

ASD-5 Series, 5Watt

FEATURES:

- ✓ Universal AC input/ Full range
- ✓ Typical Efficiency 75%
- ✓ Short circuit, 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 (mA)	Efficiency Typ.
ASD5-3	85-264	3.3	1000	64%
ASD5-5		5	1000	69%
ASD5-9		9	550	73%
ASD5-12		12	420	75%
ASD5-15		15	330	76%
ASD5-24		24	210	78%

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

ELECTRICAL

Input						
Parameters	Symbols	Test Conditions / Comment	Min.	Typ.	Max.	Units
Input voltage	$V_{in}$	---	85	--	264	Vac
Input frequency	$F_{line}$	---	47	--	63	Hz
Input current	$I_{in}$	Full load, $V_{in} = 115Vac$	--	90	--	mA
		Full load, $V_{in} = 230Vac$	--	40	--	mA
Inrush current	$I_{inrush}$	Cold start, $V_{in} = 230Vac$	--	30	--	A
Efficiency	$\eta$	Full voltage, full load	--	75	--	%
Leakage current	$I_{leakage}$	$V_{in} = 230Vac$	--	--	1	mA

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**Output**

Parameters	Symbols	Test Conditions / Comment	Min.	Typ.	Max.	Units
Output voltage accuracy	$V_{out}$	$V_{in}=100-240Vac$	--	2	--	%
Line regulation	$V_{out-line}$	$V_{in}$ from 100Vac to 240Vac	--	1	--	%
Load regulation	$V_{out-load}$	20%-100% load	--	1	--	%
Set-up rise time	--	Full load, $V_{in}=115Vac$	--	50	--	ms
		Full load, $V_{in}=230Vac$	--	20	--	ms
Hold-up time	--	Full load, $V_{in}=115Vac$	--	15	--	ms
		Full load, $V_{in}=230Vac$	--	40	--	ms
Ripple	$V_{ripple}$	---	--	50	--	mV

**Protection**

Over current	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	$T_{storage}$	Humidity: 5% RH to 95% RH	-40	--	+85	°C
Ambient operating temperature	$T_a$	Startup at rated voltage (Please refer to derating curve)	-40	--	+70	°C
Operating relative humidity	$H_a$	Non condensing	10	--	90	%
MTBF	$T_{MTBF}$	Full load, 230Vac input, 25°C ambient temperature	--	--	200	kHrs
Dimension(LxWxH)	50.8 x 25.4 x 15.3mm					

**Safety**

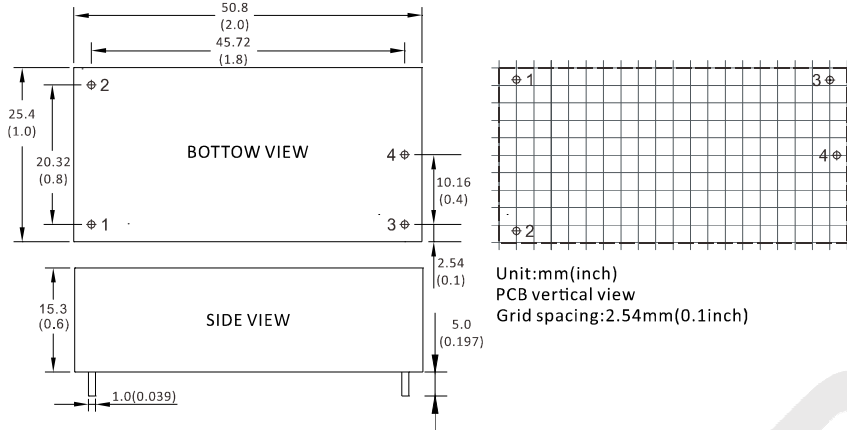
Safety standards	UL1012, EN60950, UL60950
Withstand voltage	I/P-O/P:4KVac 2mA/1min
Insulation Resistance	I/P-O/P: > 100M Ohms/500VDC/25°C/70%RH
EMI / RFI conducted	EN55011, EN55022 (CISPR22)

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

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

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MECHANICAL



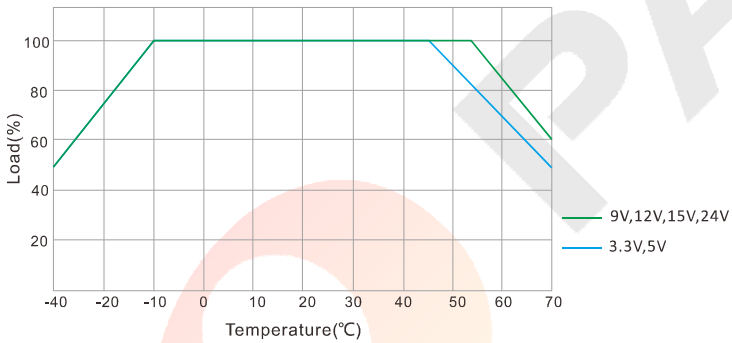
CONNECTION

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

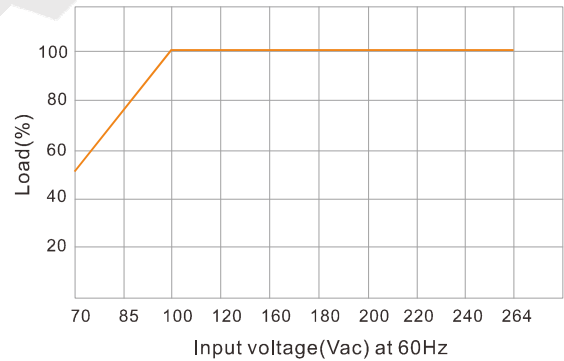
Note:  
Unit is mm(inch).

ELECTRICAL CURVE

DERATING CURVE



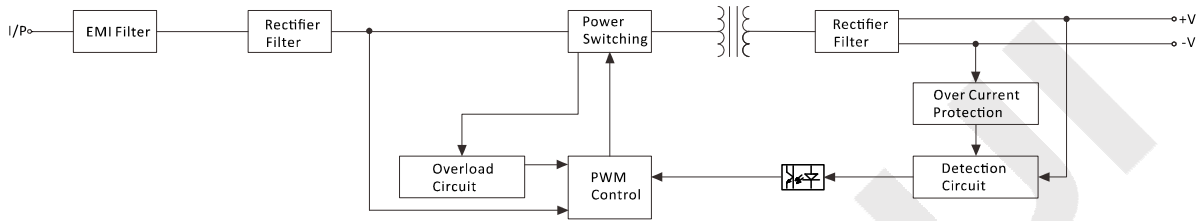
STATIC CHARACTERISTIC CURVE



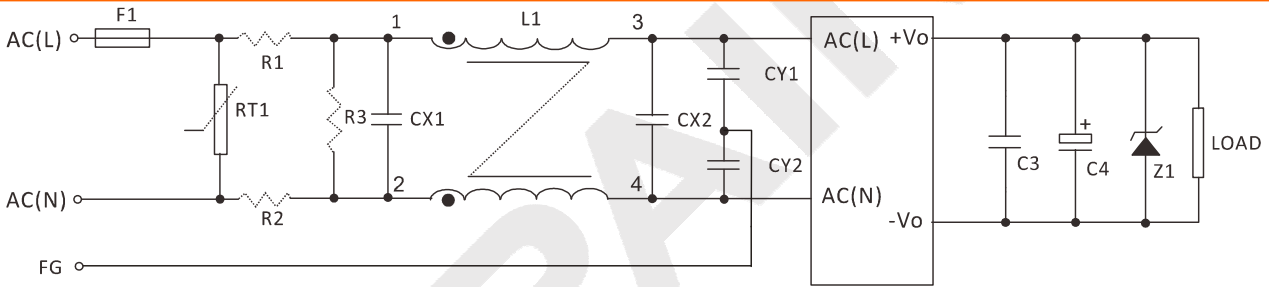
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NOTE

BLOCK DIAGRAM



RECOMMENDED TEST AND APPLICATION CIRCUIT



EMC RECOMMENDED APPLICATION CIRCUIT

	3.3VDC	5VDC	9VDC	12VDC	15VDC	24VDC
F1				T1A/250V		
RT1				7D471K		
R1, R2				2Ω/3W		
R3				1MΩ/2W		
L1				L=3-10mH, I=0.2-0.5A		
CX1, CX2				0.15-1μF/300Vac		
CY1, CY2				102K/400Vac		
C3				1μF/50V		
C4	470uF/16V	470uF/16V	150uF/25V	120uF/25V	120uF/25V	100uF/35V
Z1	P6KE6.8A	P6KE6.8A	P6KE16A	P6KE16A	P6KE20A	P6KE33A