

**UNIVERSAL INPUT AC-DC MEDICAL APPLICATION OPEN FRAME
SINGLE & MULTIPLE OUTPUT 20 WATTS
SWITCHING POWER SUPPLIES APS19MI SERIES**



FEATURES:

- **ACCOMMODATES UNIVERSAL AC SOURCES**
- **MEETS MEDICAL STANDARDS EN60601/UL2601**
- **EMI MEETS EN 55022 & FCC CLASS B**
- **CE MARKING COMPLIANCE**

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: 90-264Vac typical.

Input Connector: Molex 5273 or equivalent.

Input Frequency: 47-63Hz.

Inrush Current: 16A @ 230Vac.

Input Current: 0.4A@115Vac & 0.22A@230Vac.

Dielectric Withstand: Meets IEC601.

EMI: Meets EN 55022 & FCC Class B.

Hold-up Time: Typ. 14mS @ 115Vac.

Typ. 70mS @ 230Vac.

Earth Leakage: Less than 0.10 mA.

Over Load Protection (OLP): Fully protected against overload or short circuit. Typ. 120-150% max. load.

Consult the factory for special OLP setting.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.

Output Current: See Ratings Chart.

Output Wattage: Typ. 19-20W.

Output Connector: Molex 5273 or 41671.

Line Regulation: Typ. 0.2-1.0%.

Load Regulation: Main VO1 typ. $\pm 1.0\%$.

Aux. VO2 typ. $\pm 2-3.0\%$ (Stacked).

Aux. VO3 typ. $\pm 1-2.0\%$ (P.R.).

Noise & Ripple: Typ. 1% peak to peak.

OVP: Built-in at main VO1.

Adjustability: Factory set.

GENERAL SPECIFICATION

Efficiency: Typ. 73%.

Switching Frequency: Typ. 67KHz.

Circuit Topology: Fixed-frequency Flyback Circuit.

Transient Response: Output voltage returns in less than 0.2mS following a 25% load change.

Safety standard: Medical standards IEC601/EN 60601/
UL 2601 Class I.

Operating Temperature: 0 to +50°C.

Storage Temperature: -20 to +85°C.

Temperature Coefficient: Typ. 0.04% /°C.

Cooling: Free air convection.

Construction: L-Bracket open frame format.

Power Density: 3.3 Watts / Cubic Inch.



In application

OUTPUT VOLTAGE/CURRENT RATINGS CHART

SINGLE OUTPUT

MODEL NO.	MAIN VO1@◆		
	Typ.	Volt.	Max.
APS19MI-S050043	4.3A	+5.0V	5.0A
APS19MI-S033050	5.0A	+3.3V	6.0A
APS19MI-S120017	1.7A	+12.0V	2.0A
APS19MI-S240009	0.9A	+24.0V	1.0A

DUAL OUTPUT

MODEL NO.	MAIN VO1@◆			AUX. VO2 † or ●			
	Typ.	Volt.	Max.	Typ.	Volt.	Max.	Pk.
APS19MI-D050M	4.0A	+5.0V	5.0A	0.3A	+24V	0.5A	1A
APS19MI-D050I	4.0A	+5.0V	5.0A	0.3A	+12V	0.6A	1A
APS19MI-D033M	4.0A	+3.3V	5.0A	0.3A	+24V	0.5A	1A
APS19MI-D033I	4.0A	+3.3V	5.0A	0.3A	+12V	0.6A	1A

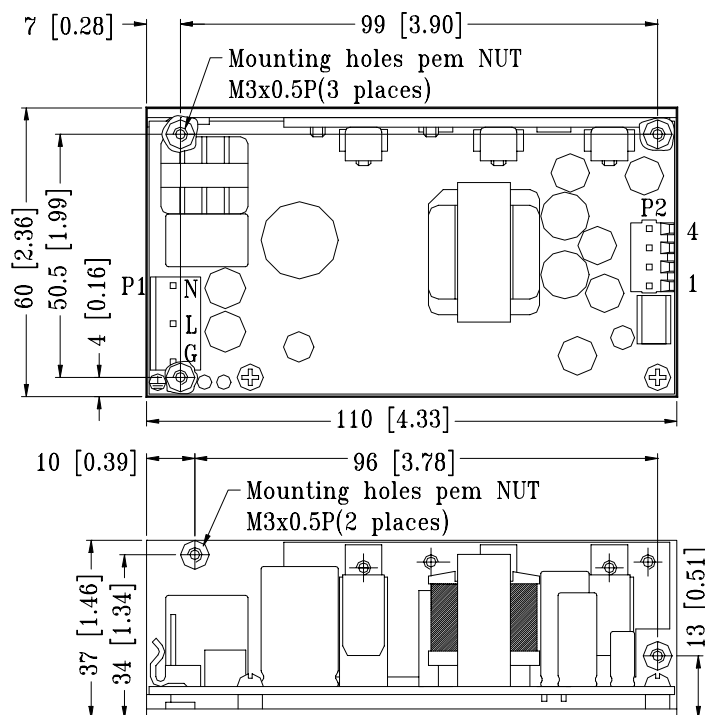
TRIPLE OUTPUT

MODEL NO.	MAIN VO1@◆			AUX. VO2 †				AUX. VO3 ●			
	Typ.	Volt.	Max.	Typ.	Volt.	Max.	Pk.	Typ.	Volt.	Max.	Pk.
APS19MI-T050MI	3.0A	+5.0V	4.0A	0.3A	+24V	0.5A	1A	0.3A	+12V	0.6A	1A
APS19MI-T050II	3.0A	+5.0V	4.0A	0.5A	+12V	1.0A	2A	0.3A	+12V	0.6A	1A
APS19MI-T033MI	4.0A	+3.3V	5.0A	0.3A	+24V	0.5A	1A	0.3A	+12V	0.6A	1A
APS19MI-T033II	4.0A	+3.3V	5.0A	0.5A	+12V	1.0A	2A	0.3A	+12V	0.6A	1A

Symbol: "◆" OVP built-in. "@@ Adjustable. "●" Installed with Post Regulator (P.R.). "†" Stacked-on main O/P.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 373.0g (13.2 Oz.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

	AC INPUT			SINGLE OUTPUT			DUAL OUTPUT				TRIPLE OUTPUT			
ASSIGNMENT	AC-L	AC-N	AC-G	VO1	N/A	DC COM.	VO1	VO2	N/A	DC COM.	VO1	VO2	VO3	DC COM.
CNTR & PIN #	P1-L	P1-N	P1-G	P2-2	P2-3,4	P2-1	P2-2	P2-4	P2-3	P2-1	P2-2	P2-3	P2-4	P2-1

Mating connector: P1: Molex 5195 or 5239 series. P2: Molex 5195 or 5239 series/ 3069 series.