

AC/DC CONVERTER 20W - REGULATED



Power Supplies

NW 20W SERIES



MAIN FEATURES:

- 20W Small Compact Size - PCB Mount
- Operating Altitude Up To 5000 meter
- Output Range: 3.3VDC– 30VDC
- Input Range: 85VAC – 265VAC/47 – 63Hz or 120VDC – 370VDC
- Very Low Standby Power Consumption $\leq 0.15W$
- High Energetic Efficiency: Meets the requirements of Energy Star and the EC Code of Conduct
- Safety : Meets All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1, UL62368-1, CSA C22.2 No.62368-1-14, CE, UKCA
- Materials: Uses UL 94-V0 Plastic and Resin
- EMC: Conducted and Radiated Emission conform to EN55032, FCC Part 15, CLASS B, EN/IEC61000-3-2 CLASS A, EN61000-3-3
- Immunity conforms to EN61000-4-2, EN/IEC61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

DATA SHEET



Part No.	Power Rating Watts	Output Voltage (VDC)	Rated Output Current (mA)	Ambient Temp. (°C)	Efficiency Typical	Input Range
49033G	13.5	3.3	4100	45	>75%@230VAC	85VAC-265VAC (120Vdc-370VDC)
	5.8		1750	80		
49050G	19	5	3800	45	>78%@230VAC	
	8		1600	80		
49090G	20	9	2200	50	>81%@230VAC	
	8		890	80		
49120G	20	12	1667(1800max.)	50	>82%@230VAC	
	8		670	80		
49150G	20	15	1333(1400max.)	50	>83%@230VAC	
	8		530	80		
49180G	20	18	1111(1140max.)	50	>83%@230VAC	
	8		450	80		
49240G	20	24	833(900max.)	50	>83%@230VAC	
	8		330	80		
49300G	20	30	667(720max.)	50	>83%@230VAC	
	8		270	80		

NOTE : Other output voltage are available upon request.

Please refer to MYRRA's website and catalogue for MYRRA SMPS application notes.

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Model : 20 Watt		Specifications
AC Input Characteristics	Rated Input Voltage	100~240 VAC or 140VDC-340VDC
	Input Voltage Range	85~265VAC or 120VDC-370VDC
	AC Input Frequency Range	47Hz~63Hz
	Rated AC Input Frequency	50/60Hz
	Input Current	0.5A Max@85VAC~265VAC, at full load
	Input Inrush Current	40A Max @100VAC~240VAC input, cold start, full load
	Standby Power	0.15W Max (Meets the Requirements of Energy Star and the EC Code Of Conduct)
DC Output Characteristics	Output Voltage Accuracy	$\pm 2\%$ (9V,12V,15V,18V,24V,30V Types) $\pm 3\%$ (3.3V Types and 5V Types)
	Output Voltage Line Regulation	+/- 1%
	Output Voltage Load Regulation	+ 2% (9V,12V,18V,24V,30V Types) $\pm 3\%$ (3.3V Type,5V Type)
	Ripple & Noise	Max 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47 μ F AL E-Cap and a 0.1 μ F Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)
	Dynamic Response	The output voltage shall not exceed $\pm 10\%$ rated output voltage @ 10% $\leftarrow \rightarrow$ 90 % Load change, 1A/ μ S, 1KHz 50% duty cycle
	Hold Up Time	5mS min@ 100 VAC~240VAC, DC output with full load
	Turn On Delay	3S max @ 85VAC~265VAC input and DC output with full load
	Rise Time	50ms max @ 85VAC~265VAC input and DC output with full load
	Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 85VAC~265VAC input, and DC with full load
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85VAC~265VAC input and DC output with full load

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	Efficiency	See table (Meets the requirements of Energy Star and the EC Code of Conduct)
Protection Characteristics	Over Current Protection	The power supply shall automatic protection. The power supply shall auto-recovery normal operations after the deformation is removed. No excessive heat, odor, or plastic deformation shall occur with no safety hazard
	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The short may be applied before power on, or after power on; The power supply shall resume normal operation after the short is removed, no excessive heat, odour or plastic deformation shall occur with no safety hazard.
	Over temperature protection	The power supply shall shut down when the junction temperature of PWM controller exceeds the thermal shutdown temperature, typically 140°C $\pm$ 10°C
Environmental	Operation Temperature	-25°C~+80°C (Refer to« DERATING GRAPH »)
	Operation Humidity	10~90% RH (No Condensing) @ full load
	Storage Temperature	-10°C~ +35°C
	Storage Humidity	<75%RH
	Cooling Method	Ordinary or thermostat
Safety & EMC Requirement	Dielectric Strength	Primary to Secondary : 4000VAC 5mA, 3 sec.
	Radiation	Meets EN55032, FCC part 15 Class B. under 3dB margin
	Conduction	Meets EN55032, FCC part 15 Class B. under 3dB margin
	Harmonic Current Distance	Meets EN/IEC61000-3-2, Class A
	Voltage Fluctuation and Flicker	Meets EN61000-3-3
	Electrostatic Discharge	Meets EN61000-4-2 Contact Discharge $\pm$ 4KV, Air Discharges $\pm$ 8KV
	RF Field Strength Susceptibility	Meets EN/IEC61000-4-3
	Electrical Fast Transient	Meets EN61000-4-4, $\pm$ 2KV

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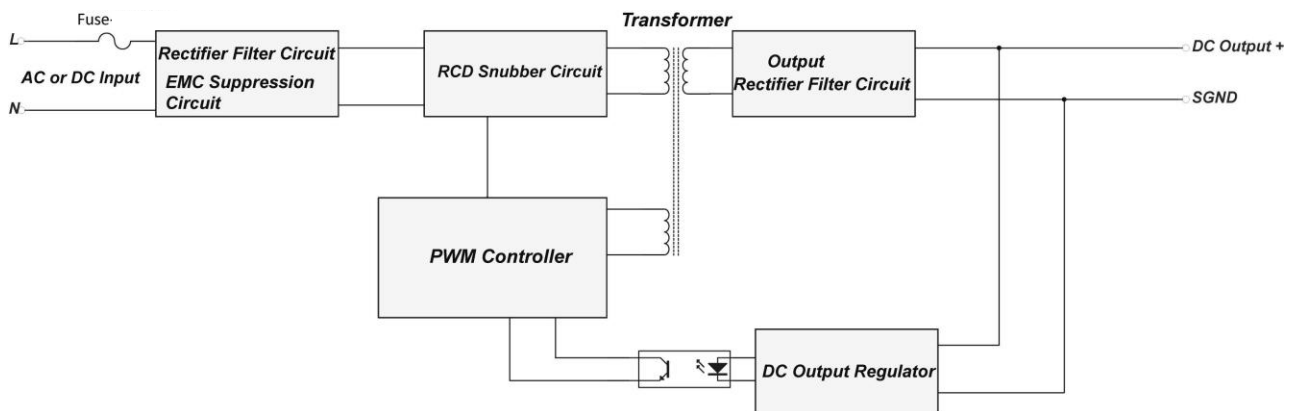
Safety & EMC Requirements	Lightning Surge	Meets EN61000-4-5,+1KV (line to line) <i>Note: surge level can be extended to 6KV with an external circuit – please refer to Myrra's website and catalogue for MYRRA SMPS application notes</i>
	Conducted Susceptibility	Meets EN61000-4-6
	Power Frequency Magnetic Field Susceptibility Test	Meeting EN61000-4-8
	Voltage Dips and interruptions	Meets EN61000-4-11
	Safety Standards	Meets all requirements of : UL62368-1, CSA C22.2 NO.62368-1-14, IEC/EN62368-1 IEC/EN60335-1 IEC/EN61558-2-16 UL1310 CE,VDE,ENEC,UKCA UL certificate NO.E345767 VDE certificate NO. 40062343 UL1310 certificate NO.E525383(49240G only)
Reliability Requirement	MTBF	200K Hours Min. @230VAC input, 50deg.C 550K Hours Min. @230VAC input, 25deg.C <i>Calculated according to MIL-HDBK-217-F2</i>
	Burn-in-Test	The unit shall be burned in 2~5hours under 230VAC input and DC with full load at and ambient temperature of 30~45 degrees C
Mechanical	Physical size	The units do not including PINs of input and output, and dimension is : (L)54.5*(W)28.5*(H)24.5 (±0.5mm) (see appearance drawing)
	Net Weight	Approximately 65 grams per product unit
Guarantee	This product is in accordance with the European RoHS & REACH directives	

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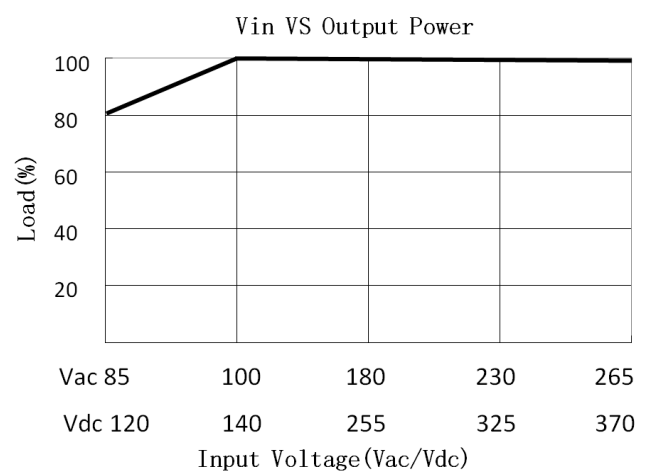
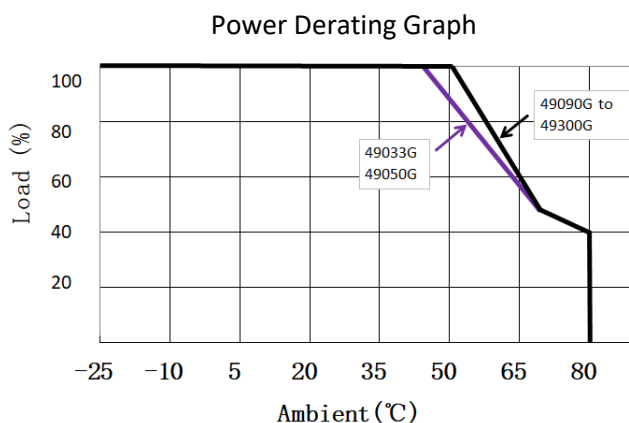


Power Supplies

SCHEMATIC



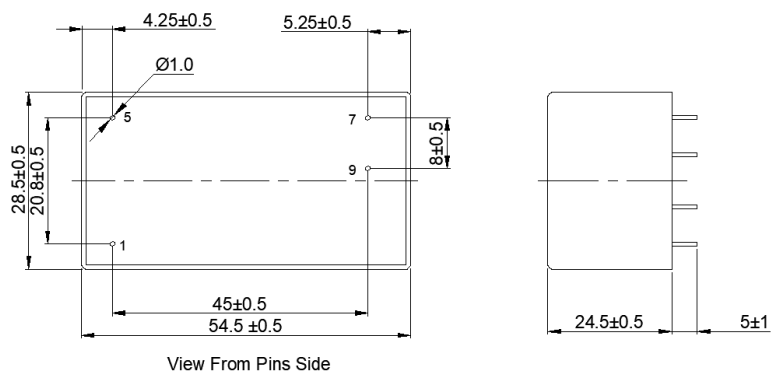
DERATING GRAPH



DIMENSIONS AND PINOUT

4 PINS

- Pins 1: AC(L) Or DC(+) Input
- Pins 5: AC(N) Or DC(-) Input
- Pin 7 : DC Output 0V
- Pin 9 : DC Output +V



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