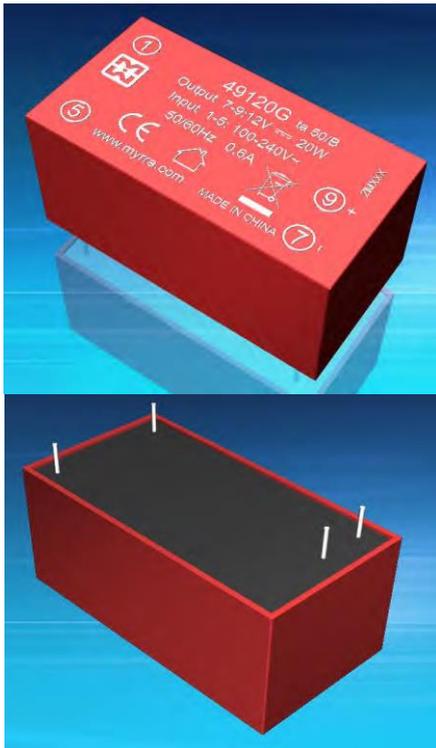


AC/DC CONVERTER 20W - REGULATED



Power Supplies

NEW 20W SERIES



MAIN FEATURES:

- 20W Small Compact Size - PCB Mount
- Single Output - Secondary Side Regulated
- Output Range: 3.3VDC - 24VDC
- 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 IEC/EN61558-2-16, IEC/EN60335, IEC/EN62368, UL/CUL62368, CE
- Materials: Uses UL 94-V0 Plastic and Resin
- EMC: Conducted and Radiated Emission conform to EN55032, N55014 and FCC Part 15, CLASS B
- Immunity conforms to EN61000-3-2 CLASS A, EN61000-3-3, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-11



Part No	Power Rating Watts	Output Voltage (VDC)	Rated Output Current (mA)	Ambient Temp. (°C) <small>Refer to "DERATING GRAPH"</small>	Efficiency Typical	Input Range
49033G	14.5	3.3	4400	-25°C ~ +70°C	>75%@230VAC	85VAC-265VAC (120VDC-370VDC)
49050G	20	5	4000	-25°C ~ +70°C	>78%@230VAC	
49090G	20	9	2200	-25°C ~ +70°C	>81%@230VAC	
49120G	20	12	1667 (1800 Max)	-25°C ~ +70°C	>82%@230VAC	
49150G	20	15	1333 (1400 Max)	-25°C ~ +70°C	>83%@230VAC	
49180G	20	18	1111 (1140 Max)	-25°C ~ +70°C		
49240G	20	24	833 (900 Max)	-25°C ~ +70°C		

NOTE: Other output voltages are available upon request.

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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	0.6A Max@85VAC~265VAC, at full load
	Input Inrush Current	40A Max @100VAC~2240VAC 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	$\pm 2.5\%$ (9V,12V,15V,18V,24V Types) $\pm 4\%$ (3.3V Types and 5V Types)
	Output Voltage Line Regulation	+/- 1%
	Output Voltage Load Regulation	+ 2.5% (9V,12V,18V,24V Types) $\pm 4\%$ (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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Power Supplies

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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~+70°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, EN55014, FCC part 15 Class B. under 3dB margin
	Conduction	Meets EN55032, EN55014, FCC part 15 Class B. under 3dB margin
	Harmonic Current Distance	Meets EN61000-3-2:2014, Class A
	Voltage Fluctuation and Flicker	Meets EN61000-3-3:2013
	Electrostatic Discharge	Meets IEC61000-4-2 : 2008, Contact Discharge \pm 4KV, Air Discharges \pm 8KV
	RF Field Strength Susceptibility	Meets IEC61000-4-3:2006+A1:2007+A2:2010
	Electrical Fast Transient	Meets IEC61000-4-4:2012, \pm 2KV

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AC/DC CONVERTER 20W - REGULATED



Power Supplies

NEW 20W SERIES

Safety & EMC Requirements	Lightning Surge	Meets IEC61000-4-5:2014, \pm 1KV
	Conducted Susceptibility	Meets IEC61000-4-6:2013
	Voltage Dips and interruptions	Meets IEC61000-4-11:2004
	Safety Standards	Meets all requirements of : UL/cUL62368 IEC/EN62368 IEC/EN60335 IEC/EN61558-2-16
Reliability Requirement	MTBF	200K Hours Min. @230VAC input, 50deg.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 (\pm 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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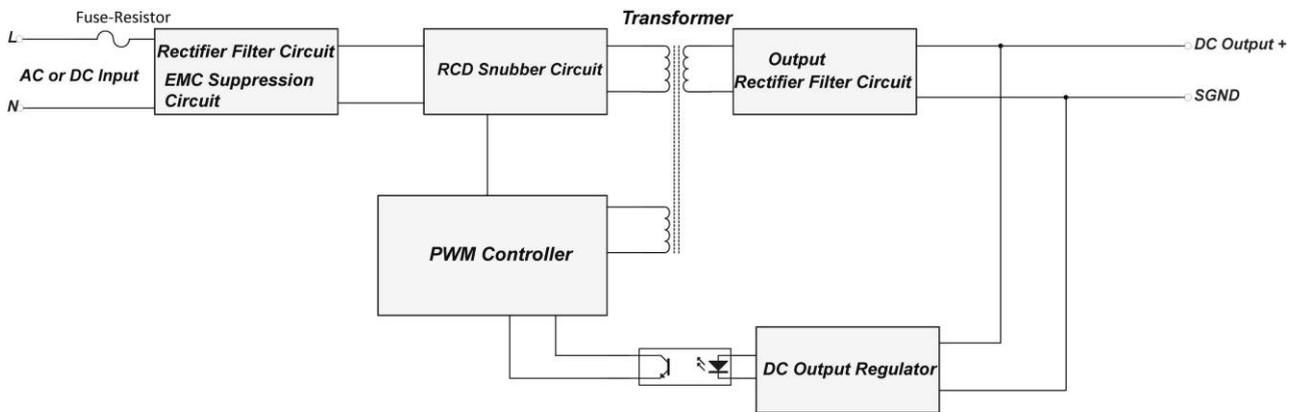
AC/DC CONVERTER 20W - REGULATED



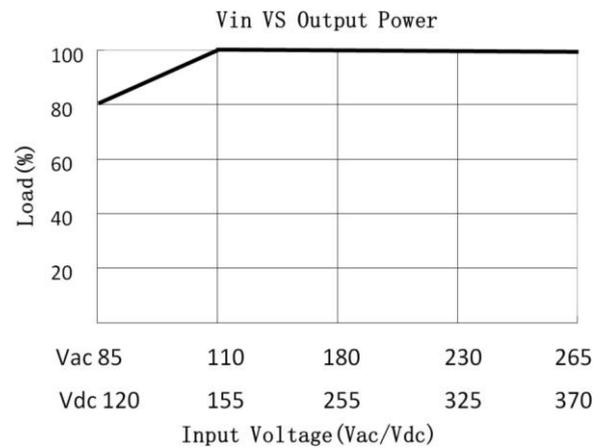
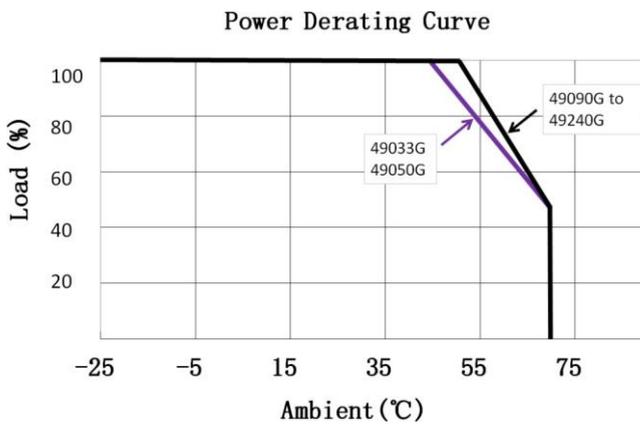
Power Supplies

NEW 20W SERIES

SCHEMATIC

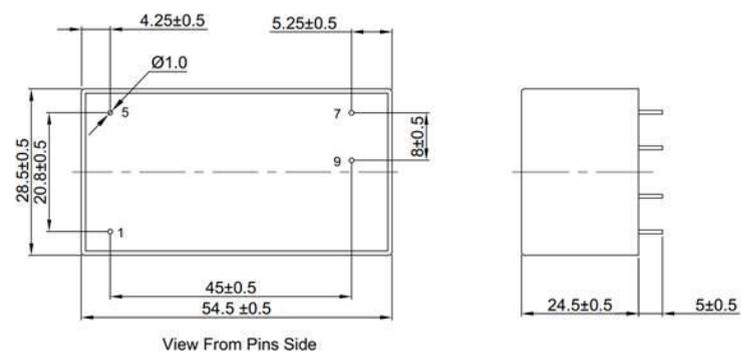


DERATING GRAPH (TYPICALLY 12V TYPE)



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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