AC-DC Converter

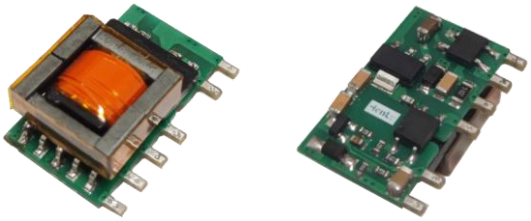
AS220S__B-5WH0 Series

HenLv

Features

- Wide input 85-305VAC/120-430VDC
- SIP（PCB pins）
- Operating temperature: -40°C～+85°C
- Isolation 3000VAC 5mA 1Minute
- Internal SMD design
- Cooling Natural
- Good shielding and anti-interference performance and electromagnetic compatibility, lightning protection, output over current, short circuit protection, overheating protection, self-recovery and other functions

Product Picture



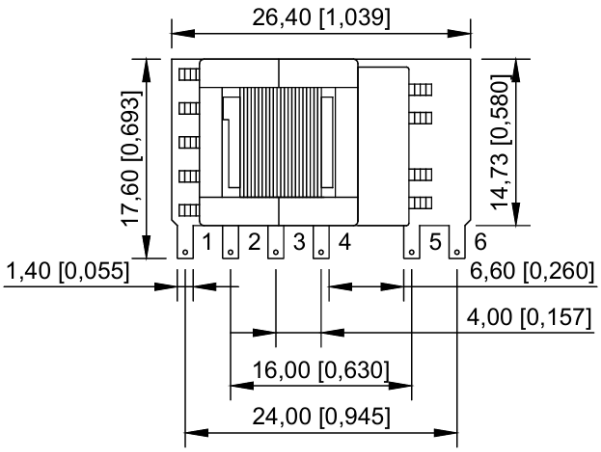
Patent protection

EMC-EN55032
EN55035
LVD-EN62368

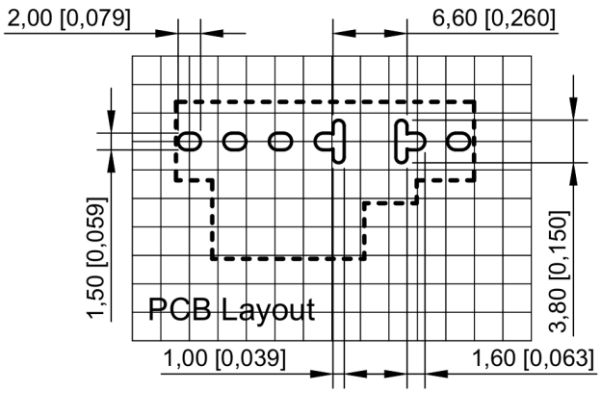
Dimensions

AS220S__B-5WH0 Series Dimensions

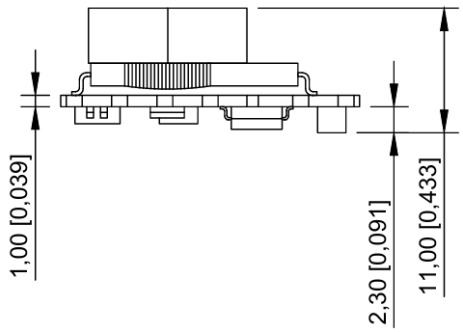
Front view



Top view



Note: The grid distance is 2.54*2.54mm



Bottom view

Pin	Function
1	AC(L)
2	AC(N)
3	+V(CAP)
4	-V(CAP)
5	0V
6	+XXVDC

Note:
Size unit: mm[inch]
Pin section tolerance: ±0.1[±0.004]
Unmarked tolerance: ±0.25[±0.01]
The device layout is for reference only.

1. Between 5-6 pins and an electrolytic capacitor 200uF/35V(high frequency and low resistance), the positive electrode of the capacitor is connected to 6 pins, and the negative electrode is connected to 5 pins.
2. Connect an electrolytic capacitor not less than 10uF/450V between 3-4 pins. Connect the positive pole of the capacitor to 3 pins and the negative pole to 4 pins.

Application

Railway communication, display, monitoring equipment, petrochemical, industrial control, remote power supply system, switching system and other communication equipment, digital products, multi-way power supply equipment and instruments.

Selection Guide

Model	Ouput Power (W)	Vin (V)	Vout (V±2%)	Full Load Output Current (mA)	Efficiency (%)	Isolation (VAC)
AS220S3.3B-5WH0	5	85-305VAC (120-430VDC)	3.3	1515	⩾69	3000
AS220S05B-5WH0			5	1000	⩾76	3000
AS220S12B-5WH0			12	416	⩾79	3000
AS220S15B-5WH0			15	333	⩾79	3000
AS220S24B-5WH0			24	210	⩾81	3000

Note: The company for customers to customize any input and output module power supply, if you have special needs, please call our company, unless otherwise specified, input =Vi, the characteristics of the module power supply should meet the requirements of Table 1, and applicable to the full temperature range (-40°C⩽Tc⩽85°C)

Electrical Characteristics

Characteristic	Symbol	Conditions Vi ,-40°C⩽Tc⩽85°C (Unless otherwise specified)	Min	Max	Unit
Output Voltage	Vo	Full Load	Vo-2%	Vo+2%	V
Output Current	Iomax	—	—	P(Power)/U(Output voltage)	A
Output Ripple Voltage	Vp-p	Full load，Vi，BW=20MHz，Normal Temperature	—	80	mV
Output Noise Voltage	Vp-p	Full load，Vi，BW=20MHz，Normal Temperature	—	150	mV
Voltage Regulation	Sv	Vimin、Vi、Vimax，Full Load	—	<0.5	%
Load Regulation	Si	Vi，Io=(10%~100%)Iomax	—	<0.5	%
Efficiency	η	Vi，Full load，Normal Temperature	69	—	%
Insulation Resistance	Rl	Input/output, test voltage: 500VDC	100	—	MΩ

General Characteristics

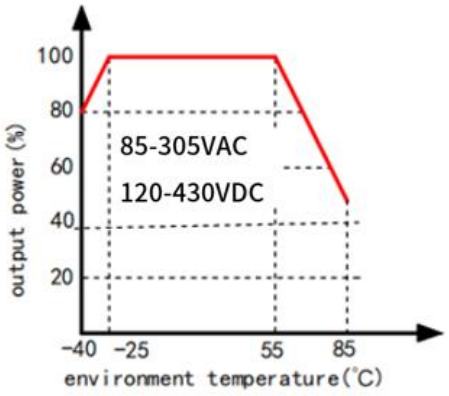
EMC Specifications	Magnetic field sensitivity test	GB-4943
	Electrostatic discharge sensitivity test	GB-4943
	Radiation sensitivity test	GB-4943
	Conduction sensitivity test	GB-4943
Temperature Excursion	<0.03%/°C	
Storage Temperature	-40°C~125°C	
Input Frequency	47Hz~63Hz	
Humidity	20%~95%RH	
Leakage Current	5mA	
MTBF	>500000H	

Mechanical Specifications

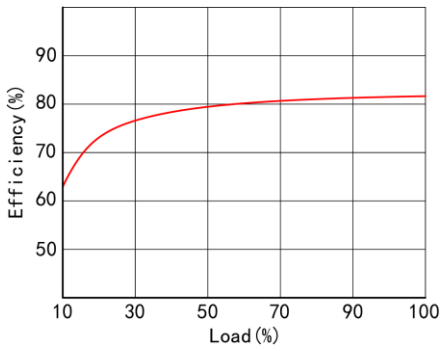
Size	26.40 x 14.73 x 11.00 mm

Typical Characteristic Curves

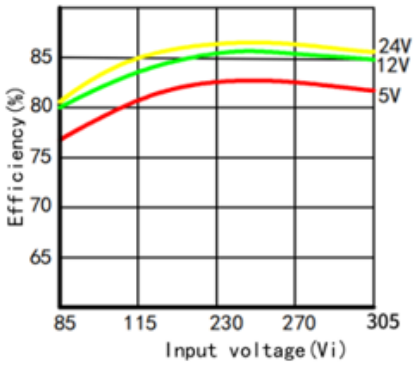
Temperature chart



Efficiency/Load graph

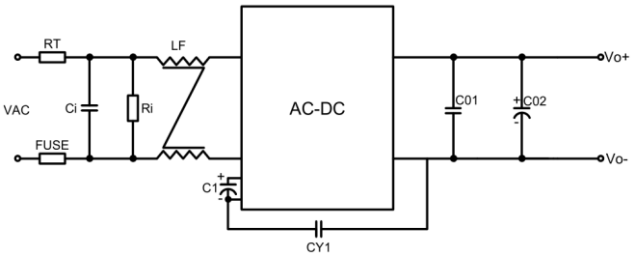


Efficiency/Input voltage graph



Typical Application

Design Reference



Recommendation Test

Filter: In some circuits that are sensitive to noise and ripple, the AC/DC input and output terminals can be connected with external filter capacitors to reduce the impact of ripple on the system, but the value of the filter capacitor should be appropriate, if the capacitor is too large, it is likely to cause startup problems, for each output, under the condition of ensuring safe and reliable operation, the maximum capacitance of the filter capacitor can be referred to the external capacitance table. In order to obtain very low ripple, an "LC" filter

network can be connected to the input and output end of the AC/DC converter, so that the filtering effect will be better, and it should be noted that the size of the inductance value and the frequency of the "LC" filter network should be staggered from the frequency of the AC/DC module power supply to avoid mutual interference. For each output, under safe and reliable working conditions, the recommended capacitive load value is shown in Table 1.

Input voltage(Vin+)	C01	C02	RT	Ci(UF)	Ri(KR)	LF(mH)
85-305V	104M/50V	1000uF/16V	8D-7	0.1/310V	560	8-10

Recommended capacitive load values Table (Table 1)

Note: Please note that the main grounding of the output and the grounding of the load are connected to the ground, so that even if the product has problems, it will not cause harm to the human body. The ground requirements for the auxiliary roads are isolated and can be grounded without grounding.

Notice

Package

This series of modules are packed in shockproof and anti-static foam.

Transport

The package containing the module is allowed to be transported by any means of transport, which should avoid direct rain and snow and mechanical damage.

Storage

The module should be stored in a warehouse where the ambient temperature is -40 °C ~ 125°C, the relative humidity is 20%~95%, and the surrounding environment is free from acidic, alkaline and other harmful gases.

Note: The above are the performance indicators of the product series listed in this manual. Some indicators of non-standard products may exceed the above requirements, so if there is any inconsistency between the manual and the product specification documents, please refer to the specification documents. If you have special needs, please contact us directly.