TECHNICAL DATASHEET

180W Medical Adapter

FSP180 Series

FSP180 Series

FEATURES

- Compact size 197 × 88 × 45 mm
- Certified medical safety IEC 60601-1
- Meet Energy Efficiency DOE Level V
- No load power consumption ≦ 0.5W
- Meet EN55011 and FCC Class B
- Over voltage protection
- Over current protection
- Over temperature protection
- Compliant with RoHS requirement

SAFETY STANDARD APPROVAL

c ® us E211696 EN 60601-1 IEC 60601-1 TÜVRheinland CERTIFIED

DESCRIPTION

The FSP180 series are high efficiency desktop adapter with IEC 320/C14 or IEC320/C8 AC inlet, which can deliver 180 watts continuous output power. All models meet EN55011 and FCC class B emission limits, and are designed for medical applications.

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	< 2.53 A (rms) / 100 VAC
	< 0.88 A (rms) / 240 VAC
Touch current:	< 100 μA / 264 VAC, 60 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart
Maximum output power:	See rating chart
Protection:	
Over voltage:	The power supply will shut down without damage while over voltage happened. That will be return to normal state by AC reset.
Short circuit:	The power supply will shut down without damage and enter auto-recovery mode.
Over current:	The power supply will shut down without damage and enter auto-recovery mode.
Over temperature:	The power supply will enter into shut down while the abnormal thermal rise occurs. That will be return to normal state by AC reset.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0℃~+40℃
Storage temperature:	-20℃~+80℃
Operating humidity:	20% to 80% RH non-condensing
Storage humidity:	10% to 90% RH non-condensing

GENERAL SPECIFICATIONS

Power factor:	0.97 Typical at 115 VAC
Efficiency:	See rating chart
Hold-up time:	5 ms minimum at 100Vac/60Hz
Line regulation:	±1% maximum at full load
Inrush current:	60 A @ 115 VAC or 120 A @ 230 VAC, at 25℃ cold start
Operating altitude :	3000 meters
Withstand voltage:	4000 VAC from input to output (2 MOPP)
MTBF:	100,000 hours at full load at 25℃ ambient , calculated per MIL-HDBK-217F
EMC Performance (IEC60601-1-2)	
EN55011:	Class B conducted, class B radiated
FCC:	Class B conducted, class B radiated
VCCI:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, Class D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ±15 KV air and ±8 KV contact
EN61000-4-3:	Radiated immunity, 10 V/m
EN61000-4-4:	Fast transient/burst, ±1 KV
EN61000-4-5:	Surge, ±1 KV diff., ±2 KV com.
EN61000-4-6:	Conducted immunity, 10 Vrms
EN61000-4-8:	Magnetic field immunity, 30 A/m
EN61000-4-11:	Voltage dip immunity, 30% reduction for 500 ms, 60% reduction for 100 ms, and >95% reduction for 10 ms

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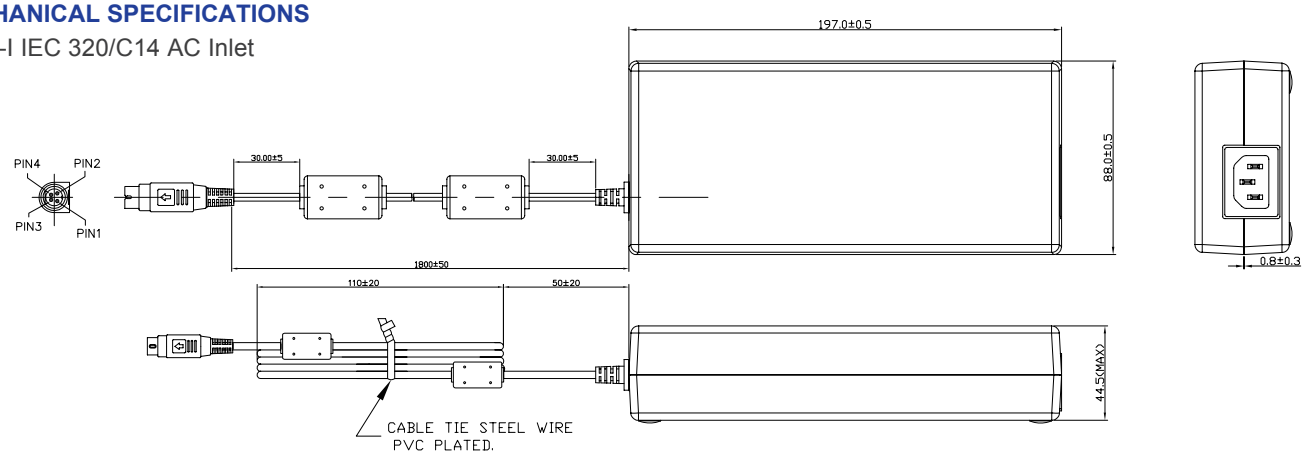
OUTPUT VOLTAGE/CURRENT RATING CHART

Model(1)		Output						Average Active Efficiency (typical) @ 115 / 230 VAC
Class-I	Class-II	Vo	Min. Current	Max. Current	Tolerance	Ripple & Noise(2)	Max. Power	
FSP180-AHAM1		12 V	0 A	15.00 A	±5%	380 mV	180 W	87% / 89%
FSP180-ABAM1		19 V	0 A	9.47 A	±5%	380 mV	180 W	88% / 90%
FSP180-AAAM1	FSP180-AACM1	24 V	0 A	7.50 A	±5%	380 mV	180 W	89% / 91%
FSP180-AKAM1		28 V	0 A	6.42 A	±5%	380 mV	180 W	89% / 91%

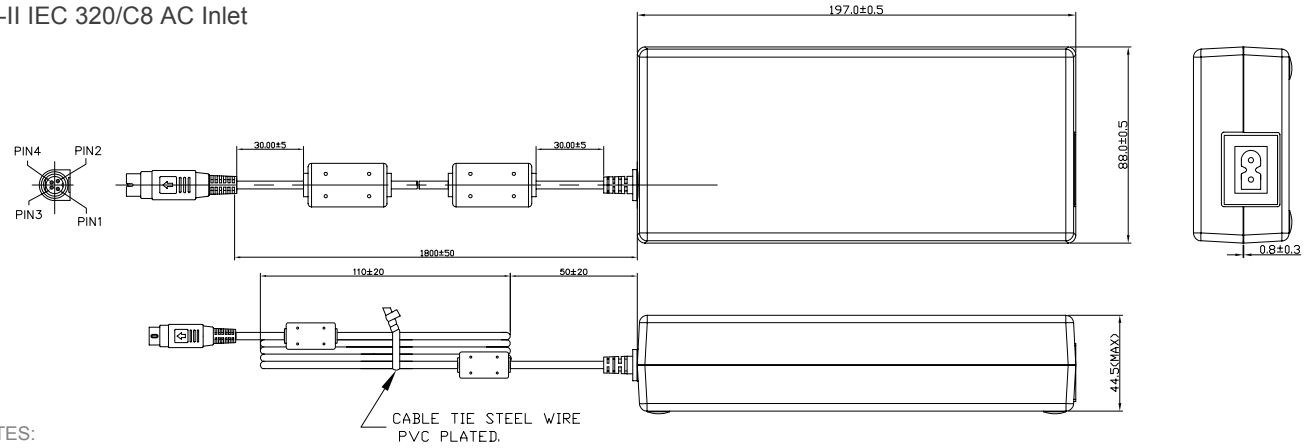
NOTES:
1. Class-I models are equipped with IEC 320/C14 inlet, and Class-II models with IEC 320/C8 inlet.
2. Ripple and noise measurements shall be made with an oscilloscope of at least 20MHz bandwidth. Output shall be bypassed at the connector with a 0.1μF ceramic disk capacitor and a 47μF electrolytic capacitor to simulate system loading.

MECHANICAL SPECIFICATIONS

Class-I IEC 320/C14 AC Inlet



Class-II IEC 320/C8 AC Inlet



NOTES:
・Dimensions shown in mm.

PIN CHART

Pin No.		PIN 1	PIN 2	PIN 3	PIN 4	Shield
Polarity	Class-I Model	Vo(+)		Vo Return & AC Ground		
	Class-II Model	Vo(+)		Vo Return		