

**SMUA60 SERIES**

**63W U-Bracket Power Supply for Medical Equipment**



- Wide Operating Voltage, 80 to 275 VAC, 47 to 63 Hz
- Internal EMI filter
- Multi Output
- Power Fail Detect (Optional)
- Crowbar Mode Over Voltage Protection
- Class I system

**5 Year Warranty**

Approvals:

Multi Output																	
Part Number	Output 1				Output 2				Output 3				Output 4				Max. Output Power
	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	
*SMUA60-D00	+3.3V	1.4A	7A	7%	+12V	0.6A	3A	5%									59.1W
SMUA60-D01	+5V	0.7A	7A	5%	+12V	0.3A	3A	5%									63W
SMUA60-D02	+5V	0.7A	7A	5%	+15V	0.3A	3A	5%									63W
SMUA60-D03	+5V	0.7A	7A	5%	+24V	0.4A	2A	5%									63W
*SMUA60-D04	+3.3V	1.4A	7A	7%	+5V	0.5A	5A	5%									48.1W
*SMUA60-D15	+5V	0.7A	7A	5%					-24V	0.2A	2A	5%					63W
*SMUA60-T00	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%					63W
*SMUA60-T00-1	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%					63W
*SMUA60-T01	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-5V	0A	0.8A	5%					63W
*SMUA60-T01-1	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+5V	0A	0.8A	5%					63W
SMUA60-T02	+5V	0.6A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%					63W
*SMUA60-T02-1	+5V	0.6A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%					63W
*SMUA60-T03	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%					63W
*SMUA60-T03-1	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%					63W
*SMUA60-T05	+5V	1.2A	6A	5%	+24V	0.4A	2A	5%	-12V	0A	0.8A	5%					63W
*SMUA60-T05-1	+5V	1.2A	6A	5%	+24V	0.4A	2A	5%	+12V	0A	0.8A	5%					63W
*SMUA60-T06	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	-5V	0A	0.8A	5%					59.8W
*SMUA60-T06-1	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	+5V	0A	0.8A	5%					59.8W
*SMUA60-T08	+3.3V	0.5A	5A	7%	+5V	0.5A	5A	5%	-12V	0A	1A	5%					53.5W
*SMUA60-T08-1	+3.3V	0.5A	5A	7%	+5V	0.5A	5A	5%	+12V	0A	1A	5%					53.5W
*SMUA60-Q00	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
*SMUA60-Q00-1	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
*SMUA60-Q00-2	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
*SMUA60-Q00-3	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
*SMUA60-Q01	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
*SMUA60-Q01-1	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
*SMUA60-Q01-2	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
*SMUA60-Q01-3	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
*SMUA60-Q02	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-12V	0A	0.8A	5%	63W
*SMUA60-Q02-1	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+12V	0A	0.8A	5%	63W
*SMUA60-Q02-2	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-12V	0A	0.8A	5%	63W
*SMUA60-Q02-3	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+12V	0A	0.8A	5%	63W
*SMUA60-Q03	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-24V	0A	0.8A	5%	63W
*SMUA60-Q03-1	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+24V	0A	0.8A	5%	63W
*SMUA60-Q03-2	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-24V	0A	0.8A	5%	63W
*SMUA60-Q03-3	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+24V	0A	0.8A	5%	63W
SMUA60-Q04	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
*SMUA60-Q04-1	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
*SMUA60-Q04-2	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
*SMUA60-Q04-3	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W

[\*] MOQ is required. Please contact sales.

Electrical Characteristics					
Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Input Voltage	Operating Voltage	90		264	VAC
Input Frequency		47		63	Hz
Output Power Range	Vin=90 to 264 VAC	0		63	W
Input Current (Low Line)	Io=Full load, Vin=115VAC		1.6		A
Input Current (High Line)	Io=Full load, Vin=230VAC		0.8		A
Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC			35	A
High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC			70	A
Efficiency	Io=Full load, Vin=230VAC	70	80	85	%
Line Regulation	Io=Full load			1	%
Over Voltage Protection		112		132	%
Over Current Protection		110		150	%
Transient Response	Io=Full load to Half Load, Vin=100VAC			4	mS
Hold-Up Time	Io=Full load, Vin=110VAC	16			mS
Start Up Time	Io=Full load, Vin=100VAC	0.3	1	2	S
* Ripple & Noise (Peak to Peak)	Full load, Vin=90VAC		0.5	1	%
Safety Ground Leakage Current	Io=Full load, Vin=240VAC			0.15	mA
Temperature Coefficient	All output	-0.04		0.04	%/°C

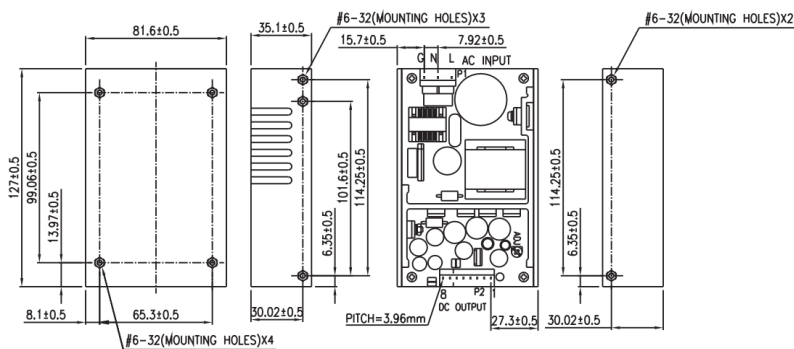
\* **Note:** The Ripple & Noise which is under 3.3VDC at 2% max

Conditions					
Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Operating Temperature		-10		70	°C
Storage Temperature		-40		85	°C
Relative Humidity	non-condensing	5		95	%
Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		200K			Hrs

**De-rate linearly from 100% load at 50°C to 50% load at 70°C**

Approvals and Compliance			
Parameter	Test Conditions	Min.	Unit
Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4000	VAC
Dielectric Withstanding Voltage for Primary to Ground	Primary to ground	1500	VAC
Isolation Resistance	Test Voltage = 2100VDC	50	MΩ
EMI	Compliance to EN55011 (CISPR11), EN60601-1-2	B	CLASS
Safety UL/c-UL, TUV/T-mark, CE	UL 60601-1, EN 60601-1, IEC 60601-1 2nd Edition	n/a	n/a

### Mechanical and PIN out



#### PIN CHART

MODEL	PIN	1	2	3	4	5	6	7	8 (Optional)
SMUA60-DXX		Vo2	Vo1	Vo1	COM	COM	N/C	N/C	PFD
SMUA60-D15		N/C	Vo1	Vo1	COM	COM	Vo3	N/C	PFD
SMUA60-TXX		Vo2	Vo1	Vo1	COM	COM	Vo3	N/C	PFD
SMUA60-QXX		Vo2	Vo1	Vo1	COM	COM	Vo3	Vo4	PFD

Note: Vo1: Output#1 Vo2:Output#2 Vo3:Output#3 Vo4:Output#4

#### Note:

- Dimensions are shown in mm.
- Weight: 425g approx.
- Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
- Output connector mates with Molex housing 09-50-3081 and Molex 2478 series crimp