMMUNITY	EN60601-1-2					
		Parameter	Standard			Test Level / Note	
		ESD	EN61000-4-2			Level 4, 15KV air ; Level 4, 8KV contact	
		RF field susceptibility	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 susceptibility	EN61000-4-5			Level 4, 4KV/Line-FG ; 2KV/Line-Line	
		Conducted susceptibility	EN61000-4-6			Level 3, 10V	
		Magnetic field immunity	EN61000-4-8			Level 4, 30A/m	
		Voltage dip, interruption	EN61000-4-11			100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods	
OTHERS	MTBF	521.2K hrs min.    MIL-HDBK-217F (25℃)					
	DIMENSION (L*W*H)	127*76.2*31mm or 5" * 3" * 1.22" inch					
	PACKING	0.25Kg; 63pcs/17.3Kg/1.46CUFT					
NOTE	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 0.1μf & 47μf 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℃/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. 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a> )						

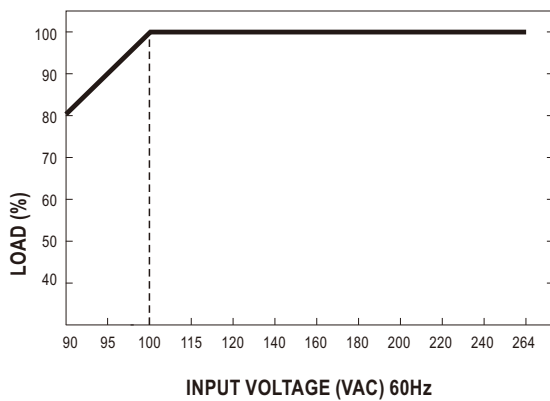
## Block Diagram



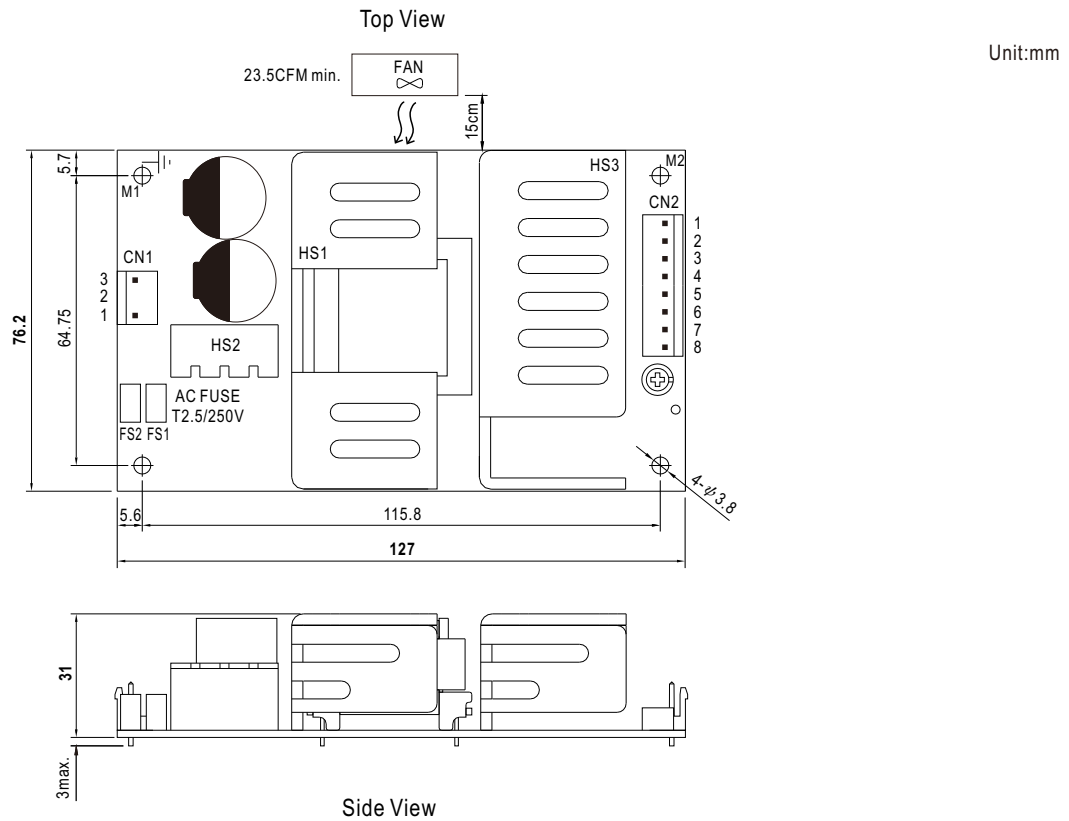
## Derating Curve



## Output Derating VS Input Voltage



## Mechanical Specification



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		

⊥ : 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>