ASD-12 Series, 12Watt

FEATURES:

- ✓ **Universal AC input range**
- ✓ **Low ripple and nosize**
- ✓ **Short circuit, over voltage, and over current protections**
- ✓ **Board in-line type installation**
- ✓ **High voltage isolation 4000Vac**
- ✓ **100% burn-in test**
- ✓ **3 year warranty**





Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (A)	Efficiency Typ.
ASD12-3	90-264	3.3	2.2	74%
ASD12-5		5	2.2	77%
ASD12-9		9	1.33	79%
ASD12-12		12	1	80%
ASD12-15		15	0.8	82%
ASD12-24		24	0.5	83%

Note: 1. other input and output models may available on request;

2. Add suffix "-C" for chassis mounting.

ELECTRICAL

Input

Parameters	Test Conditions / Comment	Min.	Typ.	Max.	Units
Input voltage	---	90 80	--	264 370	Vac Vdc
Input frequency	---	47	--	440	Hz
Input current	Vin=115Vac Vin=230Vac	--	285 175	--	mA mA
Inrush current	Cold start, Vin=230Vac	--	30	--	A
Leakage current	265Vac/50Hz	--	--	0.1	mA
Recommend external fuse	T1A/250V				

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Output					
Parameters	**Test Conditions / Comment**	**Min.**	**Typ.**	**Max.**	**Units**
Output voltage accuracy	--	--	±2	--	%
Line regulation	--	--	±1	--	%
Load regulation	--	--	±1	--	%
Set-up rise time	Full load, Vin =115Vac Full load, Vin =230Vac	--	200 100	--	ms ms
Hold-up time	Full load, Vin =115Vac Full load, Vin =230Vac	--	15 40	--	ms ms
Ripple	---	--	50	--	mV
Protection					
Over current	Hiccup mode, it will auto-recovery after fault condition is removed				
Over voltage	Hiccup mode, it will auto-recovery after fault condition is removed				
Short circuit	Hiccup mode, it will auto-recovery after fault condition is removed				
Environment					
Storage	Humidity: 10% RH to 95% RH	-40	--	+85	℃
Ambient operating temperature	Startup at rated voltage (≥50℃, derating with 0.1W/℃)	-40	--	+70	℃
Operating relative humidity	Non condensing	--	--	85	%
MTBF	Full load, 230Vac input, 25℃ ambient temperature	200	--	--	kHrs
Temperature coefficient	0.03%/ (0~ 50℃)				
Vibration coefficient	10~500Hz, 2G10min./1cycle, 60min.each along X, Y, Z axes				
Dimension(LxWxH)	50.8 x 25.4 x 15.5mm				
Weight	30g/pcs, 350g/tube, 19.45kg/carton				
Package	10pcs/tube, 54tubes/carton, carton size: 360x300x250mm				

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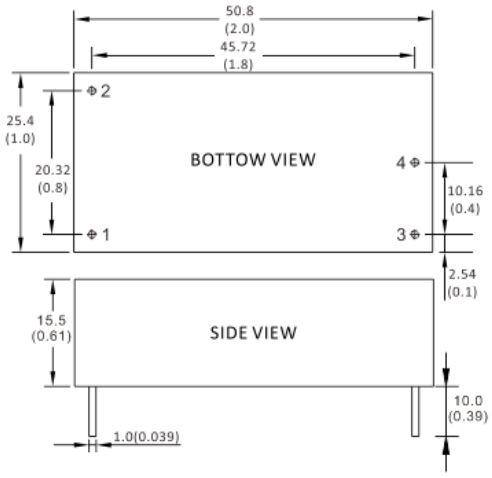
ELECTRICAL

Safety	
Safety standards	EN60950, EN60601, UL60950
Isolation voltage	I/P-O/P:4000VAC
Insulation Resistance	I/P-O/P>100M Ohms/500VDC 25℃ 70% RH
EMI / EMC	EN55011, EN55022 (CISPR22) CLASS B (refer to below application circuit)
ESD	IEC/EN 61000-4-2 level 4 8KV/15KV (refer to below application circuit)
RF Immunity	IEC/EN 61000-4-3 (refer to below application circuit)
Electrical Fast Transient	IEC/EN 61000-4-4 level 4 4KV (refer to below application circuit)
Surge	IEC/EN 61000-4-5 level 4 2KV

Notes: 1. Unless otherwise specified, all the above parameters are measured at ambient temperature of 25℃ and input nominal voltage 230Vac;

2. Ripple & Noise are measured at 20MHZ of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor.

MECHANICAL



CONNECTION	
PIN #	SINGLE
1	AC(L)
2	AC(N)
3	+Vo
4	-Vo

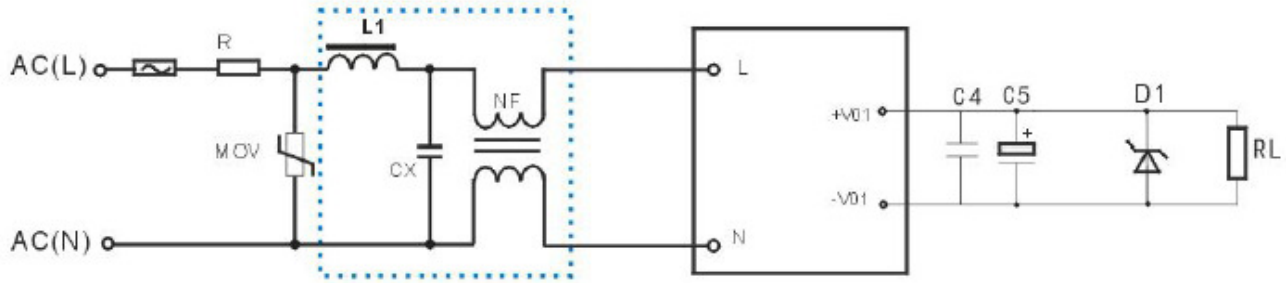
Note:

Unit is mm(inch).

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NOTE

RECOMMENDED TEST AND APPLICATION CIRCUIT



EMC RECOMMENDED APPLICATION CIRCUIT

	3.3VDC	5VDC	9VDC	12VDC	15VDC	24VDC
FUSE	T1A/250V					
R	10D-9					
NF	L=30mH,I=0.2-0.5A					
MOV	14D471K					
CX	104K/275V					
L1	1mH/0.5A					
C4	104K/50V					
C5/C6	470uF/16V	470uF/16V	150uF/16V	120uF/16V	120uF/25V	100uF/35V
D1	P6KE6.8A	P6KE6.8A	P6KE16A	P6KE16A	P6KE20A	P6KE33A