Product characteristics



• Package Type: DIP, lead wire;

• Temperature Range: -40°C to +85°C;

• Conversion Efficiency: 82 ~ 87%;

• Isolation Withstand Voltage: 1500VDC;

• Input Range: 85 ~ 264VAC, 120 ~ 370VDC;

• Output Protection: Overcurrent and short-circuit protection;

• Application Fields: Industrial, instrumentation, RF communications, rail transit, smart streetlights, smart switches, smart home.

Version	Edit description	Date	Maintainer
V2.45	Change parameters	2024-08-23	L J
V2.46	Add model specifications to the product line.	2025-07-23	L J

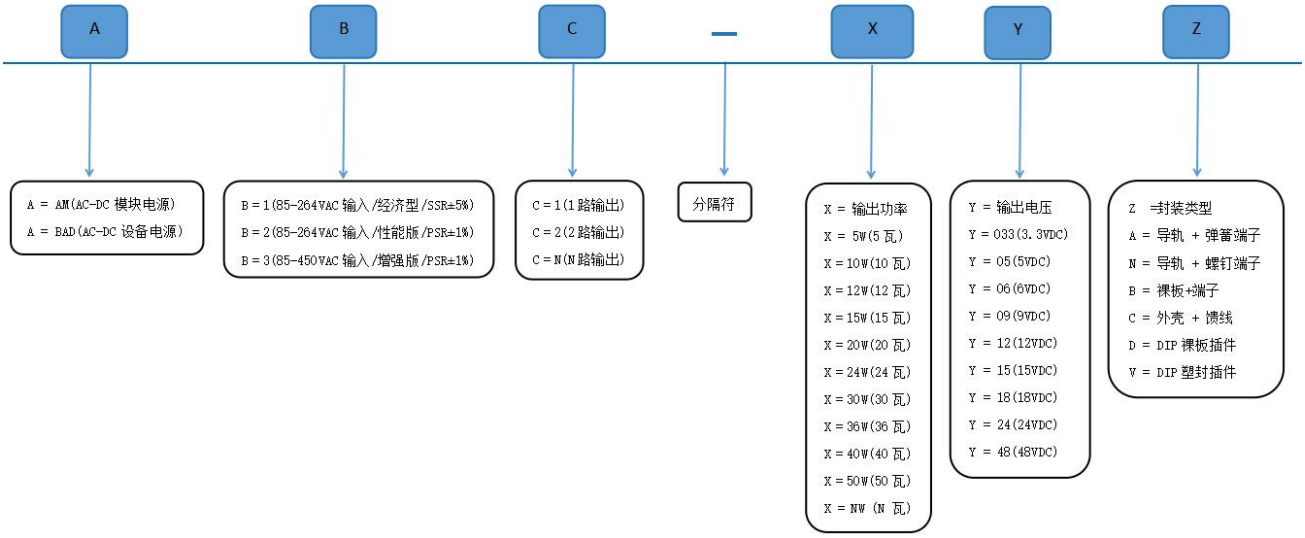
Selection Table

Model	Input Voltage Range	Output			Efficiency(%) Min./Typ.	Maximum capacitive load（μF）
		Power（W）	voltage（VDC）	current （mA） Max./Min		
AM21-5W05V	85 ~ 264VAC 120~370VDC	5	5	1000	75	1000
AM21-5W09V			9	550	78	820
AM21-5W12V			12	420	78.5	680
AM21-5W15V			15	333	80	560
AM21-5W24V			24	208	80.5	470

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Product Series and Model Description



Input parameters

Project	Operating conditions	Min	Typical value	Max	Unit
Input Voltage Range	DC Input	85	--	264	Vac
	AC Input	119	--	370	Vdc
Input Frequency	AC Input	47	--	63	Hz
Input Current	AC Input (220VAC/50Hz)	--	52	--	mA
Startup Time		--	800	1500	ms
Inrush Current	AC Input	--	10	--	A
Input Filter Type		CLC			
External Fuse		1A/250VAC,Slow break, must reconnect.			

Output Parameters

Project	Operating conditions		Min	Typical value	Max	Unit
Output Voltage Accuracy	--	--	--	±1.0	±1.5	%

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Voltage Regulation Rate	Full Load		--	±0.25	±0.5	%
Load Regulation	10%–100% Load		--	±1.0	±2	%
Ripple Noise	20MHz Bandwidth, 100% Load		--	--	120	mV
Temperature Coefficient	Full Load		--	--	±0.05	%/℃
Short-Circuit Protection			Sustainable, self-recovering			
Overcurrent Protection			110~150% Io Self-recovery			
Minimum Load			0	--	--	%

General Characteristics

Project	Operating conditions		Min	Typical value	Max	Unit
Insulation Withstand Voltage	Input - Output		1500	--	--	Vac
Operating Ambient Temperature			-40	25	+55	℃
Storage Temperature			-40	25	+85	℃
Operating Humidity			--	--	95	%RH
Welding Temperature	Wave soldering		260 ± 5℃; time：5-10s			
	Manual soldering		360 ± 10℃; tim：3-5s			
Switching Frequency			--	65	72	KHz
Mean Time Between Failures			MIL-HDBK-217F@25℃ > 200,000 h			

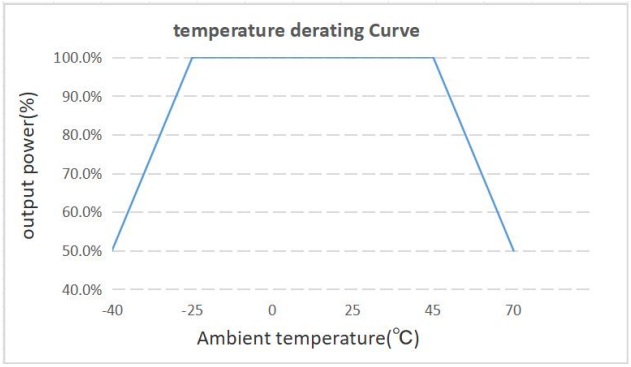
Mechanical Specifications

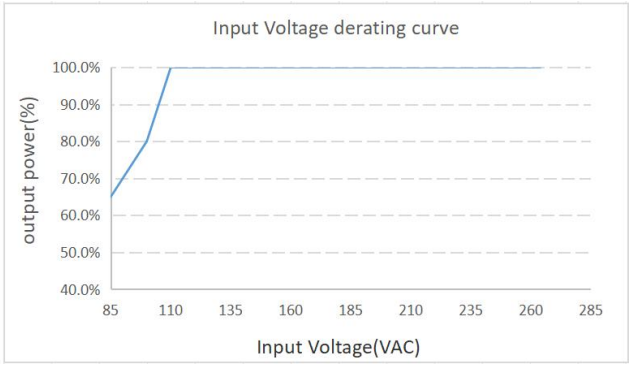
Housing Material		Flame-retardant and heat-resistant
Dimensions	AM21-5W-V	34.7*20.6*15.5mm
Product Weight	AM21-5W-V	18g(Typ.)
Cooling Method		Natural cooling

Product Feature Curve

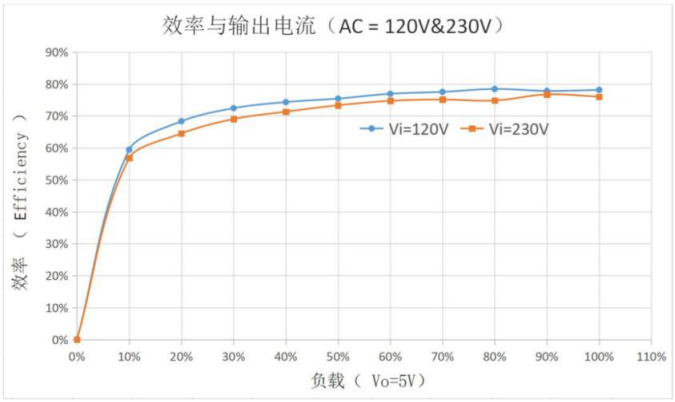
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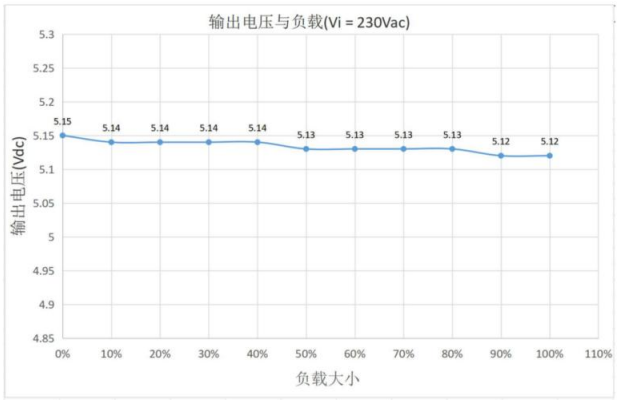
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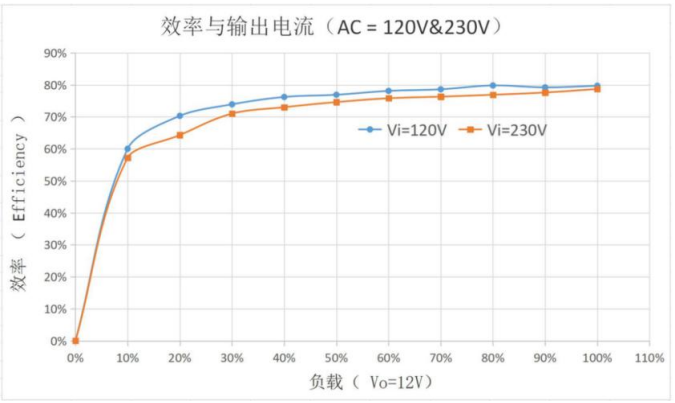


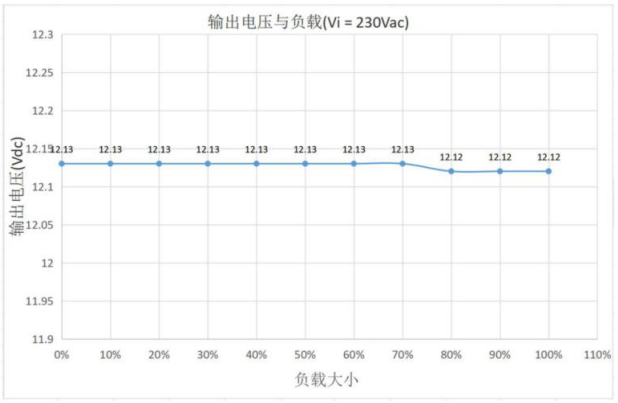


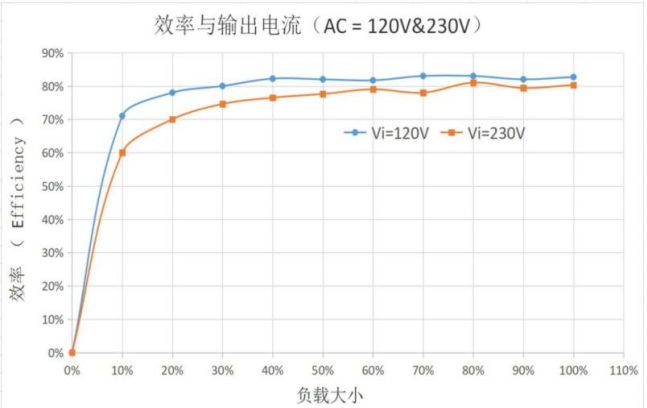
Conversion Efficiency and Load

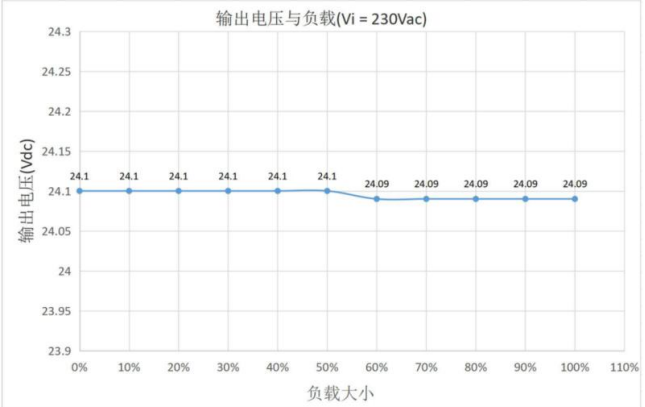










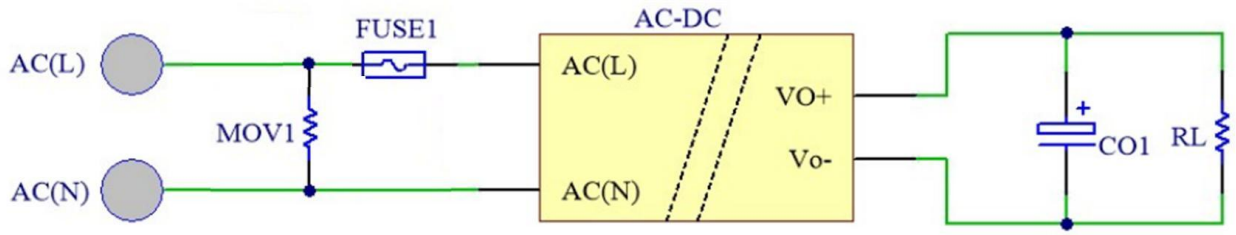


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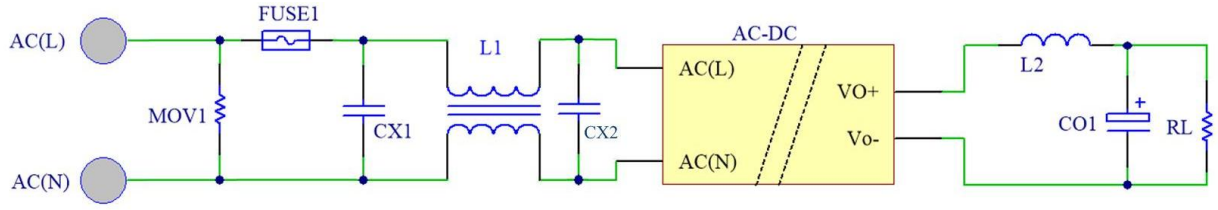
Reference Design

Typical Application Design



MOV1	FUSE1	CO1
7D 471K	2A/250VAC Slow-blow, required	220uF (High frequency low resistance)

EMC Recommended Circuit Design



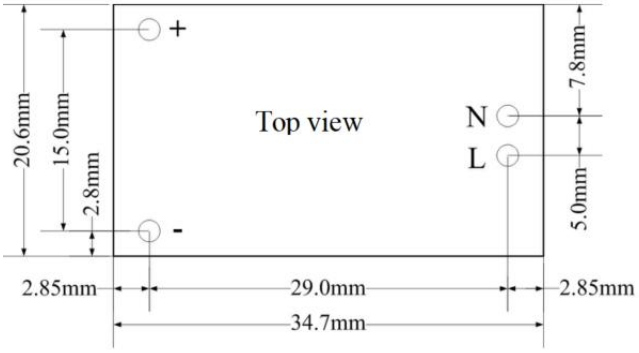
MOV1	FUSE1	CX1,CX2	L1	L2	CO1
7D 471K	2A/250V Slow disconnection, must reconnect	0.1uF/250V	UU9.8 - 10mH	0.47uH SLO0420HR47MTT	220uF±20% High frequency, low impedance

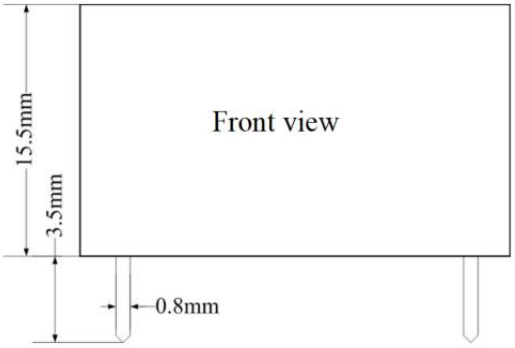
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Product Dimension Drawing

AM21-5WXV





Note:

Pin diameter tolerances:±0.1mm

General tolerances:±0.5mm

PIN	Note
L	AC_L AC Input_Live Wire
N	AC_N AC Input_Neutral Wire
+	+DC DC Output Positive Terminal
-	-DC DC Output Reference Ground

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