AC-DC Converter
AC220S__ZD(K)D2-15 Series

HenLv

Features

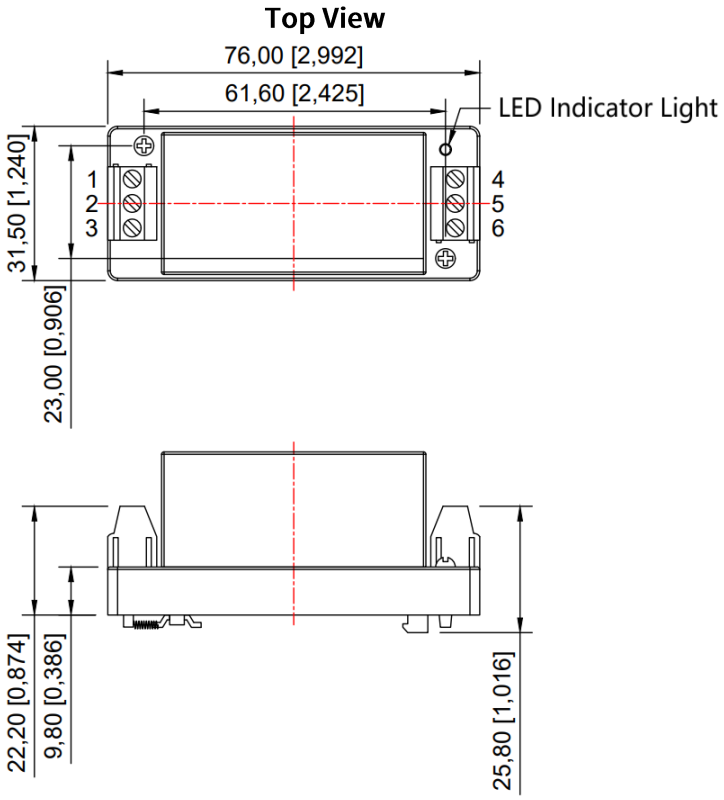
- Wide Input 85-305VAC/120-430VDC
- SNAP-IN
- Working Temperature：-40℃～+85℃
- Isolation 2500VAC 5mA 1Minute
- Internal SMD Design
- Highly Flame-retardant Plastic Shell Packaging
- Cooling Nature
- Good shielding and anti-interference performance, electromagnetic compatibility, lightning protection, output overcurrent, short circuit protection, overheating protection, self recovery and other functions

Product Picture



Dimensions

Dimensions of AC220S__ZDKD2-15 Series



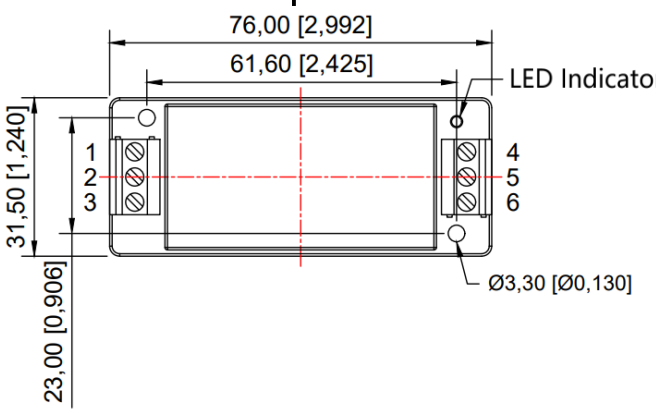
Pin Mode	
Pin	Function
1	AC(L)
2	AC(N)
3	NC
4	NC
5	0V
6	+XXVDC

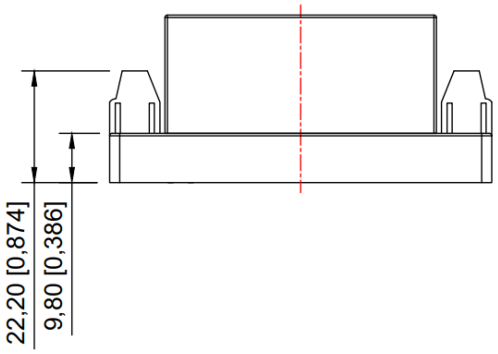
Note:
Unit：mm[inch]
General tolerances：±0.25[±0.01]
Wire range：12-24 AWG
Tightening torque：Max 0.4 N-m
Mounting rail：TS35
The device layout is for reference only

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Dimensions of AC220S__ZDD2-15 Series

Top View





Front View

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

Note:
Unit: mm[inch]
General tolerances: ±0.25[±0.01]
Wire range: 12-24 AWG
Tightening torque: Max 0.4 N-m
The device layout is for reference only

Applications

Industrial control and long-distance DC power supply systems, switching systems, railway communication, communication interface converters, cellular phones, semiconductor lasers, displayscreens, monitoring equipment, petrochemicals, portable instruments, medical instruments, self-control devices, anti-theft alarms, handheld instruments, digital circuits, IC card electricity meters, air conditioning computer controllers, LED products, digital products, power adapters, etc.

Selection Guide

Model	Vin (V)	Vout (V±2%)	Full Load Output Current (mA)	Efficiency (%)	Isolation (VAC)
AC220S05ZD(K)D2-15	85-305VAC (120-430VDC)	5	3000	82	2500
AC220S09ZD(K)D2-15		9	1666	85	2500
AC220S12ZD(K)D2-15		12	1250	85	2500
AC220S15ZD(K)D2-15		15	1000	85	2500
AC220S24ZD(K)D2-15		24	625	86	2500

Note: Our company customizes any input/output module power supply for customers. If you have special requirements, please call our company. Unless otherwise specified, the input=Vi, and 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)

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Electrical Characteristics

Characteristics	Symbol	Condition Vi ,-40℃≤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	80	250	mV
Output Noise Voltage	Vp-p	Full Load，Vi，BW=20MHz，Normal Temperature	100	300	mV
Voltage Regulation	Sv	Vimin、Vi、Vimax， Full Load	—	≤±1	%
Load Regulation	Si	Vi，Io=(10%~100%)Iomax	—	≤±1.5	%
Insulation Resistance	Rl	Input Output,Test Voltage：500VDC	100	—	MΩ

Mechanical Specifications

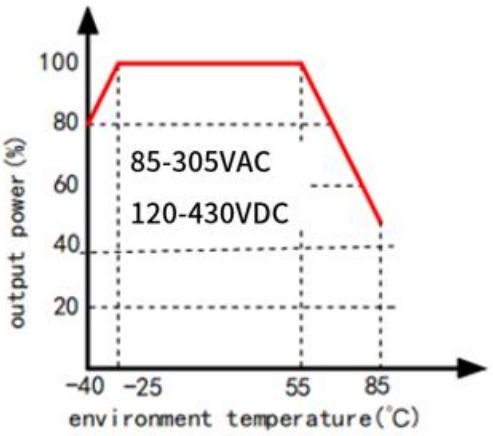
Size	76.00*31.50 mm（module：54.00 x 29.00 x 23.50 mm）

General Characteristics

EMC Specifications	Magnetic Field Sensitivity Test	GB6833.2-87
	Electrostatic Discharge Sensitivity Test	GB6833.3-87
	Radiation Sensitivity Test	GB6833.5-87
	Conductivity Sensitivity Test	GB6833.6-87
Temperature Excursion	≤±0.03%/℃	
Storage Temperature	-40℃~125℃	
Input Grid Frequency	47Hz~63Hz	
Humidity	20%~95%RH	
Leak Current	5mA(max)	
MTBF	>500000H	

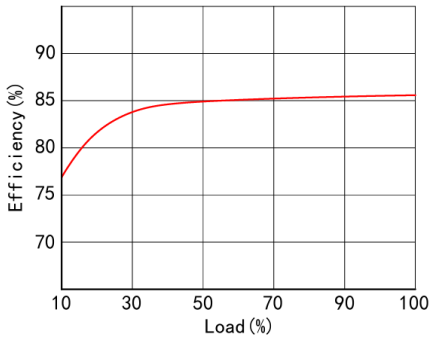
Typical Characteristic Curves

Temperature chart

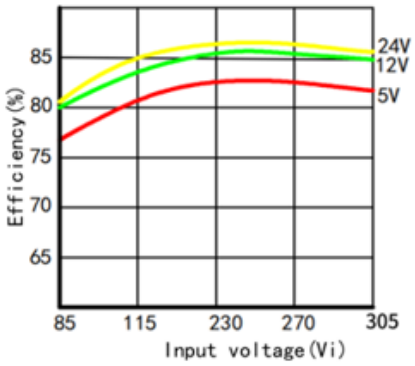


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Efficiency/Load graph

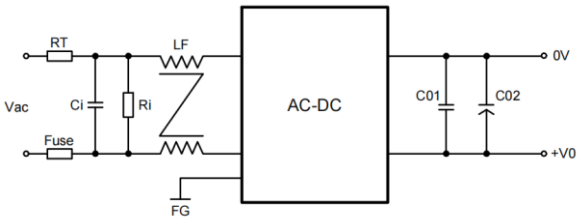


Efficiency/Input voltage graph



Typical Application

Design Reference



Recommendation Test

Filtering: In some circuits sensitive to noise and ripple, filtering capacitors can be externally connected to the input and output terminals of the AC/DC converter to reduce the impact of ripple on the system. However, the value of the filtering capacitor should be appropriate. If the capacitor is too large, it may cause startup problems. For each output, under the condition of ensuring safe and reliable operation, the maximum capacitance value of the filtering capacitor can refer to the external capacitance table. In order to obtain very low ripple, an "LC" filtering network can be connected to the input and output terminals of the AC/DC converter, so that the filtering effect will be better. At the same time, attention should be paid to the size of the inductance value and the frequency of the "LC" filtering network itself, which should be staggered with the frequency of the AC/DC converter to avoid mutual interference. For each output, under safe and reliable working conditions, it is recommended that its capacitive load value be detailed in Table1.

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

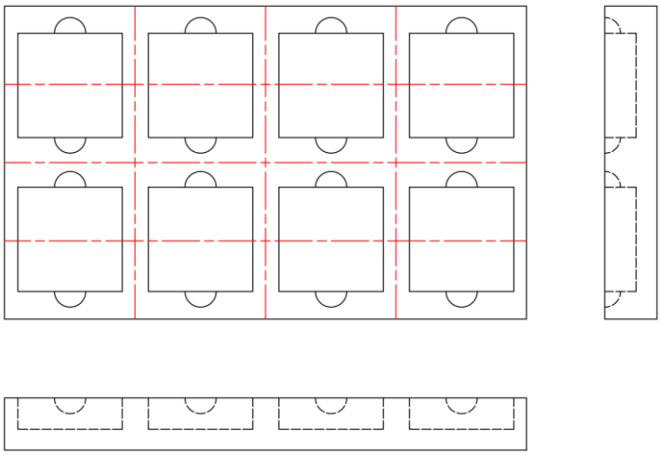
Recommended Capacitive Load Table（Table1)

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Notice

Package

This series of modules are packed with shockproof electrostatic foam.



Transport

The packaging containing modules allows for transportation by any means of transport, anddirect rain, snow, and mechanical damage should be avoided during transportation.

Storage

The module should be stored in a warehouse with an ambient temperature of -40 °C to 105 °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.

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