

## Switching Power Supply 100 Watt / Single Output

### Key Features:

- 100 Watts output Power
- 48 VDC Single Output Model (Adjustment range 40V-58V)
- Open Frame Package measuring only 3 x 5 x 1.08"
- Up to 90% Efficiency
- High Reliability in excess of 200,000 Hours
- 1+1 Redundant Operation with Integrated OR'ing Diodes
- International Safety Approvals
- Class B Emissions
- 3 Year Warranty



### Design Standards:



The ARFS-1011 series of AC/DC Power Supplies are intended for general use in ITE Applications. Designed with Universal Input and qualified to meet International Safety Approval and Emission Standards, these supplies can be utilized in a wide array of applications around the globe.

The high efficiency operation of these supplies allow for full-load convection-cooled operation, substantially reducing system costs.

Input Specifications:

Characteristic	Min	Typ	Max.	Units	Note
Input Voltage	90	-	264	VAC	
Input Frequency	47	-	63	Hz	
Inrush Current	-	-	30 50	A A	115 VAC Operation 230 VAC operation
Input Current	-	-	1.67	A	90 VAC Operation
Input Protection	-	-	4 250	A VAC	Single Fuse
Leakage Current	-	-	500	µA	264 VAC
Lightning Surge / Transients	-	-	±2k ±1k	VAC VAC	Line-Earth (EN61000-4-5) Line-Line (EN61000-4-5)
Voltage Dips	-	-	95	%	10ms (per EN61000-4-10)
Fluctuations / Flicker	-	-	-	-	Per EN61000-3-3
Voltage Interruptions	40	-	100	%	Per EN61000-4-11
Harmonics	0.95	-	-	pf	Per EN6100-3-2 Class D
Hold-Up Time	16	-	-	ms	90-264 VAC / Full Load

Output Specifications:

Characteristic	Min	Typ	Max.	Units	Note
Voltage Setpoint	40.00	48.00	58.00	VDC	
Output Current	0	2.1	2.5	Amps	Total 100W
Adjustment Range	40	-	58	VDC	
Ripple / Noise			1	%	Pk-pk max, 20MHz, measured at output connectors
Regulation	47.52		48.48	VDC	Max Line, Load, Temperature, 48VDC Setpoint
Dynamic Load: Deviation Recovery			5 10	% ms	20% Step Load
Output Rise Time			50	ms	10-90% of Rated VDC, Full Load (See figure 1)
Over-Voltage Protection	60		65	V	Latching (Recycle input to reset)
Over-Current Protection			4.5	A	Auto-recovery
Short Circuit Protection	-	-	-		Continuous (auto-recovery). An output short circuit is defined as any load impedance of less than 0.1 ohms
Redundant Operation (without remote sense)					All power supplies have an O-Ring diode to prevent one power supply failure from bringing down the system
Remote Sense			250	mV	

General Specifications:

Characteristic	Min	Typ	Max.	Units	Note
Temperature Operating Storage	0 -40		+50 +85	°C °C	Convection Cooled
Thermal Protection	100	105	110	°C	Thermistor attached to the primary heatsink will trip when the heatsink gets above 105°C +/-5°C
Humidity Operating Storage	0 0		90 95	% %	Non-Condensing Non-Condensing
Shock Operating Storage	10 40			G G	11msec, half-sine wave pulse, in both directions, on three mutually perpendicular axes
Vibration	0.25			G	10-250hz, 1 octave/min, 15 min dwell, 3 axes
Efficiency		87%			
Reliability	200			kHrs	Operated at 115VAC, Ground Benign, 25°C ambient. Calculation shall be based on Telcordia (Bellcore) SR-332 issue 1 (limited stress calculation)
Isolation (Hi-Pot)	1500			VAC	Primary to ground: 1500Vac/50Hz, 60 sec, Cut-off current:10mA

Electromagnetic Compatibility:

Characteristic	Description
Line Conducted 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 scams 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	EN610000-4-6: 0.15-80MHz, 10V, 80% AM
Voltage Dips	EN61000-4-10: 95% Dip & 10ms
Voltage Interruptions	EN61000-4-11, 40% reduction 5 cycle, 100% reduction 5s
Fluctuations & Flicker	EN61000-3-3
Harmonic Distortion	EN61000-3-2 Class D

Safety Standards:

UL/cUL 60950-1  
 TUV EN60950-1  
 CB Report IEC60950-1  
 CE Mark (Low Voltage Directive)



Outline Drawing:

