



## Industrial Power Supply

A-350FGF Series

## Datasheet

# A-350FGF-X

- ◇ Product Category: 350Watts Industrial Power Supply
- ◇ Version No.: R1.0
- ◇ Date Issued: July 10<sup>th</sup>, 2024

# CHUANGLIAN



## Product Features

- Input Voltage:  
90-132VAC/180-264VAC (Selectable by switch)
- Forced air cooling by built-in DC fan
- Multiple Protection: SCP, OVP, OCP, OTP
- Output voltage adjustment by potentiometer
- Operating Temperature: -30°C~+70°C (Refer to "Derating Curve" )
- 3 Years warranty



## Product Description

A-350FGF-x series is a 350 watts air-cooled metal enclosed industrial power supply. Adopting wide input voltage 90-132VAC/176-264VAC(selectable by switch), the entire series provides an output voltage line of 12V, 15V, 24V,36V and 48V for option. It can be adapted to different load application and meet various industrial application requirements. Besides, the EMC and safety regulations comply with the IEC/EN/UL62368 standards. High conversion efficiency, compact housing design, good heat dissipation, and all-round protection guarantee the high reliability and stability of this power supply.



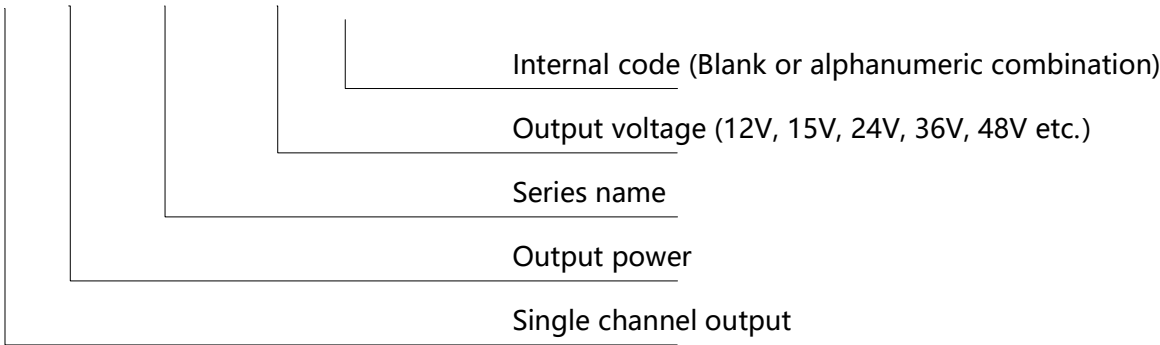
## Applications

Industrial control system, Mechanical and electrical equipment, Electronic instruments and equipment, Industrial automation machinery, Semiconductor device, etc.



## Model Encoding

### A-350 FGF-X-YY



### Model List:

Model	Output Power (W)	Output Voltage (V <sub>dc</sub> )	Adjustable output voltage <sup>[3]</sup> (V <sub>dc</sub> )	Output Current (A)	Ripple and noise (mV) <sup>[2]</sup>	Efficiency @230VAC (Typ.) <sup>[1]</sup>	Maximum capacitive load(uF)
A-350FGF-12	350.4	12	10.8-13.2	0-29.2	150	84%	4000
A-350FGF-15	349.5	15	13.5-16.5	0-23.3	150	84%	3200
A-350FGF-24	350.4	24	21.6-26.4	0-14.6	250	86%	1500
A-350FGF-36	349.2	36	32.4-39.6	0-9.7	250	86%	1500
A-350FGF-48	350.4	48	43.2-52.8	0-7.3	250	86%	470

**Note:** [1] All parameters not specially mentioned are measured at rated input voltage, full load and 25°C ambient temperature.

[2] Ripple & noise are measured at 20MHz of oscilloscope bandwidth(oscilloscope probe cap and ground clamp are removed)by using a 20±2cm twisted pair-wire terminated with a 47uF electrolytic capacitor and a 0.1uF high frequency capacitor that are connected in parallel at the output end.

[3] Under any steady operating condition, the total output power shall not exceed the rated output power. When the output voltage is raised, the total output power cannot exceed the rated output power. When the output voltage is turned down, the output current cannot exceed the rated output current.

※ For the product models under development, please contact our sales team or distributor for more information.



AC/DC 350W Switching Power Supply  
A-350FGF Series



⊙ Input Specification:

Parameter	Min.	Typ.	Max.	Notes
Input AC Voltage	90V <sub>ac</sub>		132 V <sub>ac</sub>	Selectable by switch
	176V <sub>ac</sub>		264V <sub>ac</sub>	
Rated Input AC Voltage	100V <sub>ac</sub>		120 V <sub>ac</sub>	
	200V <sub>ac</sub>		240V <sub>ac</sub>	
Input DC Voltage	127V <sub>dc</sub>		186 V <sub>dc</sub>	
	248V <sub>dc</sub>		373 V <sub>dc</sub>	
Input Frequency	47Hz		63 Hz	
Maximum Input Current			8.6 A	115Vac, full load
			4.3 A	230Vac, full load
Leakage Current			3.5mA	240Vac/50Hz

⊙ Output Specifications:

Parameter	Min.	Typ.	Max.	Notes
Output Voltage Tolerance	-1.5%		+1.5%	All models
Line Regulation	-0.5%		+0.5%	All models
Load Regulation	-1.5%		+1.5%	All models
Setup Time			3000ms	115Vac/230Vac, full load
Rise Time			50ms	115Vac/230Vac, full load
Hold up Time	16ms			115Vac/230Vac, full load



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### ◎ Efficiency:

Parameter	Min.	Typ.	Max.	Notes
Efficiency@115 V <sub>ac</sub>				
A-350FGF-12	82%	83%		Ambient temp. 25±5°C, full load
A-350FGF-15	82%	83%		
A-350FGF-24	84%	85%		
A-350FGF-36	84%	85%		
A-350FGF-48	84%	85%		
Efficiency@230 V <sub>ac</sub>				
A-350FGF-12	83%	84%		Ambient temp. 25±5°C, full load
A-350FGF-15	83%	84%		
A-350FGF-24	85%	86%		
A-350FGF-36	85%	86%		
A-350FGF-48	85%	86%		

### ◎ Protection:

Parameter	Min.	Typ.	Max.	Notes
Over Load	110%		150%	Hiccup mode, recovers automatically after fault condition is removed.
Over Voltage	110%Vo		140%Vo	Double loop constant voltage output, recovers automatically after fault condition is removed.
Over Temperature (Ambient Temp.)	63°C	70°C	77°C	OTP, recovers automatically after fault condition is removed.
Short Circuit	Hiccup mode when output side has short circuit fault, recovers automatically after fault condition is removed.			



# AC/DC 350W Switching Power Supply

## A-350FGF Series



### ◎ Safety & EMC:

Safety Category	Country/ Territory	Item	Standards
UL/CUL	USA/ Canada	Safety Standard	UL 62368-1
			CAN/CSA C22.2 No. 62368-1:19
CE	Europe		EN 62368-1
CB	CB Countries		IEC 62368-1
CCC	China		GB 4943.1

EMI Category	Country/ Territory	Item	Standards/Criteria	
FCC	USA/ Canada	Conducted Emission	FCC part 15(ANSI C63.4 )	Class B
		Radiated Emission	FCC part 15(ANSI C63.4 )	Class B
CE	Europe	Conducted Emission	EN 55032	Class B
		Radiated Emission	EN 55032	Class B
		Voltage Flicker	EN 61000-3-3	
CCC	China	Conducted Emission	GB/T 9254.1	Class B
		Radiated Emission	GB/T 9254.1	Class B

EMS Category	Country/ Territory	Item	Standards/Criteria		
CE	Europe	Electro-static Discharge	EN 61000-4-2	Air 8 kV / Contact 4 kV	Criteria B
		Radiated Susceptibility	EN 61000-4-3	80MHz–1GHz 10V/m	Criteria A
		Electrical Fast Transient	EN 61000-4-4	±2KV	Criteria B
		Surge Immunity	EN 61000-4-5	CM±2KV/DM ±1KV	Criteria B
		Conducted Emission Immunity	EN 61000-4-6	10Vr.m.s	Criteria A
		Power Frequency Magnetic Field Immunity	EN 61000-4-8	300A/m, 1 s	Criteria A
		Voltage Dips, Drops and Interruptions Immunity	EN 61000-4-11	Drop to 70%UT, last for 500mS	Criteria C
				Drop to 0%UT, last for 10mS	Criteria B
				Drop to 0%UT, last for 20mS	Criteria B
				Drop to 0%UT, last for 5000mS	Criteria C

**Note:**  
The power supply is considered as a component which will be installed into a final equipment. All the EMC tests are be executed by mounting the unit on a metal plate with size 400mm\*400mm\*3mm. The final equipment must be re-confirmed that it still meets EMC directives.

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### ◎ General Specifications:

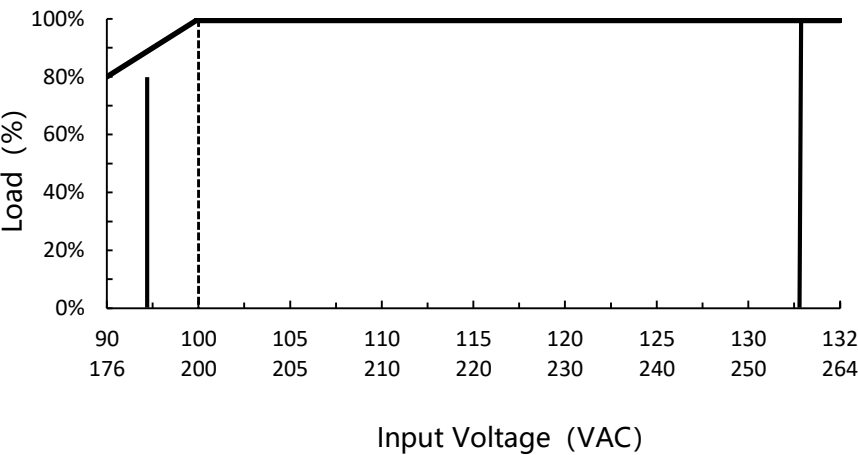
Parameter		Min.	Typ.	Max.	Notes
Dielectric Strength [4]	Input-Output	3000 V <sub>ac</sub>			Last for 60s, leakage current < 7mA
	Input-PE	1800 V <sub>ac</sub>			
	Output-PE	500 V <sub>ac</sub>			
Insulation Resistance	Input-Output	100MΩ			Test Voltage: 500V <sub>dc</sub>
	Input-PE	100MΩ			
	Output-PE	100MΩ			
Working Temp.		-30°C		+70°C	Refer to "Derating Curve"
Working Humidity		20%RH		95%RH	Non-condensing
Storage Temp.		-40°C		+85°C	
Storage Humidity		10%RH		95%RH	Non-condensing
Temp. Coefficient		-0.03%/°C		0.03%/°C	0~50°C
Mean Time Between Failure (MTBF)		100000 hours			25°C, MIL-HDBK-217F
Dimension		215*115*30mm			L*W*H
Net Weight			650g		
Packing		20PCS/16Kg/Carton, Carton Dimension: 395(L)*240(W)*275(H)mm			

**Note:** [4] The minimum withstand voltage is 3000Vac, if a higher test standard is needed, please contact our sales representative or FAE.

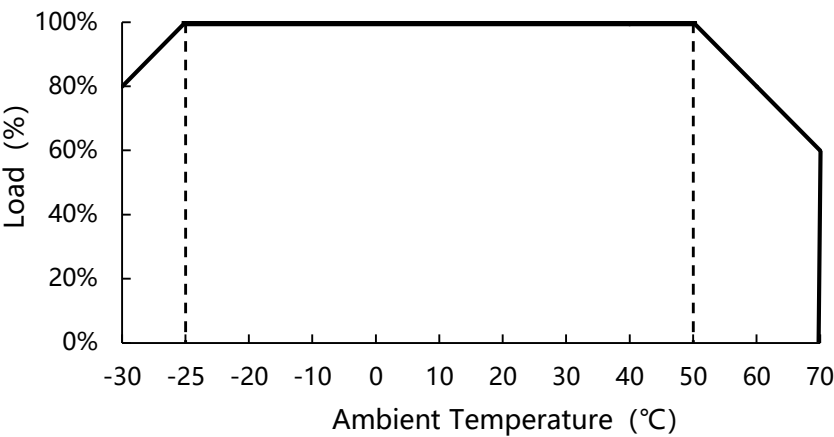


◎ Performance Curve:

**Static Characteristics**



**Derating Curve**



**Note:**  
1. If more detailed test data during application is needed, please contact our technical team to obtain application notes of related products.  
2. This product is suitable for use in natural air convection environment, if used in a closed environment, please consult our technical support personnel.

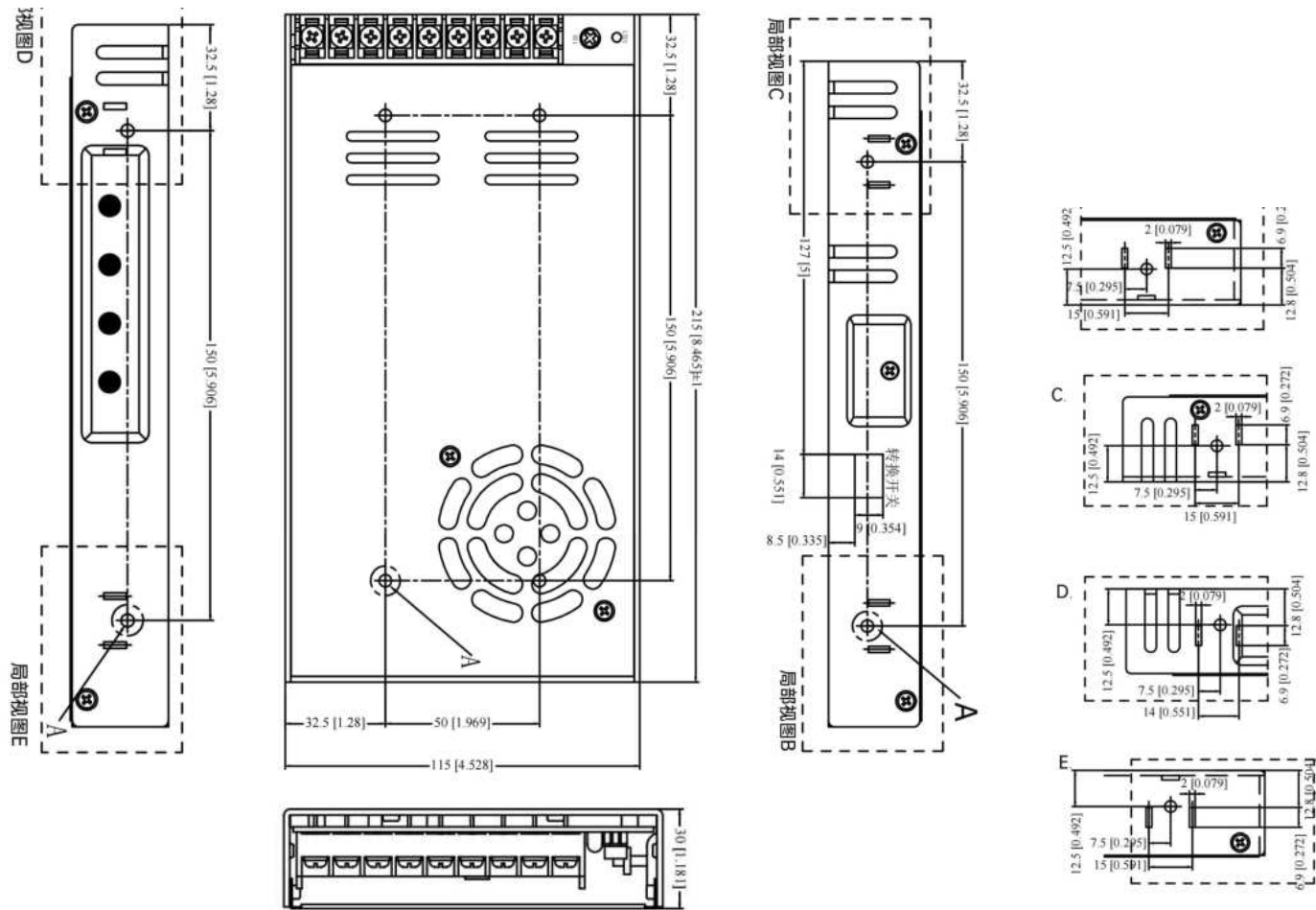


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### ◎ Mechanical Specification:



### Input and Output Terminals Description(Default)

Pin	Function	Screw spec. & Torque(max)
L	AC LINE	Screw: M4*7 Torque: 12Kgf.cn(1.2N.m)
N	AC NETURAL	
	EARTH	
V-	DC output -	Screw: M4*7 Torque: 12Kgf.cn(1.2N.m)
V-	DC output -	
V-	DC output -	
V+	DC output +	
V+	DC output +	

8-M4 mounting hole

Screw: M4  
Torque(max): 8Kgf.cn(0.8N.m)  
Penetration Depth L (max): 4mm

Note:  
Unit: mm[inch],  
General tolerances:  $\pm 0.5[\pm 0.020]$

