

## FEATURES:

- Universal Input: 90~264VAC
- High Efficiency Up To 85%
- Protection: Short Circuit/Overload
- Fully Encapsulated Plastic Case
- RoHS Compliant



## AC-DC Converter AC10D SERIES

10~12Watt  
4KV Isolated  
Single Output  
Module

Specifications typical at TA=25°C nominal input voltage and rated output current unless otherwise specified

Part Number	Output Wattage	Output Voltage	Output Current	Ripple & Noise	Efficiency
	(W)	(V)	(mA)	(mV) Max (Note)	(% TYP)
AC10D-S03	6.6	3.3	2000	150	72
AC10D-S05	10	5	2000	150	75
AC10D-S12	12	12	1000	150	82
AC10D-S15	12	15	800	150	82
AC10D-S24	12	24	500	150	85

### Note:

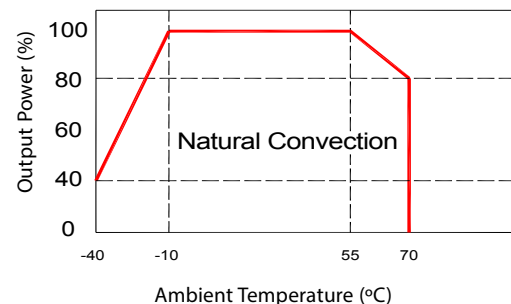
Ripple & noise is measured by using 20 MHz bandwidth, measured with 47uf paralleled with a high-frequency 0.47uf capacitor across each output by full load.



### Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Rated Input Voltage	Vo, lo nom	100~240			Vac
Voltage Range	Vo, lo nom	AC in	90	264	Vac
		DC in	120	370	Vdc
Line Frequency	Vi nom, lo nom	47	50/60	63	Hz
Inrush Current	lo nom	Vi:115VAC		10	A
		Vi:230VAC		20	A
Input Fuse	VDE/UL/CCC FUSE 2.5A/250V (Slow blow)				

### Temperature Derating Graph



## Output Specifications

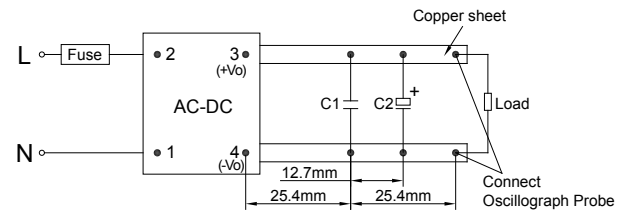
Parameters	Conditions	Min	Typ	Max	Units
Output Voltage Accuracy	Vi nom, lo nom	3.3...5V Models		±3	%
	Vi nom, lo nom	10...48V Models		±2	%
Minimum Load	Vi nom	0			%
Line Regulation	lo nom, Vi min...Vi max		±0.2		%
Load Regulation	Vi nom, lo min...lo nom	3.3V Models		±1.0	%
	Vi nom, lo min...lo nom	5...48V Models		±0.5	%
Transient Recovery Time	Vi nom, lo nom = ← → 0.5 lo nom		1000		µS
Protection	Over load	Above 110% rated output power <b>Protection type:</b> Recovers automatically after fault condition is removed			
	Short circuit	Recovers automatically after fault condition is removed			

## Part Number

AC10D -  $\frac{S}{B}$   $\frac{03}{C}$

A: Series  
B: Single Output  
C: Output Voltage

## Parallel Line Measurements

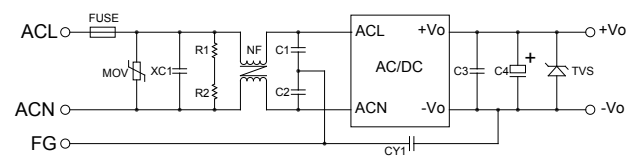


C1: Ceramic capacitor, 1µF; C2: Electrolytic capacitor, 10µF

## General Specifications

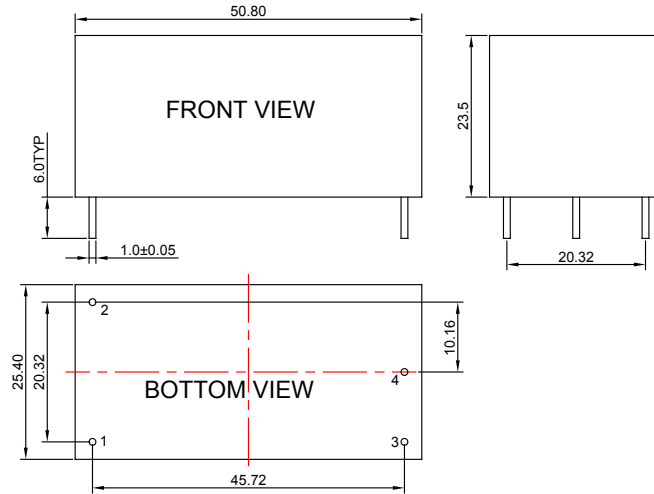
Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency	Vi nom, lo nom		65		KHz
Isolation Voltage	Input / Output		4KVac/ 5mA/5Secs		
Isolation Resistance	Input / Output, @500 Vdc	100			MΩ
Operating Temperature	Refer to Temperature Derating Graph	-40		+70	°C
Storage Temperature	Non Operational	-40		+105	°C
Relative Humidity	Vi nom, lo nom			95	% RH
Safety Standards	Design refer to UL60950-1, IEC60950-1				
EMI Conduction & Radiation	EN55022, CLASS B (See Fig. 1 for recommended circuit)				
EMS Immunity	EN61000 (See Fig. 1 for recommended circuit)				
Dimensions	L50.8 x W25.4 x H23.5 mm				
Cooling	Free air convection				

## EMC Solution-Recommended Circuit



NOTE:  
MOV: 14D-561K  
XC1: 0.47µF/275V, X2  
R1\R2: 750K, 1206  
NF: UU9.8, 20mH  
C1\C2: 2200pF/250V, Y2

**Markings and Dimensions**



UNIT: mm  
Unless otherwise specified, all tolerances are ±0.50.

**PIN Connection**

PIN	1	2	3	4
<b>GA10D</b>	ACN	ACL	+Vo	-Vo