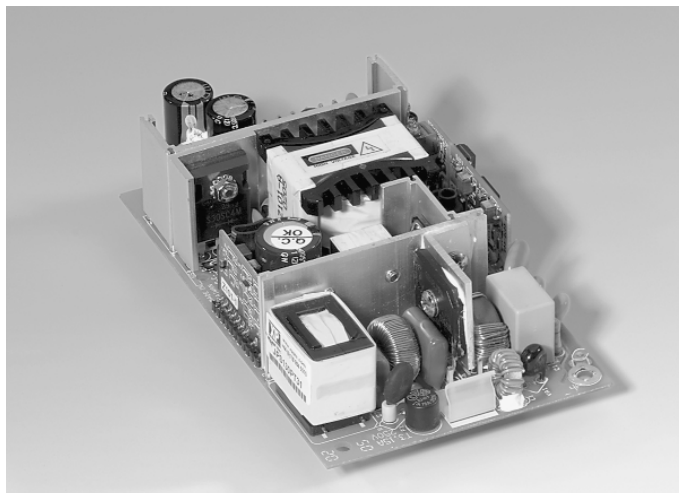


AC/DC Medical Open Frame

130 Watts ECM130 Series

XPiQ inc.

Intelligent Design Quality Product



Small Size 3.00" x 5.00 x 1.28"

Low Leakage Current

Meets Class B, EN55011 Conducted

4000 VAC Isolation

Medical Safety Agency Approvals

Zero Voltage Switching Technology

Specification

Input

AC Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Power Factor	• 0.98 at 115 VAC or 0.90 at 230 VAC
Inrush Current	• 30 A max at 115 VAC 60 A max at 230 VAC cold start at 25°C
Input Current	• 2.6 A (rms) max at 115 VAC, 1.3 A (rms) max at 230 VAC
Safety Ground	• 120 μ A max at 115 VAC, 60 Hz
Leakage Current	• 250 μ A max at 240 VAC, 60 Hz
Input Protection	• Dual fuse at 3.15 A each

Output

Output Voltage	• Single trim part for all outputs
Output Power	• 130 Watts
Output Voltage Adj.	• Fixed, not user adjustable
Minimum Load	• 0 min load for single output models 10% for multiple output models
Line Regulation	• $\pm 0.5\%$ maximum
Load Regulation	• $\pm 1\%$, $\pm 5\%$ for all secondary outputs on multiple output models
Ripple & Noise	• $\pm 1\%$ pk-pk maximum
Transient Response	• 4% max deviation, 500 μ s recovery time for a 25% load change
Temperature Coefficient	• 0.05%/°C
Hold Up Time	• >15 ms minimum
Overvoltage Protection	• 115% to 140% V1 only recycle input to reset
Overcurrent Protection	• 120% - 150% with auto recovery
Remote Sense	• Output 1 only, compensates for up to 0.5 V drop

General

Efficiency (Typical)	• >80% minimum nominal line rated load, dependant on model
Power Density	• 6.7 W/in ³ single output models
MTBF	• 100,000 hrs minimum
Switching Frequency	• 120 KHz ± 10 KHz
Isolation Voltage	• 4000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Size	• 5.00" x 3.00" x 1.28" (1.35" for multi output models)
Weight	• 100 grams

Environmental

Operating Temperature	• 0 °C to 70 °C see derating chart Full power to 50 °C
Cooling	• 130 W with 18 CFM airflow 120 W with 10 CFM airflow 100 W with convection cooling
Humidity	• 5 to 95% RH, non-condensing
Storage Temperature	• -20 °C to +85 °C

EMC & Safety

EMC	• EN61000-3 -2, EN60601-1 -2, FCC 20780 Level B EN50082-2 performance A, no degradation of performance
Safety Approvals	• EN60601-1, UL2601-1, CSA C22.2 No. 601.1 CE Mark to applicable sections of MDD

* Preliminary datasheet - see website for current specs

OUTPUT VOLTAGE & CURRENT RATINGS				ECM130	
Output Power	Output Voltage	Output Current		Ripple & Noise Pk-Pk ⁽¹⁾	Model Number
		Convection Cooled	Max 18 CFM		
130 W	5.0 V	20.0 A	26.0 A	50 mV	ECM130PS05
130 W	12.0 V	9.0 A	11.0 A	120 mV	ECM130PS12
130 W	15.0 V	7.0 A	8.7 A	150 mV	ECM130PS15
130 W	24.0 V	4.5 A	5.4 A	240 mV	ECM130PS24
130 W	28.0 V	3.9 A	4.6 A	280 mV	ECM130PS28
130 W	48.0 V	2.3 A	2.7 A	480 mV	ECM130PS48
130 W	5.0 V	10.0 A	15.0 A	50 mV	ECM130PT31
	12.0 V	3.0 A	4.1 A	120 mV	
	-12.0 V	0.8 A	1.1 A	120 mV	
130 W	5.0 V	10.0 A	15.0 A	50 mV	ECM130PT32
	15.0 V	2.5 A	4.1 A	150 mV	
	-15.0 V	0.8 A	1.1 A	150 mV	

Notes

- 0 minimum load required for single output models. For multiple output models 5V requires 0.5A and +12V or +15V requires 0.05A minimum load.

Mechanical Details - 130 Watts

$\phi 4.0$ TYP. MOUNTING HOLES
x4
5.0 (127.0)
2.55 (64.8)
TB1
L
N
3.00 (76.2)
Pin 1
TB2
TB3
TO CHASSIS GROUNDING
X2
*1.25 (30.0) MAX
0.10 (2.4)

Notes:

- Dimensions in mm. Tolerance is ± 1 mm.
- AC input connector (TB1): Molex 5277-02A or equivalent.
- DC output connector (TB2): Molex 5273 or equivalent.
- Remote sense connector (TB3): Molex 5045-02A or equivalent.

Pins	Models			
	PS05	PS12, 15, 24, 48	PT31	PT32
1	+V	+V	+5V	+5.0 V
2	+V	+V	+5V	+5.0 V
3	+V	+V	+5V	+5.0 V
4	+V	RET	RET	RET
5	RET	RET	RET	RET
6	RET	RET	RET	RET
7	RET	N/A	RET	RET
8	RET	N/A	+12V	+15.0 V
9	N/A	N/A	-12V	-15.0 V
10	N/A	N/A	N/A	N/A

* Total height of unit 1.28" (32.4 mm) for single output models, 1.35" (34.4 mm) for triple output models.

Derating Curve - 130 Watts

