

**SMDA31 SERIES**

**30W Desktop Power Supply for Medical Equipment**



- Wide Operating Voltage, 80 to 275 VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single to Triple Output
- Crowbar Mode Over Voltage Protection
- Input to Output : 2MOPP
- High ESD immunity
- Suitable professional healthcare facility
- High Altitude of 5000m
- Ultra low earth leakage current < 0.1mA

**5 Year Warranty**

Approvals:

**Single Output**

Model Number	Output Voltage	Max. Output Current	Total Regulation	Maximum Output Power
* SMDA31-S01	3 ~ 5 VDC	6.66 ~ 4.00 A	±7%	20W
* SMDA31-S02	5 ~ 6 VDC	5.00 ~ 4.16 A	±5%	25W
SMDA31-S03	6 ~ 8 VDC	4.16 ~ 3.12 A	±5%	25W
SMDA31-S04	8 ~ 11 VDC	3.75 ~ 2.72 A	±4%	30W
SMDA31-S05	11 ~ 13 VDC	2.72 ~ 2.30 A	±3%	30W
SMDA31-S06	13 ~ 16 VDC	2.30 ~ 1.87 A	±3%	30W
SMDA31-S07	16 ~ 21 VDC	1.87 ~ 1.42 A	±5%	30W
SMDA31-S08	21 ~ 27 VDC	1.42 ~ 1.11 A	±3%	30W
SMDA31-S09	27 ~ 33 VDC	1.11 ~ 0.90 A	±2%	30W
SMDA31-S10	33 ~ 40 VDC	0.90 ~ 0.75 A	±2%	30W

\*MPU31-101~102 are not in compliance with CEC V.

**Multi Output**

Model Number	Output 1				Output 2				Output 3				Maximum Output Power	Pno (max.)
	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax		
SMDA31-D00	+3.3V	0.3A	3A	7%	+12V	0.13A	1.3A	5%					25W	3W
SMDA31-D01	+5V	0.3A	3A	5%	+12V	0.13A	1.3A	5%					30W	3W
SMDA31-D02	+5V	0.3A	3A	5%	+15V	0.1A	1.0A	5%					30W	3W
SMDA31-D03	+5V	0.3A	3A	5%	+24V	0.07A	0.7A	5%					30W	3W
SMDA31-D04	+3.3V	0.3A	3A	7%	+5V	0.16A	1.6A	5%					17.9W	3W
SMDA31-D09	+12V	0.2A	2A	5%					-12V	0.05A	0.5A	10%	30W	3W
SMDA31-D10	+15V	0.15A	1.5A	5%					-15V	0.05A	0.5A	10%	30W	3W
SMDA31-D15	+5V	0.3A	3.0A	5%					-24V	0.10A	1.0A	10%	30W	3W
SMDA31-T01	+5V	0.25A	2.5A	5%	+12V	0.11A	1.1A	5%	-5V	0.05A	0.5A	10%	25W	3W
SMDA31-T02	+5V	0.25A	2.5A	5%	+12V	0.1A	1.0A	5%	-12V	0.05A	0.5A	10%	30W	3W
SMDA31-T03	+5V	0.25A	2.5A	5%	+15V	0.1A	1.0A	5%	-15V	0.05A	0.5A	10%	30W	3W
SMDA31-T04	+5V	0.3A	3.0A	5%	+24V	0.1A	1.0A	5%	-24V	0.05A	0.5A	10%	30W	3W
SMDA31-T05	+5V	0.3A	3.0A	5%	+24V	0.1A	1.0A	5%	-12V	0.05A	0.5A	10%	30W	3W
SMDA31-T06	+3.3V	0.25A	2.5A	7%	+12V	0.11A	1.1A	5%	-5V	0.05A	0.5A	10%	25W	3W

Total Regulation is conditioned by below configuration.

SMDA31-S01~S04 are required to use AWG16/4FT output cable.

SMDA31-S05~S08 are required to use AWG18/6FT output cable.

SMDA31-S09~S10 are required to use AWG20/6FT output cable.

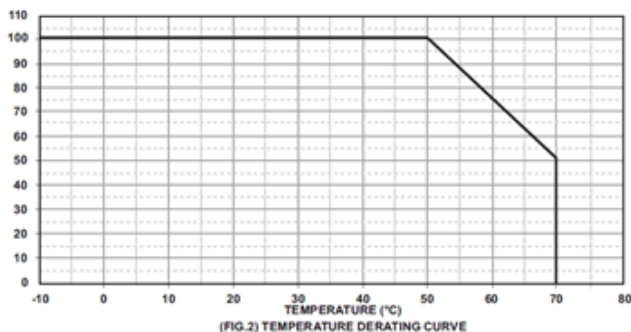
### Electrical Characteristics

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Safety Approvals Input Voltage Range	Safety Approval & Specification in Label	100		240	VAC
Operate Voltage Range	Derate linearly from 100% load at 90VAC to 80% load at 80VAC	80		275	VAC
Input Frequency	Sine wave	47		63	Hz
Output Power Range	See Rating Chart			30	W
Low Line Input Current	Full load, Vin=100VAC		0.9		A
High Line Input Current	Full load, Vin=240VAC		0.34		A
Low Line Input Inrush Current	Full load, 25°C, Cool start, Vin=100VAC			14	A
High Line Input Inrush Current	Full load, 25°C, Cool start, Vin=240VAC			33	A
Safety Ground Leakage Current	Vin=264VAC, Fi=63Hz			0.1	mA
Efficiency	Full Load, Vin=230VAC	68		86	%
Line Regulation	Full Load, Vin=100~120VAC			1	%
Over Voltage Protection		112		132	%
Over Load Protection	Recovers automatically after fault condition is removed	110		150	%
Time of Transient Response	Io=Full Load to Half Load, Vin=110VAC			4	ms
Hold-Up Time	Full Load, Vin=100VAC			12	ms
Start Up Time	Full Load, Vin=100~240VAC			2	s
Insulation Resistance		50			MΩ
Ripple & Noise (Peak to Peak)				1	%
Temperature Coefficient	All output			±0.04	%/°C
Dielectric Withstanding Voltage(P-S)	Primary to Secondary, limit current<10mA			4000	VAC
Dielectric Withstanding Voltage (P-G)	Primary to PE, limit current <10mA			1500	VAC
EMC Emission	Compliance to EN55011(CISPR11), EN60601-1-2	B			Class

### Environmental

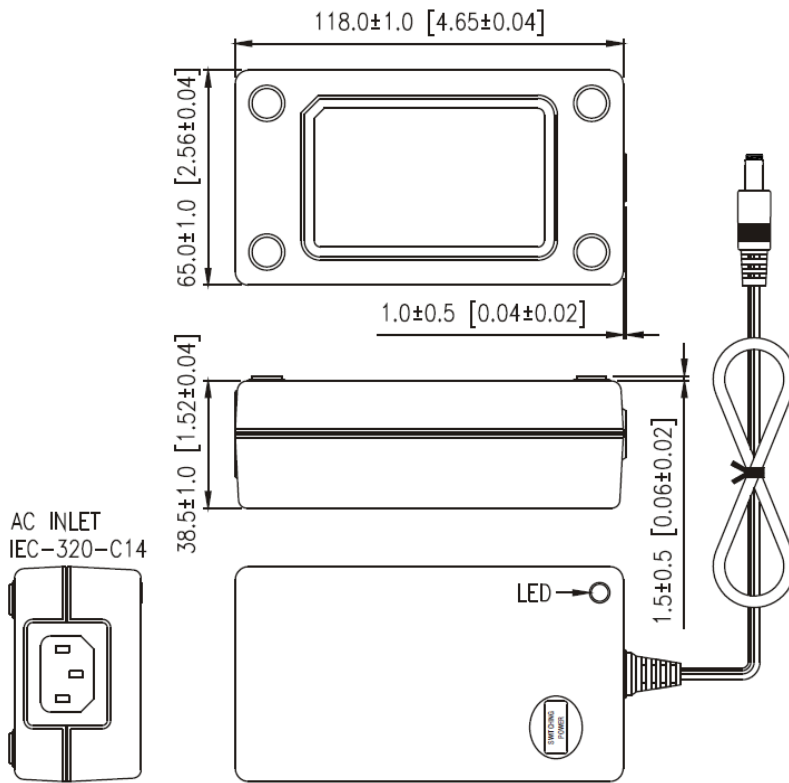
Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Operating Temperature	Derate linearly from 100% load at 50 to 50% load at 70	-10		70	°C
Storage Temperature	10~95% RH	-40		85	°C
Operating Humidity	non-condensing	0		95%	RH
Storage Humidity		0		95%	RH
Electro Static Discharge	Air Discharge, IEC61000-4-2			15	KV
Electro Static Discharge	Contact Discharge, IEC61000-4-2			8	KV
Mean Time Between Failure	Operation Temperature at 25 °C, Calculated per MIL-HDBK-217F	200K			h
Operating Altitude (Elevation)	All Condition			5000	m
Vibration	10~500Hz,10min./1cycle, 60min.each along X, Y, Z axes			5	G
Surge Voltage	Line-Neutral			1	KV
Surge Voltage	Line-PE & Neutral-PE			2	KV

### Derating Chart



1. Operating Temperature: -10 to 70°C
2. Derate linearly from 100% load at 50°C to 50% load at 70°C

Mechanical Diagram



1. Dimensions are shown in inches or mm.
2. Weight: 400-460gs approx.
3. Optional output connector