PRM30 Series,30Watt

FEATURES:

- ✓ Universal input: 85~305VAC 47~63Hz
- ✓ Regulated single output
- ✓ Energy saving, standby power only less than 0.1W
- ✓ Typical efficiency 85 … 90%
- ✓ Isolation voltage 4200VAC
- ✓ 100% burn-in test
- ✓ 3 year warranty

MODEL LIST

Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (mA)	Efficiency Typ.	Maximum capacitive load
PRM30-3	85-305VAC	3.3	6000	85	6600uF
PRM30-5	85-305VAC	5	6000	86	6600uF
PRM30-9	85-305VAC	9	3400	88	4400uF
PRM30-12	85-305VAC	12	2500	90	4400uF
PRM30-15	85-305VAC	15	2000	90	3300uF
PRM30-24	85-305VAC	24	1300	88	1000uF
PRM30-48	85-305VAC	48	625	90	470uF

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	---	---	0.75	A
	230VAC			0.50	
Inrush current Cold start	115VAC	---	20	---	A
	230VAC		50		
Leakage current	277VAC, 50Hz	---	---	0.1	mA RMS
Output voltage accuracy	VOUT=3.3V	---	±3	---	%
	others	---	±2	---	
Line regulation	Full load	---	±0.5	---	%
Load regulation IOUT=0%~100% of IOUT, rated		---	---	±2.0	%
Ripple and noise 20MHz bandwidth, peak to peak		---	100	150	mV

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ELECTRICAL PARAMETER

Temperature coefficiency		---	±0.02	---	%/°C
Standby power consumption	VOUT=24V,48V Others	--- ---	0.15 0.10	0.2 0.12	W
Hold up time Full load	115VAC 230VAC	---	10 50	---	mS
Over current protection	Automatic recovery	110	---	---	% IOUT
Over voltage protection	VOUT=3.3, 5V VOUT=9, 12V VOUT=15V VOUT=24V VOUT=48V	---	6.3 16 25 35 60	---	VDC
Short circuit protection	Continuous, hiccup mode, automatic recovery				
Built in fuse	2A, 300V, slow blow				
Minimum load	No minimum load is required				
Isolation voltage 1 minute, leakage current 5mA max	I/P to O/P	4200	---	---	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
Maximum case temperature		---	---	95	°C
Soldering temperature	Wave Manual	--- ---	260 360	--- ---	°C °C
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	> 1,500,000 Hours, 25°C			

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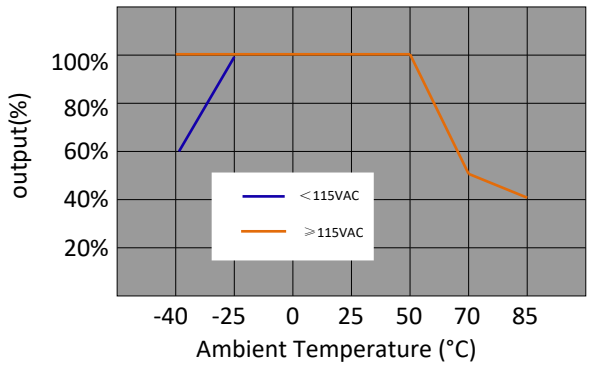
ELECTRICAL PARAMETER

Design based on standards	RoHS5 compliant, REACH 241
Safety certifications	IEC/EN/UL 62368-1 OVC III, EN 60335, EN 61558, UKCA, FCC
EMC	CISPR32, EN55032 Class B with NO external circuit IEC/EN61000-4-2, 3, 4, 5, 6, 8, 11
Size, and Weight	69.5x39.0x24mm, 100g

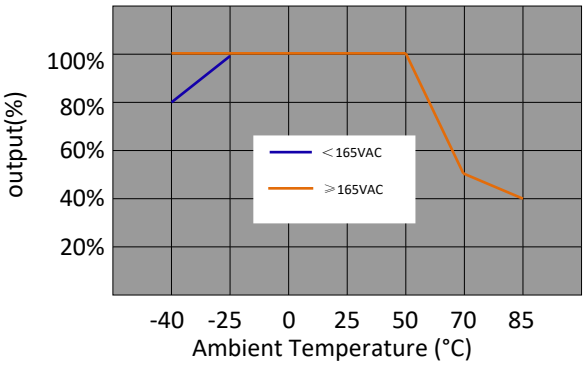
DERATING CURVES

Output vs Ambient Temperature

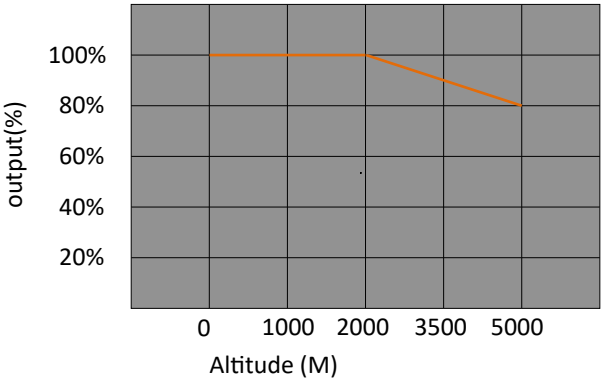
VOUT=5V



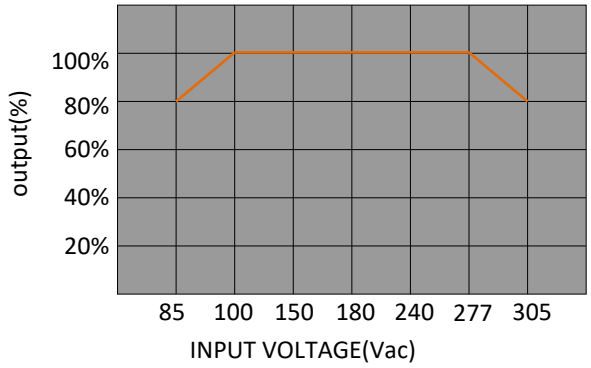
VOUT=3V,9V,12V, 15V,24V,48V



Output vs Altitude



Output vs Input Voltage



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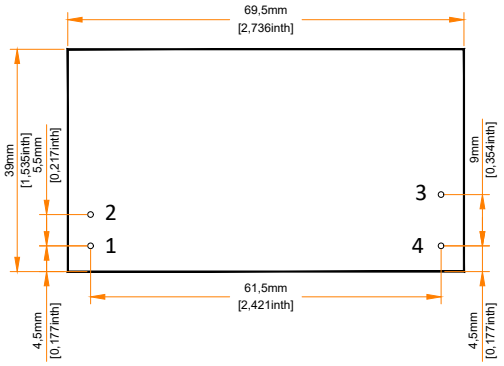
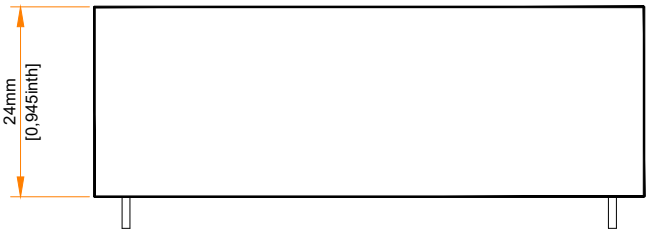
MECHANICAL SPECIFICATIONS

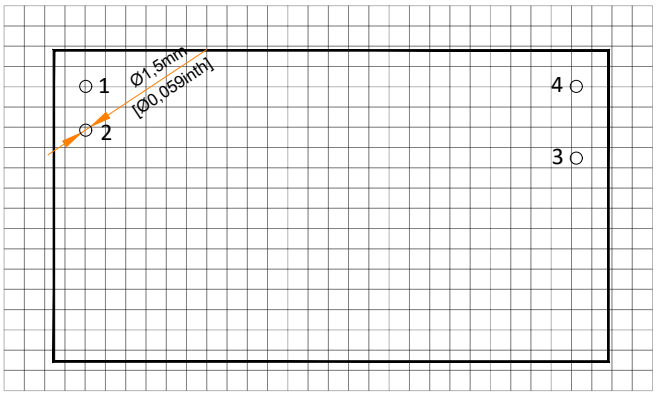




PIN DEFINITION

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