PLD15 Series,15Watt

FEATURES:

- ✓ Universal input: 85~305VAC 47~63Hz
- ✓ Regulated single output
- ✓ Energy saving, standby power only less than 0.1W
- ✓ Typical efficiency up to 87%
- ✓ 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
PLD15-3	85-305VAC	3.3	4000	79	6600uF
PLD15-5	85-305VAC	5	3000	80	5000uF
PLD15-9	85-305VAC	9	1670	84	3000uF
PLD15-12	85-305VAC	12	1250	85	2000uF
PLD15-15	85-305VAC	15	1000	85	1500uF
PLD15-24	85-305VAC	24	625	87	680uF

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	---	---	0.50	A
	230VAC			0.30	
Inrush current Cold start	115VAC	---	30	---	A
	230VAC		60		
Leakage current	277VAC, 50Hz	---	---	0.1	mA RMS
Output voltage accuracy		---	±2	---	%
Line regulation	Full load	---	±0.5	---	%
Load regulation IOUT=0%~100% of IOUT, rated		---	±1.0	---	%
Ripple and noise 20MHz bandwidth, peak to peak		---	70	120	mV

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ELECTRICAL PARAMETER

Temperature coefficiency		---	±0.02	---	%/°C
Standby power consumption	VOUT=24.0V	---	---	0.12	W
	Others	---	---	0.10	
Hold up time Full load	115VAC	---	10	---	mS
	230VAC		55		
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
Operating temperature range	See “Derating Curve”	-40	---	85	°C
Storage temperature		-40	---	105	°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	> 3,200,000 Hours, 25°C			
Design based on standards	RoHS5 compliant, UL/IEC/EN62368, EN60335, EN61558				
Safety certifications	UL/IEC/EN62368, EN60335, EN61558				
EMC	CISPR32, EN55032 Class B				
Size, and Weight	45.7x25.4x21.5 mm, 36g				

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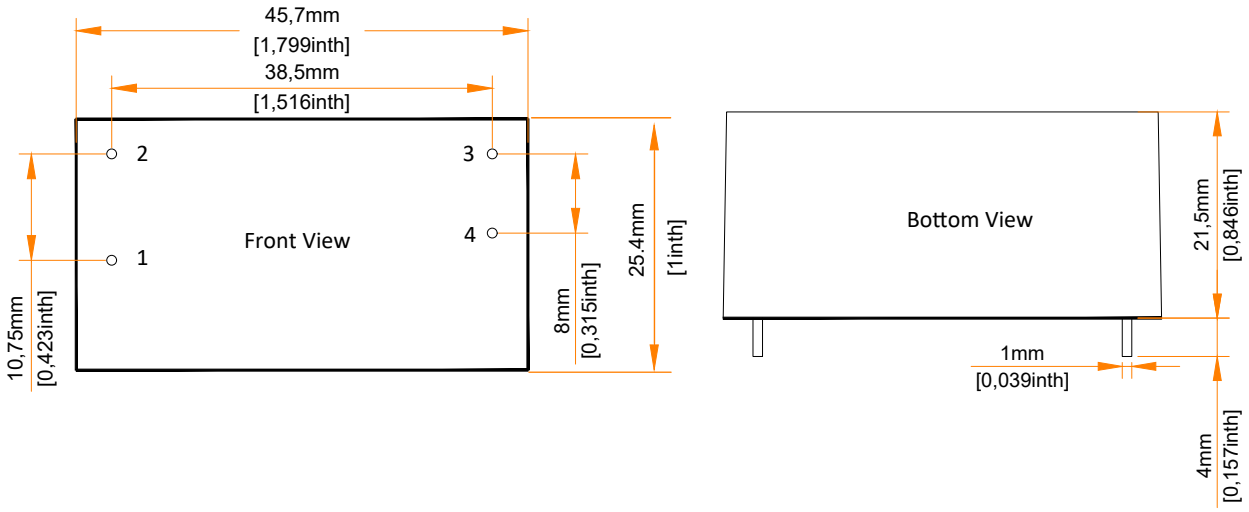
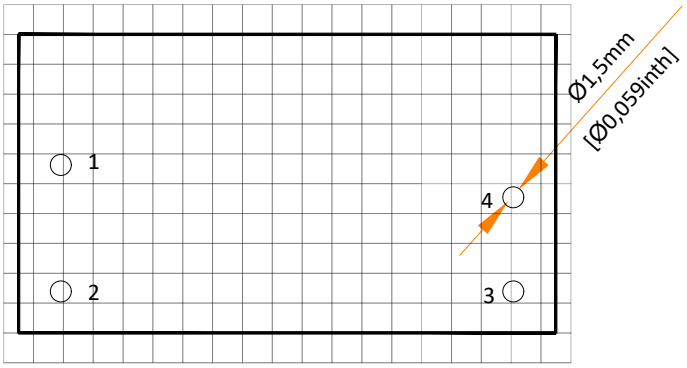
MECHANICAL SPECIFICATIONS



PIN DEFINITION

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

PCB layout



* Unless otherwise specified unit: mm [inch]
* General tolerance: ±1.00 [±0.040]
* Pin thickness: ±0.15 [±0.006]
* Pin distance: ±0.50 [±0.020]
* Footprint grid 2.54 x 2.54 mm

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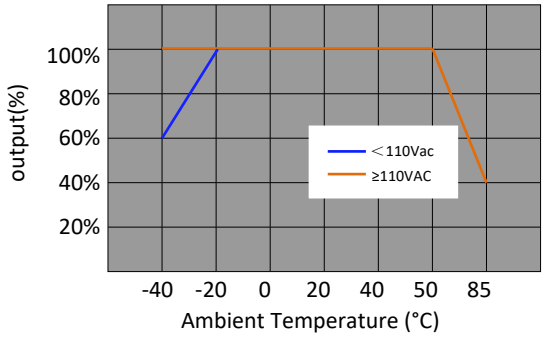
DERATING CURVES

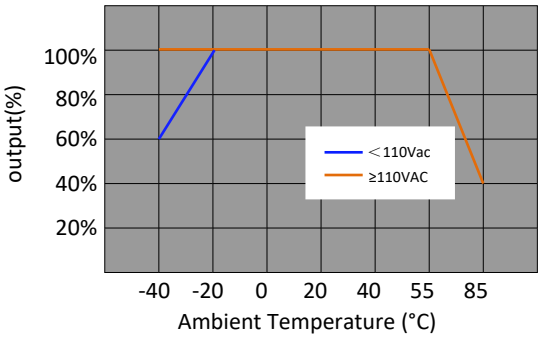
Output vs Ambient Temperature

VOUT=3.3, 5V

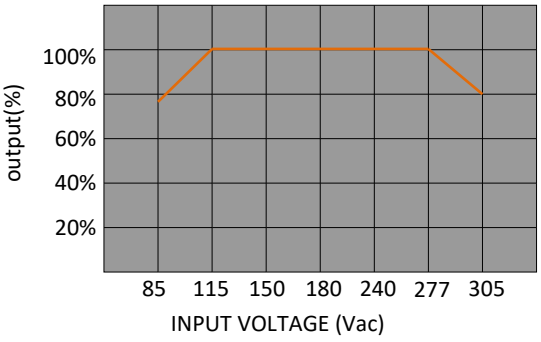


Output vs Ambient Temperature

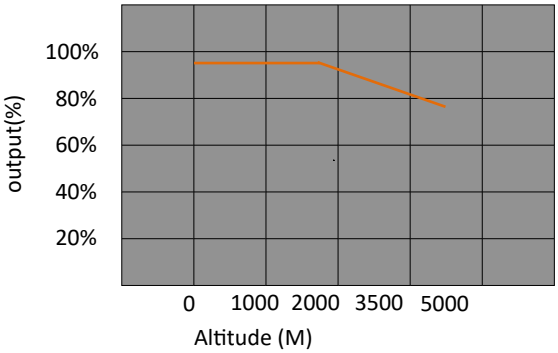
VOU=9V,12V,15V,24V



Output vs Input Voltage



Output vs Altitude



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TYPICAL EXTERNAL CIRCUIT

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

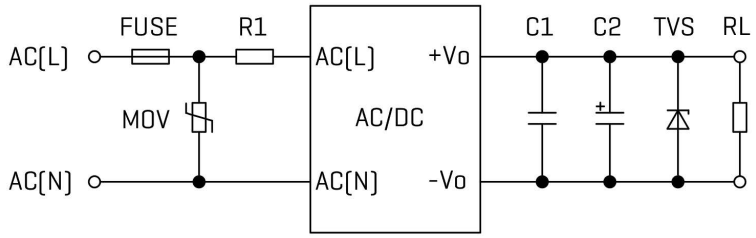


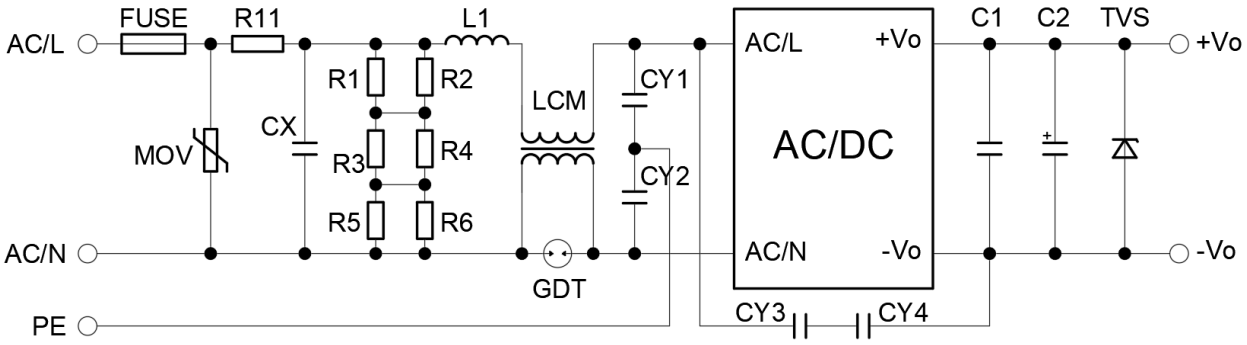
Figure 1. Typical external circuit

Recommended Components [Table 1]

SPEC	FUSE *	MOV	R1 *	C1	C2	Tvs
Vout=3.3V,5V	3.15A,300V	10D561K	6.8 Ohm, 3W	1uF, 50V	220 uF, 16V	SMBJ7.0A
Vout=9V	3.15A,300V	10D561K	6.8 Ohm, 3W	1uF, 50V	100 uF, 35V	SMBJ12A
Vout=12V,15V	3.15A,300V	10D561K	6.8 Ohm, 3W	1uF, 50V	100 uF, 35V	SMBJ20A
Vout=24V	3.15A,300V	10D561K	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