ASD-10 Series, 10Watt

FEATURES:

- ✓ **Wide input voltage range**
- ✓ **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.
ASD10-3	85-264	3.3	2000	66%
ASD10-5		5	2000	76%
ASD10-9		9	1111	80%
ASD10-12		12	830	81%
ASD10-15		15	666	82%
ASD10-24		24	420	83%

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	--	440	Hz
Input current	I_{in}	Full load, V_{in} =115Vac	--	210	--	mA
		Full load, V_{in} =230Vac	--	110	--	mA
Inrush current	I_{inrush}	Cold start, V_{in} =1150Vac	--	16	--	A
		Cold start, V_{in} =230Vac	--	30	--	A
Leakage current	$I_{leakage}$	V_{in} =230Vac/50Hz	--	--	0.1	mA
External Fuse	--	T1A/250Vac(Disconnected Slowly)				

Preliminary

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ELECTRICAL

Parameters	Symbols	Test Conditions / Comment	Min.	Typ.	Max.	Units
Output						
Output voltage accuracy	V_{out}	V_{in}=220-305Vac	--	±2	--	%
Line regulation	$V_{out-line}$	V_{in} from 220Vac to 305Vac	--	±1	--	%
Load regulation	$V_{out-load}$	20%-100% load	--	±1	--	%
Set-up rise time	--	Full load, V_{in} =230Vac	--	110	--	ms
Hold-up time	--	Full load, V_{in} =230Vac	--	40	--	ms
Ripple	V_{ripple}	V_o =3.3V, 5V	--	50	--	mV
		V_o =9V, 12V, 15V, 24V	--	100	--	mV
Protection						
Over current	It will auto-recovery after fault condition is removed					
Over voltage	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: 10% RH to 95% RH	-40	--	+85	℃
Ambient operating temperature	T_a	Startup at rated voltage (Please refer to derating curve)	-40	--	+70	℃
Operating relative humidity	H_a	Non condensing	10	--	95	%
MTBF	T_{MTBF}	Full load, 230Vac input, 25℃ ambient temperature	200	--	--	kHrs
Dimension(LxWxH)	50.8 x 25.4 x 15.3mm					
Safety						
Safety standards	Design refer to UL1012, EN60950, UL60950					
Withstand voltage	I/P-O/P:4KVac					
Insulation Resistance	I/P-O/P: > 100M Ohms/500VDC/25℃/70%RH					
EMI / RFI conducted	EN55011, EN55022 (CISPR22) Class B					

Preliminary

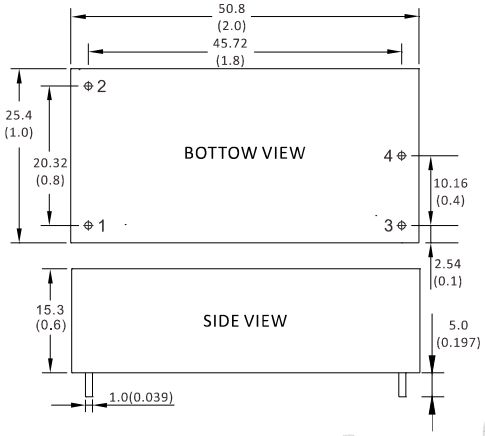
ASD-10 Series, 10Watt

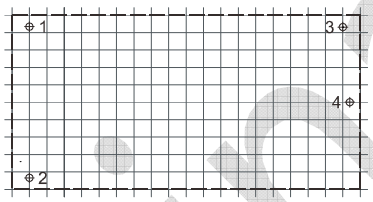
ELECTRICAL

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

2. Ripple & Noise are measured at 20MHZ of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor.

MECHANICAL





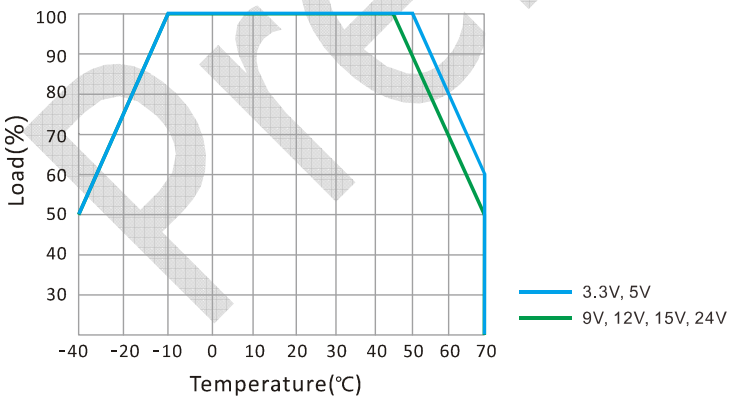
Unit:mm(inch)
PCB vertical view
Grid spacing:2.54mm(0.1inch)

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

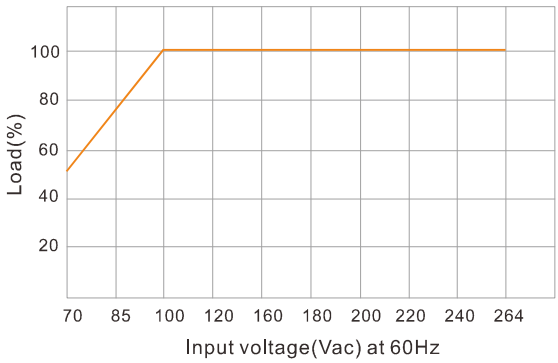
Note:
Unit is mm(inch).

ELECTRICAL CURVE

DERATING CURVE



STATIC CHARACTERISTIC CURVE

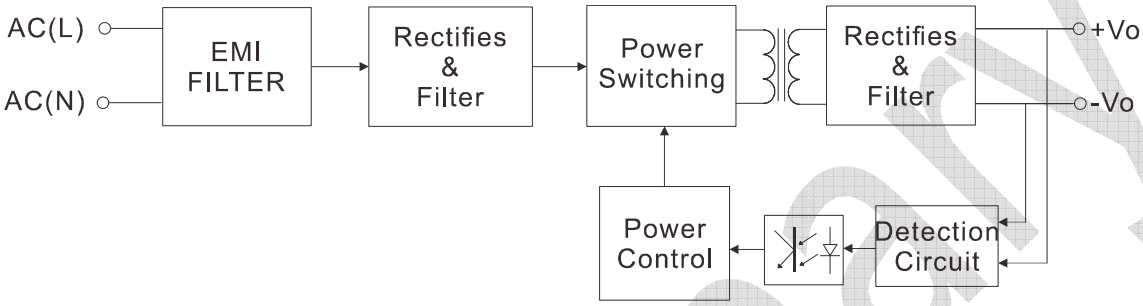


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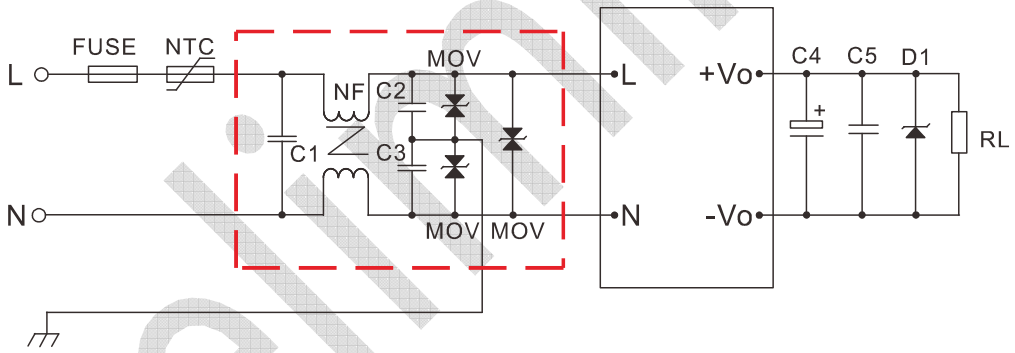
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NOTE

BLOCK DIAGRAM



RECOMMENDED TEST AND APPLICATION CIRCUIT



Components	3.3V	5V	9V	12V	15V	24V
FUSE	T1A/250V					
NTC	10D-9					
NF	Common Mode Choke, inductance=10mH, current=0.2-0.5A					
MOV	14D471K					
C1	X Capacitor, 104K/400V					
C2/C3	Y Capacitor, 102K/400V					
C4	470uF/16V	470uF/16V	150uF/16V	120uF/16V	120uF/25V	100uF/35V
C5	104K/50V					
D1	P6KE6.8A	P6KE6.8A	P6KE16A	P6KE16A	P6KE206A	P6KE33A

Preliminary