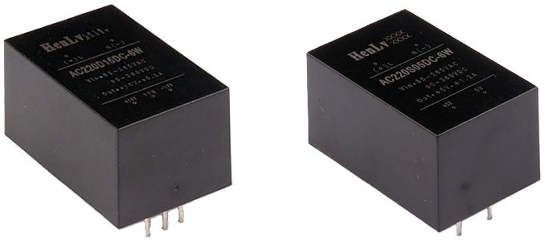
Features

- Wide input 85-308VAC/120-430VDC
- DIP Package
- Working Temperature：-40℃～+85℃
- Isolation 2500VAC 5mA 1Minute
- Internal SMD Design
- Highly Flame-retardant Plastic Shell Packaging
- Cooling Nature
- Good shielding and anti-interference performance, electromagnetic compatibility, lightning protection, output overcurrent, short circuit protection, overheating protection, self recovery and other functions

Product Picture

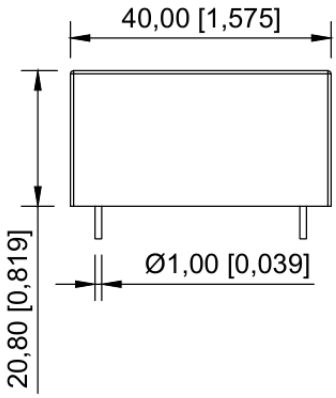


EMC-EN55032
EN55035
LVD-EN62368

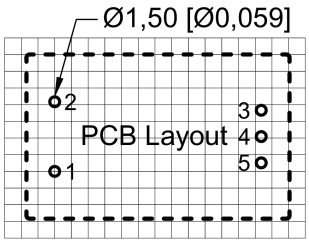
Dimensions

Dimensions of AC220D__DC-5W/6W Series

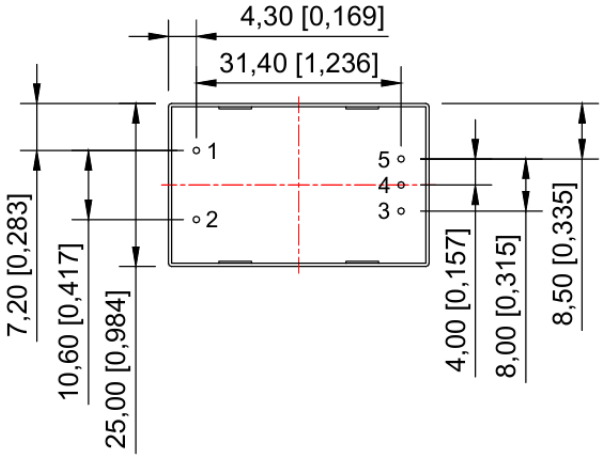
Front View



Top View



Note: The grid distance 2.54*2.54mm



Bottom View

Pin Mode		
Pin	Single(S)	Dual(D)
1	AC(N)	AC(N)
2	AC(L)	AC(L)
3	0V	-XXVDC
4	No Pin	COM
5	+XXVDC	+XXVDC

Note:
Unit: mm[inch]
Pin section tolerance: ±0.10[±0.004]
General tolerance: ±0.25[±0.01]
The device layout is for reference only.

Application

Railway communications, display screens, monitoring equipment, petrochemicals, industrial control, long-distance power supply systems, switching systems and other communication equipment, digital products, multi-channel power supply equipment and instruments, etc.

Selection Guide

Items	Vin (V)	Vout (V±2%)	Full Load Output Current (mA)	Efficiency(%)	Isolation (VAC)
AC220D05DC-5W/6W	85-308VAC (120-430VDC)	±5	±500/±600	⩾77	2500
AC220D09DC-5W/6W		±9	±278/±330	⩾80	2500
AC220D12DC-5W/6W		±12	±208/±250	⩾80	2500
AC220D15DC-5W/6W		±15	±166/±200	⩾81	2500
AC220D24DC-5W/6W		±24	±104/±125	⩾81	2500

Note: Our company can customize any input and output module power supply for customers. If you have special needs, please call our company. Unless otherwise specified, input = Vi. The characteristics of the module power supply should comply with the provisions of Table 1 and be applicable to the full temperature range (-40°C ⩽ Tc ⩽ 85°C).

Electrical Characteristics

Characteristics	Symbol	ConditionVi ,-40°C⩽Tc⩽85 (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	120	200	mV
Output Noise Voltage	Vp-p	Full Load， Vi， BW=20MHz，Normal Temperature	150	250	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	77	—	%
Insulation Resistance	Rl	Input and output, test voltage: 500VDC	100	—	MΩ

Mechanical Specifications

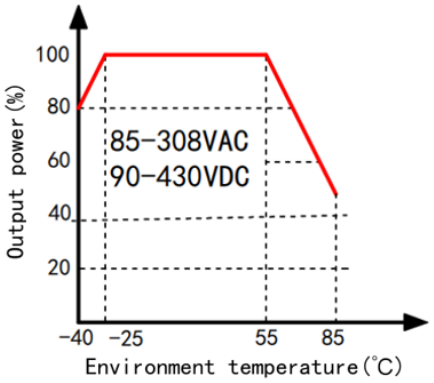
Size	40.00 x 25.00 x 20.80 mm

General Characteristics

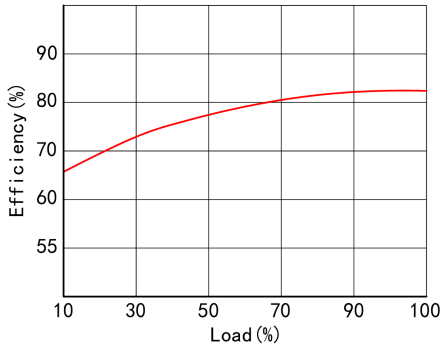
EMC Specifications	Magnetic Field Sensitivity Test Electrostatic	GB-4943
	Discharge Sensitivity Test Radiation	GB-4943
	Sensitivity Test	GB-4943
	Conduction Sensitivity Test	GB-4943
Temperature Excursion	＜0.03%/°C	
Storage Temperature	-40°C~125°C	
Switching Frequency	47Hz~63Hz	
Humidity	20%~95%RH	
MTBF	＞500000H	

Product Characteristic Curve

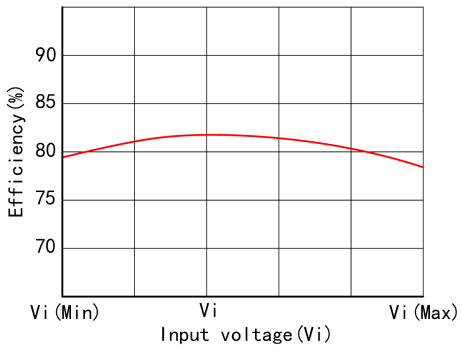
Temperature chart



Efficiency/Load graph

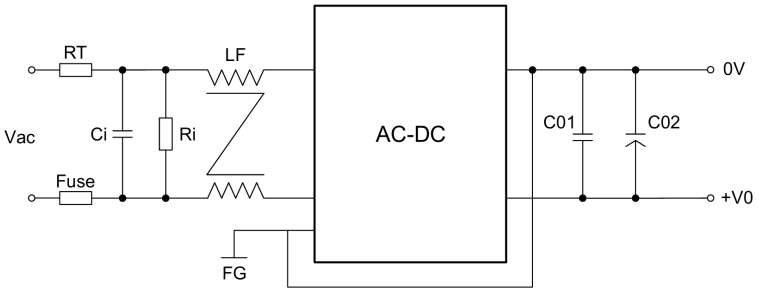


Efficiency/Input voltage graph



Typical Application

Design Reference



Recommendation test

Filtering：In some circuits sensitive to noise and ripple, a filter capacitor can be externally connected to the input and output terminals of DC/DC toreduce ripple's impact on the system, but the value of the filter capacitance should be appropriate. If the capacitor is too large, it may cause startupproblems. For each output line, under the condition of ensuring safe and reliable operation, The maximum capacity of its filtering capacitance can be referred to the external capacitance table. In order to obtain very low ripple, an "LC" filtering network can be connected to the input and output end of DC/DC converter, so that the filtering effect will be better. At the same time, it should be noted that the value of inductance and the frequency of "LC" filtering network should be staggered from the frequency of DC/DC module power supply to avoid mutual interference.For each output line, it is recommended to see the capacitive load value (Table 1) under safe and reliable working conditions.

Input voltage（Vin+）	C01	C02	RT	Ci(UF)	Ri(KR)	LF(mH)
85-308V	104M/50V	1000uF/16V	8D-7	0.1/275V	560	8-10

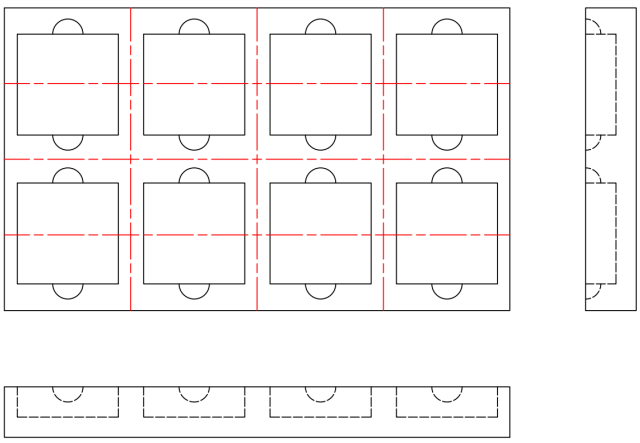
Table of recommended capacitive load values (Table 1)

Note: Please ensure that the primary circuit grounding and the load grounding are connected to the earth. This way, even if a problem occurs with the product, it will not pose a danger to personal safety. The secondary circuit grounding is required to be isolated and does not need to be connected to the ground.

Notice

Package

This series of modules are packed with shockproof and static-proof foam.



Transport

The package is allowed to be transported by any means of transport, which shall avoid direct rain or snow and mechanical damage.

Storage

The module should be stored in a warehouse with an ambient temperature of -40 ° C to 125 ° C, a relative humidity of 20% to 95%, and no acidic, alkaline, or other harmful gases in the surrounding environment.

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