

AGF-10 Series

10 Watts Universal Input Range AC/DC Power Modules

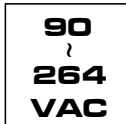


Single Outputs

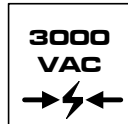
Key Features



- High Efficiency up to 76%
- 90~264VAC, 47~440Hz Universal Input Range
- Single Output Modules
- I/O Isolation 3000VAC
- EMI Complies With EN55022 Class B and FCC part 15, level B
- EMC Complies With EN61000
- MTBF > 300,000 Hours
- Meets IEC / EN / UL 60950-1 Safety Standards
- Meets IEC61140 Safety Class II
- Operating Temperature 71°C (Reference to Derating Curve)



Universal Voltage



I/O Isolation



Protection



EN55022



EN61000

AGF-10 is a 10 Watts series of AC-DC power modules. These modules have wide input range of 90~264VAC and are available in output voltages of 3.3V, 5V, 12V, 15V and 24V with efficiency as high as 76% .

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

The AGF-10 meets IEC / EN / UL 60950-1 safety approval qualifies this product for worldwide markets. The series is a wide variety of applications in commercial and industrial electronic equipment, and MTBF is up to 300,000 hours.

Environmental Specifications

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	EN6100-4-2			
	EN6100-4-3			
	EN6100-4-4			

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.)
AGF-10S03	3.3	2500	250	171	15	2200	70
AGF-10S05	5	2000	200	201	15	2200	72
AGF-10S12	12	833	83	191	15	1000	76
AGF-10S15	15	667	67	193	15	1000	75
AGF-10S24	24	417	42	201	15	680	72

Input Fuse Selection Guide

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

Input Specifications

Parameter	Model	Min.	Typ.	Max.	Unit
Input Voltage Range	All Models	90	---	264	VAC
Input Frequency Range		47	---	440	Hz
Inrush Current (Cold Start at 25°C)	115VAC	---	---	15	A
	230VAC	---	---	30	A

Output Specifications

Parameter	Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy		---	±1.0	±2.0	%
Line Regulation	Vin=Min. to Max.	---	±0.5	±1.0	%
Load Regulation	Io=Min. to Max.	---	±0.5	±1.0	%
Ripple & Noise (20MHz)	3.3 & 5.0VDC Output Models	---	1.5	1.8	%V _{pp} of Vo
	Other Output Models	---	0.8	1.0	%V _{pp} of Vo
Over Voltage Protection	Zener diode clamp	---	120	---	% of Vo
Temperature Coefficient		---	±0.01	±0.02	%/°C
Overshoot		---	---	5	%
Current limitation	85VAC, Hiccup technique, auto-recovery	105	---	---	%
Short circuit protection	Hiccup mode, indefinite (automatic recovery)				

General Specifications

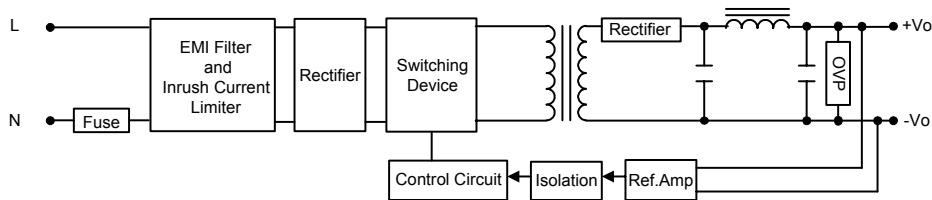
Parameter	Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage Rated	Input to Output, 60 Seconds	3000	---	---	VAC
Isolation Voltage Test	Input to output, Flash Tested for 1 Second	4700	---	---	VDC
Isolation Resistance	500VDC	100	---	---	MΩ
Switching Frequency		---	125	---	KHz
Hold-up Time	115VAC, 60Hz	---	15	---	ms
MTBF	MIL-HDBK-217F @ 25°C, Ground Benign	330	---	---	K Hours

AGF-10 Series

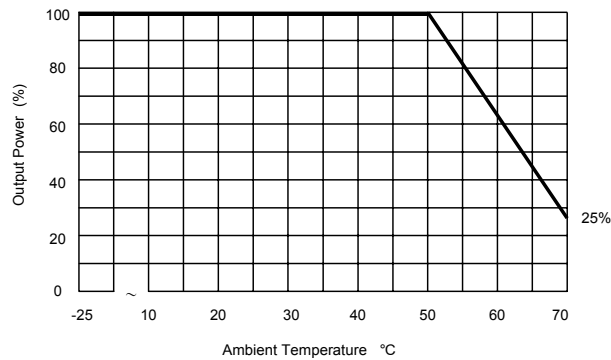
Note :

1. Specifications typical at $T_a=+25^{\circ}\text{C}$, 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.

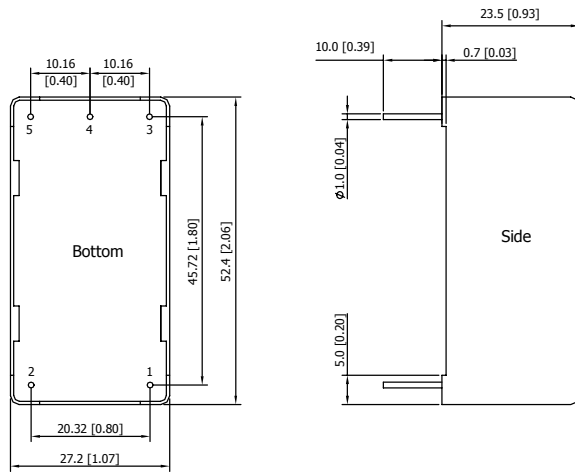
Block Diagram



Derating Curve



Mechanical Dimensions



Physical Characteristics

Case Size : 52.4×27.2×23.5 mm
2.06×1.07×0.93 inches

Case Material : Plastic resin + Fiberglass

Weight : 54g

Flammability : UL94V-0

Tolerance	Millimeters	Inches
	X.X±0.5	X.XX±0.02
	X.XX±0.25	X.XXX±0.01
Pin	±0.1	±0.04

Pin Connections

Pin	Function
1	AC(N) – AC Neutral
2	AC(L) – AC Line
3	+Vout
4	-Vout
5	No Pin