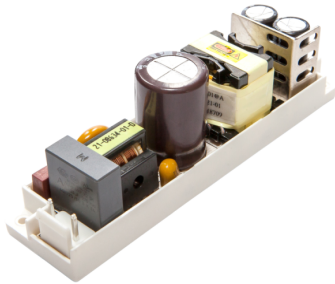


**SHFA50 SERIES**

**50W Open-Frame Power Supply for Medical Equipment**

- Wide Operating Voltage, 80 to 275 VAC, 47 to 63 Hz
- Single Output
- Over Load protection
- Input to Output : 2MOPP
- Size: 1"x4"x1.28"
- High ESD immunity
- Suitable professional healthcare facility

**3 Year Warranty**

Approvals:

**Single Output**

Product Number	Output Voltage	Max. Output Current	Total Regulation	Typ. Efficiency (%)	Ripple & Noise		Max. Output Power	Pno (max.)
					Min. (mVp-p)	Max. (mVp-p)		
SHFA50-S02	5 ~ 6 VDC	5.83 ~ 7.00 A	5%	79	50	60	35W	0.1W
SHFA50-S03	6 ~ 8 VDC	5.00 ~ 6.66 A	5%	80	60	80	40W	0.1W
SHFA50-S04	8 ~ 11 VDC	4.09 ~ 5.62 A	5%	85	80	110	45W	0.1W
SHFA50-S05	11 ~ 13 VDC	3.84 ~ 4.55 A	5%	87	110	130	50W	0.15W
SHFA50-S06	13 ~ 16 VDC	3.13 ~ 3.85 A	5%	88	130	160	50W	0.15W
SHFA50-S07	16 ~ 21 VDC	2.38 ~ 3.13 A	5%	88	160	210	50W	0.15W
SHFA50-S08	21 ~ 27 VDC	1.85 ~ 2.38 A	3%	88	210	270	50W	0.15W
SHFA50-S09	27 ~ 33 VDC	1.51 ~ 1.85 A	3%	88	270	330	50W	0.15W
SHFA50-S10	33 ~ 40 VDC	1.25 ~ 1.51 A	3%	88	330	400	50W	0.15W
SHFA50-S11	40 ~ 50 VDC	1.00 ~ 1.25 A	3%	88	400	500	50W	0.15W
SHFA50-S12	50 ~ 59 VDC	0.84 ~ 1.00 A	3%	82	500	590	50W	0.15W

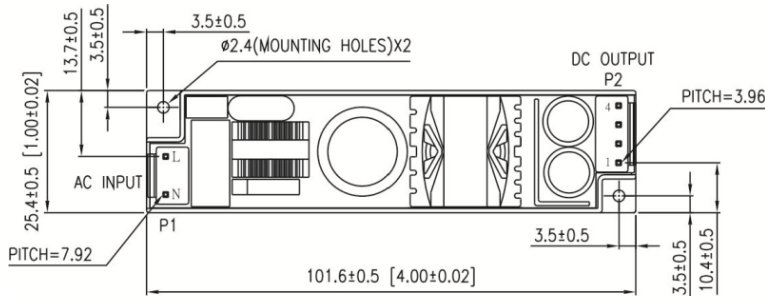
**Electrical Characteristics**

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			50	W
Low Line Input Current	Full load, Vin=100VAC			1.2	A
High Line Input Current	Full load, Vin=240VAC			0.7	A
Low Line Input Inrush Current	Full load, 25°C, Cool start, Vin=100VAC			40	A
High Line Input Inrush Current	Full load, 25°C, Cool start, Vin=240VAC			80	A
Efficiency	Full Load, Vin=230VAC	79		88	%
Line Regulation	Full Load, Vin=100~120VAC			1	%
Over Load Protection	Recovers automatically after fault condition is removed	110		150	%
Time of Transient Response	Io=Full Load to Half Load, Vin=100VAC			4	ms
Hold-Up Time	Full Load, Vin=110VAC			12	ms
Start Up Time	Full Load, Vin=100~240VAC			2	s
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
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 40 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			3000	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

### Mechanical and Technical Chart

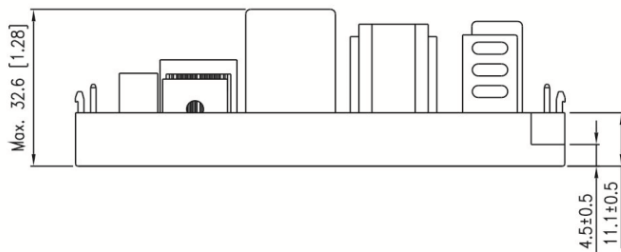


**Note:**

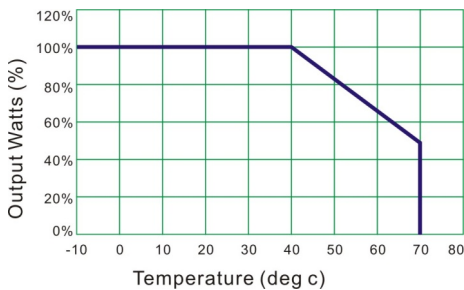
1. Dimensions are shown in mm & inch
2. Weight: approx. 75g
3. Input connector mates with JST housing VHR-3N and JST SVH series crimp terminal.
4. Output connector mates with JST housing VHR-6N and JST SVH series crimp terminal.

**PIN CHART**

MODEL	PIN	1	2	3	4
SHFA50-SXX		OUT	OUT	RTN	RTN



### Output Derating Curve



1. Operating Temperature: -10 to 70°C
2. Derate linearly from 100% load at 40°C to 50% load at 70°C