

Encapsulated Power Supplies

AC-DC 1W ~60W



LED Drivers 65W ~ 300W IP65 + 3 In 1 dimming



DC-DC 1W ~ 25W



Industrial Power Supplies



DIN Rail Mounting Power Supplies 240W

Customised Solutions 100W~2000W



www.myrra.com www.myrra-powersupplies.com Contact us: <u>contact@myrra.com</u>

Aug-2024

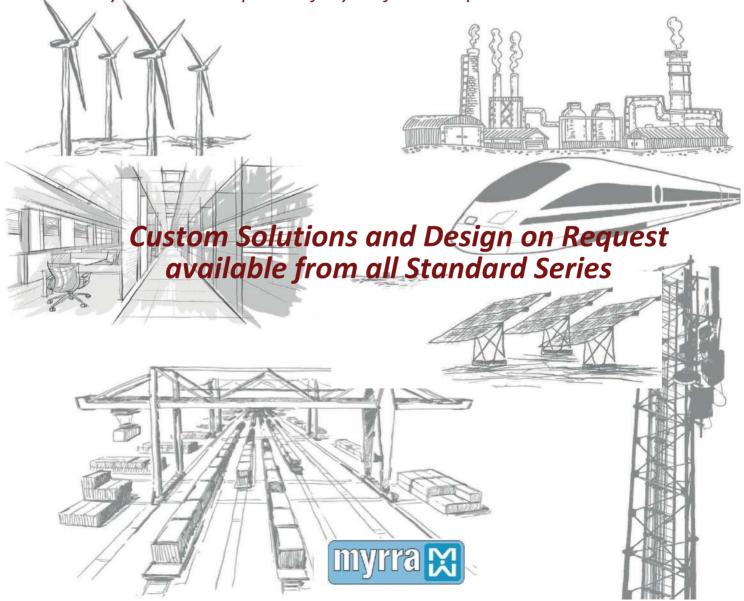
Myrra company Profile

Myrra Power Supplies, Transformers, Inductors and Choke are World renowned for their reliability and performance. This is the result of constant technological development and continuous production process improvements, which has made Myrra Group a leading Company in both design (R&D) and manufacturing.

With their own range of products, including encapsulated Power Supplies, Transformers (50/60Hz), HF Transformers and Value-Added Services, Myrra has become a reliable and renowned Global Supplier.

Since incorporation in 1949, Myrra has become one of the largest Europe a sources for their products in the electrical market, and isstriving to grow their position in a continuously evolving market.

As a Company certified by VDE, UL, CSA, ISO9001 and with a clear policy for conservation of the environment (RoHS, REACH, ISO14001), Myrra is an ideal partner for your future requirements.





Power Supplies

"We at Myrra, Design and Manufacture all our Power Products, ensuring our Customers experience consistent Quality and Reliability"

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47000 Series & 49000 Series

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53000 Series DIN RAIL Mounting Power Supplies

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Customised Solutions

68	Open Frame Type AC-DC Power Supplies 100W ~ 2000W
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	LED Drivers& Industrial Power Supplies 100W ~ 2000W

Support and Service

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1 W to 3 W



3 Certified Power Ratings In 1 Power Supply 48000 Series





3 Certified Power Ratings In 1 Power Supply 49000C Series

5W to 10W



3 Certified Power Ratings In 1 Power Supply 49000E Series

DC-DC Converters 1W to 25W



20W to 60W

LED Drivers

65W to 300W IP65 Rating,3 In 1 Dimming Built-in Active PFC Function





Industrial Power Supplies

72W to 350W Built-in Active PFC Function



Customised Solutions

100W to 2000W Open Frame Type AC-DC Power Supplies LED Drivers & Industrial Power Supplies



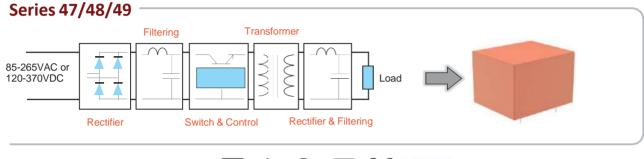
DIN Rail Mounting Power Supplies

240W Built-in Active PFC Function



ENCAPSULATED POWER SUPPLIES AC-DC 1W to 60W







MYRRA encapsulated Switched Mode Power supplies is based on Flyback topology.

They constitute an interesting alternative to the traditional supply in the most common applications of power from 1W to 60W.

ENERGY SAVING due to high efficiency and low standby power.

Application for our Power Supplies:

- Alternative to the linear transformers in all AC-DC applications of power up to 60W
- Alternative to DC-DC converters for application in D.C. current (Telecom supplies, electric substations etc.)
- Industrial, medical, domestic and consumerelectronics applications
- Stand by devices and others DC or AC auxiliary supplies

With the same footprint as an EE20-EI30-EI38-EI48 transformer, they will replace:

- 50 Hz Transformer
- Fuse
- Output Rectifier
- Filtering Capacitor
- Linear Regulator/DC to DC Circuit
- Heatsink

MAIN FEATURES

- Wide input voltage range
- Increased power: 3 x compared tostandard EE20-EI30-EI38-EI48 transformers
- Better energetic efficiency: 70% typical compared to 40% for the conventional supply
- Very low Standby Power consumption: meets requirements of Energy Star or EC Code of Conduct
- Same footprint as EE20-EI30-EI38-EI48 transformer: (1W~10W) Upgrade your application without redesign of PCB
- Operating Altitude Up To 5000m

SAFETY STANDARDS

Meets all requirements of:

- IEC/EN62368-1
- IEC/EN60950-1
- IEC/EN60335-1
- IEC/EN61558-2-16
- IEC/EN61558-1
- UL62368-1
- CSA 22.2 N°62368-1
- UL60950-1
- CSA 22.2 N°60950-1
- UL 94-V0

EMC STANDARDS

Conducted and radiated emissions conform to • EN 55014-1,EN55032,FCC Part15 Class B • IEC/EN 61000-3-x Immunity conform to

- EN 55014-2
- EN 61000-4-x

ONE OUTPUT 1W to 3W - Small Compact Size



MAIN FEATURES

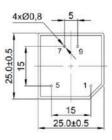
- Small Compact Size PCB Mount
- Single Output
- Output Range: 3.3VDC 24VDC
- Input Range: 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption < 0.15W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint As EE20 Transformer : Upgrade Your Application Without Redesign Of PCB

- Safety: Compliance With All Requirements of IEC/EN61558-2-16,IEC/EN60950-1, IEC/EN60335-1, IEC/EN62368-1, UL62368-1,UL60950-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14,CE,VDE,ENEC Mark
- Materials : Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emissions Conform To EN55014, EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

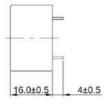
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max. Operating Ambient(°C)	Min. Part Efficiency(%)
	1		300		80	60
48021	2.5	3.3	750	± 6	60	63
	2.75		830		50	
	1		200		80	60
48022	2.5	5	500		60	65
	3		600		50	
	1		110		80	67
48023	2.5	9	280		70	70
	3		330		60	
	1		84	± 5	80	67
48024	2.5	12	210		70	72
	3		250		60	
	1		67		80	67
48025	2.5	15	170		70	72
	3		200		60	
	1	10	56		80	67
48026	2.5	18	140		70	72
	3		170		60	
	1		42		80	70
48027	2.5	24	105		70	74
	3		125		60	

DIMENSIONS and PINOUT

4 Pins Pins 1 - 5 : AC or DC Input Pin 7: DC output +V Pin9: DC output 0V



View From Pins Side



4.0

3.5

3.0

10

0.5

0.0

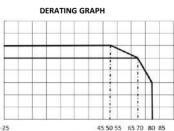
(%)

Coad

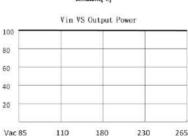
Vdc 120

€ 2.5

Power 2.0 1.5







255

Input Voltage(Vac/Vdc)

325

370

155







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Power Supplies

Proper A robust E-Cap and a 0.102 Ceramic-Cap. An oscilloscope set a2 20MHz bandwith) DYnamic Response The output vitage ge 50x ->100% Load charge, 14/us, 14N± 50% duty cycle DYNAMIC Response The output vitage ge 50x ->100% Load charge, 14/us, 14N± 50% duty cycle Turn On Delay 35 max @ 85Vac-255Vac input and DC output with full load Turn On Delay 35 max @ 85Vac-255Vac input and DC output with full load Weetshoot The output vitage ge 14N into exceed-10% rated output violage @ Power on and 85Vac-255Vac input and DC output with full load Overshoot The power supply shall automatic protect. The power supply shall auto-receed-10% rated output violage @ Power of and 85Vac-255Vac input and DC output with full load Protection The power supply shall automatic protect. The power supply shall auto-receiver normal operation after the deformation is removed. No excessive heat, doau, or plastic deformation shall occur with safety hazard Protection The power supply shall withinstand a continuous output short without damage in 24 hours; The short Strenoved, no excessive heat, doau, or plastic deformation shall occur with safety hazard Output Short Circuit Protection The power supply shall automatic protect. The power supply shall resume norm operation farm the short Strenoved, no excessive heat, dodur, or plastic deformation shall occur with safety hazard Over temperature protection The power supply shall shut down when the junction temperature of PVMA controller excee	Characteristics	AC Input Voltage Range AC Input Frequency Range Rated AC Input Frequency Input Current Standby Power Output Voltage Accuracy Output Voltage Line Regulation Output Voltage Load Regulation Ripple & Noise Dynamic Response Hold Up Time Turn On Delay Rise Time Overshoot Undershoot	85~265Vac or 120VDC-370VDC 47Hz~63Hz 50/60Hz 0.15A Max@85Vac~265Vac, at full load 0.15W Max(Meet Requirements Of Energy Star And EC Code Of Conduct) 3.3V type: ± 6 %, Other types(5V,9V,12V,15V,18V and 24V): ± 5 % 3.3V type: ± 5 %, Other types(5V,9V,12V,15V,18V and 24V): ± 3 % 3.3V type: ± 6 %, Other types(5V,9V,12V,15V,18V and 24V): ± 5 % Max 200mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 470F A E-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth) The output voltage shall not exceed ±10% rated output voltage @ 50% → 100% Load change, 1A/uS, 1KHz 50% duty cycle 5ms min@ 100Vac ~240Vac, DC output with full load 3S max @ 85Vac~265Vac input and DC output with full load 50ms max @ 85Vac~265Vac input and DC output with full load The output voltage shall not exceed ±10% rated output voltage @ Power on and 85Vac~265Vac input and DC with full load The output voltage shall not exceed ±10% rated output voltage @ Power off and 85Vac~265Vac input and DC with full load		
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Output Voltage Line Regulation 3.3 V type: 15 %, Other types(SV, 9V.12V.1EV.18V and 24V): 13 %. Dutput Voltage Load Regulation 3.3 V type: 16 %, Other types(SV, 9V.12V, 15V, 18V and 24V): 13 %. Diput Voltage Load Regulation 3.3 V type: 16 %, Other types(SV, 9V.12V, 15V, 18V and 24V): 13 %. Dynamic Response The output voltage MB not exceed 101% rated output voltage 95%-410% Load change. Durantic Response The output voltage Voltage Voltage 95%-410% Load change. Turn On Delay 35 max @ SVac=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 output with full load Overshoot The output voltage shall not exceed 10% rated output voltage @ Power off and 85Vac=265Vac input and DC output with full load Protection The output voltage explain not exceed 10% rated output voltage @ Power off and 85Vac=265Vac input and DC output with full load Output Short Circuit Protection The power supply shall automatic protect. The power supply shall avec receive normal operation after the adviration is removed. No excessive heat, dout, our, or plastic deformation shall occur vit as aftery hazard Output Short Circuit Protection The power supply shall withstand a continuous output short without damage in 24 hours; The short serves normal operation thermestage with avec receive normal operation may be applied before power on, or after power on; plastic deformation shall occur vin as		Output Voltage Line Regulation Output Voltage Load Regulation Ripple & Noise Dynamic Response Hold Up Time Turn On Delay Rise Time Overshoot Undershoot	3.3V type: ± 5 %, Other types(5V,9V,12V,15V,18V and 24V): ± 3 % 3.3V type: ± 6 %, Other types(5V,9V,12V,15V,18V and 24V): ± 5 % Max 200mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF A E-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth) The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS, 1KHz 50% duty cycle 5mS min@ 100Vac ~240Vac, DC output with full load 3S max @ 85Vac~265Vac input and DC output with full load 50ms max @ 85Vac~265Vac input and DC output with full load The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~265Vac input and DC with full load The output voltage shall not exceed +10% rated output voltage @ Power off and 85Vac~265Vac input and DC with full load		
Protection 3.3 Ybpe: 16 %, Other types(SV, 9V, 12V, 12V, 129V, 20 ed. 2014): ± 5.8 Ripple & Noise 2.4 words 200my bp & Butel A C input, a route mula line (the measurine will be terminated with a 47u E-Cap and a 0.1 uf Ceramic-Cap. An ascilicacope set at 200Hr) bandwidth) Dynamic Response 1.4 / Jos. 118H 50% duty cycle Hold Up Time 5 ms m & Ø SVac-226Vac (Do output with full load Turn On Delay 35 max @ SVac-226Vac (put and DC output with full load Rise Time 5 ms max @ SVac-226Vac (put and DC output with full load Rise Time 5 ms max @ SVac-226Vac (put and DC output with full load Undershoot 1 and DC with full load Bise Time 5 ms max @ SVac-265Vac (put and DC output with full load Undershoot 1 and DC with full load With Grieney 5 eet able (Meets Requirements Of Foregy Star And SC Code Of Conduct) Over furrent Protection The power supply shall withstand a continuous output short without damage in 3 hours; The short is removed in a continuous output short without damage in 3 hours; The short is proved supply shall response for a foregr Star And SC Code Of Conduct) Environmental Over temperature protection The power supply shall withstand a continuous output short without damage in 3 hours; The short is proved on excessive heat, adour, or plastic deformation shall occur vin osafety hazard Over temperat		Output Voltage Load Regulation Ripple & Noise Dynamic Response Hold Up Time Turn On Delay Rise Time Overshoot Undershoot	3.3V type: ± 6 % ,Other types(5V,9V,12V,15V,18V and 24V): ± 5 % Max 200mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF A E-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth) The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS , 1KHz 50% duty cycle 5mS min@ 100Vac ~240Vac, DC output with full load 3S max @ 85Vac~265Vac input and DC output with full load 50ms max @ 85Vac~265Vac input and DC output with full load The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~265Vac input and DC with full load The output voltage shall not exceed +10% rated output voltage @ Power off and 85Vac~265Vac input and DC with full load		
No. Max 200mVp:pB Reted AC iput, at nominal line (The measuring will be terminated with 4 4/Jut. Corrant:Cap. An occilloscope start 20MHz bandwidth) DC OUtput The output voltage shall not exceed 310% rated output voltage (# 50%C->100% Load change, 14/Jus, 1KH: S0% output voltage (# 50%C->100% Load change, 14/Jus, 1KH: S0% output voltage (# 50%C->100% Load change, 14/Jus, 1KH: S0% output voltage (# 50%C->100% Load change, 14/Jus, 1KH: S0% output voltage (# 50%C->100% Load change, 14/Jus, 1KH: S0% output voltage (# 50%C->100% Load change, 14/Jus, 1KH: S0% output voltage (# 50%C->10% index change, 14/Jus, 1KH: S0%C accession text) Protection The output voltage shall not exceed 10% rated output voltage (# Power on and 85Vac-265Vac ing and 0 C output with full load Protection The output voltage shall not exceed 10% rated output voltage (# Power on and 85Vac-265Vac ing and 0 C output with full load Protection The output voltage shall not exceed 10% rated output voltage (# Power onf and 85Vac-265Vac ing and 0 C output with full load Protection The power supply shall automatic protect. The power supply shall extenses and 0 C output with full load Over Current Protection The power supply shall withstand a continuous output short without damage in 24 hours; The short is move 0 and no excessive head, odow, or plastic deformation shall occur voltoge actes in the head of an other is more of nom, no excessive head, odow, or plastic deformation shall occur voltoge actes in the head of an other is more of nom, not exceed st the power supply shall withstand a continuous output short without damage in 24 hours; The short is more of an exceed sto thead other streed output voltag		Ripple & Noise Dynamic Response Hold Up Time Turn On Delay Rise Time Overshoot Undershoot	Max 200mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF A E-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth) The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS , 1KHz 50% duty cycle 5mS min@ 100Vac ~240Vac, DC output with full load 3S max @ 85Vac~265Vac input and DC output with full load 50ms max @ 85Vac~265Vac input and DC output with full load The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~265Vac input and DC output with full load The output voltage shall not exceed +10% rated output voltage @ Power off and 85Vac~265Vac input and DC with full load		
DV OUTUR The output voltage shall not exceed 110% rated output voltage @ 50% ->100% Load charge, 14/05, XHE S0% outpy cycle Hold Up Time SmS min@ 100Vac ~>240Vac, DC output with full load Turn On Delay 35 max @ 85Vac ~>255Vac input and DC output with full load Norman 2000 Devershoot The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac ~>255Vac input and DC output with full load Overshoot The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac ~>255Vac input and DC output voltage @ Power on and 85V		Hold Up Time Turn On Delay Rise Time Overshoot Undershoot	The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS, 1KHz 50% duty cycle 5mS min@ 100Vac ~240Vac, DC output with full load 3S max @ 85Vac~265Vac input and DC output with full load 50ms max @ 85Vac~265Vac input and DC output with full load 50ms max @ 85Vac~265Vac input and DC output with full load 50ms max @ 85Vac~265Vac input and DC output with full load The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~265Vac input and DC with full load The output voltage shall not exceed +10% rated output voltage @ Power off and 85Vac~265Vac input and DC with full load		
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Overshoot The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac=265Vac inp and DC with full load Efficiency The output voltage shall not exceed +10% rated output voltage @ Power off and 85Vac=265Vac inp and DC output with full load Protection The output voltage shall not exceed +10% rated output voltage @ Power off and 85Vac=265Vac inp and DC output with full load Protection Over Current Protection The power supply shall autonatic protect. The power supply shall auto-recover normal operation after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur with safety hazard Output Short Circuit Protection The power supply shall withstand a continuous output short without damage in 24 hours; The sh may be applied before power on, or after power on; The power supply shall resume norn operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur wit safety hazard Over temperature protection The power supply shall shut down when the junction temperature of PWM controller exceeds t thermal shutadom temperature, typically 140°C 110°C Operation Temperature -25°C ~x80°C (see Derating Graph) Operation Temperature -25°C *x80°C (see Derating Graph) Operation Temperature -0°C to 435°C Storage Temperature -0°C to 435°C Storage Temperature -0°C to 435°C Storage Temperature -0°C to 435°C	-	Overshoot Undershoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~265Vac input and DC with full load The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~265Vac input		
and DL with full load and DL with full load Undershoot The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac"265Vac ing and DC output with full load Protection Efficiency See table (Meets Requirements Of Energy Star And EC Code Of Conduct) Protection Over Current Protection The power supply shall automatic protect. The power supply shall auto-recover normal operatio after the deformation is removed. No excessive heat, odour, or plastic deformation shall occurr with safety hazard Output Short Circuit Protection The power supply shall withstand a continuous output short without damage in 24 hours; The sh may be applied before power on, or after power on; The power supply shall extu down when the junction temperature of PWM controller exceeds t thermal shundown temperature, typically 140°C ±10°C Over temperature protection The power supply shall shut down when the junction temperature of PWM controller exceeds t thermal shundown temperature, typically 140°C ±10°C Storage Temperature -25°C ~+80°C (see Derating Graph) Operation Temperature -25°C *-80°C (see Derating Graph) Cooling Method Ordinary or thermostat Environmental Storage Temperature Storage Fluctuation And Flicker Meeting EN55032,EN55014,FCC part 15, Class B Conduction Meeting EN61000-4-3:2019 Harmonic Current Disturbance Meeting	-	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~265Vac input		
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Over Current Protection after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur with safety hazard Protection Output Short Circuit Protection The power supply shall withstand a continuous output short without damage in 24 hours; The sh may be applied before power on, or after power on; The power supply shall resume norn operation after the should were supply shall shut down when the junction temperature of PWM controller exceeds t thermal shutdown temperature, typically 140°C ±10°C Operation Temperature -25°C ~+80°C (see Derating Graph) Operation Temperature -25°C ~+80°C (see Derating Graph) Operation Temidity 10° 90% RN(No Condensing) @ DC output with full load Storage Temperature -10°C to +35°C Storage Temperature -10°C to +35°C Cooling Method Ordinary or thermostat Dielectric Strength Primary to Secondary: 4000Vac SmA, 3 secs. Radiation Meeting ENS5032,ENS5014, FCC part 15, Class B Conduction And Flicker Meeting ENS1000-3-2:2019 Harmonic Current Disturbance Meeting ENS1000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±4KV RF Field Strength Susceptibility Meeting ENS1000-4-2:2019 Electrostatic Discharge Meeting ENS1000-4-2:2019 Conducted Susceptibility Meeting ENS1000-4-2:2019					
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Over temperature protection thermal shutdown temperature, typically 140°C ±10°C Operation Temperature -25°C ~+80°C (see Derating Graph) Operation Humidity 10° 90% RH(No Condensing) @ DC output with full load Storage Temperature -10°C to +35°C Storage Humidity <75% RH		Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The shor may be applied before power on, or after power on; The power supply shall resume norma operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur wit no safety hazard		
Operation Humidity 10° 90% RH(No Condensing) @ DC output with full load Storage Temperature -10°C to +35°C Storage Humidity <75% RH	ſ	Over temperature protection	The power supply shall shut down when the junction temperature of PWM controller exceeds the thermal shutdown temperature, typically 140°C ±10°C		
Environmental Storage Temperature -10°C to +35°C Storage Humidity <75%RH		Operation Temperature	-25°C ~+80°C (see Derating Graph)		
Storage Humidity < 75%RH		Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load		
Cooling Method Ordinary or thermostat Dielectric Strength Primary to Secondary: 4000Vac 5mA, 3 secs. Radiation Meeting EN55032,EN55014,FCC part 15, Class B Conduction Meeting EN55032,EN55014, FCC part 15, Class B Conduction Meeting EN55032,EN55014, FCC part 15, Class A Voltage Fluctuation And Flicker Meeting EN5032,EN55014, FCC part 15, Class A Voltage Fluctuation And Flicker Meeting EN61000-3-2:2019, Class A Voltage Fluctuation And Flicker Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Requirement Electrostatic Discharge Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Requirement Electrical Fast Transient Meeting EN61000-4-3:2019 Lightning Surge Meeting EN61000-4-5:2014, ±1KV (surge level can be extended to 6KV with an external circuit - please refer to MYRRA's website and catalogue for MYRRA SMPS application notes). Conducted Susceptibility Meeting EN61000-4-11: 2004 Voltage Dips And Interruptions Meeting EN61000-4-11: 2004 Safety Standards Compliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.4No.63268-1-14, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.2345677 VDE certificate NO.2345677 VDE c	Environmental	Storage Temperature	-10°C to +35°C		
Dielectric Strength Primary to Secondary: 4000Vac 5mA, 3 secs. Radiation Meeting EN55032,EN55014,FCC part 15, Class B Conduction Meeting EN55032,EN55014, FCC part 15, Class B Harmonic Current Disturbance Meeting EN55032,EN55014, FCC part 15, Class A Voltage Fluctuation And Flicker Meeting EN61000-3-2:2019, Class A Electrostatic Discharge Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Requirement Electrical Fast Transient Meeting EN61000-4-3:2019 Lightning Surge Meeting EN61000-4-4:2012, ±1KV Lightning Surge Meeting EN61000-4-6: 2014 Voltage Dips And Interruptions Meeting EN61000-4-6: 2014 Voltage Dips And Interruptions Meeting EN61000-4-1: 2004 Safety Standards Compliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-0.7, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.40046353 Reliability MTBF >200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Calculated in accordance with MIL-HDBK-217-F2 The unit shall be burned in for 2" Shours under 230Vac input and DC with full load at an ambient temperature of 30°45 degrees C		Storage Humidity	<75%RH		
Radiation Meeting EN55032,EN55014,FCC part 15, Class B Conduction Meeting EN55032,EN55014, FCC part 15, Class B Harmonic Current Disturbance Meeting EN55032,EN55014, FCC part 15, Class B Voltage Fluctuation And Flicker Meeting EN61000-3-2:2019, Class A Voltage Fluctuation And Flicker Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Requirement Field Strength Susceptibility Meeting EN61000-4-2:2019 Electrostatic Discharge Meeting EN61000-4-2:2019 Electrostatic Discharge ±8KV Refuirement Field Strength Susceptibility Meeting EN61000-4-3:2019 Electrical Fast Transient Meeting EN61000-4-5:2014, ±1KV (surge level can be extended to 6KV with an external circuit - please refer to MYRRA's website and catalogue for MYRRA SMPS application notes). Conducted Susceptibility Meeting EN61000-4-6: 2014 Voltage Dips And Interruptions Meeting EN61000-4-11: 2004 Safety Standards Compliance with all requirements of: UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO. 40046353 Reliability MTBF >200K Hours @230VAC input at max operation temperature and DC with full load; Calculated in accordance with MIL-HDBK-217-F2 Burn-In Test		Cooling Method	Ordinary or thermostat		
Reliability Methy Evidence Reliability Meeting EN5032,EN55014, FCC part 15,Class B Harmonic Current Disturbance Meeting EN5032,EN55014, FCC part 15,Class A Voltage Fluctuation And Flicker Meeting EN61000-3-2:2019, Class A Voltage Fluctuation And Flicker Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Requirement RF Field Strength Susceptibility Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Refugirement RF Field Strength Susceptibility Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Refugirement RF Field Strength Susceptibility Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Refugirement Refige Surge Meeting EN61000-4-2:2019, ±1KV Lightning Surge Meeting EN61000-4-5:2014, ±1KV (surge level can be extended to 6KV with an external circuit - please refer to MYRRA's website and catalogue for MYRRA SMPS application notes). Conducted Susceptibility Meeting EN61000-4-11: 2004 Voltage Dips And Interruptions Meeting EN61000-4-11: 2004 Compliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60350-1-07, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.40046353 Reliability Requirement MTBF <td< td=""><td></td><td>Dielectric Strength</td><td></td></td<>		Dielectric Strength			
Reliability Requirement MTBF Source Construction Constructing Construction Construction Construction Construction Con		Radiation	Meeting EN55032, EN55014, FCC part 15, Class B		
Namonic Current Distantance Net or 1 Voltage Fluctuation And Flicker Meeting EN61000-3-3:2013 Electrostatic Discharge Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Requirement RF Field Strength Susceptibility Meeting EN61000-4-3:2019 Electrical Fast Transient Meeting EN61000-4-2:2014, ±1KV (surge level can be extended to 6KV with an external circuit - please refer to MYRRA's website and catalogue for MYRRA SMPS application notes). Conducted Susceptibility Meeting EN61000-4-6: 2014 Voltage Dips And Interruptions Meeting EN61000-4-11: 2004 Safety Standards Compliance with all requirements of: UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.40046353 Reliability Requirement MTBF >200K Hours @230VAC input at max operation temperature and DC with full load; Calculated in accordance with MIL-HDBK-217-F2 Burn-In Test The unit shall be burned in for 2° Shours under 230Vac input and DC with full load at an ambient temperature of 30°45 degrees C	-	Conduction	Meeting EN55032,EN55014, FCC part 15,Class B		
Reliability Requirement MTBF Contage indication and indication Meeting EN61000-4-2:2009 Contact Discharge ±4KV, Air Discharge ±8KV Reliability Requirement Meeting EN61000-4-2:2009 Contact Discharge ±4KV, Air Discharge ±8KV RF Field Strength Susceptibility Meeting EN61000-4-3:2019 Electrical Fast Transient Meeting EN61000-4-3:2019, ±1KV Lightning Surge Meeting EN61000-4-5:2014, ±1KV (surge level can be extended to 6KV with an external circuit - please refer to MYRRA's website and catalogue for MYRRA SMPS application notes). Conducted Susceptibility Meeting EN61000-4-6 : 2014 Voltage Dips And Interruptions Meeting EN61000-4-11 : 2004 Safety Standards Compliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.E345767 VDE certificate NO.40046353 Reliability Requirement MTBF >200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Calculated in accordance with MIL+DBK-217-F2 Burn-In Test The unit shall be burned in for 2~ Shours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C	-	Harmonic Current Disturbance	Meeting IEC/EN61000-3-2:2019, Class A		
Safety & EMCR RF Field Strength Susceptibility Meeting IEC/EN61000-4-3:2019 Requirement Electrical Fast Transient Meeting EN61000-4-3:2019 Lightning Surge Meeting EN61000-4-5:2014, ±1KV (surge level can be extended to 6KV with an external circuit - please refer to MYRRA's website and catalogue for MYRRA SMPS application notes). Conducted Susceptibility Meeting EN61000-4-6: 2014 Voltage Dips And Interruptions Meeting EN61000-4-6: 2014 Voltage Dips And Interruptions Meeting EN61000-4-11: 2004 Safety Standards Compliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.E345767 VDE certificate NO.40046353 >200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Reliability Requirement Burn-In Test The unit shall be burned in for 2° 5hours under 230Vac input and DC with full load at an ambient temperature of 30°45 degrees C	-	Voltage Fluctuation And Flicker	Meeting EN61000-3-3:2013		
Requirement In Trebustrengin Susceptionity Meeting EN61000-4-4:2012, ±1KV Electrical Fast Transient Meeting EN61000-4-5:2014, ±1KV (surge level can be extended to 6KV with an external circuit - please refer to MYRRA's website and catalogue for MYRRA SMPS application notes). Conducted Susceptibility Meeting EN61000-4-6:2014 Voltage Dips And Interruptions Meeting EN61000-4-6:2014 Safety Standards Compliance with all requirements of: UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.40046353 Reliability Requirement MTBF >200K Hours @230VAC input at max operation temperature and DC with full load; Calculated in accordance with MIL-HDBK-217-F2 Burn-In Test The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C	-	Electrostatic Discharge	Meeting EN61000-4-2:2009 Contact Discharge ±4KV, Air Discharge ±8KV		
Electrical Fast Transient Meeting EN61000-4-4:2012, ±1KV Lightning Surge Meeting EN61000-4-5:2014, ±1KV (surge level can be extended to 6KV with an external circuit - please refer to MYRRA's website and catalogue for MYRRA SMPS application notes). Conducted Susceptibility Meeting EN61000-4-6:2014 Voltage Dips And Interruptions Meeting EN61000-4-6:2014 Safety Standards Compliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.E345767 VDE certificate NO. 40046353 >200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Reliability Requirement Burn-In Test The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C	Safety & EMC	RF Field Strength Susceptibility	Meeting IEC/EN61000-4-3:2019		
Lightning Surgeplease refer to MYRRA's website and catalogue for MYRRA SMPS application notes).Conducted SusceptibilityMeeting EN61000-4-6 : 2014Voltage Dips And InterruptionsMeeting EN61000-4-11 : 2004Safety StandardsCompliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.E345767 VDE certificate NO.40046353Reliability RequirementMTBFParticipation>200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Calculated in accordance with MIL-HDBK-217-F2Burn-In TestThe unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C	Requirement -	Electrical Fast Transient	Meeting EN61000-4-4:2012, ±1KV		
Conducted Susceptibility Meeting EN61000-4-6 : 2014 Voltage Dips And Interruptions Meeting EN61000-4-11 : 2004 Safety Standards Compliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, IEC/EN62368-1, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.E345767 Reliability MTBF >200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Requirement Burn-In Test The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C	-	Lightning Surge			
Voltage Dips And Interruptions Meeting EN61000-4-11 : 2004 Safety Standards Compliance with all requirements of : UL60950-1, UL62368-1, CAN/CSA22.2No.60950-1-07, CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks, UL certificate NO.E345767 Reliability Requirement MTBF >200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Burn-In Test The unit shall be burned in for 2~ Shours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C	-	Conducted Susceptibility			
Reliability Requirement MTBF >200 Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Calculated in accordance with MIL-HDBK-217-F2 MTB F The unit shall be burned in for 2~ Shours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C MTBF The unit shall be burned in for 2~ Shours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C MTBF MTBF MTBF MTBF 			Meeting EN61000-4-11 : 2004		
Reliability Requirement MTBF >200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load Calculated in accordance with MIL-HDBK-217-F2 Burn-In Test The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C	-		CSA22.2No.62368-1-14, IEC/EN60950-1, IEC/EN60335-1, IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC Marks,		
Burn-In Test temperature of 30~45 degrees C		MTBF	VDE certificate NO. 40046353 >200K Hours @230VAC input at max operation temperature and DC with full load; >550K Hours @230VAC input at 25deg.C and DC with full load		
	Γ	Burn-In Test	The unit shall be burned in for 2~ Shours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C		
	Net Weight	About 16 grams per product unit			

ONE OUTPUT 2W to 5W (49000C series)



MAIN FEATURES

- 2.0 To 5W Small Compact Size PCB Mount
- Single Output Secondary Side Regulated
- Output Range : 3.3VDC 30VDC
- Input Range : 85VAC 265VAC/47 63Hz Or 120VDC -370VDC
- Very Low Standby Power Consumption < 0.1W
- Better Energetic Efficiency : Meet Requirements
 Of Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint As El30 Transformer : Upgrade Your Application Without Redesign Of PCB

- Safety : Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1, UL62368-1, CSA C22.2NO.62368-1-14,CE,VDE,ENEC Mark
- Materials : Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B ,IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5, EN61000-4-6, EN61000-4-8,EN61000-4-11

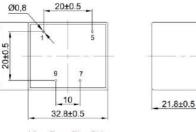
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)
	2		610		80	
49033C	2.75	3.3	830		70	71
	5		1500		50	
	2		400		85	70
49050C	3	5	600		70	
	5		1000		60	72
	2		220		85	73
49090C	3	9	330		70	
	5		560		60	75
	2		170		85	74
49120C	3	12	250		70	76
	5		420		60	
	2		130		85	74
49150C	3	15	200	± 2	70	
	5		330		60	77
	2		110		85	76
49180C	3	18	170		70	
	5		280		60	78
	2		84		85	76
49240C	3	24	125		70	
	5		210		60	80
	2		67		85	76
49300C	3	30	100		70	
	5		167		60	80

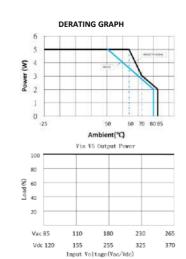
DIMENSIONS and PINOUT

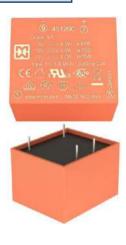
27.8±0.5

4pins pins 1 & 5: AC or DC Input pin 7: DC output +V









View From Pins Side



4±0.5





Power Supplies

Model: 2.0 To 5 Watt		Specification			
	Rated AC input Voltage	100~240Vac Or 140VDC-340VDC			
	AC Input Voltage Range	85~265Vac Or 120VDC-370VDC			
AC Input	AC Input Frequency Range	47Hz~63Hz			
Characteristics	Rated AC Input Frequency	50/60Hz			
	Input Current	0.2A Max@85Vac~265Vac@DC output with full load			
	Standby Power	0.1W Max(Meet Requirements Of Energy Star And EC Code Of Conduct)			
	Output Voltage Accuracy	±2%			
	Output Voltage Line Regulation	±0.5%			
DC Output	Output Voltage Load Regulation	±2%			
Characteristics	Ripple & Noise	Max 180mVp-p@ Rated AC input(The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)			
	Efficiency	See Table (Meet Requirements Of Energy Star And EC Code Of Conduct)			
	Over Current Protection	The power supply shall automatically protect against over current. The power supply shall auto-recover normal operation after the fault condition is removed. No excessive heat, odour, or plastic deformation shall occur with no safety hazard during the fault.			
Protection Characteristics	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage; The short may be applied before power on, or after power on. The power supply shall resume norm operation after the short is removed. No excessive heat, odour, or plastic deformation shal occur with no safety hazard during the fault.			
	Over Temperature Protection	The power supply shall shut down when the junction temperature of PWM controller exceeds the thermal shutdown temperature, typically $140^{\circ}C \pm 10^{\circ}C$			
	Operation Temperature	-25°C ~+85°C (see Derating Graph)			
Environmental	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load			
	Storage Temperature	-10°C to +35°C			
	Storage Humidity	< 75%RH			
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec.			
	Radiation	Meets EN55032,FCC part 15, Class B. under 3dB margin			
Safety & EMC	Conduction	Meets EN55032,FCC part 15,Class B. under 3dB margin			
Requirement	Safety Standards	Compliance with all requirements of : Meet all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1 CE, VDE,UKCA, ENEC Mark UL certificate NO.E345767 VDE certificate NO. 40053361			
Reliability Requirement	МТВҒ	>200K Hours @ 230VAC input at max operation temperature and DC output with 5W load >550K Hours @ 230VAC input at 25deg.C and DC output with 5W load. Calculated in accordance with MIL-HDBK-217-F2			
	Burn-In Test	The power supply is subject to a burn in test for 2~5hours under 230VAC input and DC full load at an ambient temperature of 30~45 degrees C			
Net Weight	About 30 grams per product unit				
Guarantee	This product is in accordance with the European RoHS & REACH directives				

ONE OUTPUT 2.5W to 5W



MAIN FEATURES

- 2.5 To 5W Small Compact Size PCB Mount
- Single Output
- Output Range : 3.3VDC 24VDC
- Input Range : 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption < 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint As El30 Transformer : Upgrade Your Application Without Redesign Of PCB

- Safety: Compliance With All Requirements of: IEC/EN61558-2-16, IEC/EN60950-1, IEC/EN60335-1,IEC/EN62368-1, UL60950-1, CSA22.2No.60950-1,CE,VDE, ENEC Mark
- Materials : Uses UL 94-V0 Plastic And Resin
- EMC Conducted And Radiated Emissions Conform To EN55014, EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additionalcomponents.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11

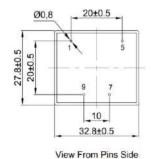
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy(%)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)
47121	2.5	3.3	750			65
47122	2.75	5	550			65
47123		9	270]	70	68
47124	2.5	12	210			70
47125		15	170			73
47126		24	110			74
47151	4.5	3.3	1350	± 2		65
47152	4.5	5	900]		68
47153		9	550]		70
47154	5	12	420		50	73
47155		15	320			75
47156		24	220			76
47157	4.5	3.8	1180			66

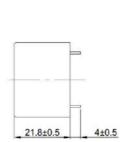
Special Version : 4712xSLI and 4715xSLI = 19.2mm case height (x=1, 2, 3, 4, 5, 6 or 7)

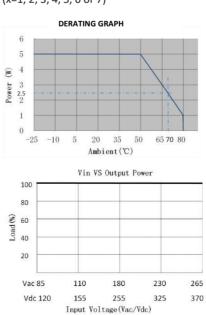
DIMENSIONS and PINOUT

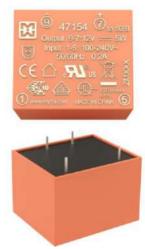
4 pins pins 1 & 5: AC or DC Input pin 7 : DC output +V

pin 9 : DC output VV















Power Supplies

Mo	del: 2.5 To 5 Watt	Specification		
	Rated AC input Voltage	100~240Vac Or 140VDC-340VDC		
	AC Input Voltage Range	85~265Vac Or 120VDC-370VDC		
AC Input	AC Input Frequency Range	47Hz~63Hz		
Characteristics	Rated AC Input Frequency	50/60Hz		
	Input Current	0.2A Max@85Vac~265Vac@ DC output at full load		
	Standby Power	0.3W Max(Meet Requirements Of Energy Star And EC Code Of Conduct)		
	Output Voltage Accuracy	±2%		
	Output Voltage Line Regulation	± 0.5%		
DC Output	Output Voltage Load Regulation	±2%		
Characteristics	Ripple & Noise	Max 200mVp-p@ Rated AC input(The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)		
	Efficiency	See Table (Meet Requirements Of Energy Star And EC Code Of Conduct)		
	Over Current Protection	The power supply shall automatic protection. The power supply shall auto recovery normal operation after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur, no safety hazard		
Protection Characteristics	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 resur normal operation after the short is removed, no excessive heat, odour, or plastic deformatic shall occur, 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 ±10°C		
	Operation Temperature	-25°C ~+70°C (see Derating Graph)		
Environmental	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load		
	Storage Temperature	-10°C to +35°C		
	Storage Humidity	< 75%RH		
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec.		
	Radiation	Meet EN55032,EN55014 , Class B. under 3dB margin		
Safety & EMC	Conduction	Meet EN55032,EN55014, Class B. under 3dB margin		
Requirement Safety Standards	Safety Standards	Compliance with all requirements of UL60950-1, CSA22.2No.60950-1-07JEC/EN60950-1, IEC/EN60335-1, IEC/EN61558-2-16, IEC/EN62368-1,CE,VDE, ENEC Mark VDE Approval No. 40034334 UL Approval No.E345767		
Reliability Requirement	MTBF	>200K Hours @ 230VAC input at max operation temperature and DC output with full load >550K Hours @ 230VAC input at 25deg.C and DC output with full load. Calculated in accordance with MIL-HDBK-217-F2		
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C		
Net Weight	About 30 grams per product unit	t		
Guarantee	This product is in accordance wi	th the European RoHS & REACH directives		

ONE OUTPUT 2.4W to 5W



MAIN FEATURES

- 2.4To 5W Small Compact Size PC B Mount
- Single Output
- Output Range : 5.5VDC 24VDC
- Input Range : 85VAC 265VAC/47 63Hz Or120VDC 370VDC
- Very Lo w Standby Power Consumption < 0.3W
- Better Energetic Efficiency : Meet RequirementsOf Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint As El30 Transformer : Upgrade Your Application Without Redesign Of PCB

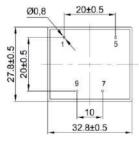
- Safety: Compliance With All Requirements of:IEC/EN61558-2-16, IEC/EN60950-1, IEC/EN60335-1, UL60950-1, IEC/EN62368-1, CSA22.2No.60950-1-07,CE,VDE, ENEC Mark
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC Conducted And Radiated Emissions Conform To EN55014, EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5, EN61000-4-6, EN61000-4-11

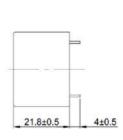
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)
47114	2.4	12	200			70
47132	2.5	5	500			65
47133		9	360		70	68
47134	3.2	12	270			70
47135		18	180	± 5		72
47136		24	130			74
47162		5	900			68
47163		9	560		50	70
47164	5	12	420		50	74
47165		18	280			74
47166		24	210			76



DIMENSIONS and PINOUT

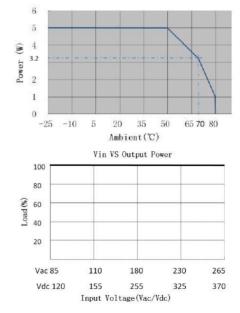
4 pins pins 1 & 5: AC or DC Input pin 7 : DC output +V pin 9 : DC output 0V





View From Pins Side

DERATING GRAPH













Mo	del: 2.4 To 5 Watt	Specification			
	Rated AC input Voltage	100~240Vac Or 140VDC-340VDC			
	AC Input Voltage Range	85~265Vac Or 120VDC-370VDC			
AC Input	AC Input Frequency Range	47Hz~63Hz			
Characteristics	Rated AC Input Frequency	50/60Hz			
	Input Current	0.2A Max@85Vac~265Vac@DC output with full load			
	Standby Power	0.3W Max(Meet Requirements Of Energy Star And EC Code Of Conduct)			
	Output Voltage Accuracy	±5%			
	Output Voltage Line Regulation	±2%			
DC Output	Output Voltage Load Regulation	±5%			
Characteristics	Ripple & Noise	Max 200mVp-p@ Rated AC input(The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)			
	Efficiency	See Table (Meet Requirements Of Energy Star And EC Code Of Conduct)			
Destaulise	Over Current Protection	The power supply shall automatic protection. The power supply shall auto recovery normal operation after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur, no safety hazard			
Protection Characteristics	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 deformationshall occur, 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 ±10°C			
	Operation Temperature	-25°C ~+70°C (see Derating Graph)			
Environmental	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load			
	Storage Temperature	-10°C to +35°C			
	Storage Humidity	< 75%RH			
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec.			
	Radiation	Meet EN55032,EN55014 , Class B. under 3dB margin			
Safety & EMC	Conduction	Meet EN55032,EN55014, Class B. under 3dB margin			
Requirement	Safety Standards	Compliance with all requirements of UL60950-1,CSA22.2No.60950-1-07,IEC/EN60950- 1,IEC/EN60335-1,IEC/EN61558-2-16,IEC/EN62368-1 CE,VDE, ENEC Mark VDE Approval No. 40034334 UL Approval No.E345767			
MTBF Reliability Requirement		 >200K Hours @ 230VAC input at max operation temperature and DC output with full load >550K Hours @ 230VAC input at 25deg.C and DC output with full load. Calculated in accordance with MIL-HDBK-217-F2 			
	Burn-In Test	The unit shall be burned in for 2~5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C			
Net Weight	About 30 grams per product unit				
Guarantee	This product is in accordance wit	h the European RoHS & REACH directives			

 $\label{eq:main_series} \textit{Myrra reserve the right to change specifications in this document without notice}$

TWO OUTPUTS - COMMON 3W to 5W



MAIN FEATURES

- 3W To 5W Small Compact Size PCB Mount
- Two Common Output
- Output Voltage Accuracy : See Table For 15 to 100% Rated Load Of EachOutput (includes line and load variations)
- Input Range : 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption < 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct

- Encapsulated Design And Same Footprint As El30Transformer : Upgrade Your Application Without Redesign Of PCB
- Safety: Compliance With All Requirements of:IEC/EN61558-2- 16, IEC/EN60950-1, IEC/EN60335-1, UL60950-1, IEC/EN62368-1, CSA22.2No.60950-1-07, CE,VDE, ENEC Mark
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC: Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5, EN61000-4-6, EN61000-4-8,EN61000-4-11

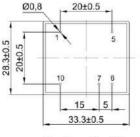
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)
47243	4,7	(+)10.5	380	±2		72
47245		(+) 7.0	100	± 5	50	12
47244	5	(+) 15	300	±2	50	73
47244	3	(+) 7.0	70	± 5		
47245	3.2	(+) 12	130	±3	70	
47245	5.2	(+) 5.5	300	± 5	10	65
47246		(+) 5.0	400 (600max)	±3		05
47240	4	(+) 12	170	± 5	60	
47247		(+) 15	130	±3	50	73
47247		(-) 15	130	±3		15

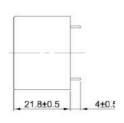
Notes : The dual DC voltage outputs share a common 0V reference. Power deration must be considered at higher operating ambient temperatures.

DIMENSIONS and PINOUT

5 pins

pins 1 & 5: AC or DC Input pin 6: Common output 0V pin 7: DC output I pin 10: DC output II















Power Supplies

Model: Two C	Common Outputs 3 TO 5W	Specification
	Rated AC input Voltage	100~240Vac Or 140VDC-340VDC
	AC Input Voltage Range	85~265Vac Or 120VDC-370VDC
AC Input AC Input Frequency Range		47Hz~63Hz
Characteristics	Rated AC Input Frequency	50/60Hz
	Input Current	0.2A Max@85Vac~265Vac@DC output with full load
	Standby Power	0.2W Max (Meet Requirements Of Energy Star And EC Code Of Conduct)
DC Output	Output Voltage Accuracy	See Table
Characteristics	Cross-Load Regulation	Refer to P/N specification
	Efficiency	See Table(Meet Requirements Of Energy Star And EC Code Of Conduct)
	Over Current Protection	The power supply shall automatic protection. The power supply shall auto recovery normal operation after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur, no safety hazard
Protection Characteristics	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 resum normal operation after the short is removed, no excessive heat, odour, or plastic deformati shall occur, no safety hazard
Over Temper	Over Temperature Protection	The power supply shall shut down when the junction temperature of PWMcontroller exceeds the thermal shutdown temperature, typically 140°C±10°C.
	Operation Temperature	-25°C ~ +70°C (see Derating Graph)
	Operation Humidity	10~ 90% RH(No Condensing) @DC output with full load
Environmental	Storage Temperature	-10°C to +35°C
	Storage Humidity	< 75%RH
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec.
	Radiation	Meet EN55032,EN55014, Class B. under 3dB margin
	Conduction	Meet EN55032,EN55014,Class B. under 3dB margin
Safety & EMC Requirement	Safety Standards	Compliance with all requirements of UL60950-1,CSA22.2No.60950-1-07,IEC/EN60950-1, IEC/EN60335-1,IEC/EN61558-2-16,IEC/EN62368-1 CE,VDE, ENEC Mark VDE Approval No. 40034334 UL Approval No.E345767
Reliability Requirement	MTBF	>200K Hours @ 230VAC input at max operation temperature and DC output with full load >550K Hours @ 230VAC input at 25deg.C and DC output with full load. Calculated in accordance with MIL-HDBK-217-F2
	Burn-In Test	The unit shall be burned in for 2~5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C
Net Weight	About 30 grams per product unit	
	1	

TWO OUTPUTS - ISOLATED 3.5W to 4V

MAIN FEATURES

- Small Compact Size P C BMount
- Two Isolated Output
- Output Voltage Accuracy : See Table For 15 to 100% Rated Load Of Each Output (includes line and load variations)
- Input Range : 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption < 0.2W
- Better Energetic Efficiency: Meet Requirements Of Energy Star And EC Code Of Conduct

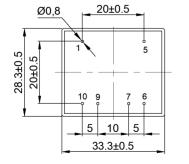
- Encapsulated Design And Same Footprint As El30Transformer : Upgrade Your Application Without Redesign Of PCB
- Safety: Compliance With All Requirements of: IEC/EN61558-2- 16, IEC/EN60950-1, IEC/EN60335-1, UL60950-1, IEC/EN62368-1,CSA22.2No.60950-1-07, CE,VDE, ENEC Mark
- Materials : Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5, EN61000-4-6, EN61000-4-8,EN61000-4-11

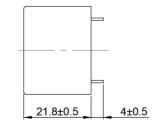
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)
47252	3.5	5	350 (600 max)	± 3		66
11202	0.0	5	350	± 5		
47254		12	165 (300max)	± 2		72
47204		12	165	± 5		12
47255		15	135 (200 max)	± 2	60	73
47200	4	15	135	± 5	00	13
47257	4	5	400 (600 max)	± 2		68
47237		12	170	± 5		00
47258		18	150 (200 max)	± 4		72
47230		8	150	± 5		12

DIMENSIONS and PINOUT

6 pins

pins 1 & 5: AC or DC Input pin 6: DC output 1 0V pin 7: DC output 1 +V pin 9: DC output 2 0V pin 10: DC output 2 +V











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Nodel : Two Co	mmon Outputs 3.5 TO 4W	Specification
	Rated AC input Voltage	100~240Vac Or 140VDC-340VDC
	AC Input Voltage Range	85~265Vac Or 120VDC-370VDC
AC Input	AC Input Frequency Range	47Hz~63Hz
Characteristics	Rated AC Input Frequency	50/60Hz
	Input Current	0.2A Max@85Vac~265Vac@ DC output with full load
	Standby Power	0.2W Max (Meet Requirements Of Energy Star And EC Code Of Conduct)
DC Output	Output Voltage Accuracy	See Table
Characteristics	Cross-Load Regulation	Refer to P/N specification
	Efficiency	See Table(Meet Requirements Of Energy Star And EC Code Of Conduct)
	Over Current Protection	The power supply shall automatic protection. The power supply shall auto recovery normal operation after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur, no safety hazard
Protection Characteristics	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, no safety hazard
	Over Temperature Protection	The power supply shall shut down when the junction temperature of PWMcontroller exceeds the thermal shutdown temperature, typically140°C±10°C.
	Operation Temperature	-25°C ~ +60°C (see table)
	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load
Environmental	Storage Temperature	-10°C to +35°C
	Storage Humidity	< 75%RH
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec.
	Radiation	Meet EN55032,EN55014, Class B. under 3dB margin
	Conduction	Meet EN55032,EN55014,Class B. under 3dB margin
Safety & EMC Requirement	Safety Standards	Compliance with all requirements of UL60950-1, CSA22.2No.60950-1-07, IEC/EN60950-1, IEC/EN60335-1,IEC/EN61558-2-16,IEC/EN62368-1 CE,VDE, ENEC Mark VDE Approval No. 40034334 UL Approval No.E345767
Reliability Requirement	MTBF	>200K Hours @ 230VAC input at max operation temperature and DC output with full load >550K Hours @ 230VAC input at 25deg.C and DC output with full load. Calculated in accordance with MIL-HDBK-217-F2
Acquirement	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C
Net Weight	About 30 grams per product unit	
Guarantee	This product is in accordance wit	h the European RoHS & REACH directives

 $\label{eq:main_series} \textit{Myrra reserve the right to change specifications in this document without notice}$

ONE OUTPUT 7.5W



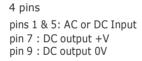
MAIN FEATURES

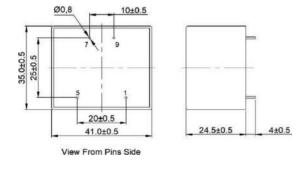
- 7.5W Small Compact Size PCB Mount
- Single Output
- Output Range : 3.3VDC 24VDC
- Input Range : 85VAC 265VAC/47 63Hz Or120VDC - 370VDC
- Very Low Standby Power Consumption < 0.15W
- Better Energetic Efficiency : Meet RequirementsOf Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint As El38 Transformer : Upgrade Your Application Without Redesign Of PCB

- Safety : Compliance With All Requirements of: IEC/EN61558-2- 16, IEC/EN60950-1, IEC/EN60335-1, UL60950-1, IEC/EN62368-1, CAN/CSA22.2No.60950-1-07, CE,VDE, ENEC Mark
- Materials : Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5, EN61000-4-6, EN61000-4-8,EN61000-4-11

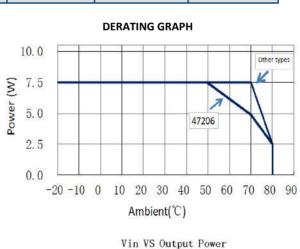
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)
47200		5	1500			75
47201		9	830			80
47202		12	625		70	80
47203	7.5	15	500	± 2	70	80
47204		18	420			81
47205		24	310			82
47206		3.3	2270	± 3	50	74

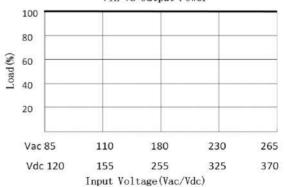
DIMENSIONS and PINOUT

















Power Supplies

N	lodel: 7.5 Watt	Specification
	Rated AC input Voltage	100~240Vac Or 140VDC-340VDC
	AC Input Voltage Range	85~265Vac Or 120VDC-370VDC
AC Input	AC Input Frequency Range	47Hz~63Hz
Characteristics	Rated AC Input Frequency	50/60Hz
	Input Current	0.3A Max@85Vac~265Vac@DC with full load
	Standby Power	0.15W Max(Meet Requirements Of Energy Star And EC Code Of Conduct)
	Output Voltage Accuracy	± 2% (5V,9V,12V,15V,18V,24V Types) - ± 3%(3.3V Type)
	Output Voltage Line Regulation	±0.5%
DC Output	Output Voltage Load Regulation	± 1%(5V,9V,12V,15V,18V,24V Types) ± 3%(3.3V Type)
Characteristics	Ripple & Noise	Max 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)
Efficier	Efficiency	Meet Requirements Of Energy Star And EC Code Of Conduct
	Over Current Protection	The power supply shall automatic protection. The power supply shall auto recovery normal operation after the deformation is removed. No excessive heat, odour, or plastic deformatio shall occur, no safety hazard
Protection Characteristics 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 resun normal operation after the short is removed, no excessive heat, odour, or plastic deformatic shall occur, no safety hazard
	Operation Temperature	-20°C ~ +70°C (see Derating Graph)
	Operation Humidity	10~ 90% RH(No Condensing) @ full load
Environmental	Storage Temperature	-10°C to +35°C
	Storage Humidity	< 75%RH
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec.
	Radiation	Meet EN55032,EN55014,FCC part 15, Class B. under 3dB margin
	Conduction	Meet EN55032,EN55014, FCC part 15,Class B. under 3dB margin
Safety & EMC		Compliance with all requirements of
Requirement	Safety Standards	UL60950-1,CAN/CSA22.2No.60950-1-07,IEC/EN60950-1,IEC/EN60335-1,IEC/EN61558-2- 16,IEC/EN62368-1
		CE,VDE,ENEC Mark VDE Approval No. 40041563 UL Approval No.E345767
Reliability	МТВЕ	>200K Hours @ 230VAC input at max operation temperature and DC output with full lo >550K Hours @ 230VAC input at 25deg.C and DC output with full load. Calculated in accordance with MIL-HDBK-217-F2
Requirement	Burn-In Test	The unit shall be burned in for 2~5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C
Net Weight	About 56 grams per product unit	·
Guarantee	This product is in accordance wit	h the European RoHS & REACH directives

ONE OUTPUT 5W to 10W (49000E series)

MAIN FEATURES

- 5 To 10W Small Compact Size PCB Mount
- Single Output Secondary Side Regulated
- Output Range : 3.3VDC 30VDC
- Input Range : 85VAC 265VAC/47 63Hz Or 120VDC -370VDC
- Very Low Standby Power Consumption < 0.1W
- Better Energetic Efficiency : Meet Requirements
 Of Energy Star And EC Code Of Conduct

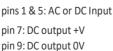
Encapsulated Design And Same Footprint As El38 Transformer : Upgrade Your Application Without Redesign Of PCB Safety : Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1, UL62368-1, CSA C22.2NO.62368-1-14,CE,VDE,ENEC,UKCA Mark.

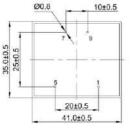
CERTIFIE

- Materials : Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5, EN61000-4-6, EN61000-4-8,EN61000-4-11

Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max. Operating Ambient (°C)	Min. Part Efficiency(%)
49033E	10		2700		60	
	7.5	3.3	2270		70	68
	5.0		1500		80	
49050E	10		2000		60	73
	7.5	5	1500		70	15
	5.0		1000		80	70
49090E	10		1100		60	
	7.5	9	830		75	79
	5.0	-	550		80	74
49120E	10		830		60	
	7.5	12	625		75	80
	5.0		420	±2	80	75
49150E	10		670		60	
	7.5	15	500		75	81
	5.0		330		80	76
49180E	10		560		60	
	7.5	18	420		75	81
	5.0		280		80	76
49240E	10		420		60	81
	7.5	24	310		75	01
	5.0		210		80	76
49300E	10		333		60	
	7.5	30	250		75	81
	5.0		167		80	76

DIMENSIONS and PINOUT 4pins



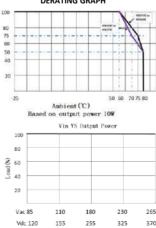


View From Pins Side









Input Voltage(Vac/Vdc)





(%)

Load





Power Supplies

Mo	del: 5W To 10Watt	Specification
	Rated AC input Voltage	100~240Vac Or 140VDC-340VDC
	AC Input Voltage Range	85~265Vac Or 120VDC-370VDC
AC Input	AC Input Frequency Range	47Hz~63Hz
Characteristics	Rated AC Input Frequency	50/60Hz
	Input Current	0.35A Max@85Vac~265Vac@DC output with full load
	Standby Power	0.1W Max(Meet Requirements Of Energy Star And EC Code Of Conduct)
	Output Voltage Accuracy	±2%
	Output Voltage Line Regulation	±0.5%
DC Output	Output Voltage Load Regulation	±2%
Characteristics	Ripple & Noise	Max 180mVp-p@ Rated AC input(The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)
Efficiency		See Table (Meet Requirements Of Energy Star And EC Code Of Conduct)
Protection	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, odour, or plastic deformatior shall occur with no safety hazard
Characteristics	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, 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 ±10°C
	Operation Temperature	-25°C ~+80°C (Refer to "Derating Graph")
Environmental	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load
	Storage Temperature	-10°C to +35°C
	Storage Humidity	< 75%RH
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec.
	Radiation	Meets EN55032,FCC part 15, Class B. under 3dB margin
Safety & EMC	Conduction	Meets EN55032,FCC part 15,Class B. under 3dB margin
Requirement	Safety Standards	Compliance with all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE,UKCA, ENEC Mark UL certificate NO.E345767 VDE certificate NO.40056578
Reliability Requirement	MTBF	>200K Hours @230VAC input at max operation temperature and DC output with full load >550K Hours @230VAC input at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2
	Burn-In Test	The power supply is subject to a burn in test for 2~5hours under 230VAC input and DC full load at an ambient temperature of 30~45 degrees C
Net Weight	About 56 grams per product un	it
Guarantee	This product is in accordance w	ith the European RoHS & REACH directives

ONE OUTPUT 10W

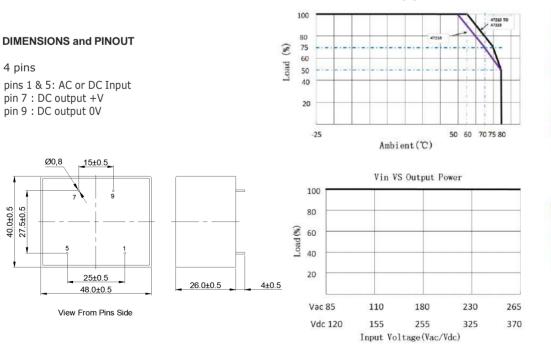


MAIN FEATURES

- 10W Small Compact Size PCB Mount
- Single Output
- Output Range : 3.3VDC 24VDC
- Input Range : 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption < 0.10W
- Better Energetic Efficiency : Meet RequirementsOf Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint As El48 Transformer : Upgrade Your Application Without Redesign Of PCB

- Safety : Compliance With All Requirements of: IEC/EN61558-2- 16, IEC/EN60950-1, IEC/EN60335-1, UL60950-1, IEC/EN62368-1,CAN/CSA22.2No.60950-1-07, CE, VDE, ENECMark
- Materials : Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)
47210		5	2000	±3		73
47211		9	1100			79
47212	10	12	830	±2	60	80
47213		15	670			
47214		18	560			81
47215		24	420			
47216		3.3	3000	±4	50	68



DERATING GRAPH







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Мо	del: 10 Watt	Specification				
	Rated input Voltage	100~240Vac Or 140VDC-340VDC				
	Input Voltage Range	85~265Vac Or 120VDC-370VDC				
AC Input	AC Input Frequency Range	47Hz~63Hz				
Characteristics	Rated AC Input Frequency	50/60Hz				
	Input Current	0.4A Max@85Vac~265Vac@ DC output with full load				
	Standby Power	0.1W Max(Meet Requirements Of Energy Star And EC Code Of Conduct)				
	Output Voltage Accuracy	± 2% (9V,12V,15V,18V,24V Types), ± 3% (5V Type), ± 4%(3.3V Type)				
	Output Voltage Line Regulation	± 0.5%(9V,12V,15V,18V,24V Types), ± 1%(3.3V and 5V Types)				
	Output Voltage Load	± 1%(9V,12V,15V,18V,24V Types)				
DC Output Characteristics	Regulation	± 3% (5V Type), ± 4%(3.3V Type)				
characteristics	Ripple & Noise	Max180mVp-p@RatedACinput (Themeasuringwillbeterminatedwitha47uFALE-Capanda 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)				
	Efficiency	Meets Requirements Of Energy Star And 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, odour, 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, no safety hazard				
	Operation Temperature	-25°C ~ +60°C (see Derating Graph)				
- · · · ·	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load				
Environmental	Storage Temperature	-10'C to +35'C				
	Storage Humidity	<75%RH				
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec .				
	Radiation	Meeting EN55032, EN55014, FCC part 15, Class B.				
	Conduction	Meeting EN55032,EN55014, FCC part 15,Class B.				
Safety & EMC Requirement	Safety Standards	Compliance with all requirements of : UL60950-1, CAN/CSA22.2No.60950-1-07, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368 CE, VDE, ENEC Mark UL certificate NO.E345767 VDE certificate No.40044416				
Reliability	MTBF	>200K Hours @230VAC input at max operation temperature and DC output with full load >550K Hours @230VAC input at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2				
Requirement	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambienttemperature of 30~45 degrees C				
Net Weight	About 80.2 grams per product unit.					
Guarantee	This product is in accordance	with the European RoHS & REACH directives				

ONE OUTPUT 20W (49000G series)



MAIN FEATURES

- 20W Small Compact Size PCB Mount
- Single Output
- Output Range : 3.3VDC 30VDC
- Input Range: 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption ≤ 0.15W
- High Energetic Efficiency: Meet Requirements Of Energy Star And EC Code Of Conduct
- Encapsulated Design PCB Total Power Solution

- Safety: Compliance With All Requirements of: IEC/EN61558-2-16, IEC/EN60335-1, UL62368-1, IEC/EN62368-1, CSA C22.2NO.62368-1-14,CE,VDE,ENEC, **UKCA Mark**
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8,EN61000-4-11

Part Number	Output Power (W)	Output Voltage(Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)
	13.5		4100	±3	45	_
49033G	5.8	3.3	1750	±3	80	75
400500	19	_	3800	±3	45	70
49050G	8	5	1600	±3	80	78
400000	20	•	2200	±2	50	
49090G	8	9	890	±2	80	81
404000	20	40	1667(1800max.)	±2	50	
49120G	8	12	670	±2	80	82
404500	20	45	1333(1400max.)	±2	50	00
49150G	8	15	530	±2	80	83
404900	20	18	1111(1140max.)	±2	50	02
49180G	8	18	450	±2	80	83
402400	20	24	833(900max.)	±2	50	83
49240G	8	24	330	±2	80	83
402000	20	20	667(720max.)	±2	50	82
49300G	8	30	270	±2	80	83

Vin VS Output Power

180

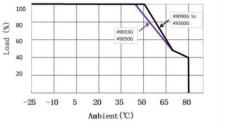
255

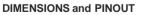
Input Voltage(Vac/Vdc)

230

325

DERATING GRAPH







100

80

40

20

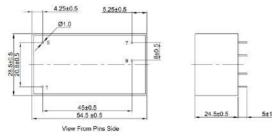
Vac 85

Vdc 120

100

140

Load (%) 60











Mod	lel: 20 Watt	Specification			
	Rated input Voltage	100~240Vac Or 140VDC-340VDC			
	Input Voltage Range	85~265Vac Or 120VDC-370VDC			
AC Input	AC Input Frequency	47Hz~63Hz			
Characteristics	Rated AC Input Frequency	50/60Hz			
	Input Current	0.5A Max@85Vac~265Vac@DC output with full load			
	Standby Power	0.15W Max (Meets requirements Of Energy Star And EC Code Of Conduct)			
		± 2% (9V, 12V, 15V, 18V, 24V Types)			
	Output Voltage Accuracy	± 3% (3.3V Type, 5V Type)			
	Output Voltage Line Regulation	± 1%			
DC Output	Output Voltage Load	± 2% (9V, 12V, 15V, 18V, 24V Types)			
Characteristics	Regulation	± 3% (3.3V Type, 5V Type)			
		Max 180mVp-p @Rated AC input (The measuring will be terminated with a 47uF AL			
	Ripple & Noise	E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)			
	Efficiency	Meets requirements Of Energy Star And EC Code Of Conduct			
	Efficiency				
		The power supply shall automatic protection. The power supply shall auto-recovery normal			
	Over Current Protection	operations after the deformation is removed. No excessive heat, odour, or plastic deformatio			
Protection		shall occur with no safety hazard			
Characteristics		The power supply shall withstand a continuous output short without damage in 24 hours;			
	Output Short Circuit	The short may be applied before power on, or after power on; The power supply shall			
	Protection	resume normal operation after the short is removed, no excessive heat, odour, or plastic			
		deformation shall occur, no safety hazard			
	Operation Temperature	-25°C ~+80°C (Refer to "Derating Graph")			
Environmental	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load			
Environmental	Storage Temperature	-10°C~ +35°C			
	Storage Humidity	<75%RH			
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec .			
	Radiation	Meeting EN55032, EN55014, FCC part 15, Class B.			
Safety & EMC	Conduction	Meeting EN55032, EN55014, FCC part 15, Class B.			
Requirement	Safety Standards	Compliance with all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN60335-1,IEC/EN61558-2-16, IEC/EN62368-1, CE,VDE,ENEC,UKCA Mark UL certificate NO.E345767			
		VDE certificate NO. 400xxxx			
Reliability	MTBF	>200K Hours @230VAC input at max operation temperature and DC output with full load; >550K Hours @230VAC input at 25deg.C and DC output with full load			
Requirement		Calculated in accordance with MIL-HDBK-217-F2			
nequirement		The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at ar			
	Burn-In Test	ambient temperature of 30~45 degrees C			
		The units do not including PINs of input and output , and dimension is :			
Mechanical	Physical Size	(L)54.5*(W)28.5*(H)24.5±0.5mm (see appearance drawing)			
	Net Weight	Approximately 65 grams per product unit.			
Guarantee		I e with the European RoHS & REACH directives			

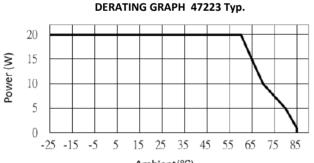
ONE OUTPUT 20W

MAIN FEATURES

- 20W Small Compact Size PCB Mount
- Single Output
- Output Range : 3.3VDC 24VDC
- Input Range: 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption ≤0.15W
- Better Energetic Efficiency: Meet Requirements Of Energy Star And EC Code Of Conduct
- Encapsulated Design PCB Total Power Solution

- Safety: Compliance With All Requirements of: IEC/EN61558-2-16, IEC/EN62368-1, IEC/EN60335-1, UL62368-1, CSA C22.2NO.62368-1-14, CE,VDE,ENEC Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3,EN61000-4-4,EN61000-4-5, EN61000-4-6,EN61000-4-8,EN61000-4-11

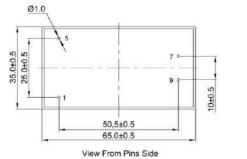
Part Number	Output Power(W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency (%)
47220	15	3.3	4500	±4	50	82
47221		5	4000			
47222		9	2200		<u>.</u>	
47223	20	12	1700	±3		85
47224		15	1400	±3	60	65
47225		18	1100			
47226		24	840			

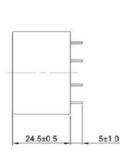


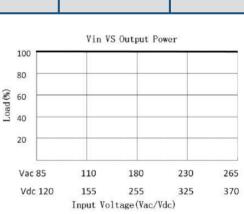
DIMENSIONS and PINOUT

Ambient(°C)

4 pins pins 1 & 5: AC or DC Input pin 7 : DC output +V pin 9 : DC output OV









47000 SERIES





Mod	el: 20 Watt	Specification			
	Rated input Voltage	100~240Vac Or 140VDC-340VDC			
	Input Voltage Range	85~265Vac Or 120VDC-370VDC			
AC Input	AC Input Frequency	47Hz~63Hz			
Characteristics	Rated AC Input Frequency	50/60Hz			
	Input Current	0.6A Max@85Vac~265Vac@DC output with full load			
	Standby Power	0.15W Max (Meets requirements Of Energy Star And EC Code Of Conduct)			
		± 3% (9V, 12V, 15V, 18V, 24V Types)			
	Output Voltage Accuracy	± 4% (3.3V Type, 5V Type)			
	Output Voltage Line	± 2% (9V, 12V, 15V, 18V, 24VTypes)			
	Regulation	± 3% (3.3V and 5V Types)			
DC Output	Output Voltage Load	± 3% (9V, 12V, 15V, 18V, 24V Types)			
Characteristics	Regulation	± 4% (3.3V Type, 5V Type)			
		Max 180mVp-p @Rated AC input (The measuring will be terminated with a 47uF AL			
	Ripple & Noise	E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)			
	Efficiency	Meets requirements Of Energy Star And EC Code Of Conduct			
		The power supply shall automatically protect. The power supply shall auto-recover r			
	Over Current Protection	operation after the deformation is removed. No excessive heat, odour, or plastic			
		deformation shall occur, no safety hazard			
Protection		The power supply shall withstand a continuous output short without damage in 24 hours;			
Characteristics	Output Short Circuit	The short may be applied before power on, or after power on; The power supply shall			
	Protection	resume normal operation after the short is removed, no excessive heat, odour, or plastic			
		deformation shall occur, no safety hazard			
	Operation Temperature	-25°C ~+50°C (operation temp. can be extended more than +50°C ,Refer to "Derating Graph")			
	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load			
Environmental	Storage Temperature	-10°C~ +35°C			
	Storage Humidity	<75%RH			
	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec .			
	Radiation	Meeting EN55032, FCC part 15, Class B			
Safety & EMC	Conduction	Meeting EN55032, FCC part 15, Class B			
Requirement	Safety Standards	Compliance with all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN60335- 1, IEC/EN61558-2-16, IEC/EN62368-1,CE,VDE,ENEC MARK			
Reliability	MTBF	>200K Hours @230VAC input at max operation temperature and DC output with full load; >550K Hours @230VAC input at 25deg.C and DC output with full load			
Requirement		Calculated in accordance with MIL-HDBK-217-F2			
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an			
		ambient temperature of 30~45 degrees C			
	Physical Size	The units do not including PINs of input and output , and dimension is :			
Mechanical		(L)65*(W)35*(H)24.5±0.5mm (see appearance drawing)			
	Net Weight	Approximately 92 grams per product unit.			
Guarantee	This product is in accordance	e with the European RoHS & REACH directives			

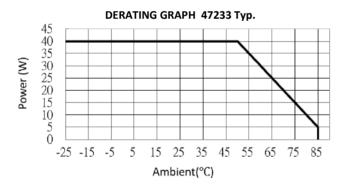
ONE OUTPUT 40W

MAIN FEATURES

- Small Compact Size PCB Mount
- Single Output
- Output Range : 5VDC 24VDC
- Input Range: 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption ≤0.15W
- Better Energetic Efficiency: Meet Requirements
 Of Energy Star And EC Code Of Conduct
- Encapsulated Design PCB Total Power Solution

- Safety: Compliance With All Requirements of: IEC/EN61558-2-16, IEC/EN62368-1, IEC/EN60335-1, UL62368-1, CSA C22.2NO.62368-1-14, CE,VDE,ENEC Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

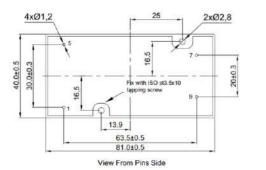
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (mA)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency (%)
47231	30	5	6000	±5		82
47232	36	9	4000			83
47233		12	3300		50	
47234	40	15	2700	±3	50	84
47235		18	2200			
47236		24	1700			

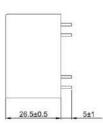


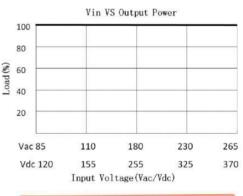
DIMENSIONS and PINOUT

4 pins Pins 1 & 5: AC or DC Input Pin7 : DC output +V pin 9 : DC output 0V

Plastic fixture for screw fixing(optional)

















Model: 40 Watt **Specification** Rated input Voltage 100~240Vac Or 140VDC-340VDC 85~265Vac Or 120VDC-370VDC Input Voltage Range **AC Input Frequency Range** 47Hz~63Hz AC Input Characteristics Rated AC Input Frequency 50/60Hz Input Current 1.0A Max@85Vac~265Vac@DC output with full load Standby Power 0.15W Max (Meet Requirements Of Energy Star And EC Code Of Conduct) ± 3% (9V, 12V, 15V, 18V, 24V Types) **Output Voltage Accuracy** ± 5% (5V Type) ± 1% (9V, 12V, 15V, 18V, 24V Types) **Output Voltage Line** Regulation ± 2% (5V Types) DC Output **Output Voltage Load** ± 3%(9V,12V,15V,18V,24V Types) Characteristics Regulation ± 5% (5V Type) Max 200mVp-p @Rated AC input (The measuring will be terminated with a Ripple & Noise 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth) Efficiency See table (Meet Requirements Of Energy Star And EC Code Of Conduct) The power supply shall automatic protection. The power supply shall auto-recovery **Over Current Protection** normal operation after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur, no safety hazard Protection The power supply shall withstand a continuous output short without damage in 24 Characteristics **Output Short Circuit** hours ; The short may be applied before power on, or after power on; The power supply Protection shall resume normal operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur, no safety hazard **Operation Temperature** $-25^{\circ}C \sim +50^{\circ}C$ (operation temp. can be extended more than +50°C , Refer to "Derating Graph") 10~ 90% RH (No Condensing) @ DC output with full load **Operation Humidity** Environmental Storage Temperature -10°C~ +35°C Storage Humidity <75%RH **Dielectric Strength** Primary to Secondary : 4000Vac 5mA, 3 sec. Radiation Meeting EN55032, FCC part 15, Class B Safety & EMC Conduction Meeting EN55032, FCC part 15, Class B Requirement Compliance with all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, Safety Standards IEC/EN60335-1, IEC/EN61558-2-16, IEC/EN62368-1, CE, VDE, ENEC MARK >200K Hours @230VAC input at max operation temperature and DC output with full load MTBF Reliability >550K Hours @230VAC input at 25deg.C and DC output with full load Requirement Calculated in accordance with MIL-HDBK-217-F2 The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at Burn-In Test an ambient temperature of 30~45 degrees C Approximately 150 grams per product unit. Net Weight This product is in accordance with the European RoHS & REACH directives Guarantee

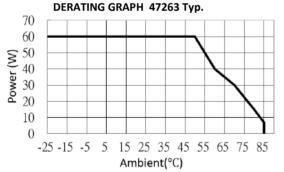
ONE OUTPUT 60W

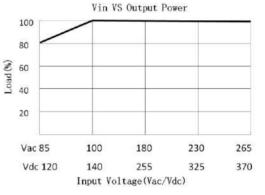
MAIN FEATURES

- Small Compact Size PCB Mount
- Single Output
- Output Range : 5VDC 24VDC
- Input Range: 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption≤ 0.15W
- Better Energetic Efficiency: Meet Requirements Of Energy Star And EC Code Of Conduct
- Encapsulated Design PCB Total Power Solution

- Safety: Compliance With All Requirements of: IEC/EN61558-2-16, IEC/EN62368-1, IEC/EN60335-1, UL62368-1, CSA C22.2NO.62368-1-14, CE,VDE,ENEC Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

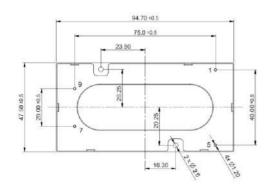
Part Number	Output Power (W)	Output Voltage (Vdc)	Output Current (A)	Output Voltage Accuracy (%)	Max.Operating Ambient (°C)	Min. Part Efficiency (%)
47261	50	5	10	± 5		80
47262		9	6.6			
47263		12	5.0		50	
47264	60	15	4.0	± 3	50	85
47265		18	3.3			
47266		24	2.5			





DIMENSIONS and PINOUT















Moc	del: 60 Watt	Specification	
	Rated input Voltage	100~240Vac Or 140VDC-340VDC	
	Input Voltage Range	85~265Vac Or 120VDC-370VDC	
AC Input	AC Input Frequency Range	47Hz~63Hz	
Characteristics	Rated AC Input Frequency	50/60Hz	
	Input Current	1.5A Max@85Vac~265Vac@DC output with full load	
	Standby Power	0.15W Max (Meet Requirements Of Energy Star And EC Code Of Conduct)	
	Output Voltage Accuracy	± 3% (9V, 12V, 15V, 18V, 24V Types) ± 5% (5V Type)	
	Output Voltage Line	± 3% (9V, 12V, 15V, 18V, 24V Types)	
	Regulation	± 5% (5V Types)	
DC Output	Output Voltage Load	± 3%(9V,12V,15V,18V,24V Types)	
Characteristics	Regulation	± 5% (5V Type)	
	Ripple & Noise	Max 180mVp-p @Rated AC input (The measuring will be terminated with a	
		47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)	
	Efficiency	See table (Meet Requirements Of Energy Star And EC Code Of Conduct)	
	Over Current Protection	The power supply shall automatic protection. The power supply shall auto-recovery normal operation after the deformation is removed. No excessive heat, odour, or plasti deformation shall occur, no safety hazard	
Protection Characteristics	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 2 hours ; The short may be applied before power on, or after power on; The power supp shall resume normal operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur, no safety hazard	
	Operation Temperature	$-25^{\circ}C \sim +50^{\circ}C$ (operation temp. can be extended more than +50°C ,Refer to "Derating Graph")	
	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load	
Environmental	Storage Temperature	-10°C~ +35°C	
	Storage Humidity	<75%RH	
	Dielectric Strength	Primary to Secondary : 4000Vac 5mA, 3 sec.	
	Radiation	Meeting EN55032, FCC part 15, Class B	
Safety & EMC	Conduction	Meeting EN55032, FCC part 15, Class B	
Requirement	Safety Standards	Compliance With all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN60335-1, IEC/EN61558-2-16, IEC/EN62368-1,CE,VDE,ENEC Mark	
Reliability	MTBF	>200K Hours @230VAC input at max operation temperature and DC output with full load >550K Hours @230VAC input at 25deg.C and DC output with full load	
Requirement		Calculated in accordance with MIL-HDBK-217-F2 The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C	
	Burn-In Test	an ambient temperature of 30~45 degrees C	



ENCAPSULATED DC-DC CONVERTER 1W to 25W

50000 Series





MYRRA 50000 series are 1W to 25W encapsulated type DC-DC converter with international standard pins, a high efficiency up to 90%, wide working temperature range -40° C ~ $+105^{\circ}$ C, 1.5KV~ 3.0KVdc I/O isolation voltage; Compliance to EN55032 radiated Class A/B, continuous-mode short circuit protection, etc. This series converters account for different input voltage 4.5×5.5 V, 10.8×13.2 V, 21.6×26.4 V,6.0V~36V and 18×75 V and various output voltage 3.3V/5V/9V/12V/15V and 24V for single output, which are suitable for all kinds of systems, such as industrial control, telecommunication field, distributed power architecture, and so on.

Applications :

- Instrument
- Industrial control facility
- Wireless network
- Telecom/datacom system
- Analyzer
- Detector
- Data switch

MAIN FEATURES

- Wide input voltage range
- Operating Altitude Up To 5000m
- Low cost/High Reliability
- 1500V To 3000Vdc I/O isolation voltage
- Operating Temperature Range -40°C To +105°C
- Industry Standard Pinout PCB Mount
- Protections: Short circuit/Over load
- Remote ON/OFF control and Trimming Output

SAFETY STANDARDS

Meets all requirements of:

- IEC/EN62368-1
- UL62368-1
- CSA 22.2 N°62368-1-14
- IEC60601-1
- UL 94-V0

EMC STANDARDS

Conducted and radiated emissions conform to • EN55032,FCC Part15 Class A/B • IEC/EN 61000-3-x

Immunity conform to EN 61000-4-x

ONE OUTPUT 1W



MAIN FEATURES

- Small Compact Size PCB Mount
- Output Range : 3.3VDC 24VDC
- 3000Vdc I/O Isolation voltage
- Operating Temperature -40°C To +105°C
- Industry Standard Pinout
- Low Cost/High Reliability

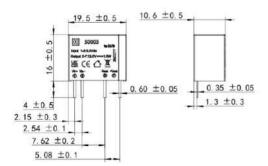
- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1,IEC60601-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power(W)	Output Voltage (VDC)	Output Current (mA)max/min	Input Current Typ.(Full load/No load) (mA)	Max.Operating Ambient (°C)	Efficiency Typical (%)	Input Range (Vdc)
50000	1	3.3	303/30	270/8	105	72	
50001	1	5	200/20	244/8	105	80	
50002	1	9	111/12	241/8	105	80	4.5-5.5
50003	1	12	84/9	241/12	105	80	
50004	1	15	67/7	241/18	105	80	
50005	1	24	42/4	241/18	105	83	
50006	1	5	200/20	208/8	105	72	10.8 –13.2
50007	1	12	84/9	201/8	105	81	10.8–13.2
50008	1	5	200/20	104/8	105	72	21.6 –26.4

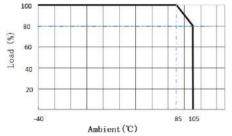
DIMENSIONS and PINOUT

4 pins

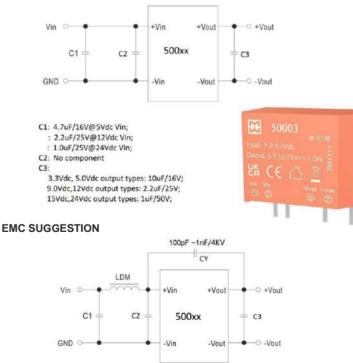
Pin 1: DC Input +Vin Pin 2: DC Input -Vin Pin 5 : DC Output -Vout Pin 7 : DC Output +Vout







TYPICAL APPLICATION



C1,C2: 4.7uF/25V CY: 100pF ~ 1nF/4kv LDM: 4.7 to 10uH C3: 1uF to 10uF/16V







Мос	del: 1 Watt	Specification				
Rated input Voltage		5.0VDC :PN50000 to 50005; 12VDC :PN50006 to 50007; 24VDC: PN50008				
DC Input	Input Voltage Range	4.5 - 5.5VDC:P/N50000 to 50005; 10.8 -13.2VDC :PN50006 to 50007; 21.6 - 26.4VDC: PN50008				
Characteristics	Input Current	See table				
	Protection (Fuse recommended)	500mA				
	Input Filter	Capacitor type				
	Output Voltage Accuracy	Refer to datasheet document				
	Output Voltage Line Regulation	Refer to datasheet document				
DC Output Characteristics	Output Voltage Load Regulation	Refer to datasheet document				
	Ripple & Noise	Max 100mVp-p @Rated DC input (The measuring will be terminated with a 22uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)				
	Switching Frequency	300KHz typ.@5VDC input type				
	Over Current Protection	280KHz typ.@ 12V/24VDC input type The DC converter shall automatically protect against over current. The DC converter shall auto- recover normal operation after the fault condition is removed. No excessive heat, odour, or plastic deformation shall occur with no safety hazard during the fault				
Protection Characteristics	Output Short Circuit Protection	The DC converter shall withstand a continuous output short without damage; The DC converter shall resume normal operation after the short is removed, no excessive heat, odour, or plasti deformation shall occur with no safety hazard				
	Operation Temperature	-40°C ~ + 105°C (Refer to "Derating Graph")				
Environmental	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load				
	Storage Temperature	-10°C~ +35°C				
	Storage Humidity	<75%RH				
	Dielectric Strength	Primary to Secondary : 3000Vdc 1mA, 3 sec.				
	Radiation	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).				
Safety & EMC	Conduction	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).				
Requirement	Safety Standards	Compliance With all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN62368-1, IEC60601-1, CE,UKCA Mark				
	Isolation Capacitance	20pF Max. @100KHz/0.1V,				
Reliability	MTBF	>200K Hours @ at 85deg.C and DC output with full load >700K Hours @ at 25deg.C and DC output with full load				
Requirement	Burn-In Test	Calculated in accordance with MIL-HDBK-217-F2 The unit shall be burned in for 2~ 5hours under rated input voltage and DC with full load at an ambient temperature of 30~45 degrees C				
	Net Weight	Approximately 2.5 grams per product unit.				
Guarantee	This product is in accordance	e with the European RoHS & REACH directives				

ONE OUTPUT 2W



MAIN FEATURES

- Small Compact Size PCB Mount
- Output Range : 3.3VDC 24VDC
- 3000Vdc I/O Isolation voltage
- Operating Temperature -40°C To +105°C
- Industry Standard Pinout
- Low Cost/High Reliability

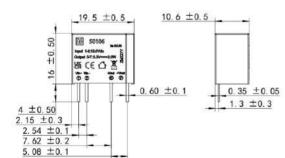
- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1,IEC60601-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

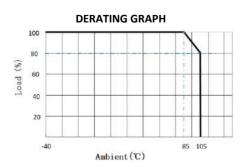
Part Number	Output Power(W)	Output Voltage (VDC)	Output Current (mA)max/min	Input Current Typ.(Full load/No load) (mA)	Max.Operating Ambient (°C)	Efficiency Typical (%)	Input Range (Vdc)
50100	1.32	3.3	400/40	534/8	105	75	
50101	2	5	400/40	477/8	105	82	
50102	2	9	222/22	471/8	105	83	4.5-5.5
50103	2	12	167/17	471/8	105	83	
50104	2	15	133/13	466/8	105	83	
50105	2	24	83/8	466/8	105	84	
50106	2	5	400/40	208/8	105	80	10.8 –13.2
50107	2	12	167/17	201/8	105	82	10.8 –13.2
50108	2	5	400/40	104/8	105	80	21.6 - 26.4

DIMENSIONS and PINOUT

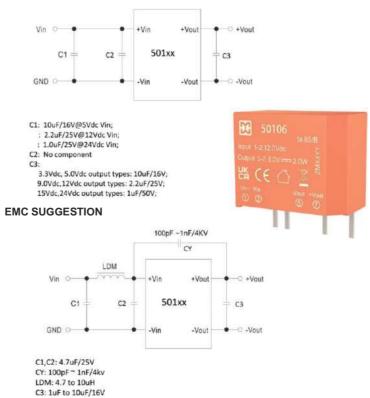
4 pins

Pin 1: DC Input +Vin Pin 2: DC Input -Vin Pin 5 : DC Output -Vout Pin 7 : DC Output +Vout





TYPICAL APPLICATION



@ pending certification

50000 SERIES





Мос	del: 2 Watt	Specification
	Rated input Voltage	5.0VDC :PN50100 to 50105; 12VDC :PN50106 to 50107; 24VDC: PN50108
DC Input	Input Voltage Range	4.5 - 5.5VDC:P/N50100 to 50105; 10.8 -13.2VDC :PN50106 to 50107; 21.6 - 26.4VDC: PN50108
Characteristics	Input Current	See table
	Protection (Fuse recommended)	500mA
	Input Filter	Capacitor type
	Output Voltage Accuracy	Refer to datasheet document
	Output Voltage Line	
	Regulation	Refer to datasheet document
	Output Voltage Load	Refer to datasheet document
DC Output	Regulation	keier to datasneet document
Characteristics	Ripple & Noise	Max 200mVp-p @Rated DC input (The measuring will be terminated with a 22uF AL E-Ca and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)
	Switching Frequency	220KHz typ.@5VDC input type
		260KHz typ.@ 12V/24VDC input type
		The DC converter shall automatically protect against over current. The DC converter shall auto-
	Over Current Protection	recover normal operation after the fault condition is removed. No excessive heat, odour, or
Protection		plastic deformation shall occur with no safety hazard during the fault
Characteristics	Output Short Circuit Protection	The DC converter shall withstand a continuous output short without damage; The DC conver shall resume normal operation after the short is removed, no excessive heat, odour, or plas deformation shall occur with no safety hazard
	Operation Temperature	-40°C ~ + 105°C (Refer to "Derating Graph")
Environmental	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load
	Storage Temperature	-10°C~ +35°C
	Storage Humidity	<75%RH
	Dielectric Strength	Primary to Secondary : 3000Vdc 1mA, 3 sec.
	Radiation	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typica recommended circuit).
Safety & EMC	Conduction	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typica recommended circuit).
Requirement	Safety Standards	Compliance With all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN62368-1, IEC60601-1, CE,UKCA Mark
	Isolation Capacitance	20pF Max. @100KHz/0.1V,
Reliability	MTBF	>200K Hours @ at 85deg.C and DC output with full load >700K Hours @ at 25deg.C and DC output with full load
Requirement		Calculated in accordance with MIL-HDBK-217-F2
	Burn-In Test	The unit shall be burned in for 2~ 5hours under rated input voltage and DC with full loa at an ambient temperature of 30~45 degrees C
	Net Weight	Approximately 2.5 grams per product unit.
Guarantee	This product is in accordance	e with the European RoHS & REACH directives

ONE OUTPUT 2.5W NON-ISOLATED



MAIN FEATURES

- Small Compact Size PCB Mount
- Output Range : 3.3VDC 24VDC
- Pin-out compatible with LM78xx/LM79xx Linear regulators
- Operating Temperature -40°C To +85°C
- Industry Standard Pinout
- Low Cost/High Reliability

- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)	Capacitor Load Max.(uF)	Max.Operating Ambient (°C)	Efficiency Typical (%)	Input Range (Vdc)
50200	1.65	3.3	500	680	85	84	6.0 ~36 (12V typ.)
50201	2.5	5	500	680	85	89	8.0 ~36 (12V typ.)
50202	2.5	9	277	680	85	92	13 ~36 (24V typ.)
50203	2.5	12	210	680	85	92	16 ~36 (24V typ.)
50204	2.5	15	166	680	85	94	20 ~36 (24V typ.)
50205	2.5	24	104	680	85	95	28 ~36 (32V typ.)
50206	2.5	-5	500	680	85	85	8.0 ~36 (12V typ.)
50207	2.5	-12	210	680	85	88	8.0 ~36 (12V typ.)

DIMENSIONS and PINOUT

50200 to 50205: Pin 1: DC Input +Vin Pin 2: DC Input GND Pin 3 : DC Output +Vout

5

0+1

40

Derating Graph

100

60

40

20

LOAD (%) 80

4 ±0.5

11.8 ±0.5

50203 to 850

Input 1-2:24.04dc Output 3-2:12.0V 断(€ △ 】

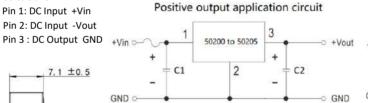
0.6 ±0.05

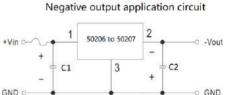
5.08 ±0.20

Ta (°C)

3 d) -100 50206 to 50207: Pin 1: DC Input +Vin Pin 2: DC Input -Vout

TYPICAL APPLICATION





3.3Vdc, 5.0Vdc output types:

. 22uF/10V;

9.0Vdc,15Vdc output types: 22uF/25V;

24Vdc output types: 22uF/50V;

In using parallel application circuit,

notice of and a 10uH LDM component is recommended to

reduce the interference.

input voltage range should be taken

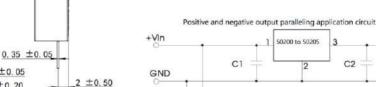
External capacitor:

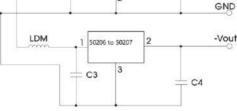
10uF/50V

C1,C3:

C2 C4.

+Vout



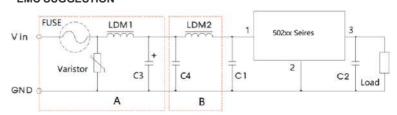


50200 to 50205

3

C2

EMC SUGGESTION



LDM1,LMD2: 10uH to 100uH; C1: 10uF/50V; C2: 22uF/10V to 50V; C3:680uF/50V; C4: 4.7uF/50V; Varistor: 10D470K to 20D470K; FUSE:1A slow-blow type; Circuit A part: used for EMS tests, circuit B part: used for EMI tests.







Мос	del: 2.5 Watt	Specification
	Rated input Voltage	See table
Delivert	Input Voltage Range	36VDC max. (see table)
DC Input Characteristics	Input Current	See table
	Protection (Fuse recommended)	1000mA slow-blow type for all models
	Input Filter	Capacitor type
	Output Voltage Accuracy	Refer to datasheet document
	Output Voltage Line Regulation	Refer to datasheet document
DC Output Characteristics	Output Voltage Load Regulation	Refer to datasheet document
	Ripple & Noise	Max 100mVp-p @Rated DC input (The measuring will be terminated with a 22uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)
	Switching Frequency	1MHz typ.
Protection	Over Current Protection	The DC converter shall automatically protect against over current. The DC converter shall auto- recover normal operation after the fault condition is removed. No excessive heat, odour, or plastic deformation shall occur with no safety hazard during the fault
Characteristics	Output Short Circuit Protection	The DC converter shall withstand a continuous output short without damage; The DC converter shall resume normal operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur with no safety hazard
	Operation Temperature	-40°C ~ +85°C (Refer to "Derating Graph")
Environmental	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load
	Storage Temperature	-10°C~ +35°C
	Storage Humidity	<75%RH
	Dielectric Strength	Non-isolation
	Radiation	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).
Safety & EMC	Conduction	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).
Requirement	Safety Standards	Compliance With all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN62368-1, CE,UKCA Mark
Reliability Requirement	MTBF	>200K Hours @ at 85deg.C and DC output with full load >700K Hours @ at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2
	Burn-In Test	The unit shall be burned in for 2 $^{\circ}$ 5hours under rated input voltage and DC with full load at an ambient temperature of 30 $^{\circ}$ 45 degrees C
	Net Weight	Approximately 1.5 grams per product unit.
Guarantee	This product is in accordance	e with the European RoHS & REACH directives

 $\ensuremath{\textit{Myrra}}$ reserve the right to change specifications in this document without notice

ONE OUTPUT 1W



MAIN FEATURES

- Small Compact Size PCB Mount
- Output Range : 3.3VDC 24VDC
- 1500Vdc I/O Isolation voltage
- Operating Temperature -40°C To +105°C
- Industry Standard Pinout
- Low Cost/High Reliability

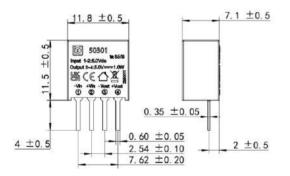
- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1,IEC60601-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)max/min	Input Current Typ.(Full load/No load) (mA)	Max.Operating Ambient (°C)	Efficiency Typical (%)	Input Range (Vdc)
50300	1	3.3	303/30	271/8	105	79	
50301	1	5	200/2	244/8	105	82	
50302	1	9	111/11	241/12	105	85	4.5-5.5
50303	1	12	83/8	241/12	105	82	
50304	1	15	67/7	241/12	105	82	
50305	1	24	42/4	241/18	105	84	

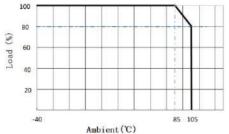
DIMENSIONS and PINOUT

4 pins

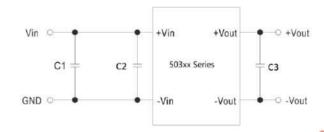
Pin 1: DC Input -Vin Pin 2: DC Input +Vin Pin 3 : DC Output -Vout Pin 4 : DC Output +Vout







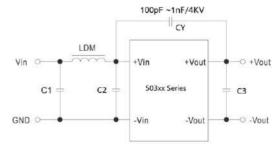




C1,C2: 4.7uF/25V

3.3Vdc, 5.0Vdc output types: 10uF/16V;
 9.0Vdc,12Vdc output types: 2.2uF/25V;
 15Vdc,24Vdc output types: 1uF/50V;

EMC SUGGESTION











Мо	del: 1 Watt	Specification			
	Rated input Voltage	5.0VDC			
DC Input	Input Voltage Range	4.5 - 5.5VDC			
DC Input Characteristics	Input Current	See table			
	Protection (Fuse recommended)	500mA			
	Input Filter	Capacitor type			
	Output Voltage Accuracy	Refer to datasheet document			
	Output Voltage Line Regulation	Refer to datasheet document			
DC Output Characteristics	Output Voltage Load Regulation	Refer to datasheet document			
	Ripple & Noise	Max 100mVp-p @Rated DC input (The measuring will be terminated with a 22uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)			
	Switching Frequency	270КНz Тур.			
	Over Current Protection	The DC converter shall automatically protect against over current. The DC converter shall au recover normal operation after the fault condition is removed. No excessive heat, odour, or			
Protection		plastic deformation shall occur with no safety hazard during the fault			
Characteristics	Output Short Circuit Protection	The DC converter shall withstand a continuous output short without damage; The DC converter shall resume normal operation after the short is removed, no excessive heat, odour, or plasti deformation shall occur with no safety hazard			
	Operation Temperature	-40°C ~ + 105°C (Refer to "Derating Graph")			
	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load			
Environmental	Storage Temperature	-10°C~ +35°C			
	Storage Humidity	<75%RH			
	Dielectric Strength	Primary to Secondary : 1500Vdc 1mA, 3 sec.			
	Radiation	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).			
Safety & EMC	Conduction	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).			
Requirement	Safety Standards	Compliance With all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN62368-1, IEC60601-1, CE,UKCA Mark			
	Isolation Capacitance	20pF Max. @100KHz/0.1V,			
Reliability Requirement	MTBF	>200K Hours @ at 85deg.C and DC output with full load >700K Hours @ at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2			
	Burn-In Test	The unit shall be burned in for 2~ 5hours under rated input voltage and DC with full load at an ambient temperature of 30~45 degrees C			
	Net Weight	Approximately 1.5 grams per product unit.			

ONE OUTPUT 15W

MAIN FEATURES

- Small Compact Size PCB Mount
- Output Range : 3.3VDC 24VDC
- 1500Vdc I/O Isolation voltage
- Operating Temperature -40°C To +85°C
- DIP 1"x 1" Package With Industry Standard Pinout
- Low Cost/High Reliability
- Remote ON/OFF Control and Trimming Output

- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1,IEC60601-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)max/min	Input Current Typ.(Full load/No load) (mA)	Max.Operating Ambient (°C)	Efficiency Typical (%)	Input Range (Vdc)
50410	10	3.3	3000	280/70	85	81	
50411	15	5	3000	380/80	85	85	
50412	15	9	1670	380/30	85	89	Normal 48
50413	15	12	1250	380/25	85	89	(18 to 75)
50414	15	15	1000	380/25	85	88	
50415	15	24	625	380/25	85	88	

DIMENSIONS and PINOUT

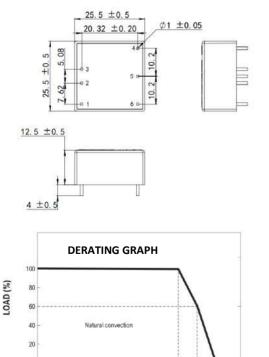
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40

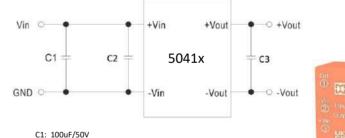
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Ta (C)

Pin 1: Ctrl Pin 2: DC Input -Vin Pin 3: DC Input +Vin Pin 4 : DC Output +Vout Pin 5: Trim Pin 6: DC Output -Vout



TYPICAL APPLICATION

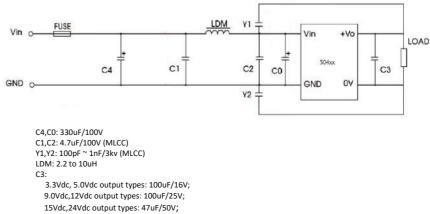


C1: 100uF/50 C3:

3.3Vdc, 5.0Vdc output types: 100uF/16V; 9.0Vdc,12Vdc output types: 100uF/25V; 15Vdc,24Vdc output types: 47uF/50V;



EMC SUGGESTION (Required external component to meet EN55032 radiated Class B emission)



50000 SERIES





Мос	del: 15 Watt	Specification				
	Rated input Voltage	48VDC				
	Input Voltage Range	18- 75VDC				
DC Input	Input Current	See table				
Characteristics	Protection (Fuse recommended)	Fuse recommended: 1.5A delay time type				
	Input Filter	Pi type				
	Input U.V.P.	12Vdc min. / 15.5Vdc max.				
	Output Voltage Accuracy	±2%				
	Output Voltage Line Regulation	±0.5%				
DC Output	Output Voltage Load					
Characteristics	Regulation	±1%				
	Ripple & Noise	Max 100mVp-p @Rated DC input (The measuring will be terminated with a 47uF AL E-Ca and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)				
	Switching Frequency	250KHz Typ.				
	Over Current Protection	110% to 180% rated output power Protection type: Recovers automatically after fault condition is removed.				
Protection Characteristics	Output Short Circuit Protection	The DC converter shall withstand a continuous output short without damage; The DC converte shall resume normal operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur with no safety hazard				
Remote Control	Ctrl Pin to -Vin Pin	DC/DC convertor ON: Ctrl Pin to -Vin Pin >5.5-75Vdc or open circuit DC/DC convertor OFF: Ctrl Pin to -Vin Pin <1.2Vdc or short				
	Operation Temperature	-40°C ~ + 85°C (Refer to "Derating Graph")				
E. Statute	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load				
Environmental	Storage Temperature	-10°C~ +35°C				
	Storage Humidity	<75%RH				
	Dielectric Strength	Primary to Secondary : 1500Vdc 1mA, 3 sec.				
	Radiation	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).				
Safety & EMC	Conduction	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).				
Requirement	Safety Standards	Compliance With all requirements of : UL62368-1, CSA C22.2NO.62368-1-14 , IEC/EN62368-1, IEC60601-1, CE,UKCA Mark				
	Isolation Capacitance	20pF Max. @100KHz/0.1V,				
Reliability	MTBF	>200K Hours @ at 71deg.C and DC output with full load >700K Hours @ at 25deg.C and DC output with full load				
Requirement	Burn-In Test	Calculated in accordance with MIL-HDBK-217-F2 The unit shall be burned in for 2~ 5hours under rated input voltage and DC with full load at an ambient temperature of 30~45 degrees C				
	Net Weight	Approximately 20 grams per product unit.				
Guarantee	This product is in accordance	e with the European RoHS & REACH directives				

ONE OUTPUT 25W

MAIN FEATURES

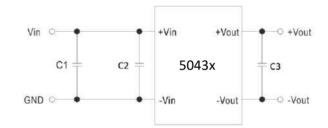
- Small Compact Size PCB Mount
- Output Range : 3.3VDC 24VDC
- 1500Vdc I/O Isolation voltage
- Operating Temperature -40°C To +85°C
- Industry Standard Pinout
- Low Cost/High Reliability
- Remote ON/OFF Control and Trimming Output



- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1,IEC60601-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)max/min	Input Current Typ.(Full load/No load) (mA)	Max.Operating Ambient (°C)	Efficiency Typical (%)	Input Range (Vdc)
50430	15	3.3	4500	480/10	85	81	
50431	25	5	5000	580/10	85	85	
50432	25	9	2770	580/10	85	89	Normal 48
50433	25	12	2100	580/10	85	89	(18 to 75)
50434	25	15	1670	580/10	85	88	
50435	25	24	1040	580/10	85	88	

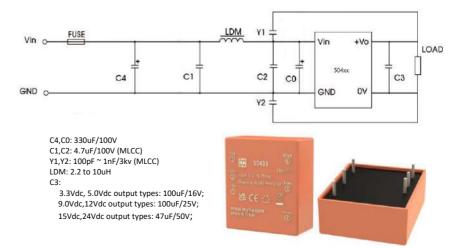
TYPICAL APPLICATION



C1: 100uF/50V C3:

3.3Vdc, 5.0Vdc output types: 100uF/16V; 9.0Vdc,12Vdc output types: 100uF/25V; 15Vdc,24Vdc output types: 47uF/50V;

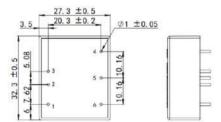
EMC SUGGESTION (Required external component to meet EN55032 radiated Class B emission)

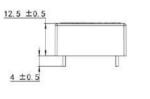


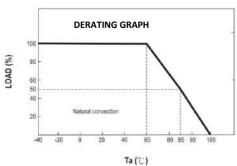
@ pending certification

DIMENSIONS and PINOUT Pin 1: Ctrl

Pin 2: DC Input -Vin Pin 3: DC Input +Vin Pin 4 : DC Output +Vout Pin 5: Trim Pin 6: DC Output -Vout







50000 SERIES





Model: 25 Watt		Specification				
	Rated input Voltage	48VDC				
	Input Voltage Range	18- 75VDC				
DC Input	Input Current	See table				
Characteristics	Protection (Fuse recommended)	Fuse recommended: 1.5A delay time type				
	Input Filter	Pi type				
	Input U.V.P.	12Vdc min. / 15.5Vdc max.				
	Output Voltage Accuracy	±2%				
	Output Voltage Line Regulation	±0.5%				
DC Output	Output Voltage Load					
Characteristics	Regulation	±1%				
	Ripple & Noise	Max 150mVp-p @Rated DC input (The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)				
	Switching Frequency	250КНz Тур.				
	Over Current Protection	110% to 180% rated output power Protection type: Recovers automatically after fault condition is removed.				
Protection Characteristics	Output Short Circuit Protection	The DC converter shall withstand a continuous output short without damage; The DC converter shall resume normal operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur with no safety hazard				
Remote Control	Ctrl Pin to -Vin Pin	DC/DC convertor ON: Ctrl Pin to -Vin Pin >5.5-75Vdc or open circuit DC/DC convertor OFF: Ctrl Pin to Vin Pin <1 2Vdc or short				
	Operation Temperature	Ctrl Pin to -Vin Pin <1.2Vdc or short -40°C ~ + 85°C (Refer to "Derating Graph")				
	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load				
Environmental	Storage Temperature	-10°C~ +35°C				
	Storage Humidity	<75%RH				
	Dielectric Strength	Primary to Secondary : 1500Vdc 1mA, 3 sec.				
	Radiation	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).				
Safety & EMC	Conduction	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit).				
Requirement	Safety Standards	Compliance With all requirements of : UL62368-1, CSA C22.2NO.62368-1-14, IEC/EN62368-1, IEC60601-1, CE,UKCA Mark				
	Isolation Capacitance	20pF Max. @100KHz/0.1V,				
Reliability	MTBF	>200K Hours @ at 65deg.C and DC output with full load >700K Hours @ at 25deg.C and DC output with full load				
Requirement	Burn-In Test	Calculated in accordance with MIL-HDBK-217-F2 The unit shall be burned in for 2~ 5hours under rated input voltage and DC with full load at an ambient temperature of 30~45 degrees C				
	Net Weight	Approximately 23 grams per product unit.				
Guarantee		with the European RoHS & REACH directives				

INDUSTRIAL POWER SUPPLIES AC-DC 72W to 350W



51000 Series



YE CE MROHS

MYRRA 51000 series are 72W to 350W single output enclosed type AC/DC power supply. This series operates for 85~305VAC input voltage and offers the models with the DC output mostly demanded from the industry. 72W to 250W models are cooled by free air convection, 350W model is cooled by Fan, working temperature up to 70°C

Applications for 51000 Series Power Supplies:

- Factory control or automation apparatus
- Test and measurement instrument
- Laser related machine
- Burn-in facility
- RF application

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MAIN FEATURES

- Wide input voltage range 85-305Vac
- Buit-in active PFC > 0.95
- Regulated output range 3.3Vdc-48Vdc
- Very low standby power consumption: meets requirements of Energy Star or EC Code of Conduct
- Operating altitude up to 5000m

SAFETY STANDARDS

Meets all requirements of:

- IEC/EN62368-1
- IEC/EN60335-1
- IEC/EN61558-2-16
- UL62368-1
- CSA 22.2 N°62368-1-14
- CE UKCA Mark

EMC STANDARDS

Conducted and radiated emissions conform to EN55032,FCC Part15 Class B IEC/EN 61000-3-x

Immunity conform to • EN 61000-4-x

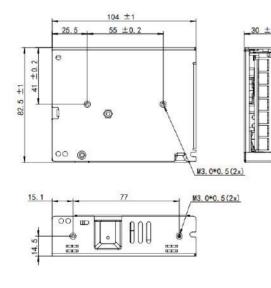
ONE OUTPUT 72W

MAIN FEATURES

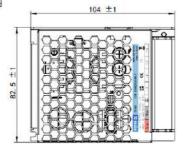
- Small Compact Size
- Single Output
- Regulated Output Range: 3.3VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption < 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct

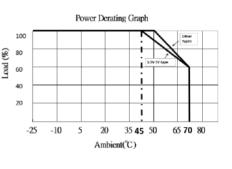
- Safety: Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1,UL62368-1, CSA22.2No.62368-1-14 CE,UKCA Mark
- EMC : Conducted And Radiated Emissions Conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additionalcomponents.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

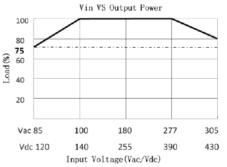
Part Number	Output Power (W)	Output Voltage (VDC)	Rated Output Current (A)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
51000	45	3.3	13.5	70	80	
51001	72	5	14.4	70	82	
51002	72	9	8.0	70	82	
51003	72	12	6.0	70	85	85 ~ 305VAC
51004	72	15	4.8	70	85	(120-430VDC)
51005	72	18	4.0	70	85	
51006	72	24	3.0	70	86	
51007	72	36	2.0	70	86	
51008	72	48	1.5	70	90	

















Model: 72 W		Specification
	Rated AC input Voltage	100~277 VAC or 140VDC-390VDC
AC Input Characteristics	AC Input Voltage Range	85~ 305Vac or 120VDC-430VDC
	AC Input Frequency Range	47Hz~63Hz
	Rated AC Input Frequency	50/60Hz
	Input Current	1.5A Max.
	Standby Power	0.2W Max.(Meet Requirements Of Energy Star And EC Code Of Conduct)
	Leakage Current	< 0.75mA/305VAC
	Output Voltage Accuracy	±2%
	Output Voltage Line Regulation	±0.5%
	Output Voltage Load Regulation	±1%
	Ripple & Noise	Max. 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF ALE-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)
DC Output	Dynamic Response	The output voltage shall not exceed ±10% rated output voltage @ 50% \leftarrow \rightarrow 100% Load change, 1A/uS , 1KHz 50% duty cycle
Characteristics	Hold Up Time	5mS min@ 100Vac ~277Vac, DC output with full load
	Turn On Delay	3S max. @ 85Vac~305Vac input and DC output with full load
	Rise Time	50ms max. @ 85Vac~305Vac input and DC output with full load
	Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~305Vac input and DC with full load
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~305Vac inpu and DC output with full load
	Efficiency	See table (Meets Requirements Of Energy Star And EC Code Of Conduct)
	Over Current Protection	The power supply shall automatic protect. The power supply shall auto-recover normal operation after the deformation is removed. No excessive heat, odour, no safety hazard
Protection Characteristics	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The shor may be applied before power on, or after power on; The power supply shall resume norma operation after the short is removed, no excessive heat, odour, no safety hazard
	Operation Temperature	-25°C ~+70 °C (Refer to DERATING GRAPH)
	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load
Environmental	Storage Temperature	+5°C to +35°C
	Storage Humidity	<75%RH
	Cooling Method	Ordinary or thermostat
		Input to Output : 3750VAC 5mA, 3 sec.
	Dielectric Strength	Input to GND: 2000VAC 10mA, 3 sec.
	Insulation Resistance	Output to GND: 1250VAC 10mA, 3 sec 100MΩ max @500Vdc
	Radiation/ Conduction	Meeting EN55032,FCC part 15, Class B
	Harmonic Current Disturbance	Meeting IEC/EN61000-3-2:2019, Class A
Cofoty & ENAC	Voltage Fluctuation And Flicker	Meeting EN61000-3-3:2013
Safety & EMC Requirement		Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV
	Electrostatic Discharge	Meeting EC/EN61000-4-3:2019
	RF Field Strength Susceptibility	
	Electrical Fast Transient	Meeting EN61000-4-4:2012, ±4KV
	Lightning Surge	Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode
	Conducted Susceptibility	Meeting EN61000-4-6 : 2014
	Voltage Dips And Interruptions	Meeting EN61000-4-11 : 2004
	Safety Standards	Compliance With all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335- 1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark
Reliability Requirement	MTBF	 >200K Hours @230VAC input at 50deg.C and DC output with full load; >450K Hours @230VAC input at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C

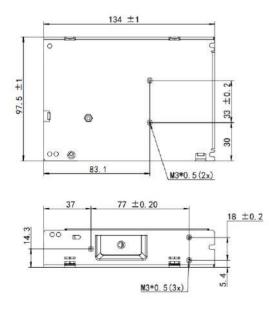
ONE OUTPUT 100W



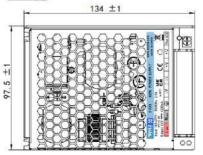
MAIN FEATURES

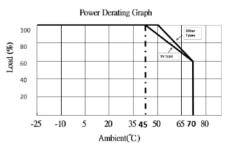
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 5.0VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1,UL62368-1, CSA22.2No.62368-1-14 CE,UKCA Mark
- EMC : Conducted And Radiated Emissions Conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additionalcomponents.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

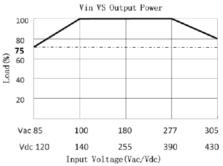
Part Number	Output Power (W)	Output Voltage (VDC)	Rated Output Current (A)	Output Voltage Range- ADJ(Vdc)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
51301	75	5	15.0	4.75 ~ 5.75	70	85	
51302	90	9	10.0	8.55 ~ 10.30	70	86	
51303	100(102max.)	12	8.4 (8.5max.)	11.40 ~ 13.80	70	86	
51304	100(105max.)	15	6.7 (7.0max.)	14.25 ~ 18.50	70	86	85 ~ 305VAC (120-430VDC)
51305	100(105max.)	18	5.6 (5.8max.)	17.50 ~ 20.50	70	88	
51306	100(108max.)	24	4.2 (4.5max.)	22.80 ~ 28.80	70	88	
51307	100(110max.)	36	2.8(3.05max.)	34.20 ~ 39.60	70	89	
51308	100(110max.)	48	2.1 (2.3max.)	43.20 ~ 52.80	70	89	

















Model:100 W	Rated AC input Voltage	Specification					
		100~277 VAC or 140VDC-390VDC 85~ 305Vac or 120VDC-430VDC					
AC Input	AC Input Voltage Range						
AC Input	AC Input Frequency Range	47Hz~63Hz					
Characteristics	Rated AC Input Frequency	50/60Hz					
	Input Current	2.0A Max.					
	Standby Power	0.2W Max.(Meet Requirements Of Energy Star And EC Code Of Conduct)					
	Leakage Current	< 0.75mA/305VAC					
	Output Voltage Accuracy	± 2 % (Output Voltage ADJ Range See table)					
	Output Voltage Line Regulation	± 0.5 %					
	Output Voltage Load Regulation	±1%					
	Ripple & Noise	Max. 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF ALE-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)					
DC Output	Dynamic Response	The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS , 1KHz 50% duty cycle					
Characteristics	Hold Up Time	5mS min@ 100Vac~277Vac, DC output with full load					
	Turn On Delay	3S max. @ 85Vac~305Vac input and DC output with full load					
	Rise Time	50ms max. @ 85Vac~305Vac input and DC output with full load					
	Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~305Vac input and DC with full load					
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~305Vac inpu and DC output with full load					
Protection Characteristics	Over Current Protection	The power supply shall automatic protect. The power supply shall auto-recover normal operation after the deformation is removed. No excessive heat, odour, no safety hazard					
	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The shor may be applied before power on, or after power on; The power supply shall resume norma operation after the short is removed, no excessive heat, odour, no safety hazard					
	Over temperature protection	The power supply is built thermal protection function and can be shutdown(hiccup mode) when NTC thermistor's body temperature reach approx.110°C; The power supply shall auto-recovery normal operation, it is subject to the shut-down is long enough to allow the thermal detection is down to auto reset.					
	Operation Temperature	-25°C ~+70 °C (Refer to DERATING GRAPH)					
	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load					
Environmental	Storage Temperature Storage Humidity	+5°C to +35°C <75%RH					
·	Cooling Method	Ordinary or thermostat					
	Dielectric Strength	Input to Output : 3750VAC 5mA, 3 sec. Input to GND: 2000VAC 10mA, 3 sec. Output to GND: 1250VAC 10mA, 3 sec					
·	Insulation Resistance	100MΩ max @500Vdc					
		Toomini max @ ooor ao					
	Radiation/Conduction	Meeting EN55032,FCC part 15, Class B					
	Radiation/ Conduction Harmonic Current Disturbance	Meeting EN55032,FCC part 15, Class B Meeting IEC/EN61000-3-2:2019, Class C					
	Radiation/ Conduction Harmonic Current Disturbance Voltage Fluctuation And Flicker						
Safaty & EMC	Harmonic Current Disturbance Voltage Fluctuation And Flicker	Meeting IEC/EN61000-3-2:2019, Class C					
Safety & EMC Requirement	Harmonic Current Disturbance	Meeting IEC/EN61000-3-2:2019, Class C Meeting EN61000-3-3:2013					
,	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility	Meeting IEC/EN61000-3-2:2019, Class C Meeting EN61000-3-3:2013 Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV					
,	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility Electrical Fast Transient	Meeting IEC/EN61000-3-2:2019, Class C Meeting EN61000-3-3:2013 Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV Meeting IEC/EN61000-4-3:2019					
'	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge	Meeting IEC/EN61000-3-2:2019, Class CMeeting EN61000-3-3:2013Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KVMeeting IEC/EN61000-4-3:2019Meeting EN61000-4-4:2012, ±4KVMeets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode					
,	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility	Meeting IEC/EN61000-3-2:2019, Class C Meeting EN61000-3-3:2013 Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6 : 2014					
,	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge	Meeting IEC/EN61000-3-2:2019, Class C Meeting EN61000-3-3:2013 Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6 : 2014 Meeting EN61000-4-11 : 2004					
,	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility	Meeting IEC/EN61000-3-2:2019, Class C Meeting EN61000-3-3:2013 Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6 : 2014					
Requirement	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility Voltage Dips And Interruptions	Meeting IEC/EN61000-3-2:2019, Class CMeeting EN61000-3-3:2013Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KVMeeting IEC/EN61000-4-3:2019Meeting EN61000-4-4:2012, ±4KVMeeting EN61000-4-5:2014,±6KV common mode,±4KV diff.modeMeeting EN61000-4-6: 2014Meeting EN61000-4-6: 2014Meeting EN61000-4-11: 2004Compliance With all requirements of: UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335-1, IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark>200K Hours @230VAC input at 50deg.C and DC output with full load					
Requirement	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility Voltage Dips And Interruptions Safety Standards	Meeting IEC/EN61000-3-2:2019, Class CMeeting EN61000-3-3:2013Meeting EN61000-4-2:2009 Contact Discharge ±6KV, Air Discharge ±8KVMeeting IEC/EN61000-4-3:2019Meeting EN61000-4-4:2012, ±4KVMeeting EN61000-4-5:2014, ±6KV common mode, ±4KV diff.modeMeeting EN61000-4-6: 2014, ±6KV common mode, ±4KV diff.modeMeeting EN61000-4-6: 2014Meeting EN61000-4-11: 2004Compliance With all requirements of: UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335-1, IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark>200K Hours @230VAC input at 50deg.C and DC output with full load>450K Hours @230VAC input at 25deg.C and DC output with full load					
	Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility Voltage Dips And Interruptions Safety Standards	Meeting IEC/EN61000-3-2:2019, Class CMeeting EN61000-3-3:2013Meeting EN61000-4-2:2009 Contact Discharge ±6KV, Air Discharge ±8KVMeeting IEC/EN61000-4-3:2019Meeting EN61000-4-4:2012, ±4KVMeets EN61000-4-5:2014, ±6KV common mode, ±4KV diff.modeMeeting EN61000-4-6 : 2014Meeting EN61000-4-11 : 2004Compliance With all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335-1, IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark>200K Hours @230VAC input at 50deg.C and DC output with full load					

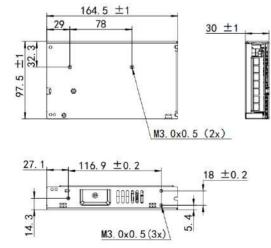
ONE OUTPUT 150W



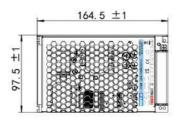
MAIN FEATURES

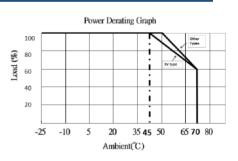
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 5.0VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1,UL62368-1, CSA22.2No.62368-1-14 CE,UKCA Mark
- EMC : Conducted And Radiated Emissions Conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additionalcomponents.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

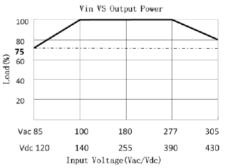
Part Number	Output Power (W)	Output Voltage (VDC)	Rated Output Current (A)	Output Voltage Range- ADJ(Vdc)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
51401	100	5	20.0	4.75 ~ 5.75	70	85	
51402	150	9	16.7	8.55 ~ 10.30	70	86	
51403	150	12	12.5	11.40 ~ 13.80	70	86	
51404	150	15	10.0	14.25 ~ 18.50	70	86	85 ~ 305VAC (120-430VDC)
51405	150	18	8.3	17.50 ~ 20.50	70	88	
51406	150	24	6.25	22.80 ~ 28.80	70	88	
51407	150	36	4.2	34.20 ~ 39.60	70	89	
51408	150	48	3.1	43.20 ~ 52.80	70	89	

















Model:150 W		Specification				
	Rated AC input Voltage	100~277 VAC or 140VDC-390VDC				
	AC Input Voltage Range	85~ 305Vac or 120VDC-430VDC				
AC Input	AC Input Frequency Range	47Hz~63Hz				
Characteristics	Rated AC Input Frequency	50/60Hz				
	Input Current	2.0A Max.				
	Standby Power	0.2W Max.(Meet Requirements Of Energy Star And EC Code Of Conduct)				
	Leakage Current	< 0.75mA/305VAC				
	Output Voltage Accuracy	± 2 % (Output Voltage ADJ Range See table)				
	Output Voltage Line Regulation	± 0.5 %				
	Output Voltage Load Regulation	±1%				
	Ripple & Noise	Max. 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF ALE-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)				
DC Output	Dynamic Response	The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS , 1KHz 50% duty cycle				
Characteristics	Hold Up Time	5mS min@ 100Vac ~277Vac, DC output with full load				
	Turn On Delay	3S max .@ 85Vac~305Vac input and DC output with full load				
	Rise Time					
		50ms max .@ 85Vac~305Vac input and DC output with full load The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~305Vac input				
	Overshoot	and DC with full load				
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~305Vac inpu and DC output with full load				
	Over Current Protection	The power supply shall automatic protect. The power supply shall auto-recover normal operation after the deformation is removed. No excessive heat, odour, no safety hazard				
	Over current Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The short				
Protection Characteristics	Output Short Circuit Protection	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, no safety hazard				
	Over temperature protection	The power supply is built thermal protection function and can be shutdown(hiccup mode) wher NTC thermistor's body temperature reach approx.110°C; The power supply shall auto-recovery normal operation, it is subject to the shut-down is long enough to allow the thermal detection is down to auto reset.				
	Operation Temperature	-25°C ~+70 °C (Refer to DERATING GRAPH)				
	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load				
Environmental	Storage Temperature	+5°C to +35°C				
	Storage Humidity	< 75%RH				
	Cooling Method	Ordinary or thermostat				
	Dielectric Strength	Input to Output : 3750VAC 5mA, 3 sec. Input to GND: 2000VAC 10mA, 3 sec. Output to GND: 1250VAC 10mA, 3 sec				
	Insulation Resistance	100MΩ max @500Vdc				
	Radiation/ Conduction	Meeting EN55032,FCC part 15, Class B				
	Harmonic Current Disturbance	Meeting IEC/EN61000-3-2:2019, Class C				
	Voltage Fluctuation And Flicker	Meeting EN61000-3-3:2013				
Safety & EMC	Electrostatic Discharge	Meeting EN61000-4-2:2009 Contact Discharge ±6KV, Air Discharge ±8KV				
Requirement	RF Field Strength Susceptibility	Meeting IEC/EN61000-4-3:2019				
	Electrical Fast Transient	Meeting EN61000-4-4:2012, ±4KV				
		Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode				
	Lightning Surge					
	Conducted Susceptibility	Meeting EN61000-4-6 : 2014				
	Voltage Dips And Interruptions	Meeting EN61000-4-11 : 2004				
	Safety Standards	Compliance With all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335- 1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark				
	MTBF	>200K Hours @230VAC input at 50deg.C and DC output with full load				
Reliability		>450K Hours @230VAC input at 25deg.C and DC output with full load				
		Calculated in accordance with MIL-HDBK-217-F2				
Requirement	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient				
	Burn-In Test About 265 grams per product unit					

 $\label{eq:main_series} Myrra\,reserve\,the\,right\,to\,change\,specifications\,in\,this\,document\,without\,notice$

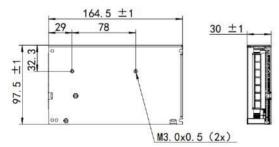
ONE OUTPUT 200W

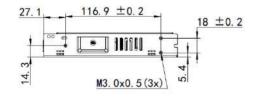


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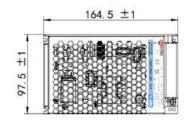
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 9.0VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1,UL62368-1, CSA22.2No.62368-1-14 CE,UKCA Mark
- EMC : Conducted And Radiated Emissions Conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additionalcomponents.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

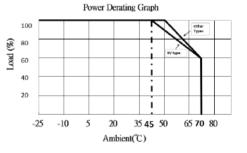
Part Number	Output Power (W)	Output Voltage (VDC)	Rated Output Current (A)	Output Voltage Range- ADJ(Vdc)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
51502	150	9	16.7	8.55 ~ 10.30	70	89	
51503	200	12	16.7	11.40 ~ 13.80	70	91	
51504	200	15	13.3	14.25 ~ 18.50	70	91	85 ~ 305VAC
51505	200	18	11.0	17.50 ~ 20.50	70	91	(120-430VDC)
51506	200	24	8.4	22.80 ~ 28.80	70	92	
51507	200	36	5.6	34.20 ~ 39.60	70	92	
51508	200	48	4.2	43.20 ~ 52.80	70	92	

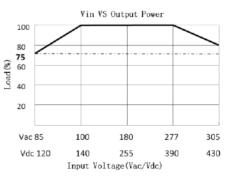


















Model: 200 V	Vatt	Specification
	Rated AC input Voltage	100~277 VAC or 140VDC-390VDC
	AC Input Voltage Range	85~ 305Vac or 120VDC-430VDC
	AC Input Frequency Range	47Hz~63Hz
AC Input Characteristics	Rated AC Input Frequency	50/60Hz
Characteristics	Input Current	2.8A Max.
	Standby Power	0.2W Max. (Meet Requirements Of Energy Star And EC Code Of Conduct)
	Leakage Current	< 0.75mA/305VAC
	Output Voltage Accuracy	± 2 % (Output Voltage ADJ Range See table)
	Output Voltage Line Regulation	±0.5%
	Output Voltage Load Regulation	±1%
	Ripple & Noise	Max. 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF ALE-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)
DC Output	Dynamic Response	The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS , 1KHz 50% duty cycle
Characteristics	Hold Up Time	5mS min@ 100Vac ~277Vac, DC output with full load
	Turn On Delay	3S max. @ 85Vac~305Vac input and DC output with full load
	Rise Time	50ms max. @ 85Vac~305Vac input and DC output with full load
	Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~305Vac input, and DC with full load
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~305Vac input and DC output with full load
	Over Current Protection	The power supply shall automatic protect. The power supply shall auto-recover normal operation after the deformation is removed. No excessive heat, odour, no safety hazard
Protection Characteristics	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, no safety hazard
	Over temperature protection	The power supply is built thermal protection function and can be shutdown(hiccup mode) when NTC thermistor's body temperature reach approx.110°C; The power supply shall auto-recovery normal operation, it is subject to the shut-down is long enough to allow the thermal detection is down to auto reset.
	Over voltage protection	Production type: shut down O/P voltage and re-power on to recover.
	Operation Temperature	-25°C ~+70 °C (Refer to DERATING GRAPH)
Environmental	Operation Humidity Storage Temperature	10~ 90% RH(No Condensing) @ DC output with full load +5°C to +35°C
Environmental	Storage Humidity	<75%RH
	Cooling Method	Ordinary or thermostat
	Dielectric Strength	Input to Output : 3750VAC 5mA, 3 sec. Input to GND: 2000VAC 10mA, 3 sec. Output to GND: 1250VAC 10mA, 3 sec
	Insulation Resistance	100MΩ max @500Vdc
	Radiation/ Conduction	Meeting EN55032,FCC part 15, Class B
	Harmonic Current Disturbance	Meeting IEC/EN61000-3-2:2019, Class C
	Voltage Fluctuation And Flicker	Meeting EN61000-3-3:2013
	Electrostatic Discharge	Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV
Safety & EMC Requirement	RF Field Strength Susceptibility	Meeting IEC/EN61000-4-3:2019
	Electrical Fast Transient	Meeting EN61000-4-4:2012, ±4KV
		Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode
	Lightning Surge Conducted Susceptibility	Meeting EN61000-4-6 : 2014
		Meeting EN61000-4-11 : 2004
	Voltage Dips And Interruptions Safety Standards	Compliance with all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335-
Reliability	MTBF	1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark >200K Hours @230VAC input at 50deg.C and DC output with full load >450K Hours @230VAC input at 25deg.C and DC output with full load
Requirement		Calculated in accordance with MIL-HDBK-217-F2
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C
Net Weight	About 265 grams per product unit	
Guarantee	This product is in accordance with	the European RoHS & REACH directives

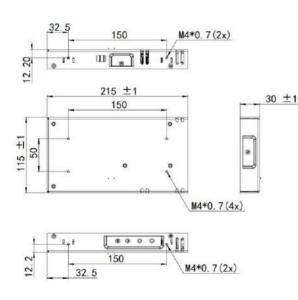
ONE OUTPUT 250W



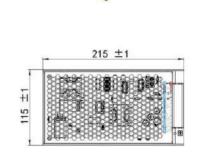
MAIN FEATURES

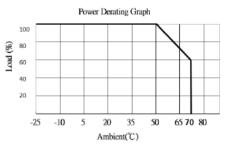
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 12VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.3W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1,UL62368-1, CSA22.2No.62368-1-14 CE,UKCA Mark
- EMC : Conducted And Radiated Emissions Conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additionalcomponents.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

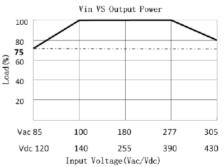
Part Number	Output Power (W)	Output Voltage (VDC)	Rated Output Current (A)	Output Voltage Range- ADJ(Vdc)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
51603	250	12	20.8	11.40 ~ 13.80	70	91	
51604	250	15	16.7	14.25 ~ 18.50	70	91	
51605	250	18	13.9	17.50 ~ 20.50	70	91	85 ~ 305VAC (120-430VDC)
51606	250	24	10.4	22.80 ~ 28.80	70	92	
51607	250	36	6.9	34.20 ~ 39.60	70	92	
51608	250	48	5.2	43.20 ~ 52.80	70	92	

















AC Input Characteristics	Rated AC input Voltage AC Input Voltage Range	100~277 VAC or 140VDC-390VDC 85~ 305Vac or 120VDC-430VDC
		85~ 305Vac or 120VDC-430VDC
	AC Input Frequency Range	47Hz~63Hz
	Rated AC Input Frequency	50/60Hz
	Input Current	3.0A Max.
	Standby Power	0.3W Max. (Meet Requirements Of Energy Star And EC Code Of Conduct)
-	Leakage Current	< 0.75mA/305VAC
	Output Voltage Accuracy	± 2 % (Output Voltage ADJ Range See table)
-	Output Voltage Line Regulation	±0.5%
-	Output Voltage Load Regulation	±1%
	Ripple & Noise	Max. 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF ALE-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)
DC Output	Dynamic Response	The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS , 1KHz 50% duty cycle
Characteristics	Hold Up Time	5mS min@ 100Vac ~277Vac, DC output with full load
-	Turn On Delay	3S max. @ 85Vac~305Vac input and DC output with full load
-	Rise Time	50ms max. @ 85Vac~305Vac input and DC output with full load
	Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~305Vac input and DC with full load
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~305Vac inpu and DC output with full load
	Over Current Protection	The power supply shall automatic protect. The power supply shall auto-recover normal operation after the deformation is removed. No excessive heat, odour, no safety hazard
Protection Characteristics	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The shor may be applied before power on, or after power on; The power supply shall resume norma operation after the short is removed, no excessive heat, odour, no safety hazard
	Over temperature protection	The power supply is built thermal protection function and can be shutdown(hiccup mode) when NTC thermistor's body temperature reach approx.110°C; The power supply shall auto-recovery normal operation, it is subject to the shut-down is long enough to allow the thermal detection is down to auto reset. Production type: shut down O/P voltage and re-power on to recover.
	Operation Temperature	-25°C ~+70 °C (Refer to DERATING GRAPH)
-	Operation Humidity	10~90% RH(No Condensing) @ DC output with full load
Environmental	Storage Temperature	+5°C to +35°C
-	Storage Humidity	<75%RH
	Cooling Method	Ordinary or thermostat
	Dielectric Strength	Input to Output : 3750VAC 5mA, 3 sec. Input to GND: 2000VAC 10mA, 3 sec. Output to GND: 1250VAC 10mA, 3 sec
-	Insulation Resistance	100MΩ max @500Vdc
-	Radiation/ Conduction	Meeting EN55032,FCC part 15, Class B
-	Harmonic Current Disturbance	Meeting IEC/EN61000-3-2:2019, Class C
-	Voltage Fluctuation And Flicker	Meeting EN61000-3-3:2013
Cofoty & EMC	Electrostatic Discharge	Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV
Safety & EMC Requirement	Ũ	Meeting IEC/EN61000-4-3:2019
	RF Field Strength Susceptibility	Meeting EN61000-4-4:2012, ±4KV
-	Electrical Fast Transient	Meets EN61000-4-4:2012, 14KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode
	Lightning Surge	
r	Conducted Susceptibility	Meeting EN61000-4-6 : 2014
-	Voltage Dips And Interruptions Safety Standards	Meeting EN61000-4-11 : 2004 Compliance with all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335- 1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark
Reliability Requirement	MTBF	 >200K Hours @230VAC input at 50deg.C and DC output with full load >450K Hours @230VAC input at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C
Net Weight	About 295 grams per product unit	

 $\label{eq:main_series} Myrra\,reserve\,the\,right\,to\,change\,specifications\,in\,this\,document\,without\,notice$

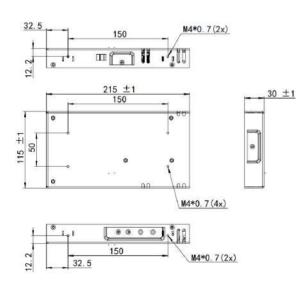
ONE OUTPUT 350W



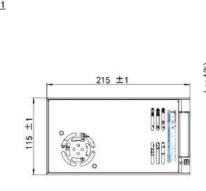
MAIN FEATURES

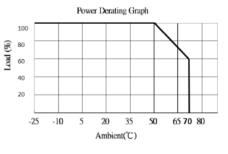
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 12VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.3W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance with All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1,UL62368-1, CSA22.2No.62368-1-14 CE,UKCA Mark
- EMC : Conducted And Radiated Emissions Conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additionalcomponents.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

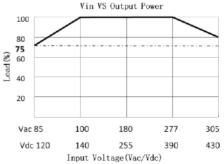
Part Number	Output Power (W)	Output Voltage (VDC)	Rated Output Current (A)	Output Voltage Range- ADJ(Vdc)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
51703	350	12	29.1	11.40 ~ 13.80	70	91	
51704	350	15	23.3	14.25 ~ 18.50	70	91	
51705	350	18	19.4	17.50 ~ 20.50	70	91	85 ~ 305VAC (120-430VDC)
51706	350	24	14.6	22.80 ~ 28.80	70	92	
51707	350	36	9.7	34.20 ~ 39.60	70	92	
51708	350	48	7.3	43.20 ~ 52.80	70	92	

















	Specification					
	100~277 VAC or 140VDC-390VDC					
	85~ 305Vac or 120VDC-430VDC					
	47Hz~63Hz					
	50/60Hz					
	3.5A Max.					
•	0.3W Max. (Meet Requirements Of Energy Star And EC Code Of Conduct)					
-	<0.75mA/305VAC					
	± 2 % (Output Voltage ADJ Range See table)					
	±0.5%					
Output Voltage Load Regulation	$\pm 1\%$					
Ripple & Noise	Max. 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47u ALE-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)					
Dynamic Response	The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS , 1KHz 50% duty cycle					
Hold Up Time	5mS min@ 100Vac ~277Vac, DC output with full load					
Turn On Delay	3S max. @ 85Vac~305Vac input and DC output with full load					
Rise Time	50ms max. @ 85Vac~305Vac input and DC output with full load					
Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~305Vac input and DC with full load					
Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~305Vac inpu and DC output with full load					
Over Current Protection	The power supply shall automatic protect. The power supply shall auto-recover normal operation after the deformation is removed. No excessive heat, odour, no safety hazard					
Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The shore may be applied before power on, or after power on; The power supply shall resume normat operation after the short is removed, no excessive heat, odour, no safety hazard					
Over temperature protection	The power supply is built thermal protection function and can be shutdown(hiccup mode) wher NTC thermistor's body temperature reach approx.110°C; The power supply shall auto-recovery normal operation, it is subject to the shut-down is long enough to allow the thermal detection i down to auto reset.					
Over voltage protection	Production type: shut down O/P voltage and re-power on to recover.					
Operation Temperature	-25°C ~+70 °C (Refer to DERATING GRAPH)					
Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load					
Storage Temperature	+5°C to +35°C					
Storage Humidity	<75%RH					
Cooling Method	With Fan					
Dielectric Strength	Input to Output : 3750VAC 5mA, 3 sec. Input to GND: 2000VAC 10mA, 3 sec. Output to GND: 1250VAC 10mA, 3 sec					
Insulation Resistance	100MΩ max @500Vdc					
Radiation/Conduction	Meeting EN55032,FCC part 15, Class B					
	Meeting IEC/EN61000-3-2:2019, Class C					
Harmonic Current Disturbance						
Voltage Fluctuation And Flicker	Meeting EN61000-3-3:2013					
Electrostatic Discharge	Meeting EN61000-4-2:2009 Contact Discharge ±6KV, Air Discharge ±8KV					
RF Field Strength Susceptibility	Meeting IEC/EN61000-4-3:2019					
Electrical Fast Transient	Meeting EN61000-4-4:2012, ±4KV					
Electrical Fast Transient Lightning Surge	Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode					
Lightning Surge Conducted Susceptibility	Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode					
Lightning Surge	Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6 : 2014					
Lightning Surge Conducted Susceptibility Voltage Dips And Interruptions	Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6 : 2014 Meeting EN61000-4-11 : 2004 Compliance with all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335- 1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark >200K Hours @230VAC input at 50deg.C and DC output with full load >450K Hours @230VAC input at 25deg.C and DC output with full load					
Lightning Surge Conducted Susceptibility Voltage Dips And Interruptions Safety Standards	Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6 : 2014 Meeting EN61000-4-11 : 2004 Compliance with all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335- 1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark >200K Hours @230VAC input at 50deg.C and DC output with full load					
	Dynamic Response Hold Up Time Turn On Delay Rise Time Overshoot Undershoot Over Current Protection Over Current Protection Over temperature protection Operation Temperature Operation Humidity Storage Temperature Storage Humidity Cooling Method Dielectric Strength Insulation Resistance Radiation/ Conduction Harmonic Current Disturbance Voltage Fluctuation And Flicker Electrostatic Discharge					

DIN RAIL MOUNTING POWER SUPPLIES AC-DC 240W



53000 Series





53000 is an economical slim 240W Din rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 40mm in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 85VAC to 265VAC and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current.

53000 series is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 90%, the entire series can operate at the ambient temperature between -20°C and 70°C under air convection. It is equipped with constant current mode for over-load protection, fitting various inductive or capacitive applications. The complete protection functions for industrial control apparatus make 53000 series a very competitive power supply solution for industrial applications.

Applications for 53000 Series Power Supplies:

- Factory control or automation apparatus
- Semi-conductor fabrication equipment
- Laser related machine
- Industrial control system
- Electro-mechanical



Admissible Din-Rail: TS35/7.5 or TS35/15, For reference only, not included with unit.

MAIN FEATURES

- Universal input voltage range 85-265Vac
- Buit-in active PFC > 0.95
- Built-in DC OK relay contact
- Very low standby power consumption: meets requirements of Energy Star or ECCode of Conduct
- Can be installed on DIN rail TS-35/7.5 or 15

SAFETY STANDARDS

Meets all requirements of:

- IEC/EN62368-1
- IEC/EN60335-1
- IEC/EN61558-2-16
- UL62368-1
- CSA 22.2 N°62368-1-14
- CE UKCA Mark

EMC STANDARDS

- Conducted and radiated emissions conform to EN55032,FCC Part15 Class B
 - IEC/EN 61000-3-x

Immunity conform to EN 61000-4-x

ONE OUTPUT 240W



MAIN FEATURES

- Slim Size 40mm
- Single Output
- Regulated Output Range: 12VDC 48VDC
- Built-in active PFC >0.95
- Input Range: 85VAC 265VAC/47 63Hz Or 120VDC - 375VDC
- Very Low Standby Power Consumption < 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct

- Safety: Compliance with all requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1,UL62368-1, CSA22.2No.62368-1-14 CE,UKCA Mark
- EMC : Conducted And Radiated Emissions Conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS C, EN61000-3-3 without any additionalcomponents.
- Immunity Conform To: EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

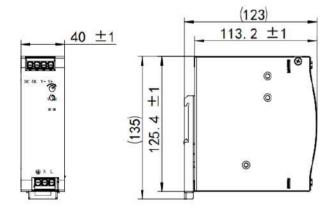
Part Number	Output Power (W)	Output Voltage (VDC)	Rated Output Current (A)	Output Voltage Range- ADJ(Vdc)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
53103	240	12	20	11.40 ~ 13.80	70	91	
53104	240	15	16	14.25 ~ 18.50	70	91	
53105	240	18	13.3	17.50 ~ 20.50	70	91	85 ~ 265VAC (120-375VDC)
53106	240	24	10	22.80 ~ 28.80	70	92	
53107	240	36	6.7	34.20 ~ 39.60	70	92	
53108	240	48	5.0	43.20 ~ 52.80	70	92	

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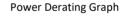
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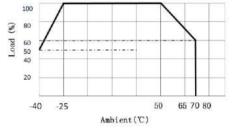
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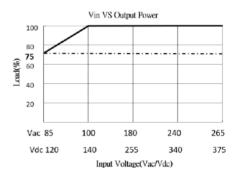
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Model: 240 V	Vatt	Specification
	Rated AC input Voltage	100~240 VAC or 140VDC-340VDC
	AC Input Voltage Range	85~265VAC or 120VDC-375VDC
	AC Input Frequency Range	47Hz~63Hz
AC Input	Rated AC Input Frequency	50/60Hz
Characteristics	Input Current	3.0A Max.
	Standby Power	0.2W Max. (Meet Requirements Of Energy Star And EC Code Of Conduct)
	Leakage Current	< 0.75mA/265VAC
	Output Voltage Accuracy	±2%
	Output Voltage Line Regulation	± 0.5 %
	Output Voltage Load Regulation	±1%
	Ripple & Noise	Max. 180mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47uF ALE-Cap and a 0.1uF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)
DC Output	Dynamic Response	The output voltage shall not exceed ±10% rated output voltage @ 50% ← →100% Load change, 1A/uS , 1KHz 50% duty cycle
Characteristics	Hold Up Time	5mS min@ 100Vac ~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 inpu and DC output with full load
	Efficiency	See table (Meets Requirements Of Energy Star And EC Code Of Conduct)
	Over Current Protection	The power supply shall automatic protect. The power supply shall auto-recover normal operation after the deformation is removed. No excessive heat, odour, no safety hazard
Protection Characteristics	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The shor may be applied before power on, or after power on; The power supply shall resume norma operation after the short is removed, no excessive heat, odour, no safety hazard
	Over voltage protection	Production type: shutdown O/P voltage and re-power on to recover.
DC OK Relay	DC OK Relay Contact Rantings	60Vdc/0.3A,30Vdc/1A,30Vac/0.5A resistive load
	Operation Temperature	-25°C ~+70 °C (Refer to DERATING GRAPH)
	Operation Humidity	10~ 90% RH(No Condensing) @ DC output with full load
Environmental	Storage Temperature	+5°C to +35°C
	Storage Humidity	<75%RH
	Cooling Method	Ordinary or thermostat
	Dielectric Strength	Input to Output : 3750VAC 5mA, 3 sec. Input to GND: 2000VAC 10mA, 3 sec. Output to GND: 1250VAC 10mA, 3 sec
	Insulation Resistance	100MΩ max @500Vdc
	Radiation/ Conduction	Meeting EN55032,FCC part 15, Class B
	,	Meeting IEC/EN61000-3-2:2019, Class A
	Harmonic Current Disturbance	
Safety & EMC	Voltage Fluctuation And Flicker	Meeting EN61000-3-3:2013
Poquiromont		
Requirement	Electrostatic Discharge	Meeting EN61000-4-2:2009 Contact Discharge ±6KV,Air Discharge ±8KV
Requirement	Electrostatic Discharge RF Field Strength Susceptibility	Meeting IEC/EN61000-4-3:2019
Requirement		Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV
Requirement	RF Field Strength Susceptibility	Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode
Requirement	RF Field Strength Susceptibility Electrical Fast Transient	Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV
Requirement	RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge	Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode
Requirement	RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility	Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6:2014
Reliability	RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility Voltage Dips And Interruptions	Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6: 2014 Meeting EN61000-4-6: 2014 Meeting EN61000-4-11: 2004 Compliance with all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335- 1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark >200K Hours @230VAC input at 50deg.C and DC output with full load >450K Hours @230VAC input at 25deg.C and DC output with full load
	RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility Voltage Dips And Interruptions Safety Standards	Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6: 2014 Meeting EN61000-4-6: 2014 Meeting EN61000-4-11: 2004 Compliance with all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335- 1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark >200K Hours @230VAC input at 50deg.C and DC output with full load >450K Hours @230VAC input at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2
Reliability	RF Field Strength Susceptibility Electrical Fast Transient Lightning Surge Conducted Susceptibility Voltage Dips And Interruptions Safety Standards	Meeting IEC/EN61000-4-3:2019 Meeting EN61000-4-4:2012, ±4KV Meets EN61000-4-5:2014,±6KV common mode,±4KV diff.mode Meeting EN61000-4-6: 2014 Meeting EN61000-4-6: 2014 Meeting EN61000-4-11: 2004 Compliance with all requirements of : UL62368-1, CSA22.2No.62368-1-14, IEC/EN60335- 1,IEC/EN61558-2-16, IEC/EN62368-1, CE, UKCA Mark >200K Hours @230VAC input at 50deg.C and DC output with full load >450K Hours @230VAC input at 25deg.C and DC output with full load

LED DRIVERS 65W TO 300W



54000 Series



54000 series is a 65W to 300W AC-DC LED driver featuring the dual mode constant voltage and constant current output. The entire series adopts the full range AC input from 100VAC to 305VAC with different output voltage ranging between 12V and 48V and conforms to EN61000-3-2 Class C, the norm the European Union regulates for harmonic current. 54000 series is designed with metal housing and IP65 ingress protection level allows this series to fit both indoor and

outdoor applications. The High working efficiency up to 90% with the fanless design, the entire series can operate at the ambient temperature between -25°C and +80°C under air convection.

54000 series is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Applications:

- LED Flood Lighting
- LED Decorative Lighting
- LED Architectural Lighting LED Street Lighting
- LED Bay Lighting....

MAIN FEATURES

- Universal input voltage range 100-305Vac
- Buit in active PFC > 0.95
- Constant Current Mode Output
- IP65 Rating for indoor or outdoor installations
- 3 In 1 dimming(1V to 10Vdc or 10V PWM signal or resistance)

SAFETY STANDARDS

Meets all requirements of:

- IEC/EN61347-1
- IEC/EN61347-2-13
- UL8750 Class 2
- CSA C22.2 N°250.13-12
- IP65
- CE UKCA Mark

EMC STANDARDS

Conducted and radiated emissions conform to EN55015,FCC Part15 Class B IEC/EN 61000-3-x

Immunity conform to EN 61000-4-x

65W LED Driver



MAIN FEATURES

- 65W Small Compact Size- Metal housing design
- Constant Current Mode Output
- Built-in active PFC >0.95
- Output Range : 12VDC 48VDC
- Input Range: 100VAC 305VAC/47- 63Hz
- Very Low Standby Power Consumption<0.5W
- IP65 Rating For Indoor Or Outdoor Installations
- 3 In 1 Dimming(1V to 10Vdc or 10V PWM Signal or resistance)

- Safety: Compliance with All Requirements of: IEC/EN61347-1, IEC/EN61347-2-13, UL8750 CALSS 2, CSA C22.2NO.250.13-12,CE,UKCA,IP65
- Materials: Uses UL 94-V0 Resin
- EMC : Conducted And Radiated Emission conform To EN55015,FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS C, EN61000-3-3 without any additional components.

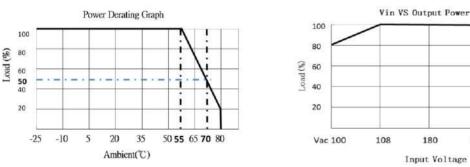
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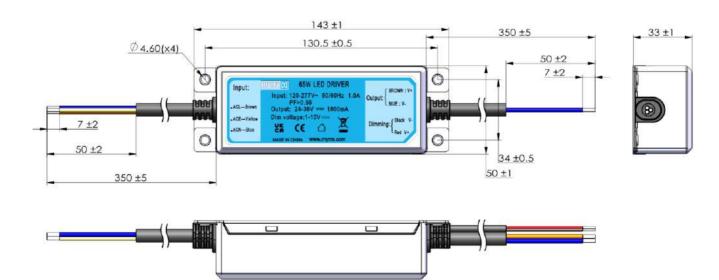
 Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
54000	65	12~18	3600	80	88	
54001	65	15 ~24	2700	80	88	
54002	65	21.5 ~36	1800	80	89	100VAC-305VAC
54003	65	25 ~42	1550	80	90	
54004	65	32 ~48	1350	80	90	

DERATING GRAPH













Model: 65 Watt		Specification		
	Rated input Voltage	120~277Vac		
	Input Voltage Range	100~305Vac		
	AC Input Frequency Range	47Hz~63Hz		
AC Input	Rated AC Input Frequency	50/60Hz		
Characteristics	Input Current	1.0A Max.@108Vac~305Vac@DC output with full load		
	Standby Power	0.5W Max. (Meet Requirements Of Energy Star And EC Code Of Conduct)		
	Total Harmonic Distortion	≤20% @output load≥75%		
	Leakage Current	<0.75mA@277Vac		
	Max.No.of PSU on 16A circuit	26 units(circuit breaker of type B)/26 units(circuit breaker of type C)at 230VAC.		
	breaker			
	Output Voltage Range	See table		
	Output Voltage Line			
	Regulation	± 5%		
DC Output	Output Voltage Load	± 5%		
Characteristics	Regulation			
	Ripple & Noise	Max. 10%Ip-p@ 120Vac ~277Vac (The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth).		
	Efficiency	See table (Meet Requirements Of Energy Star And EC Code Of Conduct)		
	Over Voltage Protection(LED Open)	The LED driver shall automatic protection(hiccup mode). The LED driver shall auto-recovery normal operation after the deformation is removed. No excessive heat, odour, no safety hazard.		
Protection Characteristics	Output Short Circuit Protection	The LED driver shall withstand a continuous output short without damage in 24 hours ; The short may be applied before power on, or after power on; The LED driver shall resume normal operation after the short is removed, no excessive heat, odour, no safety hazard		
	Over Temperature Protection	Hiccup mode, recovers automatically after fault condition is removed.		
	Operation Temperature	-25°C ~ + 80'C (Refer to "Derating Graph")		
	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load		
Environmental	Storage Temperature	-10°C~ +35°C		
	Storage Humidity	<75%RH		
Cofet: 8 EMC	Dielectric Strength	Input to Output 3kVAC,5mA,1 min(3.75kVAC,3s @at the mass production stage) Input to Ground 1.5kVAC, 5mA,1 min Output to Ground 500VAC ,5mA,1 min		
Safety & EMC	Radiation	Meeting EN55015, FCC part 15, Class B		
Requirement	Conduction	Meeting EN55015, FCC part 15, Class B		
		Compliance with all requirements of :		
	Safety Standards	IP65; UL8750 CLASS2; CSA C22.2NO.250.13-12;IEC/EN61347-1;IEC/EN61347-2-13;		
Reliability Requirement	MTBF	CE, UKCA Mark >200K Hours @230VAC input at 55deg.C and DC output with full load >550K Hours @230VAC input at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2		
nequirement	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C		
	Net Weight	Approximately 450 grams per product unit.		
Guarantee	This product meet to RoHS sta	indard		
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100W LED Driver



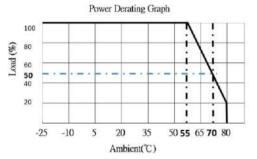
MAIN FEATURES

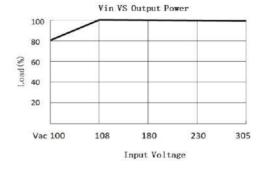
- 100W Small Compact Size- Metal housing design
- Constant Current Mode Output
- Built-in active PFC >0.95
- Output Range : 12VDC 48VDC
- Input Range: 100VAC 305VAC/47- 63Hz
- Very Low Standby Power Consumption<0.5W
- IP65 Rating For Indoor Or Outdoor Installations
- 3 In 1 Dimming(1V to 10Vdc or 10V PWM Signal or resistance)

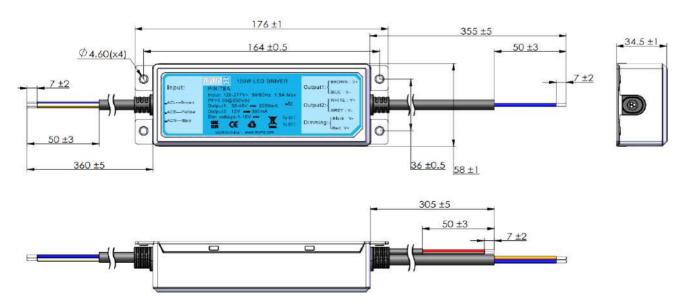
- Safety: Compliance with All Requirements of: IEC/EN61347-1, IEC/EN61347-2-13, UL8750 CALSS 2, CSA C22.2NO.250.13-12,CE,UKCA,IP65
- Materials: Uses UL 94-V0 Resin
- EMC : Conducted And Radiated Emission conform To EN55015,FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS C, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
54010	100	12~18	5500	80	88	
54011	100	15 ~24	4200	80	88	
54012	100	21.5 ~36	2770	80	89	100VAC-305VAC
54013	100	25 ~42	2380	80	90	
54014	100	32 ~48	2080	80	90	

DERATING GRAPH













Model: 100 Watt		Specification		
	Rated input Voltage	120~277Vac		
	Input Voltage Range	100~305Vac		
	AC Input Frequency Range	47Hz~63Hz		
AC Input	Rated AC Input Frequency	50/60Hz		
Characteristics	Input Current	1.5A Max.@108Vac~305Vac@DC output with full load		
	Standby Power	0.5W Max. (Meet Requirements Of Energy Star And EC Code Of Conduct)		
	Total Harmonic Distortion	≤20% @output load≥75%		
	Leakage Current	<0.75mA@277Vac		
	Max.No.of PSU on 16A circuit breaker	26 units(circuit breaker of type B)/26 units(circuit breaker of type C)at 230VAC.		
	Output Voltage Range	See table		
	Output Voltage Line			
	Regulation	± 5%		
	Output Voltage Load	± 5%		
DC Output	Regulation			
Characteristics	Ripple & Noise	Max. 10%lp-p@ 120Vac ~277Vac (The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth).		
	Efficiency	See table (Meet Requirements Of Energy Star And EC Code Of Conduct)		
	Over Voltage Protection(LED Open)	The LED driver shall automatic protection(hiccup mode). The LED driver shall auto-recovery normal operation after the deformation is removed. No excessive heat, odour, no safety hazard.		
Protection Characteristics	Output Short Circuit Protection	The LED driver shall withstand a continuous output short without damage in 24 hours ; The short may be applied before power on, or after power on; The LED driver shall resume normal operation after the short is removed, no excessive heat, odour, no safety hazard		
	Over Temperature Protection	Hiccup mode, recovers automatically after fault condition is removed.		
	Operation Temperature	-25°C ~ + 80'C (Refer to "Derating Graph")		
	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load		
Environmental	Storage Temperature	-10°C~ +35°C		
	Storage Humidity	<75%RH		
6-6- 0 FMG	Dielectric Strength	Input to Output 3kVAC,5mA,1 min(3.75kVAC,3s @at the mass production stage) Input to Ground 1.5kVAC, 5mA,1 min Output to Ground 500VAC ,5mA,1 min		
Safety & EMC	Radiation	Meeting EN55015, FCC part 15, Class B		
Requirement	Conduction	Meeting EN55015, FCC part 15, Class B		
	Safety Standards	Compliance with all requirements of : IP65; UL8750 CLASS2; CSA C22.2NO.250.13-12;IEC/EN61347-1;IEC/EN61347-2-13;		
Reliability Requirement	MTBF	CE, UKCA Mark >200K Hours @230VAC input at 55deg.C and DC output with full load >550K Hours @230VAC input at 25deg.C and DC output with full load Calculated in accordance with MIL-HDBK-217-F2		
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C		
	Net Weight	Approximately 530 grams per product unit.		
Guarantee	This product meet to RoHS sta	ndard		
	<u> </u>			

200W LED Driver



MAIN FEATURES

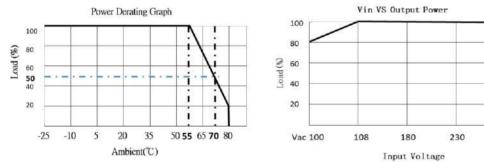
- 200W Small Compact Size- Metal housing design
- Constant Current Mode Output
- Built-in active PFC >0.95
- Output Range : 12VDC 48VDC
- Input Range: 100VAC 305VAC/47- 63Hz
- Very Low Standby Power Consumption<0.5W
- IP65 Rating For Indoor Or Outdoor Installations
- 3 In 1 Dimming(1V to 10Vdc or 10V PWM Signal or resistance)

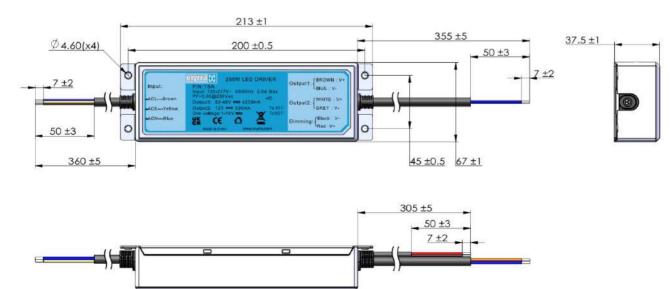
- Safety: Compliance with All Requirements of: IEC/EN61347-1, IEC/EN61347-2-13, UL8750 CALSS 2, CSA C22.2NO.250.13-12,CE,UKCA,IP65
- Materials: Uses UL 94-V0 Resin
- EMC : Conducted And Radiated Emission conform To EN55015,FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS C, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

305

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
54020	200	12~18	11.10	80	88	
54021	200	15 ~24	8.33	80	88	
54022	200	21.5 ~36	5.56	80	89	100VAC-305VAC
54023	200	25 ~42	4.76	80	90	
54024	200	32 ~48	4.20	80	90	

DERATING GRAPH











Model: 200 Watt		Specification		
	Rated input Voltage	120~277Vac		
	Input Voltage Range	100~305Vac		
	AC Input Frequency Range	47Hz~63Hz		
AC Input	Rated AC Input Frequency	50/60Hz		
Characteristics	Input Current	2.5A Max.@108Vac~305Vac@DC output with full load		
	Standby Power	0.5W Max. (Meet Requirements Of Energy Star And EC Code Of Conduct)		
	Total Harmonic Distortion	≤20% @output load≥75%		
	Leakage Current	<0.75mA@277Vac		
	Max.No.of PSU on 16A circuit breaker	26 units(circuit breaker of type B)/26 units(circuit breaker of type C)at 230VAC.		
	Output Voltage Range	See table		
	Output Voltage Line			
	Regulation	± 5%		
DC Output	Output Voltage Load	± 5%		
Characteristics	Regulation			
	Ripple & Noise	Max. 10%Ip-p@ 120Vac ~277Vac (The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth).		
	Efficiency	See table (Meet Requirements Of Energy Star And EC Code Of Conduct)		
		The LED driver shall automatic protection(hiccup mode). The LED driver shall auto-recovery		
	Over Voltage Protection(LED	normal operation after the deformation is removed. No excessive heat, odour, no safety		
	Open)	hazard.		
		The LED driver shall withstand a continuous output short without damage in 24 hours ;		
Protection	Output Short Circuit	The short may be applied before power on, or after power on; The LED driver shall		
Characteristics	Protection	resume normal operation after the short is removed, no excessive heat, odour,		
	Over Temperature Protection	no safety hazard Hiccup mode, recovers automatically after fault condition is removed.		
	Operation Temperature	-25°C~+80'C (Refer to "Derating Graph")		
	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load		
Environmental	Storage Temperature	-10°C~ +35°C		
	Storage Humidity	<pre></pre> <pre></pre> <pre></pre> <pre></pre>		
	Dielectric Strength	Input to Output 3kVAC,5mA,1 min(3.75kVAC,3s @at the mass production stage) Input to Ground 1.5kVAC, 5mA,1 min		
Safety & EMC		Output to Ground 500VAC ,5mA,1 min		
Requirement	Radiation	Meeting EN55015, FCC part 15, Class B		
nequirement	Conduction	Meeting EN55015, FCC part 15, Class B		
	Safety Standards	Compliance with all requirements of :		
	Surety Standards	IP65; UL8750 CLASS2; CSA C22.2NO.250.13-12;IEC/EN61347-1;IEC/EN61347-2-13;		
	MTBF	CE, UKCA Mark >200K Hours @230VAC input at 55deg.C and DC output with full load		
Reliability		>550K Hours @230VAC input at 25deg.C and DC output with full load		
Requirement		Calculated in accordance with MIL-HDBK-217-F2		
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at		
		an ambient temperature of 30~45 degrees C		
	Net Weight	Approximately 530 grams per product unit.		
Guarantee	This product meet to RoHS standard			

300W LED Driver



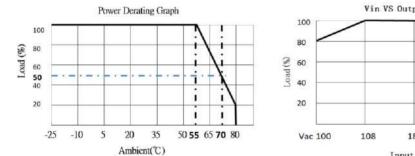
MAIN FEATURES

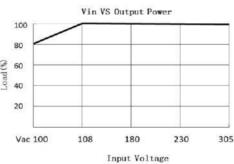
- 300W Small Compact Size- Metal housing design
- Constant Current Mode Output
- Built-in active PFC >0.95
- Output Range : 12VDC 48VDC
- Input Range: 100VAC 305VAC/47- 63Hz
- Very Low Standby Power Consumption<0.5W
- IP65 Rating For Indoor Or Outdoor Installations
- 3 In 1 Dimming(1V to 10Vdc or 10V PWM Signal or resistance)

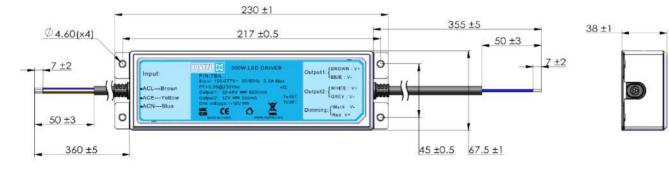
- Safety: Compliance With All Requirements of: IEC/EN61347-1, IEC/EN61347-2-13, UL8750 CALSS 2, CSA C22.2NO.250.13-12,CE,UKCA,IP65
- Materials: Uses UL 94-V0 Resin
- EMC : Conducted And Radiated Emission conform To EN55015, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS C, EN61000-3-3 without any additional components.
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)	Max.Operating Ambient (°C)	Min. Part Efficiency(%)	Input Range
54030	300	12~18	16.70	80	88	
54031	300	15 ~24	12.50	80	88	
54032	300	21.5 ~36	8.33	80	89	100VAC-305VAC
54033	300	25 ~42	7.14	80	90	
54034	300	32 ~48	6.25	80	90	

DERATING GRAPH













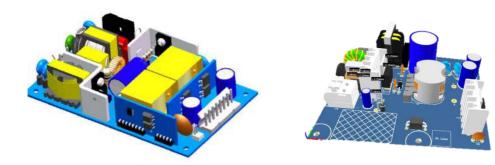


Model: 300 Watt		Specification		
	Rated input Voltage	120~277Vac		
	Input Voltage Range	100~305Vac		
	AC Input Frequency Range	47Hz~63Hz		
AC Input	Rated AC Input Frequency	50/60Hz		
Characteristics	Input Current	3.0A Max.@108Vac~305Vac@DC output with full load		
	Standby Power	0.5W Max. (Meet Requirements Of Energy Star And EC Code Of Conduct)		
	Total Harmonic Distortion	≤20% @output load≥75%		
	Leakage Current	<		
	Max.No.of PSU on 16A circuit breaker	26 units(circuit breaker of type B)/26 units(circuit breaker of type C)at 230VAC.		
	Output Voltage Range	See table		
	Output Voltage Line			
	Regulation	± 5%		
DC Output	Output Voltage Load	± 5%		
Characteristics	Regulation			
	Ripple & Noise	Max. 10%lp-p@ 120Vac ~277Vac (The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth).		
	Efficiency	See table (Meet Requirements Of Energy Star And EC Code Of Conduct)		
		The LED driver shall automatic protection(hiccup mode). The LED driver shall auto-recovery		
	Over Voltage Protection(LED	normal operation after the deformation is removed. No excessive heat, odour, no safety		
	Open)	hazard.		
		The LED driver shall withstand a continuous output short without damage in 24 hours ;		
Protection	Output Short Circuit	The short may be applied before power on, or after power on; The LED driver shall		
Characteristics	Protection	resume normal operation after the short is removed, no excessive heat, odour,		
	Over Temperature Protection	no safety hazard Hiccup mode, recovers automatically after fault condition is removed.		
	Operation Temperature	-25°C~ + 80'C (Refer to "Derating Graph")		
Environmental	Operation Humidity	10~ 90% RH (No Condensing) @ DC output with full load		
	Storage Temperature	-10°C~ +35°C		
	Storage Humidity	<75%RH		
	Dielectric Strength	Input to Output 3kVAC,5mA,1 min(3.75kVAC,3s @at the mass production stage) Input to Ground 1.5kVAC, 5mA,1 min		
Safety & EMC		Output to Ground 500VAC ,5mA,1 min		
Requirement	Radiation	Meeting EN55015, FCC part 15, Class B		
	Conduction	Meeting EN55015, FCC part 15, Class B		
	Safety Standards	Compliance with all requirements of :		
	Survey Standards	IP65; UL8750 CLASS2; CSA C22.2NO.250.13-12;IEC/EN61347-1;IEC/EN61347-2-13;		
	MTBF	CE, UKCA Mark >200K Hours @230VAC input at 55deg.C and DC output with full load		
Reliability		>550K Hours @230VAC input at 25deg.C and DC output with full load		
Requirement		Calculated in accordance with MIL-HDBK-217-F2		
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at		
		an ambient temperature of 30~45 degrees C		
	Net Weight	Approximately 530 grams per product unit.		
Guarantee	This product meet to RoHS standard			

Customised Solutions

Open Frame Type AC/DC Power Supplies 100W to 2000W

Efficiency up to 92% Built-in Active PFC Function



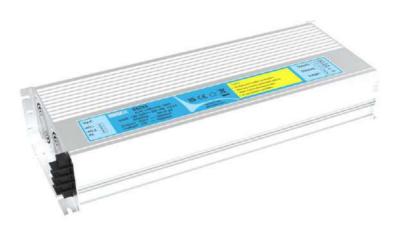
Grow Lights - LED Drivers 100W ~ 2000W

Efficiency up to 90% IP65 Rating, Isolated 3 In 1 dimming: 0 ~ 10Vdc or PWM or Resistance Built-in Active PFC Function



LED Driver & Industrial Power Supplies 100W ~ 2000W

Efficiency up to 92% Built-in Active PFC Function



Application notes for 47000/48000/49000 Series



1 – Storage Guide:
Encapsulated type product:
Storage temperature: -10°C to +35°C, Storage humidity: <75%RH
Non-encapsulated type product:
Storage temperature: +5°C to +35°C, Storage humidity: <75%RH

2 – Shelf life Guide :

Encapsulated type product:

To ensure best power supply reliability and life, the customer shall limit the power supply shelf life to no longer than 6 months after delivery. The maximum recommended period before the power supply shall be powered is 18 months from the power supply date code.

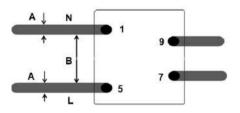
Non-encapsulated type product:

To ensure best power supply reliability and life, the customer shall limit the power supply shelf life to no longer than 6 months after delivery. The maximum recommended period before the power supply shall be powered is 12 months from the power supply date code.

3 – General Storage Conditions:

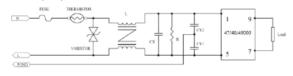
MYRRA power supplies should be stored in their original packaging before use. In the warehouse, there should not be harmful gas, inflammable, explosive products, corrosive chemical products, strong mechanical vibration, shock and strong magnetic field effects. The package box should be stored above ground by at least 20cm height, and 50cm away from any wall, thermal source, and vent.

4- Safety and recommend wiring : linewidth A≥2mm, B≥5mm.



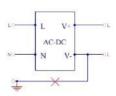
5- Recommended circuit for applications requiring higher EMC performance :

The 47/48/49 series are already certified as compliant to EN55022 and EN55014 CLASS B for EMC. For this compliance no additional external components are required. Should a more stringent EMC performance be required the circuit below canbe proposed

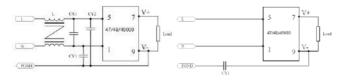


6 – Application of the connection to ground :

This application is not supported for by Myrra SMPS products



The following proposed circuit may assist :



L : is a common mode inductor, the recommended parameters: 10mH to 30mH CX1 : is an X2 capacitor, the recommended parameters : 0.1uF to 0.22uF/275Vac CY1 and CY2 are Y capacitors, the recommended parameters : 1000pF to 2200pF/400V

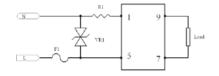
Fuse: recommended parameters : 5A to 10A/250Vac, Time-lag type.

THERMISTOR: recommended parameters : 2A, 5 Ω , 1.8W to 5A D10,2.5 Ω , 2.4W. Varistor: recommended parameters : 14D471,300Vac, maximum energy 118 Joule. L is a common mode inductor : recommended parameters : 10mH to 30mH CX is a X2 capacitor : recommended parameters : 0.1uF to 0.22uF/275Vac CY1 and CY2 are Y capacitors : recommended parameters : 1000pF to 2200pF/400V R is a resistor : recommended parameters : 1.0M Ω to 3.0 M Ω .



7 – High surge circuit :

The 47 / 48/49 Series is tested and certified for a surge level in accordance with IEC61000-4-5 as standard without requiring any additional external components. To extend the surge level to 6KV the external circuit below can be proposed.



VR1 is a varistor, the recommended parameters : 14D471, 300Vac, maximum energy 118 Joule. R1 is a wire-wound resistor, the recommended parameters : 10R/1W to 10R/3W, resistance wire Φ0.1 to 0.23mm. F1 is a fuse, the recommended parameters : 6.3A to 10A/250Vac, Time-lag type.

The information contained in this document is subject to change without notice.

Modified and Custom Solutions

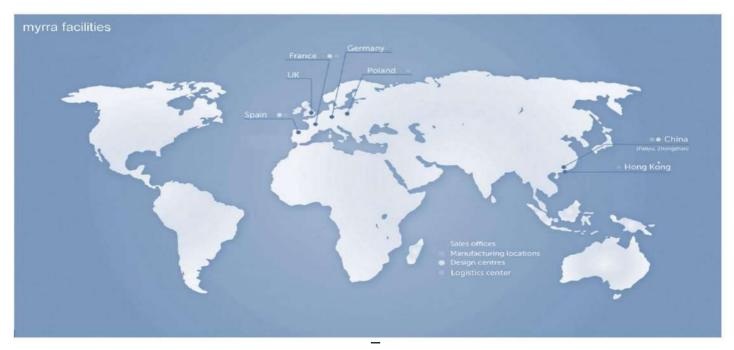
TECHNICAL SERVICES :

- Alternative DC Output Voltages
- Single, Dual or Triple Output Voltages
- Addition of Signal Pins for AC OK, Remote on/off, sense etc.
- Alternative Power Rating
- Revised 'Hold-up' timing to suit System needs
- Customer specific product 'Branding/Labelling'
- Specific Power Supply Manufacturing Functional Test Profile
- Integrating the Power Supply on the System PCB
- Alternative Power Supply Housing
- Revised DC Output Filtering

CUSTOMER SERVICES :

- Existing Designs for Modified Standards
- Flexible Manufacturing Batch Sizes
- European Stock-holding locations
- European Engineering and Logistics Support
- Country Specific Distribution Partners
- Manufacturing dynamics for Volume Fluctuations
- Myrra Quality Controlled Design and Manufacturing
- Fast Sample Service

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