

SMFA120 SERIES

120W Open-Frame Power Supply for Medical Equipment

- Wide Input Voltage 90 to 260 VAC, 47 to 63Hz
- Output Voltage Available From 5VDC Thru 40VDC
- Internal EMI filter
- Single Output
- Size: 3" x 5" x 1.42"
- Over Voltage and Over Load protection
- Output Voltage Protection (Crowbar Design)
- Class I System

5 Year Warranty

Approvals:

Single Output

Product Number	Output Voltage	Max. Output Current	Total Regulation	Max Output Power
SMFA120-S02	5 ~ 6 VDC	20 ~ 16.66 A	7%	100W
SMFA120-S03	6 ~ 9 VDC	18.33 ~ 12.22 A	7%	110W
SMFA120-S04	9 ~ 11 VDC	13.33 ~ 10.90 A	5%	120W
SMFA120-S05	11 ~ 13 VDC	10.90 ~ 9.23 A	5%	120W
SMFA120-S06	13 ~ 16 VDC	9.23 ~ 7.50 A	5%	120W
SMFA120-S07	16 ~ 21 VDC	7.50 ~ 5.71A	3%	120W
SMFA120-S08	21 ~ 27 VDC	5.71 ~ 4.44 A	3%	120W
SMFA120-S09	27 ~ 33 VDC	4.44 ~ 3.63 A	2%	120W
SMFA120-S10	33 ~ 40 VDC	3.63 ~ 3.00 A	2%	120W

Electrical Characteristics

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Safety Approvals Input Voltage Range		100		240	VAC
Input Voltage	Operating Voltage	90		260	VAC
Input Frequency		47		63	Hz
Power Factor Correction	Io=Full load, Vin=90~260VAC	0.95		1.00	
Output Power Range	Vin= 90 to 264 VA C	See rating chart			W
Input Current (Low Line)	Io=Full load, Vin=100 VAC			1.7	A
Input Current (High Line)	Io=Full load, Vin= 240 VAC			0.8	A
Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC			30	A
High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC			60	A
Efficiency	Io=Full Load, Vin=230VAC	72.5		88	%
Line Regulation	Io=Full Load			1	%
Load Regulation	Vin=230VAC			5	%
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		2	S
Ripple & Noise (Peak to Peak)	Full Load, Vin=90VAC			1	%
Safety Ground Leakage Current	Io= Full Load, Vin=240VAC/60Hz			0.1	mA
Temperature Coefficient	All output	-0.04		0.04	%/°C

Conditions

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Operating Temperature		-10		70	°C
Storage Temperature		-40		85	°C
Operating Humidity	Non-condensed	0		95	%
Storage Humidity	Non-condensed	0		95	%
Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		100K			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 PE	Primary to PE	1500	VAC
Isolation Resistance	Test Voltage = 500VDC	50	MΩ
EMI (EMC Emission)	Compliance to EN55011 (CISPR11), EN60601-1-2	B	CLASS
Safety UL/c-UL, TUV/T-mark, CE, FCC	UL/c-UL(UL 60601-1:2ndEdition), TUV/T-mark(IEC 60601-1:2 Safety ndEdition)		

Mechanical and PIN out

PIN CHART

MODEL	PIN	1	2	3	4	5	6	7	8	9	10	11	12
SMFA120-SXX-12PIN		Vout	Vout	Vout	Vout	Vout	Vout	RTN	RTN	RTN	RTN	RTN	RTN

MODEL	PIN	1	2	3	4	5	6
SMFA120-SXX-6PIN		Vout	Vout	Vout	RTN	RTN	RTN

Note:

- Dimensions are shown in mm.
- Weight: 365g approx.
- Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
- Output connector mates with Molex housing 09-50-3121 and Molex 2478 series crimp or with screw terminal (Terminal Block)(16-22AWG)

