

PLD10 Series,10Watt

FEATURES:

- ✓ Universal input: 85~305VAC 47~63Hz
- ✓ Regulated single output
- ✓ Energy saving, standby power only less than 0.1W
- ✓ Typical efficiency 74 ... 85%
- ✓ Isolation voltage 4000VAC
- ✓ 100% burn-in test
- ✓ 3 year warranty



MODEL LIST

Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (mA)	Efficiency Typ.	Maximum capacitive load
PLD10-3	85-305VAC	3.3	2600	74	3000uF
PLD10-5	85-305VAC	5	2000	79	3000uF
PLD10-9	85-305VAC	9	1100	81	1200uF
PLD10-12	85-305VAC	12	830	84	1200uF
PLD10-15	85-305VAC	15	660	84	680uF
PLD10-24	85-305VAC	24	410	85	220uF

ELECTRICAL PARAMETER

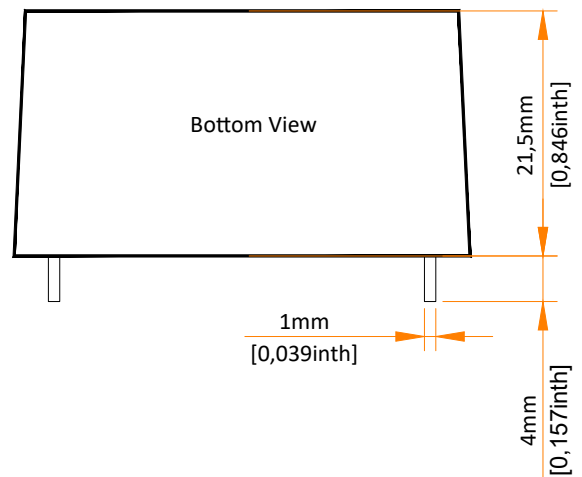
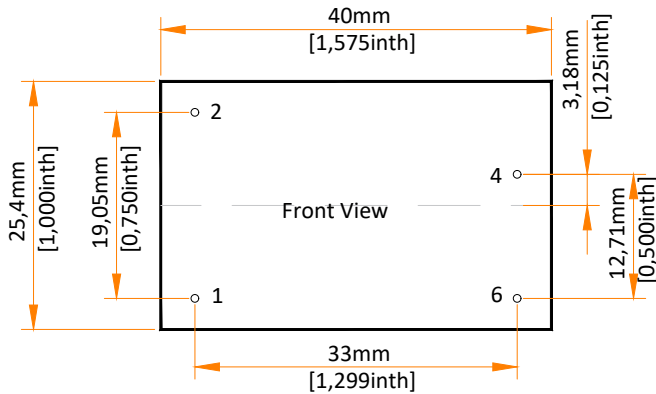
PARAMETERS	CONDITION	MIN.	TYP.	MAX.	UNIT
Input voltage range	AC in	85	---	305	VAC
	DC in	100	---	430	VDC
Input frequency		47	---	63	Hz
Nominal input voltage		100	---	277	VAC
Input current	115VAC	---	---	0.23	A
	230VAC	---	---	0.15	A
Inrush current Cold start	115VAC	---	25	---	A
	230VAC	---	40	---	A
Leakage current	277VAC, 50Hz	---	---	0.1	mA RMS
Output voltage accuracy		---	±2	---	%
Line regulation	Full load	---	±0.5	---	%
Load regulation <small>I_{OUT}=0%~100% of I_{OUT}, rated</small>		---	±1.0	---	%
Ripple and noise <small>20MHz bandwidth, peak to peak</small>		---	50	150	mV

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Temperature coefficient		---	±0.02	---	%/°C
Standby power consumption	230VAC	---	0.1	---	W
Hold up time Full load	115VAC	---	8	---	mS
	230VAC		40		
Over current protection	Automatic recovery	110	---	---	% IOUT
Short circuit protection	Continuous, hiccup mode, automatic recovery				
Recommended external fuse	2A, 300V, slow blow, *required*				
Minimum load	No minimum load is required				
Isolation voltage 1 minute, leakage current 5mA max	I/P to O/P	4000	---	---	VAC
Isolation resistance 500VDC, 25°C, 70%RH	I/P to O/P	100	---	---	M Ohm
Switching frequency		---	65	---	KHz
Operating temperature range	See "Derating Curve"	-40	---	85	°C
Storage temperature		-40	---	85	°C
Storage humidity		10	---	95	%RH
Operating altitude		---	---	5000	m
Soldering temperature	Wave		260		°C
	Manual		360		
Case material	Black plastic UL94-V0				
Cooling method	Free air convection				
Vibration	10Hz to 55Hz, 10G, 30 minutes along X, Y and Z axis				
Class II power	Yes, no FG				
MTBF	MIL-HDBK-217F	> 300,000 Hours, 25°C			
Safety certifications	IEC/EN62368, EN60335, EN61558				
EMC	CISPR32, EN55032 Class B				
Size, and Weight	40.0x25.4x21.0mm, 40g				

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MECHANICAL SPECIFICATIONS



PIN DEFINITION

Pin #	Single Out
1	AC (L)
2	AC (N)
4	+VOUT
6	-VOUT

* Unless otherwise specified unit: mm [inch]

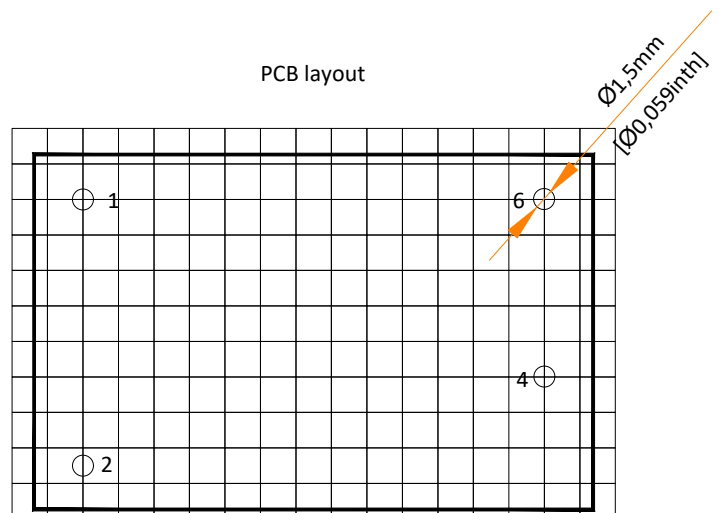
* General tolerance: ± 1.00 [± 0.020]

* Pin thickness: ± 0.15 [± 0.006]

* Pin distance: ± 0.50 [± 0.020]

* Footprint grid 2.54 x 2.54 mm

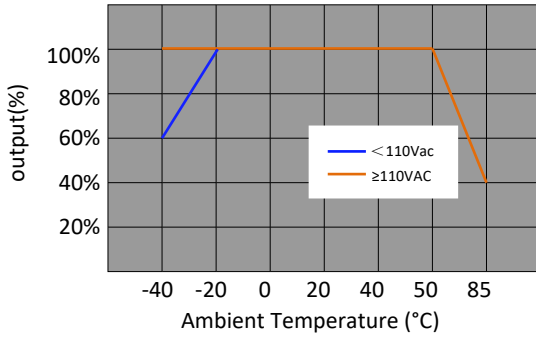
PCB layout



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DERATING CURVES

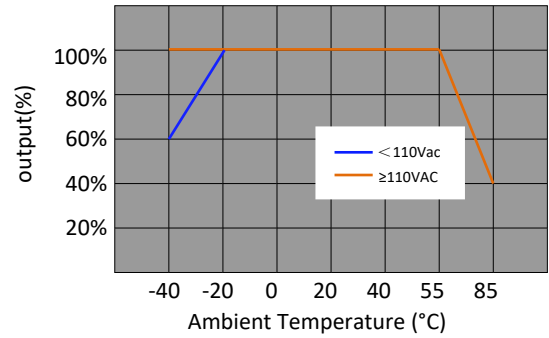
Output vs Ambient Temperature

VOUT=3.3, 5V

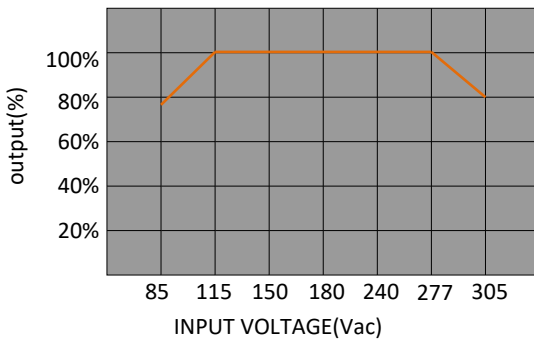


Output vs Ambient Temperature

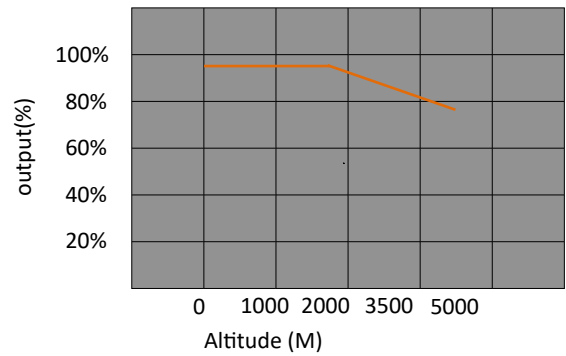
VOU=9V,12V,15V,24V



Output vs Input Voltage



Output vs Altitude



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TYPICAL EXTERNAL CIRCUIT

Components with "" are required. The other components are highly recommended.

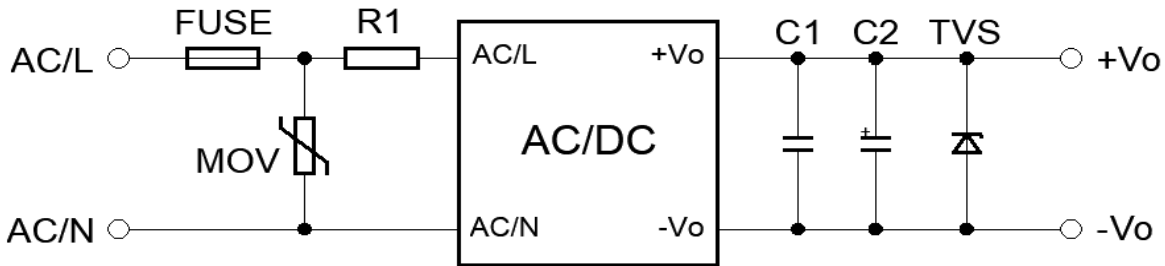


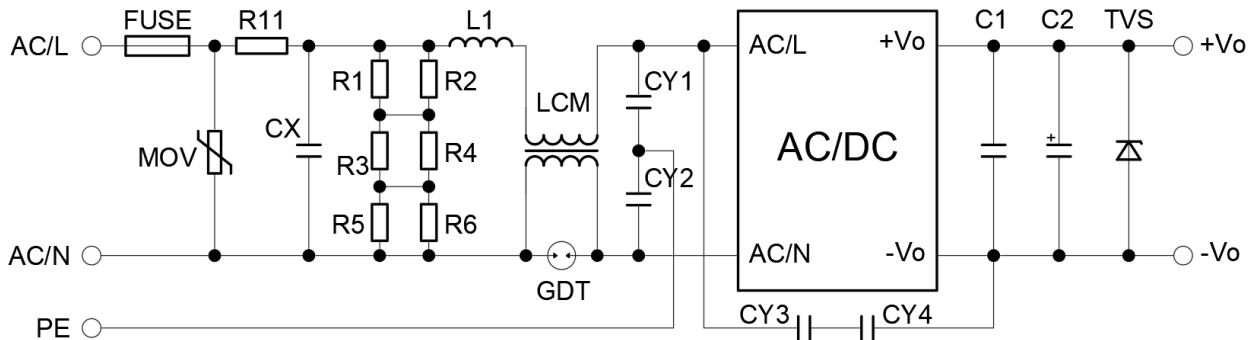
Figure 1. Typical external circuit

Recommended Components [Table 1]

SPEC	FUSE *	MOV	R1 *	C1	C2	Tvs
Vout=3.3V,5V	2A, 300V	S14K350	6.8 Ohm, 3W	1uF, 50V	220 uF, 16V	SMBJ7.0A
Vout=9V	2A, 300V	S14K350	6.8 Ohm, 3W	1uF, 50V	100 uF, 35V	SMBJ12A
Vout=12V,15V	2A, 300V	S14K350	6.8 Ohm, 3W	1uF, 50V	100 uF, 35V	SMBJ20A
Vout=24V	2A, 300V	S14K350	6.8 Ohm, 3W	1uF, 50V	100 uF, 35V	SMBJ 30A

*For further questions contact one of our sales representatives.

EMC Enhancement for EN55032 Class B



[Table 2] Recommended Components

MoV	CX	R11	L1	LCM	GDT	CY1,CY2	CY3,CY4
S14K350	334K,305VAC	12 Ohm,3W	1.2mH,0.5A	20mH	300V,1KA	2.2nF, 400VAC	1nF,400VAC

*R1 ... R6 is the bleeder resistance of CX – 1.5Mohm, 150VDC

*Other components see the same in Table 1