TECHNICAL DATASHEET

260W Medical Power Supplies

FSP260M-P35 Series

FSP260M-P35 Series

FEATURES

- Class-I design
- IEC60601-1 & IEC 62368-1
- EN55011 class B compliance
- Remote ON / OFF input (optional)
- Standby power less than 0.5W
- Form factor 3" x 5"

SAFETY STANDARD APPROVAL

c ® us E211696

EN 60601-1
IEC 60601-1
TÜVRheinland CERTIFIED

DESCRIPTION

This AC-DC switching power supplies in a package of 3 x 5 inches is a Class-I (with Protection Earth) safety construction and feature with 0.5W low input power consumption at 0.2W load which is comply with Energy Star requirement. Less audible noise is suitable for quiet design requirement. PSU capable of delivering 260 watts continuous power at 18.4 CFM forced air cooling or 150 watts continuous power (24V at 200W) at convection cooling and 50℃ operation temperature.

INPUT SPECIFICATIONS

Input voltage:	90 to 264 VAC
Input frequency:	47-63 Hz
Input current:	≤ 3 A (rms) for 115 VAC ≤ 1.5 A (rms) for 230 VAC
Earth leakage current:	≤ 300 μA @ 264VAC, 63Hz (Typical)
Touch current:	≤ 100 μA @ 264VAC, 63Hz
PS_OFF (CN201):	PSU build in a pull low resistor. A TTL high level to turn PSU off.

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Total output power:	260 watts maximum
Ripple and noise:	1% peak to peak maximum
Protection:	
OVP	Auto recovery
OCP & Shorted	Auto recovery
OTP	Auto recovery
Temperature coefficient:	All outputs ±0.04% /℃ maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 us after a 25% step load change

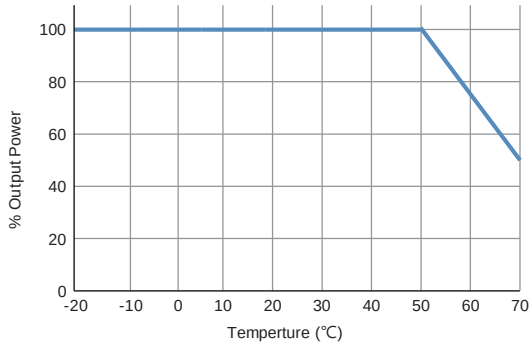
ENVIRONMENTAL SPECIFICATIONS

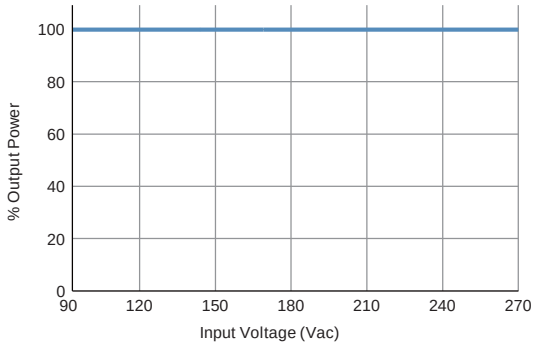
Operating temperature:	-20℃ to +70℃
Storage temperature:	-40℃ to +85℃
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50℃ linearly to 50% at +70℃, applicable to convection and forced-air cooling conditions.

GENERAL SPECIFICATIONS

Fuse protection	T5AH, 250Vac @ Line & Neutral
Power factor:	0.95 mini. @ 115VAC & 100% load 0.98 mini. @ 230VAC & 100% load
Efficiency:	Refer to rating table
Turn-On Delay Time:	≤ 1 sec
Hold-up time:	16.6 mS mini. @ 115VAC & 260W load 20 mS mini. @ 115VAC & 150W load
Line regulation:	±0.2% maximum at full load
Inrush current:	60A @ 115VAC, 25℃& cold start 120A @ 230VAC, 25℃& cold start
Withstand voltage:	4000 VAC from input to output (2 MOPP) 1500 VAC from input to ground (1 MOPP) 1500 VAC from output to ground (1 MOPP)
Isolation resistance:	Input to output 100M ohm @ 500Vdc
MTBF:	500,000 hours mini. at full load at 25℃ ambient temperature, calculated per Telcordia SR-332
EMC Performance (IEC60601-1-2)	
EN 55011:	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, 3 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, 3 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 >95% reduction for 10 ms

OUTPUT POWER DERATING CURVE



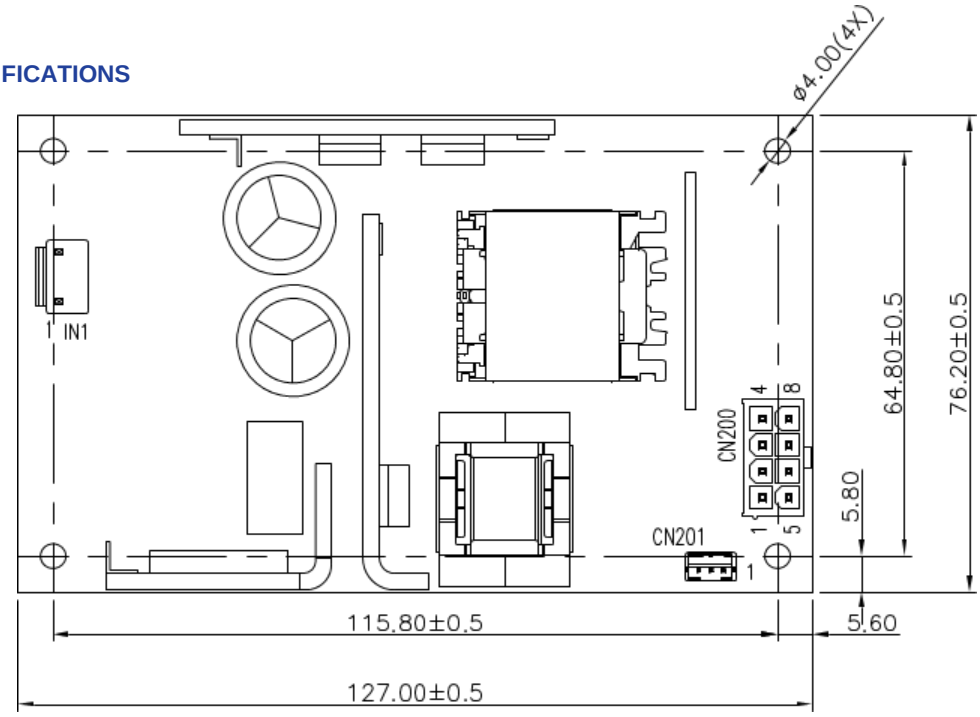


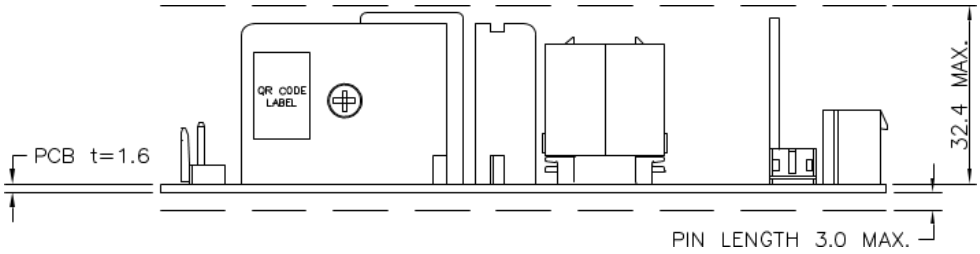
OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output								Efficiency (typical) @ 115 / 230 VAC
	V1	Min. Current	Max. Current (1)		Tol.	Ripple & Noise (2)	Max. Power (1)		
			Convection	Forced air			Convection	Forced air	
FSP260M-P35-A12	12 V	0 A	12.50A	21.60A	±3 %	120 mV	150W	260W	90 / 92%
FSP260M-P35-A19	19 V	0 A	6.25A	10.80A	±3 %	240 mV	150W	260W	89 / 91%
FSP260M-P35-B24	24 V	0 A	2.78A	4.82A	±3 %	540 mV	200W	260W	88 / 90%

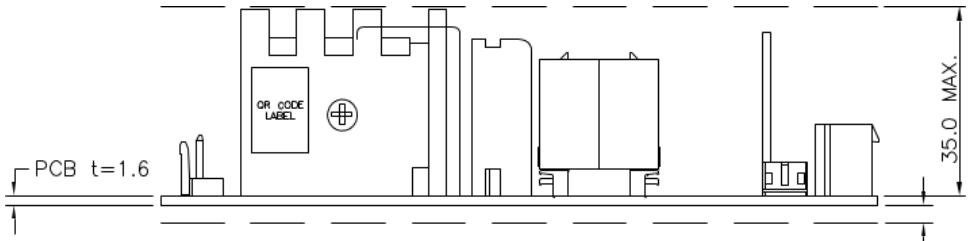
NOTES:
1. Forced air 18.4 CFM to be provide by user.
2. Ripple and noise is maximum peak to peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 10 μF tantalum (or electrolytic) capacitor in parallel with a 0.1 μF ceramic capacitor across the output.

MECHANICAL SPECIFICATIONS





▲ FSP260M-P35-A12, FSP260M-P35-A19



▲ FSP260M-P35-B24

CONNECTOR PIN CHART

CONNECTOR	IN1			CN200								CN201		
PIN NO.	1	2	3	1	2	5	6	3	4	7	8	1	2	3
OUTPUT	Neutral		Line	V+				GND				Remote ON/OFF	V+ Sense	RTN

NOTES:
1. Dimensions shown in mm
2. Connector IN1: JST B2P3-VH or equivalent.
3. Connector CN200: Molex 462071208 or equivalent.
4. Connector CN201: JST B3B-PH or equivalent.
5. Ground tab: 8 x 6.35 x 0.8 mm
6. To ensure compliance with level B emissions, connect the three PCB mounting holes with metallic standoffs to the chassis.

Weight: 301 grams (0.663 lbs.) approx.