TECHNICAL DATASHEET

200W-220W Medical Adapter

FSP220 Series

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FEATURES

- Compact size 198 × 89 × 44 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 UL us E178020

EN 60601-1
IEC 60601-1
TÜVRheinland CERTIFIED

CE

DESCRIPTION

The FSP220 series are high efficiency desktop adapter with IEC 320/C14 or IEC320/C8 AC inlet, which can deliver 200-220 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:	< 2.5 A (rms) / 115 VAC < 1.2 A (rms) / 230 VAC
Touch current:	< 100 μA / 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart
Maximum output power:	See rating chart
Protection:	
Over voltage:	Set at 110 ~ 130% of its rated output voltage. The power supply will shut down without damage while over voltage happened.
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. It will enter into normal condition if the fault condition is removed.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0℃~+60℃
Storage temperature:	-20℃~+80℃
Operating humidity:	30% to 75% RH non-condensing
Storage humidity:	10% to 90% RH non-condensing

GENERAL SPECIFICATIONS

Power factor:	0.95 Typical at 115 VAC
Efficiency:	See rating chart
Hold-up time:	12 ms minimum at 100Vac/60Hz
Line regulation:	±0.5% maximum at full load
Inrush current:	100 A @ 115 VAC or 200 A @ 230 VAC, at 25℃ cold start
Withstand voltage:	
Class-I models:	5656 VDC from input to output (2 MOPP)
Class-II models:	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 A and 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, ±2 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

2019.05 spec

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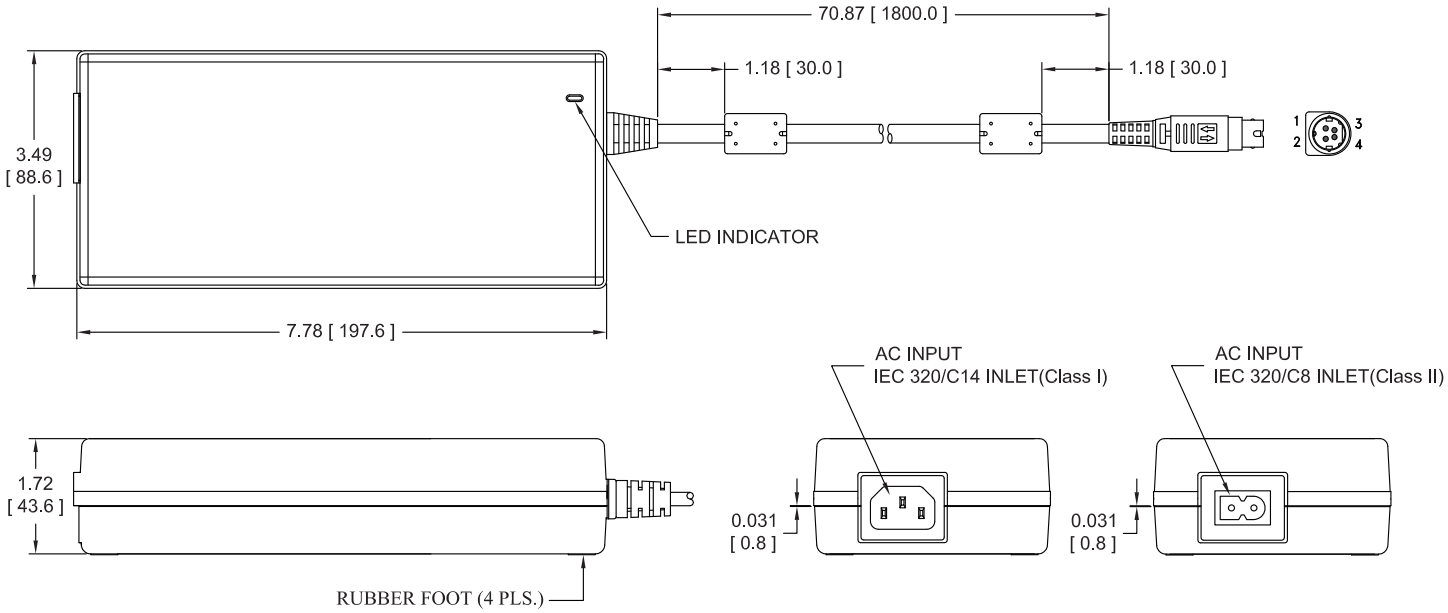
OUTPUT VOLTAGE/CURRENT RATING CHART

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	
FSP200-KBAM1	FSP200-KBCM1	19 V	0 A	10.53 A	±5%	190 mV	200 W	88% / 90%
FSP220-KAAM1	FSP220-KACM1	24 V	0 A	9.17 A	±5%	240 mV	220 W	88% / 90%
FSP220-KKAM1	FSP220-KKCM1	28 V	0 A	7.86 A	±5%	280 mV	220 W	89% / 91%
FSP220-KEAM1	FSP220-KECM1	36 V	0 A	6.11 A	±5%	360 mV	220 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



NOTES:
- Dimensions shown in inches [mm].
- Tolerance 0.02 [0.5] maximum.
- Output connector is 4-pin plug with lock, Kycon P/N KPPX-4P or equivalent, mating with 4-pin socket, Kycon P/N KPJX-4S-S or equivalent.

PIN CHART

Pin No.	PIN 1	PIN 2	PIN 3	PIN 4	Shell of Connector	
					Class-I	Class-II
Polarity	Vo(+)		Vo Return		AC Ground	NC