

ADF-07 Series

7 Watts Universal Input Range AC/DC Power Modules Single Outputs

Key Features

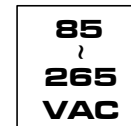
- High Efficiency up to 78%
- 85~265VAC, 47~440Hz Universal Input Range
- I/O Isolation 3000VAC
- EMI Complies With EN55022 Class B and FCC part 15, level B
- EMC Complies With EN61000
- MTBF > 330,000 Hours
- UL 60950-1 Safety Approval
- IEC61140 Safety Class II Approval
- Operating Temperature 71°C (Reference to Derating Curve)



ADF-07 is a 7-Watt series of AC-DC power modules. These modules have universal input range of 85-265VAC and are available in output voltages of 3.3V, 5V, 12V, 15V and 24V with efficiency as high as 78%.

Other features include continuous short circuit protection, overvoltage protection, output current limitation, EMC EN61000-4(-2,-3,-4) and EMI EN55022 level B approved which conducted noise compliance minimize design-in time, cost and eliminate the need for external components.

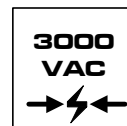
The ADF-07 series has IEC / EN / UL 60950-1 safety approval qualifies this product for worldwide markets. The series is a wide variety of applications including in commercial and industrial of the MTBF 330,000 hours.



Universal Voltage



Protection



I/O Isolation

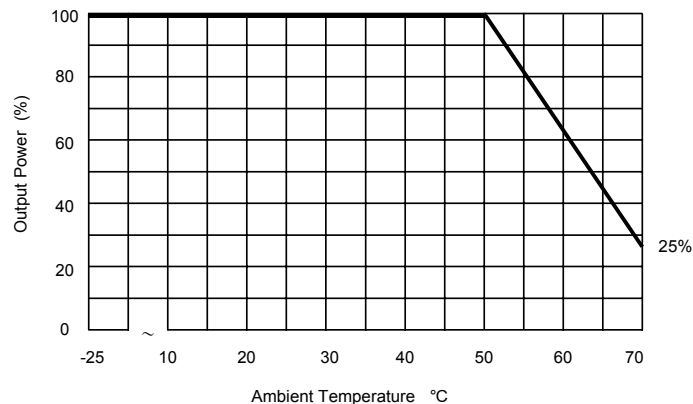


EN55022



EN61000

Derating Curve



Model Selection Guide

Model Number	Output Voltage	Output Current		Input Current		Capacitive Load	Efficiency
				115VAC, 60Hz			
	VDC	Max. mA	Min. mA	@Max. Load mA (Typ.)	@No Load mA (Typ.)	Max. uF	@Max. Load % (Typ.)
ADF-07S03	3.3	1400	140	96	10	2200	70
ADF-07S05	5	1400	140	139	10	2200	73
ADF-07S12	12	583	58	130	10	1000	78
ADF-07S15	15	466	47	130	10	1000	78
ADF-07S24	24	291	29	130	10	680	78

Environmental Specifications

Note :

Parameter	Conditions	Min.	Max.	Unit
Operating Temperature	Ambient	-25	71	°C
Storage Temperature		-40	85	°C
Humidity		---	95	%
Cooling	Free-Air Convection			
Conducted EMI	EN55022 Class B			
Conducted EMC	Standard	specification requirement		Performance Criteria
	EN61000-4-2	Air ±8KV Cont. ±4KV		B
	EN61000-4-3	80~1000MHz 10V/m 80% AM1KHz modulation		A
	EN61000-4-4	AC port ±2KV DC, SL, TL ±2KV not less than 1 min.		B
	EN61000-4-5	1.2/50uS(8/20uS) AC dif. ±1KV DC ±0.5KV		B
	EN61000-4-6	0.15~80MHz 10Vrms (functional earth ports included) 80% AM 1kHz modulation		B
	EN61000-4-11	30% 10ms 60% 100ms 95% 5000ms		B C C

1. Specifications typical at Ta=+25°C, resistive load, 115VAC, 60Hz input voltage, rated output current unless otherwise noted.
2. Ripple & Noise measurement bandwidth is 0-20 MHz.
3. These power modules require a minimum output loading to maintain specified regulation.
4. Operation under no-load conditions will not damage these devices; however they may not meet all listed specifications.
5. All AC/DC modules should be externally fused at the front end for protection.
6. Other input and output voltage may be available, please contact factory.
7. Specifications subject to change without notice.

General Specifications

Parameter	Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Input to Output, 60 Seconds	3000	---	---	VAC
Isolation Test Voltage	Input to output, Flash Tested for 1 Second	4700	---	---	VDC
Isolation Resistance	500VDC	100	---	---	MΩ
Switching Frequency		---	100	---	KHz
Hold-up Time	115VAC, 60Hz	---	15	---	ms
MTBF	MIL-HDBK-217F @ 25°C, Ground Benign	330	---	---	K Hours

ADF-07 Series

Input Fuse

All Models	
External Fuse (Recommended)	1.5A Slow – Blow Type

Input Specifications

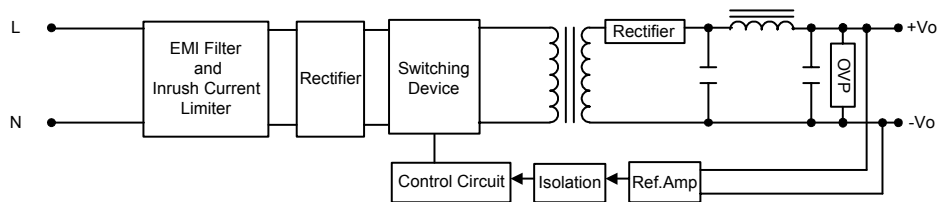
Parameter	Conditions	Min.	Typ.	Max.	Unit
Input Voltage Range	All Models	85	---	265	VAC
Input Frequency Range		47	---	440	Hz
Inrush Current (Cold Start at 25°C)	115VAC	---	---	10	A
	230VAC	---	---	20	A

Output Specifications

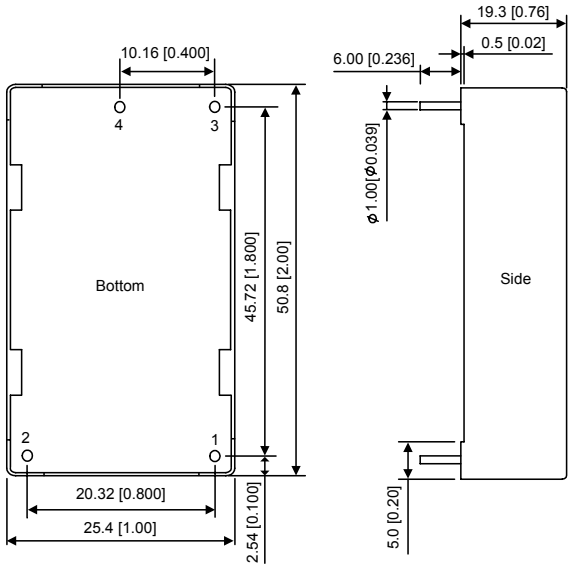
Parameter	Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy		---	± 1.0	± 2.0	%
Line Regulation	$V_{in} = \text{Min. to Max.}$	---	± 0.5	± 1.0	%
Load Regulation	$I_{out} = \text{Min. to Max.}$	---	± 0.5	± 1.0	%
Ripple & Noise (20MHz)	3.3 & 5.0VDC Output Models	---	1.5	1.8	% V_{pp} of V_o
	Other Output Models	---	0.8	1.0	% V_{pp} of V_o
Over Voltage Protection	Zener diode clamp	---	120	---	% of V_o
Temperature Coefficient		---	± 0.01	± 0.02	%/°C
Overshoot		---	---	5.0	%
Current limitation	85VAC, Hiccup technique, auto-recovery	105	---	---	%
Short circuit protection	Hiccup mode, indefinite (automatic recovery)				

Block Diagram

Single Output



Mechanical Dimensions



<i>Tolerance</i>	<i>Millimeters</i>	<i>Inches</i>
	<i>X.X±0.5</i>	<i>X.XX±0.02</i>
	<i>X.XX±0.25</i>	<i>X.XXX±0.01</i>
<i>Pin</i>	<i>±0.1</i>	<i>±0.004</i>

Pin Connections

<i>Pin</i>	<i>Single Output</i>
1	AC(N) – AC Neutral
2	AC(L) – AC Line
3	+Vout
4	-Vout

Physical Characteristics

Case Size : 50.8×25.4×19.3 mm
2.00×1.00×0.76 inches

Case Material : Plastic resin + Fiberglass

Weight : 44 g

Flammability : UL94V-0