

Switching Power Supply

500 WATT / SINGLE OUTPUT

KEY FEATURES:

- 500 Watts output Power
- 24VDC Single Output models
- U Channel Package measuring only 4" x 7" x 1.5"
- High Density in excess of 11W/in³
- 90% Efficiency typical
- OR'ing FET on output for 1 + 1 applications (optional)
- High Reliability in excess of 200,000 Hours
- International Safety Approvals
- Class B Radiated and Conducted Emissions
- 3 Year Warranty
- Medical versions also available



MODEL	Output Voltage (V)	Regulation	Maximum Current (A)	Ripple/Noise (mVp-p)	Standby (Vsb)
ARFU-5011-2405	+24.0	+/- 1%	21	240	+5V/4A
	+12.0	+/- 5%	2	120	

INPUT SPECIFICATIONS	
Input Voltage	90 – 264 VAC
Input Frequency	47 – 63 Hz
Input Current	Maximum 6.5A @ 100 VAC
Inrush Current	50A @ 230 VAC
Input Protection	Fuse
Leakage Current	Maximum 1.0 mA
Power Factor Correction	Active PFC to meet or exceed EN61000-3-2

ENVIRONMENT SPECIFICATIONS	
Operating Temperature	-20 °C to +70 °C Derate linearly above 50 °C to 50% load @ 70 °C
Storage Temperature	-40 °C to +85 °C
Forced Air Cooling	20CFM from AC to DC side
MTBF	200 kHrs to MIL-HDBK-217F at 25 °C
Shock	Storage: 30G , 11ms, 1/2 sine wave pulse, 6 axis Operation: 5G , 11ms, 1/2 sine wave pulse, 6 axis
Vibration	2G rms, 5Hz to 500kHz, 3 axis

OUTPUT SPECIFICATIONS	
Setpoint Accuracy	+/- 1%
Total Output Power	500W
Hold-up Time	16ms @ 80% load
Efficiency	90% typical
Minimum Load	No minimum load
Isolation (HiPot)	1500 VAC Input to Ground
Remote Sense	Compensates for up to 0.5V drop
AC_Fail	Goes low (<0.4V) at least 6ms before output drops in the event of an AC input failure
ExtOff / PSON (option)	Turns off / on the outputs when signal is pulled high / low.
PowerGood	Goes high (> 2.4V) within 100ms - 500ms of output in regulation. Goes low (<0.4V) at least 1ms before output out of regulation.

PROTECTION	
Overvoltage	Latch-mode (Cycle AC input or ExtOff/ PSON to reset)
Overpower	Latch-mode (Cycle AC input or ExtOff/ PSON to reset)
Short Circuit	Latch-mode (Cycle AC input or ExtOff/ PSON to reset)
Thermal (option)	Auto-recovery / latch off

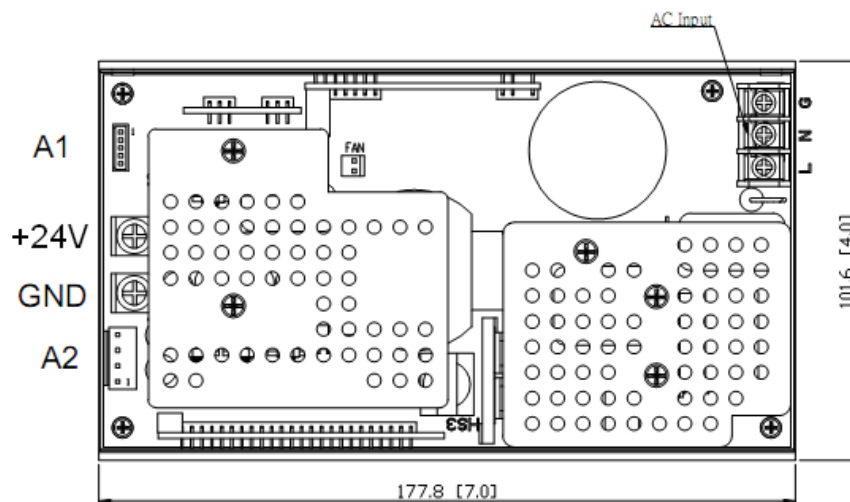


COMPLIANCE

EMI	FCC Class B / EN55022 Class B under all rated input and load conditions
Electrostatic Discharge	EN61000-4-2: Contact Discharge- Contact discharge in 2kV increments to 6kV for metallic surfaces including connector bodies. 10 discharges pretest point at each voltage: 5 positive polarity and 5 negative polarity. Air discharge – Air discharge in 2kV increments to 8kV for seams and non-metallic user accessible surfaces. 10 discharges pretest point at each voltage: 5 positive polarity and 5 negative polarity.
Radiated Susceptibility	EN61000-4-3: Electromagnetic Field Strength 3V/m
EFT / Bursts	EN61000-4-4: Direct Coupling Line to Ground Reference Plane: 1kV increments up to 2kV for a minimum of 1 min. at each voltage. Direct Coupling Neutral to Ground Reference Plane: 1kV increments up to 2kV for a minimum of 1 min. at each voltage. Direct Coupling Ground to Ground Reference Plane: 1kV increments up to 2kV for a minimum of 1 min. at each voltage
Surges	EN61000-4-5: The peak value of the bi-directional surge waveform shall be 2kV for common mode and 1kV for differential modes of transient surge injection. No unsafe operation or no user noticeable degradation is allowed under any condition.
Conducted Immunity	EN61000-4-6: 0.15~800MHz, 10V, 80% AM
Voltage Dips	EN61000-4-10: 95% Dip & 10ms, 30% Dip & 500ms
Voltage Interruptions	EN61000-4-11, 95% reduction, 5s
Fluctuations & Flicker	EN61000-3-3
Harmonic Distortion	EN61000-3-2 Class D
Safety Certifications	cTUVus UL/EN60950, CB Report IEC 60950, CE

Typical Outline Drawing:

(REFER TO PRODUCT MECHANICAL DRAWING FOR COMPLETE INFORMATION)



SIGNALS CONNECTOR

Pin	Signal
A1	
1	GND
2	PowerGood
3	AC_Fail
4	ExtOff / PSON
5	+24V sense
A2	
1	5Vs
2	12V
3	GND
4	GND

DERATING

