

Medical Series

MPU50-xxx Medical Switcher Series Switch-Mode Power Supply	
Total Power	24 – 50 Watts
Input Voltages	90-264 VAC
Number of Outputs	One – Three

Preliminary Specifications

ANZ#: Z074b, January 2, 2003

SPECIAL FEATURES

- Medical Application
- Universal AC input
- Regulated output
- EMI filter built in
- Overload and short circuit protection

ENVIRONMENTAL

Operating temperature:	0 to 70 °C (De-rating : 2.5% of total power per °C)
Storage temperature:	-40 to 85 °C
Humidity (Non-Condensing):	5% to 95%
Cooling:	Convection
Vibration Frequency:	5 to 50 Hz
MTBF:	>100,000 Hours at full load and 25°C ambient conditions (MIL-217F)

ELECTRICAL SPECIFICATIONS

Input range	90 to 264 VAC, Full range
Frequency	47 to 63 Hz
Inrush current	30.0 Amps maximum at 230VAC, cold start, 25° C
Input current	1.35Amps maximum at 90VAC
Efficiency	83% typical at 230VAC and maximum load
EMI filtering	FCC part 15J class B, CISPR 22 class B
Maximum power	50W
Voltage regulation	±2 - 5%, vary depending on models
Leakage Current	100uA typ.
Hold up time	Half cycle minimum at 120 VAC and 80% of rated load
Protection	Over-voltage, Short circuit and over current protection: output short circuit, shut-down/latch off

SAFETY

UL60601	- Certified, Second Edition, A1, A2
EN60 601	- Certified, EN60601-1-2:1993
CE	- Certified

MODEL INFORMATION – SINGLE OUTPUT

Model	Output Rating #1		Output Rating #2		Load Regulation	Ripple/Noise mV p-p	Max. Output (W)
	(Vdc)	(A) max.	(V)	(A)			
MPU50-100	2 – 3	8.00	---	---	7 %	1 %	24
MPU50-101	3 – 5	8.00	---	---	5 %	1 %	40
MPU50-102	5 – 6	8.00 - 6.66	---	---	5 %	1 %	40
MPU50-103	6 – 9	7.50 - 5.00	---	---	4 %	1 %	42
MPU50-104	9 – 11	5.38 - 4.40	---	---	3 %	1 %	45
MPU50-105	11 – 13	4.54 - 3.38	---	---	3 %	1 %	45
MPU50-106	13 – 16	3.84 – 3.12	---	---	3 %	1 %	45
MPU50-107	16 – 21	3.12 – 2.38	---	---	3 %	1 %	50
MPU50-108	21 – 27	2.35 – 1.85	---	---	2 %	1 %	50
MPU50-109	27 – 33	1.85 – 1.51	---	---	2 %	1 %	50
MPU50-110	33 – 40	1.51 – 1.25	---	---	2 %	1 %	50
MPU50-111	40 - 50	1.25 – 1.00	---	---	2 %	1 %	50

- Notes: 1. The standard DC output plug is 5-pin DIN type.
2. For other DC output plugs, please call our application engineers for detail information.

MODEL INFORMATION – DUAL OUTPUTS

Model	Output Rating #1				Output Rating #2				Ripple/Noise mV p-p	Max. Output (W)
	Vdc	Min. A	Max.A	Reg.	Vdc	Min. A	Max. A	Reg.		
MPU50-200	3.3	0.5	5	5 %	12	0.2	2.0	5 %	1 %	40
MPU50-201	5	0.5	5	5 %	12	0.2	2.0	5 %	1 %	42
MPU50-202	5	0.5	5	5 %	15	0.2	1.5	6 %	1 %	42
MPU50-203	5	0.5	5	5 %	24	0.1	1.0	5 %	1 %	42
MPU50-204	3.3	1.0	5	5 %	5	0.4	2.0	5 %	1 %	26.5
MPU50-209	12	0.5	3	5 %	-12	0.2	1.0	5 %	1 %	42
MPU50-210	15	0.5	2	5 %	-15	0.2	1.0	5 %	1 %	42

- Notes: 1. The standard DC output plug is 5-pin DIN type.
2. For other DC output plugs, please call our application engineers for detail information.

MODEL INFORMATION – TRIPLE OUTPUTS

Model	Output Rating #1				Output Rating #2				Output Rating #3				Max. Output (W)
	Vdc	Min.	Max.	Reg.	Vdc	Min.	Max.	Reg.	Vdc	Min.	Max.	Reg.	
MPU50-300	3.3	0.5	5	5 %	12	0.2	2	5 %	-12	0	0.8	5 %	42
MPU50-301	5	0.5	5	5 %	12	0.2	2	5 %	-5	0	0.8	5 %	42
MPU50-302	5	0.5	5	5 %	12	0.2	2	5 %	-12	0	0.8	5 %	42
MPU50-303	5	0.5	5	5 %	15	0.2	2	5 %	-15	0	0.8	5 %	42
MPU50-304	5	0.5	5	5 %	24	0.1	1	5 %	-24	0	0.5	5 %	42
MPU50-305	5	0.5	5	5 %	24	0.1	1	5 %	-12	0	0.8	5 %	42
MPU50-306	3.3	0.5	5	5 %	12	0.2	2	5 %	-5	0	0.8	5 %	42

- Notes: 1. The standard DC output plug is 5-pin DIN type.
 2. For other DC output plugs, please call our application engineers for detail information.

MECHANICAL DRAWING

Input connector: IEC-320-C14

Output connector: 5-pin DIN Connector

Single Output Pin assignment

Pin 1,2,4 - Output Return

Pin 3, 5 - Output

Shell - GND

Dual Output Pin assignment

Pin 1,2,4 - Output Return

Pin 3 - Output #1

Pin 5 - Output #2

Shell - GND

Triple Output Pin assignment

Pin 1,2 - Output Return

Pin 3 - Output #1

Pin 4 - Output #2

Pin 5 - Output #3

Shell - GND

