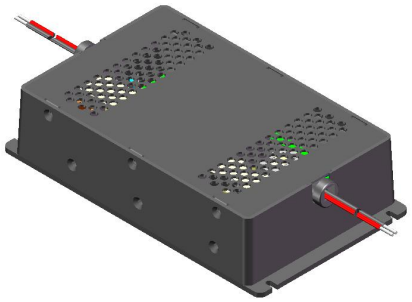
Typical Feature

- Wide input voltage range: 300-600VDC
- No-load power consumption ≤ 2W
- Transfer Efficiency: Typical 90%
- Protection: short circuit, over current, anti-reverse connection protection
- Isolation Voltage 4000Vac
- Altitude: 5000m
- Meet UL1741, IEC/EN62109 test standards
- Switching Frequency 100KHz
- RoHS compliant



Application Field

DD350-300SXXG1N6-----is a small-size, high-efficiency module power supply provided by Aipu to customers. This series of power supplies has the advantages of ultra-high and ultra-wide input range, low ripple, low temperature rise, low power consumption, high efficiency, high reliability, high safety isolation, and good EMC performance. EMC and safety specifications meet the international standards of UL1741, CSA-C22.2 No.107.1, and IEC/EN62109. This series of products has been widely used in many fields such as photovoltaic home energy storage, providing stable working voltage for load equipment. When the product is used in an environment with relatively harsh electromagnetic compatibility, please refer to the application circuit provided by our company.

Typical Product List

Certificate	Part No	Input Specification			Max. Capacitive Load (MAX)	Ripple & Noise 20MHz（MAX）	Efficiency full load, 400VDC (Typ.)
		Power	Voltage1	Current1			
		（W）	Vo（V）	Io（m A）	u F	mVp-p	%
--	DD350-300S24G1N6	350	24	14600	2200	100	90
--	DD350-300S28G1N6	350	28	12500	1500	120	90
--	DD350-300S32G1N6	350	32	10950	1500	150	90

Note 1: The typical value of output efficiency is based on the product being aged at full load for half an hour.

Note 2: The full load efficiency (%, TYP) in the table fluctuates by ±2%. The full load output efficiency is equal to the total output power divided by the input power of the power module.

Note 3: The ripple and noise test method uses the twisted pair test method. For specific test methods and matching, please refer to the following (Ripple & Noise Test Instructions).

Input Specification

Items	Test Conditions	Min.	Typ.	Max.	Unit
Input Voltage Range	DC input	300	400	600	VDC
Input Current	300VDC@100%Load	-	-	2.0	A
	600VDC@100%Load	-	-	1.0	
Surge Current	600VDC	-	150	-	

No-load power consumption	Input 300VDC	-	-	2.0	W
	Input 600VDC	-	-		
External fuse	/	6A /1000VDC, slow fuse, must be connected			
Input anti-reverse connection protection	/	Available			
Hot Plug	/	N/A			
Control Pin(Ctrl)	/	W/O			

Output Specification

Items		Test Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy		Full voltage range, any load	-	±2.0	-	%
Line Regulation		Nominal load	-	±1.0	-	%
Load Regulation		Input nominal voltage, 20%~100% load	-	±2.0	-	%
Minimum Load		Single Output	0	-	-	%
Turn on Delay Time		Input 300vdc (full load)	-	3000	-	ms
Power-off Retention Time		Input 600vdc (full load)	-	10	-	
Dynamic Response	Overshoot Range	25%~50%~25% 50%~75%~50%	-5.0	-	＋5.0	%
	Recovery Time		-5.0	-	＋5.0	mS
Output overshoot		Input full voltage range	≤10%Vo			%
Short Circuit Protection			Support, need to power off and restart			/
Drift coefficient		/	-	±0.02	-	/
Overcurrent protection		Input full voltage range	⩾110% Io, power off and restart required			/

EMC Characteristics

Total Item		Sub Item	Test Standard	Class
EMC	EMI	CE	CISPR32/EN55032	CLASS A
		RE	CISPR32/EN55032	CLASS A
	EMS	RS	IEC/EN61000-4-2	Contact ±6KV / Air ±8KV Perf.Criteria A
		CS	IEC/EN61000-4-3	10V/m Perf.Criteria A
		ESD	IEC/EN61000-4-4	±4KV Perf.Criteria A
		Surge	IEC/EN61000-4-5	±2KV Perf.Criteria A
		EFT	IEC/EN61000-4-6	10Vr.m.s Perf.Criteria A

General Specification

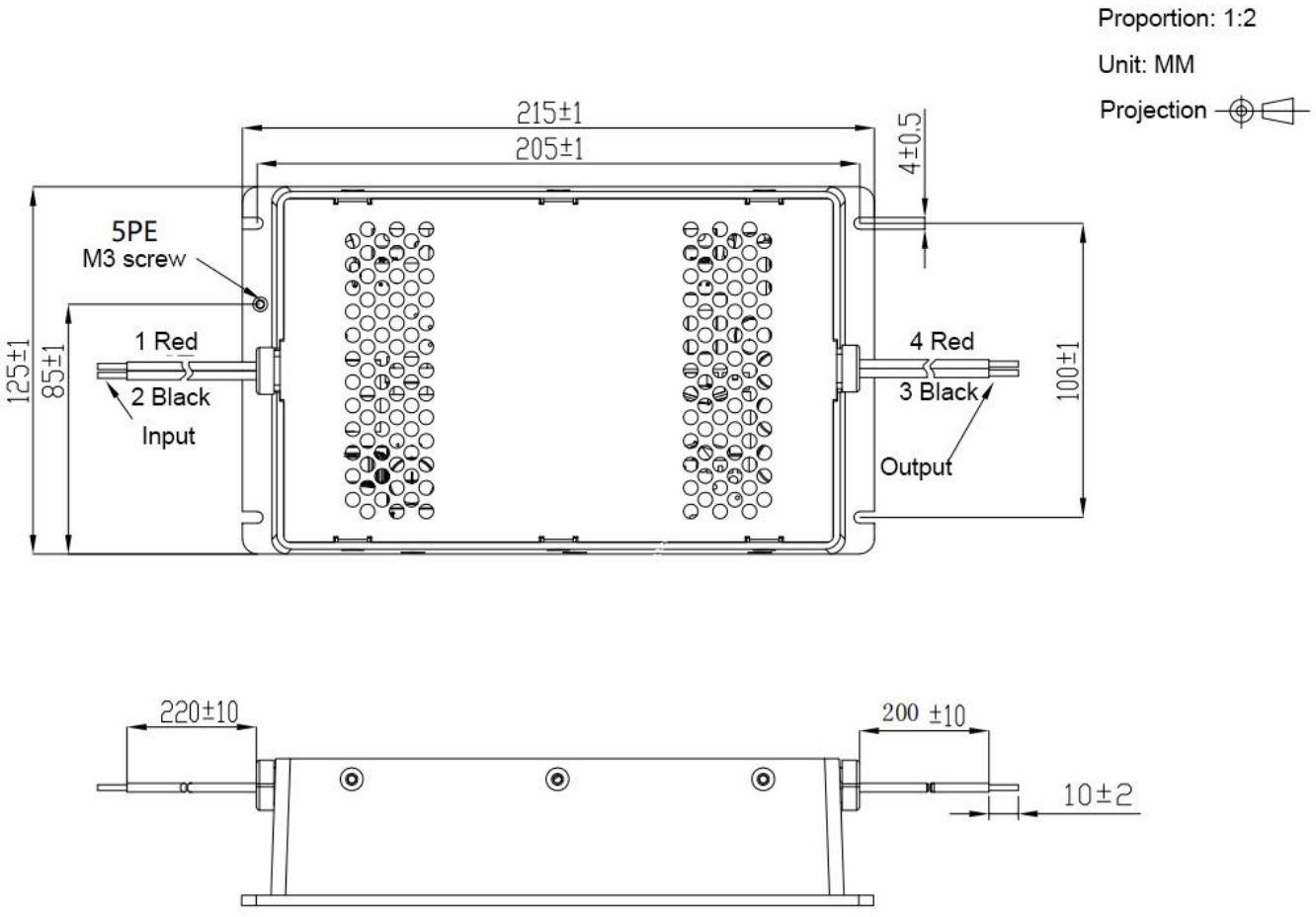
Items	Test Conditions	Min.	Typ.	Max.	Unit
Switching Frequency	-	/	100	/	KHz
Operating Temperature	Refer to Temperature Derating Curve	-40	/	+70	℃
Storage Temperature	-	-40	/	+85	
Pin Withstand Soldering Temperature	Wave soldering	260±4℃，Time5-10S			
	manual welding	360±8℃，Time 4-7S			

Storage Humidity		-	-	-	95	%RH
Isolation Voltage	I/P-O/P	Test 1min, leakage current<1mA	4000	-	-	VAC
	I/P-PE		4000	-	-	VAC
	O/P-PE		4000	-	-	VAC
Insulation Resistance		Input to output , voltage 500VDC	50	-	-	MΩ
Safety standard		-	UL1741、CSA-C22.2 No.107.1、IEC/EN62109			
Vibration		-	10-55Hz,10G,30Min,alongX,Y,Z			
Safety Class		-	CLASS II			
MTBF		-	MIL-HDBK-217F 25℃＞300,000H			

Physical Characteristic

Case Material		Mental
Dimension	Refer to Temperature Derating Curve	215.0X125.0X50.0 mm
Weight	-	2000g（TYP）
Cooling Method		Natural air cooling

Package Dimension



Packing Code	L x W x H	
G	215.0X125.0X50.0 mm	8.465X4.921X1.969inch

Pin Definition

Pin-Out	1	2	3	4	5
DD30-32S12B3R5	+Vin	-Vin	-V0	+V0	PE

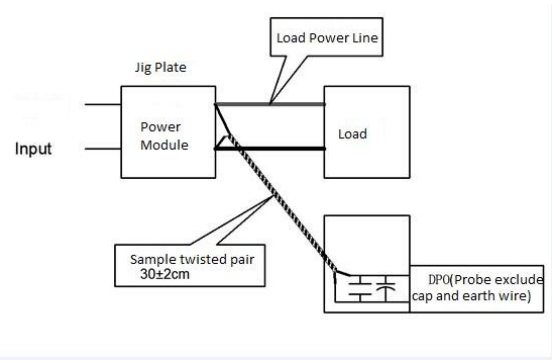
Ripple & Noise Test (Twisted pair method 20MHz bandwidth)

Ripple& Noise Test:

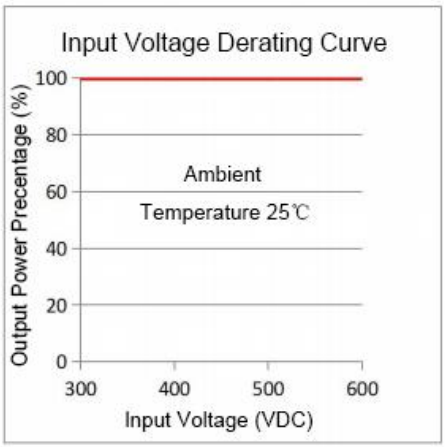
1.12# twisted pair to connect, Oscilloscope bandwidth set as 20MHz, 100M bandwidth probe, terminated with 0.1uF polypropylene capacitor and 10uF high frequency low resistance electrolytic capacitor in parallel, oscilloscope set as Sample pattern.

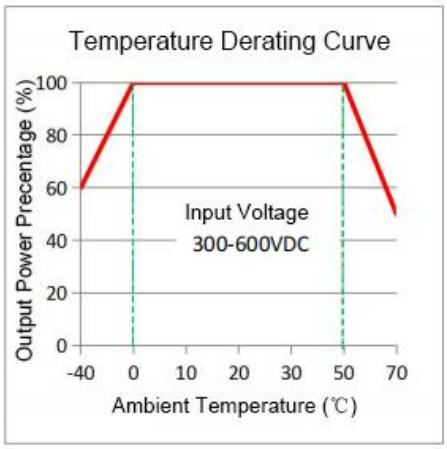
2. Output Ripple &Noise Test Method:

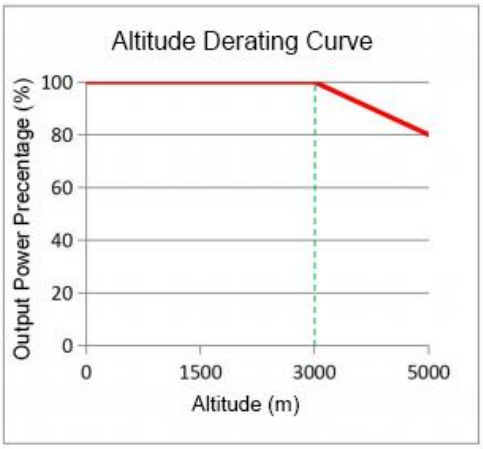
Input terminal connect to power supply, output terminal connect to electronic load through jig plate, Use 30cm±2 cm sampling line, Power line selected from corresponding diameter wire with insulation according to the flow of output current.



Product Characteristic Curve



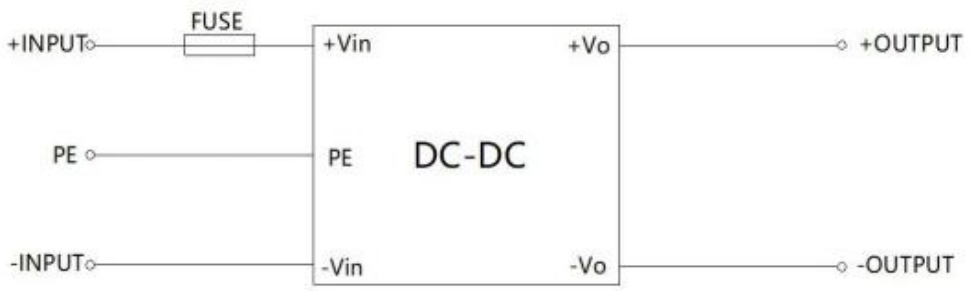




Note 1: When the ambient temperature is -40~0℃, +50~+70℃, the voltage must be derated based on the temperature derating curve.

Note 2: This product is suitable for use in a natural air cooling environment. Please contact us if it is used in a closed environment.

Typical Application Circuit and EMC Recommended Parameters



Part No.	FUSE
DD350-300S24G1N6	6A /1000VDC,slow fuse, necessary
DD350-300S28G1N6	6A /1000VDC,slow fuse, necessary
DD350-300S32G1N6	6A /1000VDC,slow fuse, necessary

Note 1:

1. The product should be used within the specification range, otherwise it will cause permanent damage to the product;
2. The product input terminal must be connected to a fuse;
3. If the product works below the minimum required load, it cannot be guaranteed that the product performance meets all the performance indicators in this manual;
4. If the product works beyond the product load range, it cannot be guaranteed that the product performance meets all the performance indicators in this manual;
5. Unless otherwise specified, the above data are measured at Ta=25℃, humidity<75%, input nominal voltage and output rated load (pure resistance load);
6. All the above index test methods are based on our company's standards;
7. The above are the performance indicators of the product models listed in this manual. Some indicators of non-standard model products will exceed the above requirements. For specific details, please contact our technical personnel directly;
8. Our company can provide product customization;
9. Product specifications are subject to change without prior notice. Please pay attention to the latest manual published on our official website.

Guangzhou Aipu Electron Technology Co., Ltd
Address: Building 4, HEDY Park, No.63, Punan Road, Huangpu Dist, Guangzhou, China.
Tel: 86-20-84206763 Fax: 86-20-84206762 HOTLINE: 400-889-8821
E-mail: sales@aipu-elec.com Website: https:// www.aipupower.com