

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

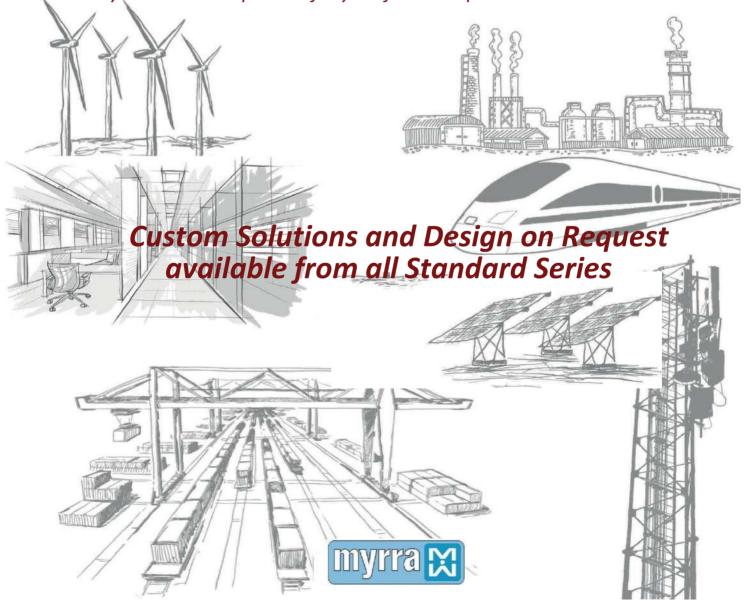
Myrra company Profile

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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| | |



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| |

Customised Solutions

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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



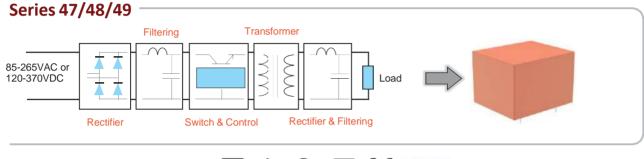
DIN Rail Mounting Power Supplies

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

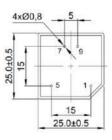
- Small Compact Size PCB Mount
- Single Output
- Output Range: 3.3VDC 24VDC
- Input Range: 85VAC 265VAC/47 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption < 0.15W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint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

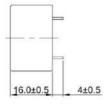
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy (%) | Max. Operating Ambient(°C) | Min. Part Efficiency(%) |
|-------------|---------------------|-------------------------|------------------------|--------------------------------|-------------------------------|----------------------------|
| | 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

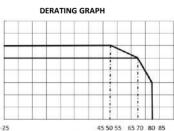
(%)

Coad

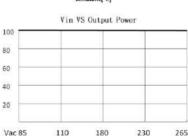
Vdc 120

€ 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 | | |
|--|-----------------------------|--|---|--|--|
| A C Input Frequency Parge 47br: 53br Characteristics Read A C Input Frequency Software Input Current 0.156 Max@85Vac: 265Vac, at full load Standby Power 0.0159 Max@85Vac: 265Vac, at full load Standby Power 0.0159 Max@85Vac: 265Vac, at full load Standby Power 0.0159 Max@85Vac: 265Vac, at full load A C Unput Voltage Accuracy 3.3 Vype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 1.5 % Output Voltage Load Regulation 3.3 Vype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 5.5 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 5.5 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 5.5 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 5.5 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 5.5 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 5.5 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 5.5 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 5.5 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 1.6 % Ripple & Noise 8. Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V, 18V and 24V): 1.6 % Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V and 100 Couptor With full load Rise True 5.0 Mype: 1.6 %. Other types(SV 92, 22, 15V and 100 Couptor With full load Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V and 100 Couptor With full load Protection 2.3 Mype: 1.6 %. Other types(SV 92, 22, 15V and 100 Couptor With full load Distruct Protection 3.3 Mype: 1.6 %. Other types(SV 92, 22, 15V and 100 Couptor With full load Distruct Protection 3.5 Mype: 1.6 %. Other types 1.6 % | Characteristics | 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 | 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: ± 6 % ,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 | | |
| Churacteristic Rated AC Imput Frequency 50/00/12 Input Current 0.15W Max(Meet Requirements Of Energy Star And EC Code Of Conduct) Sandby Power 0.15W Max(Meet Requirements Of Energy Star And EC Code Of Conduct) Output Voltage Load Regulation 3.3V type: 15 %, Other Types(SV, V2V.12V, ISW and 24V): 15 % Output Voltage Load Regulation 3.3V type: 15 %, Other Types(SV, V2V.12V, ISW and 24V): 15 % Output Voltage Load Regulation 3.3V type: 15 %, Other Types(SV, V2V.12V, ISW and 24V): 15 % Discourse Max(Meet Requirements Of Energy Star And EC Code Of Conduct) Dynamic Response The output voltage And Conjuct Anocaliboscope set at 20MHz bandwidth) Dynamic Response The output voltage Anocaliboscope set at 20MHz bandwidth) Overshoot The output voltage Anocaliboscope set at 20MHz bandwidth) Overshoot The output voltage Anocaliboscope set at 20MHz bandwidth) Overshoot The output voltage Anocaliboscope set at 20MHz bandwidth and 20MIX and | Characteristics | Rated AC Input FrequencyInput CurrentStandby PowerOutput Voltage AccuracyOutput Voltage Line RegulationOutput Voltage Load RegulationRipple & NoiseDynamic ResponseHold Up TimeTurn On DelayRise TimeOvershootUndershoot | 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 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 | | |
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| Standby Power 0.15W Mark/Meet Requirements Of Energy Star And EC Code Of Conduct) Output Voltage Lace Regulation 3.3V type: 1.5 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Output Voltage Lane Regulation 3.3V type: 1.5 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Det Uniting Lane Regulation 3.3V type: 1.5 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage Lane Regulation 3.3V type: 1.5 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage Lane Regulation 3.3V type: 1.5 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage Lane Regulation 3.3V type: 1.6 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage Lane Regulation 3.3V type: 1.6 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage Lane Regulation 3.3V type: 1.6 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage Lane Regulation 3.3V type: 1.6 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage SV and Regulation 3.3V type: 1.6 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage Lane Regulation 3.3V type: 1.6 %, Other types(SV, 9V, 12V, 15V, 18V and 24V): 1.5 % Droutput Voltage Lane Regulation 3.5 % type: 1.6 % Droutput Voltage Lane Regulation 3.5 % Drout | | 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 | 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 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 | | |
| Protection 3.3 Wige: 16 %, Other types(SV,94,12V,15V,184 and 24V): 15 % Dutput Voltage Load Regulation 3.3 Wige: 16 %, Other types(SV,94,12V,15V,184 and 24V): 15 % Dutput Voltage Load Regulation 3.3 Wige: 16 %, Other types(SV,94,12V,15V,184 and 24V): 15 % Dutput Voltage Load Regulation 3.3 Wige: 16 %, Other types(SV,94,12V,15V,184 and 24V): 15 % Dynamic Response 1.0 coupt voltage shall not exceed 10% rated output voltage @ 50% +>100% Load change, 1.0 %, SMR 50% doity cycle The output voltage shall not exceed 10% rated output voltage @ 50% +>100% Load change, 1.0 %, SMR 50% doity cycle Tum On Delay 35 max @ 55% -255% cliput and DC output with full load Rise Time 50m smax @ 55% -255% cliput and DC output with full load Undershoot The output voltage shall not exceed -10% rated output voltage @ Power off and 85% cr265% cliput and DC output with full load Undershoot The output voltage shall not exceed -10% rated output voltage @ Power off and 85% cr265% cliput and DC output voltage @ Power off and 85% cr265% cliput and DC output voltage @ Power off and 85% cr265% cliput and DC output voltage @ Power off and 85% cr265% cliput and DC output voltage @ Power off and 85% cr265% cliput and DC output voltage @ Power off and 85% cr265% cliput and DC output voltage and DC output voltage @ Power off and 85% cr265% cliput and DC output voltage and DC output voltag | | Output Voltage AccuracyOutput Voltage Line RegulationOutput Voltage Load RegulationRipple & NoiseDynamic ResponseHold Up TimeTurn On DelayRise TimeOvershootUndershoot | 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 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 | | |
| 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 | | |
| OC Output Characteristics Hold Up Time Sm Min@ 100Vac "240Vac, DC output with full load Characteristics Rie Time Soms max @ 85Vac "256Vac input and DC output with full load Rie Time Soms max @ 85Vac "256Vac 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 Undershoot The output voltage shall not exceed ±10% rated output voltage @ Power on and 85Vac "265Vac inp and DC output with full load Efficiency See table (Mexter Requirements Of Energy Star And EC Code Of Conduct) The power supply shall automatic protect. The power supply shall stud acontinuous output short without damage in 24 hours; The short Simply shall shut down when the junction temperature of PWM controller exceeds t thermal shutdown 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 shutdown temperature, typically 140°C ±10°C Condition Meeting EN50032.EN55014.FCC part 15, Class 8 Color gene the short is removed. Over temperature -10°C to 35°C | | Turn On Delay Rise Time Overshoot Undershoot | 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 The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~265Vac input and DC with full load | | |
| Characteristics Turn On Delay 35 max @ 85Vac=265Vac input and DC output with full load Rise Time Soms 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 output with full load Undershoot The output voltage shall not exceed +10% rated output voltage @ Power off and 85Vac=265Vac input and DC output with full load Protection The power supply shall automatic protect. The power supply shall stands proteom. Proteom on; The power supply shall automatic protect. The power supply shall stands proteom. Proteom on; The power supply shall automatic proteom. Proteom on; The power supply shall automatic protection Output short Circuit Protection The power supply shall stands proteom. Proteom on; The power supply shall automatic proteom. Proteom on; The power supply shall automatic proteom. Proteom on; The power supply shall automatic proteom. Proteom: Proteom on; The power supply shall automatic proteom. Proteom on; The power supply shall automatic proteom. Proteom: Proteom o | Characteristics - - - | Turn On Delay Rise Time Overshoot Undershoot | 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 The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~265Vac input and DC with full load | | |
| Rise Time Soms 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 inp and DC with full load Undershoot The output voltage shall not exceed ±10% rated output voltage @ Power off and 85Vac"265Vac inp and DC with with full load Efficiency See table (Meets Requirements Of Energy Star And EC Code Conduct) Over Current Protection The power supply shall automatic protect. The power output yoltage shall auto-recover normal operation after the deformation is removed. No excessive heat, doour, or plastic deformation shall occur with safety haard Output Short Circuit Protection The power supply shall withstand a continuous output short without damage in 24 hours; The short smay be applied before power on or after power on; The power supply shall all curv on safety haard Over temperature protection The power supply shall shut down when the junction temperature of PWM controller exceeds t thermal shutdown temperature, typicall J40°C 10°C. Operation Temperature -25°C **80°C (see Derating Graph) Operation Humidity 27 5%84°C Storage Humidity <7 5%84 | - | Rise Time Overshoot Undershoot | 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 | | |
| 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 | | |
| Understoot and DC output with full load DC 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 automate control over supply shall automate protect. The power supply shall resume nor no safety shared 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 the power supply shall resume nor no safety heard Over temperature protection The power supply shall shut down when the junction temperature of PWM controller exceeds thermal shutdown temperature, typically 140°C ±10°C Storage Temperature -35°C -480°C (see Derating Graph) Operation Temperature -10°C to +35°C Storage Humidity <75%RH | - | | | | |
| Protection Characteristics The power supply shall automatic protect. The power supply shall auto-recover normal apperatio after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur with safety heard Protection Characteristics 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 the power supply shall resume nom no safety heard Over temperature protection The power supply shall shut down when the junction temperature of PWM controller exceeds t thermal shutdown 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 shutdown temperature, typically 140°C ±10°C Storage Temperature -10°C to +33°C Storage Temperature -10°C to +33°C Storage Temperature -10°C to +33°C Cooling Method Ordinary or thermostat Delectric 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 A Voltage Fluctuation And Flicker Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV Requirement Refine Single Philophilophilophilophilophilophilophilop | | Efficiency | | | |
| 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 | | | | | |
| Protection Characteristics Output Short Circuit Protection may be applied before power on, or after power on; The power supply shall resume nom 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; typically 140°C ±10°C Operation Temperature -25°C ~+80°C (see Derating Graph) Operation Temperature -25°C ~+80°C (see Derating Graph) Operation Temperature -10°C to +33°C Storage Temperature -10°C to +33°C Dielectric Strength Primary to Secondary: 4000Vac SmA, 3 secs. Radiation Meeting ENS5032,ENS5014,FCC part 15, Class B Conduction Meeting EN51000-3-2:2019, Class A Voltage Fluctuation And Flicker Meeting EN51000-4-3:2019 Requirement Electrostatic Discharge Refight Standards Meeting EN51000-4-3:2019 Conducted Susceptibility Meeting EN51000-4-3:2019 Voltage Fluctuation And Flicker Meeting EN51000-4-3:2019 Field Strength Susceptibility Meeting EN51000-4-1:2014 Voltage Fluctuation And Flicker Meeting EN51000-4-1:2014 Voltage Dips And Interruptions Compliate Biof1000-4-5:2014 | | Over Current Protection | after the deformation is removed. No excessive heat, odour, or plastic deformation shall occur with n | | |
| 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

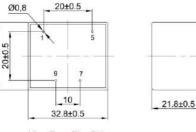
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy (%) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) |
|-------------|---------------------|----------------------------|---------------------------|--------------------------------------|-------------------------------|----------------------------|
| | 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 |

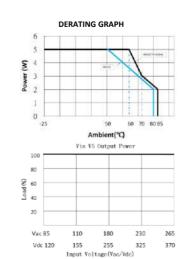
DIMENSIONS and PINOUT

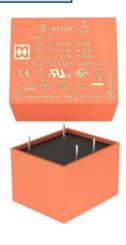
27.8±0.5

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

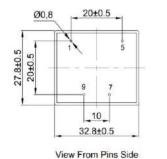
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy(%) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) |
|-------------|---------------------|----------------------------|---------------------------|-------------------------------|-------------------------------|----------------------------|
| 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 |

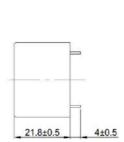
Special Version : 4712xSLI and 4715xSLI = 19.2mm case height (x=1, 2, 3, 4, 5, 6 or 7)

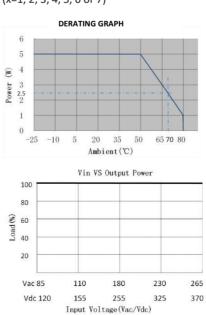
DIMENSIONS and PINOUT

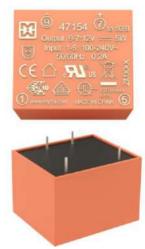
4 pins pins 1 & 5: AC or DC Input pin 7 : DC output +V

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

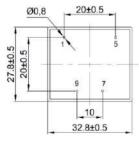
- Safety: Compliance With All Requirements of:IEC/EN61558-2-16, IEC/EN60950-1, IEC/EN60335-1, UL60950-1, IEC/EN62368-1, CSA22.2No.60950-1-07,CE,VDE, ENEC Mark
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC Conducted And Radiated Emissions Conform To EN55014, EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 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

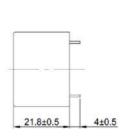
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy (%) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) |
|----------------|---------------------|-------------------------|------------------------|--------------------------------|-------------------------------|----------------------------|
| 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

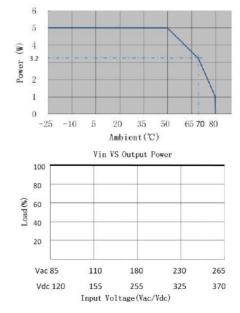
4 pins pins 1 & 5: AC or DC Input pin 7 : DC output +V pin 9 : DC output 0V





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

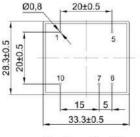
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy (%) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) |
|-------------|---------------------|-------------------------|------------------------|--------------------------------|-------------------------------|----------------------------|
| 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 |

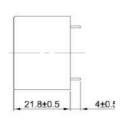
Notes : The dual DC voltage outputs share a common 0V reference. Power deration must be considered at higher operating ambient temperatures.

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

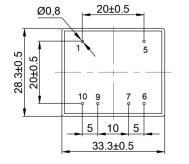
- Encapsulated Design And Same Footprint As El30Transformer : Upgrade Your Application Without Redesign Of PCB
- Safety: Compliance With All Requirements of: IEC/EN61558-2- 16, IEC/EN60950-1, IEC/EN60335-1, UL60950-1, IEC/EN62368-1,CSA22.2No.60950-1-07, CE,VDE, ENEC Mark
- Materials : Uses UL 94-V0 Plastic 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

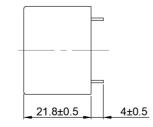
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy (%) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) |
|-------------|---------------------|-------------------------|------------------------|--------------------------------|-------------------------------|----------------------------|
| 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



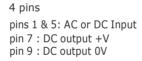
MAIN FEATURES

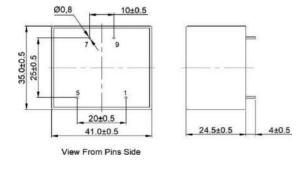
- 7.5W Small Compact Size PCB Mount
- Single Output
- Output Range : 3.3VDC 24VDC
- Input Range : 85VAC 265VAC/47 63Hz Or120VDC - 370VDC
- Very Low Standby Power Consumption < 0.15W
- Better Energetic Efficiency : Meet RequirementsOf Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint 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

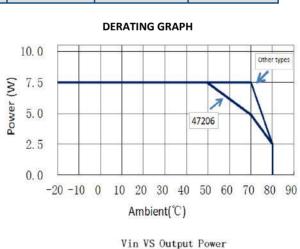
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy (%) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) |
|-------------|---------------------|----------------------------|---------------------------|--------------------------------|-------------------------------|----------------------------|
| 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 |

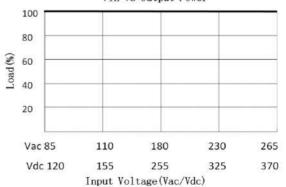
DIMENSIONS and PINOUT

















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

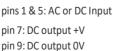
Encapsulated Design And Same Footprint As El38 Transformer : Upgrade Your Application Without Redesign Of PCB Safety : Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1, UL62368-1, CSA C22.2NO.62368-1-14,CE,VDE,ENEC,UKCA Mark.

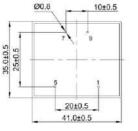
CERTIFIE

- 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



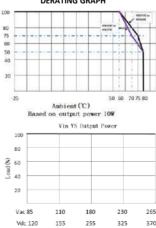


View From Pins Side









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

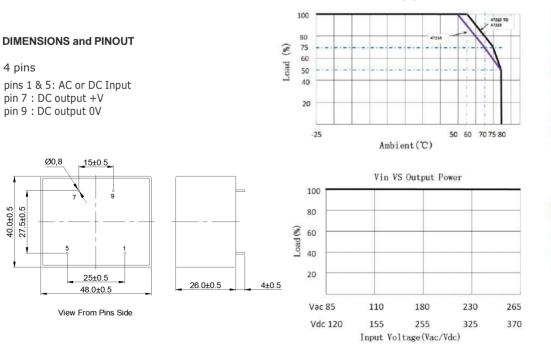


MAIN FEATURES

- 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

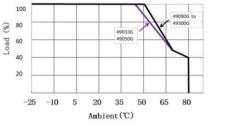
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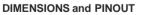
Input Voltage(Vac/Vdc)

230

325

DERATING GRAPH







100

80

40

20

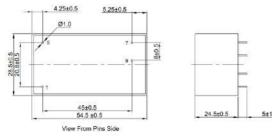
Vac 85

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 | | | |

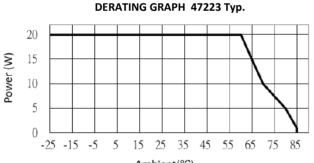
ONE OUTPUT 20W

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

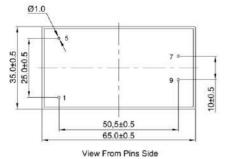
| Part Number | Output Power(W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy (%) | Max.Operating Ambient (°C) | Min. Part Efficiency (%) |
|-------------|--------------------|----------------------------|---------------------------|--------------------------------|-------------------------------|-----------------------------|
| 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 | | | |

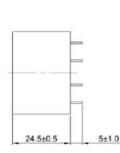


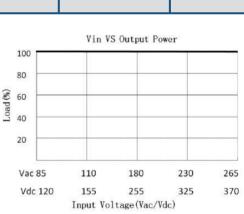
DIMENSIONS and PINOUT

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 | | | |

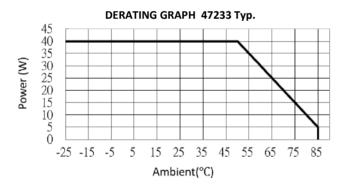
ONE OUTPUT 40W

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

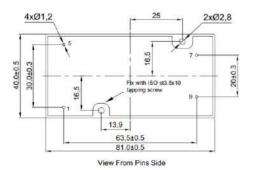
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (mA) | Output Voltage Accuracy (%) | Max.Operating Ambient (°C) | Min. Part Efficiency (%) |
|-------------|---------------------|-------------------------|------------------------|--------------------------------|-------------------------------|-----------------------------|
| 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 | | | |

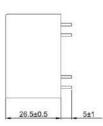


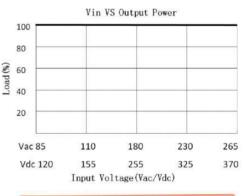
DIMENSIONS and PINOUT

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

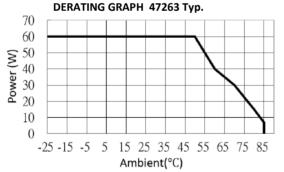
ONE OUTPUT 60W

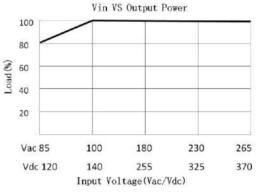
MAIN FEATURES

- 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

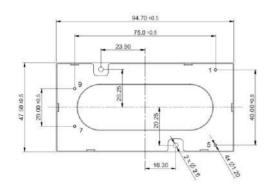
| Part Number | Output Power (W) | Output Voltage (Vdc) | Output Current (A) | Output Voltage Accuracy (%) | Max.Operating Ambient (°C) | Min. Part Efficiency (%) |
|-------------|---------------------|-------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------------|
| 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

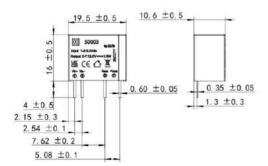
- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1,IEC60601-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform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

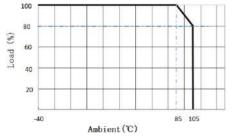
DIMENSIONS and PINOUT

4 pins

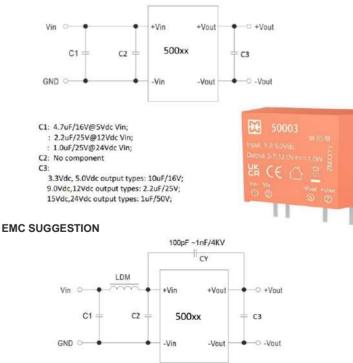
Pin 1: DC Input +Vin Pin 2: DC Input -Vin Pin 5 : DC Output -Vout Pin 7 : DC Output +Vout







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

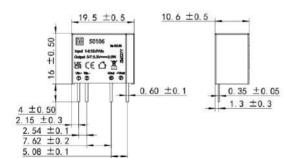
- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1,IEC60601-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform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

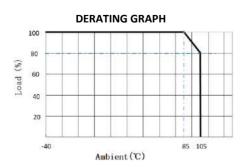
| Part Number | Output Power(W) | Output Voltage (VDC) | Output Current (mA)max/min | Input Current Typ.(Full load/No load) (mA) | Max.Operating Ambient (°C) | Efficiency Typical (%) | Input Range (Vdc) |
|----------------|--------------------|----------------------------|----------------------------------|--|-------------------------------|---------------------------|----------------------|
| 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

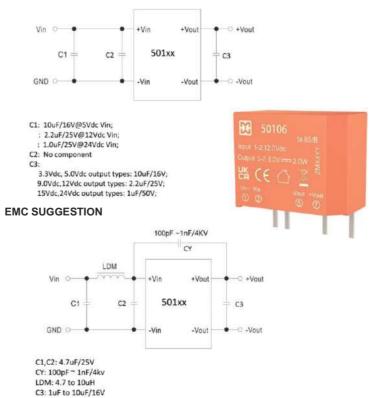
4 pins

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(€ △ 】

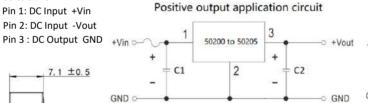
0.6 ±0.05

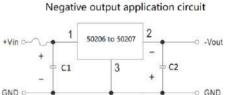
5.08 ±0.20

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

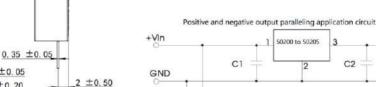
External capacitor:

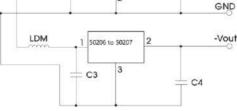
10uF/50V

C1,C3:

C2 C4.

+Vout



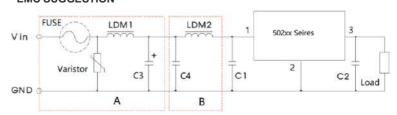


50200 to 50205

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

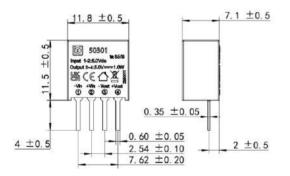
- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1,IEC60601-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform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

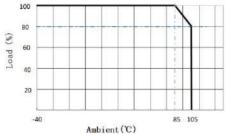
DIMENSIONS and PINOUT

4 pins

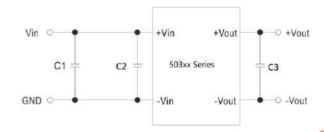
Pin 1: DC Input -Vin Pin 2: DC Input +Vin Pin 3 : DC Output -Vout Pin 4 : DC Output +Vout







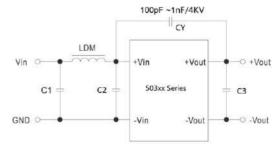




C1,C2: 4.7uF/25V

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

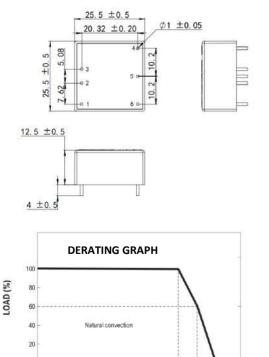
-20

40

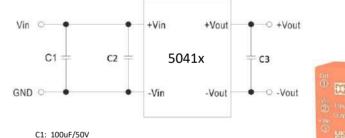
20 40 60

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

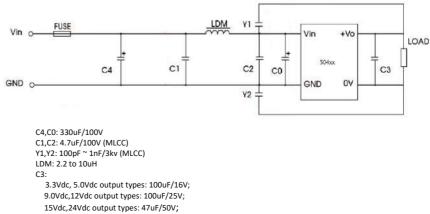


C1: 100uF/50 C3:

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

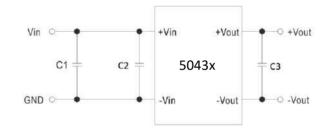
- Small Compact Size PCB Mount
- Output Range : 3.3VDC 24VDC
- 1500Vdc I/O Isolation voltage
- Operating Temperature -40°C To +85°C
- Industry Standard Pinout
- Low Cost/High Reliability
- Remote ON/OFF Control and Trimming Output



- 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 | |

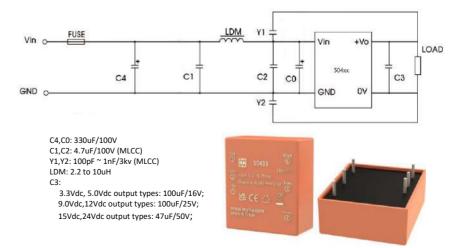
TYPICAL APPLICATION



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;

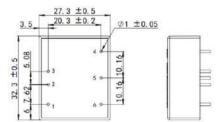
EMC SUGGESTION (Required external component to meet EN55032 radiated Class B emission)

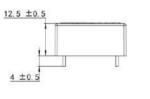


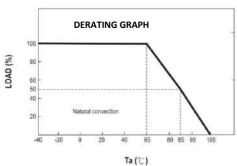
@ pending certification

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

. . . .



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

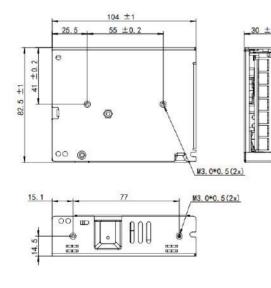
ONE OUTPUT 72W

MAIN FEATURES

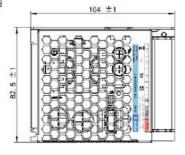
- Small Compact Size
- Single Output
- Regulated Output Range: 3.3VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption < 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct

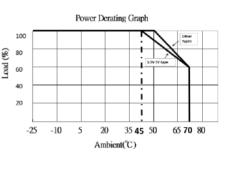
- Safety: Compliance With All Requirements of IEC/EN61558-2-16, IEC/EN60335-1, IEC/EN62368-1,UL62368-1, CSA22.2No.62368-1-14 CE,UKCA Mark
- EMC : Conducted And Radiated Emissions Conform To EN55032, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS A, EN61000-3-3 without any additionalcomponents.
- Immunity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

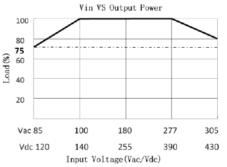
| Part Number | Output Power (W) | Output Voltage (VDC) | Rated Output Current (A) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) | Input Range |
|----------------|------------------------|----------------------------|-----------------------------|-------------------------------|----------------------------|--------------|
| 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 |
| | | |

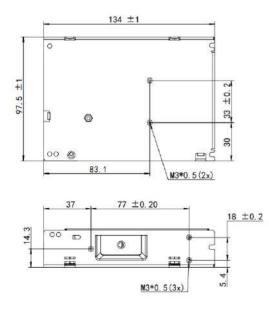
ONE OUTPUT 100W



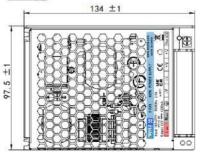
MAIN FEATURES

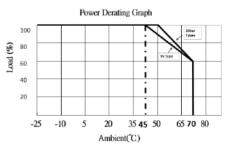
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 5.0VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance With 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

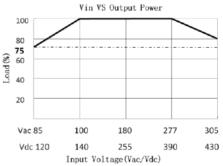
| Part Number | Output Power (W) | Output Voltage (VDC) | Rated Output Current (A) | Output Voltage Range- ADJ(Vdc) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) | Input Range |
|----------------|------------------------|----------------------------|--------------------------------|---|-------------------------------|----------------------------|-----------------------------|
| 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 | | | | | |

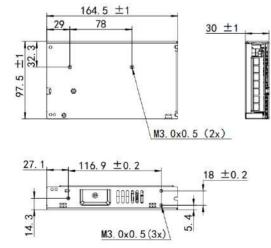
ONE OUTPUT 150W



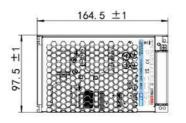
MAIN FEATURES

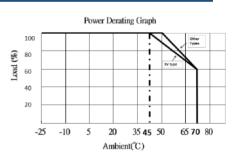
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 5.0VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance With 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

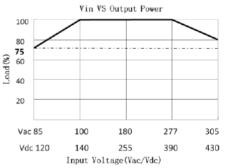
| Part Number | Output Power (W) | Output Voltage (VDC) | Rated Output Current (A) | Output Voltage Range- ADJ(Vdc) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) | Input Range |
|----------------|------------------------|----------------------------|--------------------------------|---|-------------------------------|----------------------------|-----------------------------|
| 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 | | | | | |

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

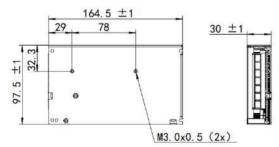
ONE OUTPUT 200W

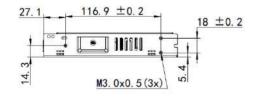


MAIN FEATURES

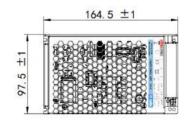
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 9.0VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.2W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance With 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

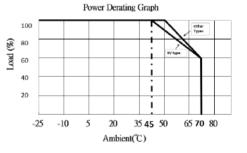
| Part Number | Output Power (W) | Output Voltage (VDC) | Rated Output Current (A) | Output Voltage Range- ADJ(Vdc) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) | Input Range |
|----------------|------------------------|----------------------------|--------------------------------|---|-------------------------------|----------------------------|--------------|
| 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 | |

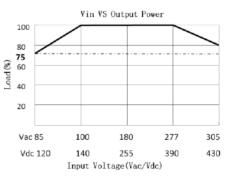


















| Model: 200 V | Vatt | Specification |
|-------------------------------|--|--|
| | Rated AC input Voltage | 100~277 VAC or 140VDC-390VDC |
| | AC Input Voltage Range | 85~ 305Vac or 120VDC-430VDC |
| | AC Input Frequency Range | 47Hz~63Hz |
| AC Input Characteristics | Rated AC Input Frequency | 50/60Hz |
| 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 |

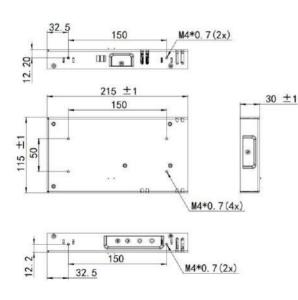
ONE OUTPUT 250W

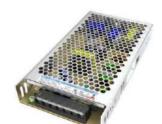


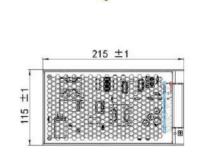
MAIN FEATURES

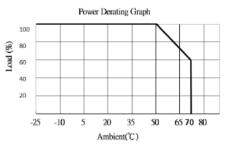
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 12VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.3W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance With All 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

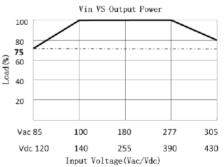
| Part Number | Output Power (W) | Output Voltage (VDC) | Rated Output Current (A) | Output Voltage Range- ADJ(Vdc) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) | Input Range |
|----------------|------------------------|----------------------------|--------------------------------|---|-------------------------------|----------------------------|-----------------------------|
| 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 | |

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

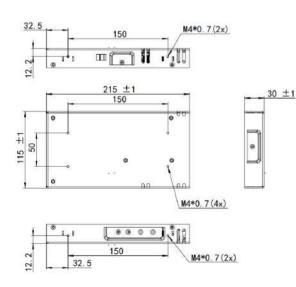
ONE OUTPUT 350W



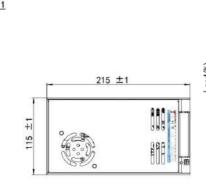
MAIN FEATURES

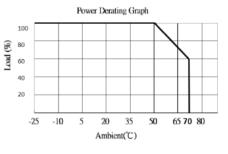
- Small Compact Size
- Buit -in Active PFC >0.95
- Regulated Output Range: 12VDC 48VDC
- Input Range: 85VAC 305VAC/47 63Hz Or 120VDC - 430VDC
- Very Low Standby Power Consumption ≤ 0.3W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Safety: Compliance with All 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

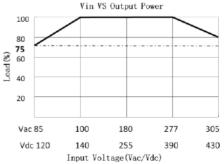
| Part Number | Output Power (W) | Output Voltage (VDC) | Rated Output Current (A) | Output Voltage Range- ADJ(Vdc) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) | Input Range |
|----------------|------------------------|----------------------------|--------------------------------|---|-------------------------------|----------------------------|-----------------------------|
| 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



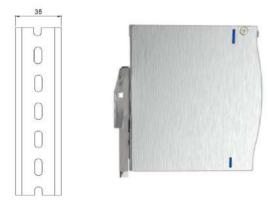


53000 is an economical slim 240W Din rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 40mm in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 85VAC to 265VAC and conforms to EN61000-3-2,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

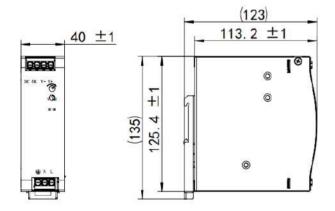
| Part Number | Output Power (W) | Output Voltage (VDC) | Rated Output Current (A) | Output Voltage Range- ADJ(Vdc) | Max.Operating Ambient (°C) | Min. Part Efficiency(%) | Input Range |
|----------------|------------------------|----------------------------|--------------------------------|---|-------------------------------|----------------------------|-----------------------------|
| 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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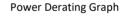
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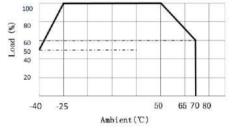
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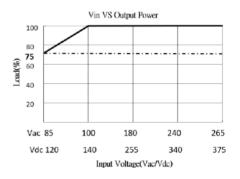
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| Model: 240 V | Vatt | Specification |
|-------------------------------|--|---|
| | Rated AC input Voltage | 100~240 VAC or 140VDC-340VDC |
| | AC Input Voltage Range | 85~265VAC or 120VDC-375VDC |
| | AC Input Frequency Range | 47Hz~63Hz |
| AC Input | 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.

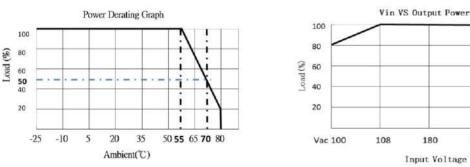
230

305

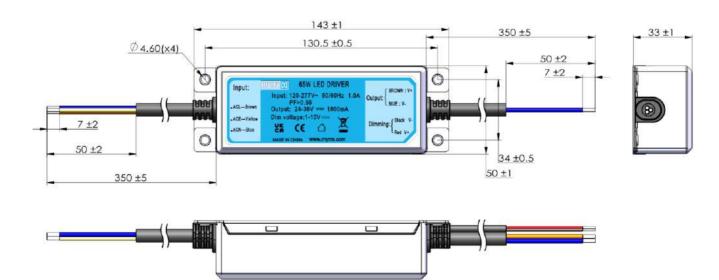
 Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

| 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 | | |
| | • | | | |

100W LED Driver



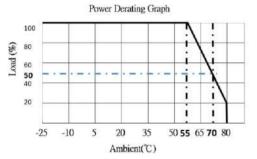
MAIN FEATURES

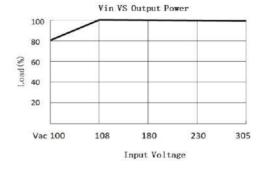
- 100W Small Compact Size- Metal housing design
- Constant Current Mode Output
- Built-in active PFC >0.95
- Output Range : 12VDC 48VDC
- Input Range: 100VAC 305VAC/47- 63Hz
- Very Low Standby Power Consumption<0.5W
- IP65 Rating For Indoor Or Outdoor Installations
- 3 In 1 Dimming(1V to 10Vdc or 10V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

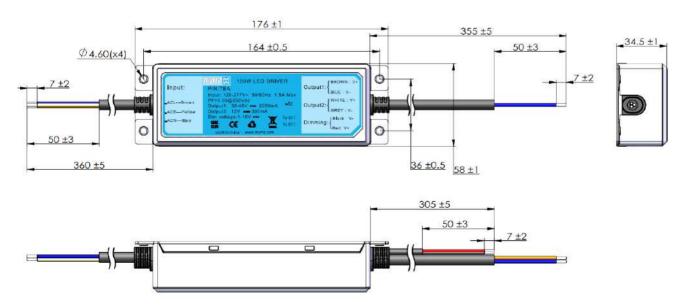
- Safety: Compliance with All Requirements of: IEC/EN61347-1, IEC/EN61347-2-13, UL8750 CALSS 2, CSA C22.2NO.250.13-12,CE,UKCA,IP65
- Materials: Uses UL 94-V0 Resin
- EMC : Conducted And Radiated Emission conform To EN55015,FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS C, EN61000-3-3 without any additional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

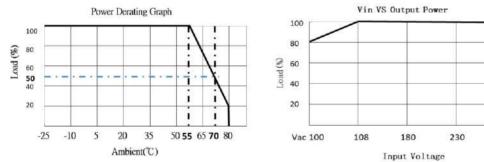
- 200W Small Compact Size- Metal housing design
- Constant Current Mode Output
- Built-in active PFC >0.95
- Output Range : 12VDC 48VDC
- Input Range: 100VAC 305VAC/47- 63Hz
- Very Low Standby Power Consumption<0.5W
- IP65 Rating For Indoor Or Outdoor Installations
- 3 In 1 Dimming(1V to 10Vdc or 10V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

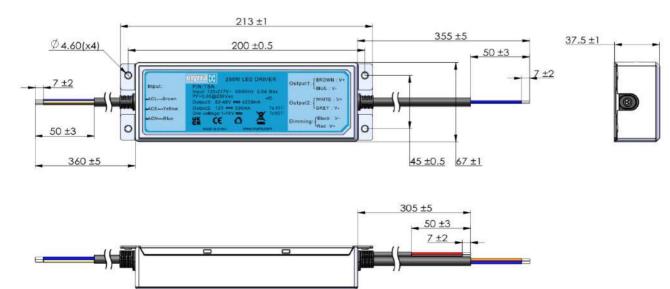
- Safety: Compliance with All Requirements of: IEC/EN61347-1, IEC/EN61347-2-13, UL8750 CALSS 2, CSA C22.2NO.250.13-12,CE,UKCA,IP65
- Materials: Uses UL 94-V0 Resin
- EMC : Conducted And Radiated Emission conform To EN55015,FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS C, EN61000-3-3 without any additional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



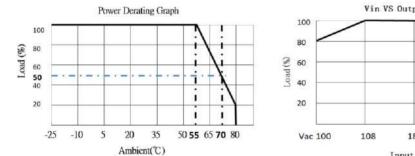
MAIN FEATURES

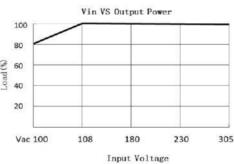
- 300W Small Compact Size- Metal housing design
- Constant Current Mode Output
- Built-in active PFC >0.95
- Output Range : 12VDC 48VDC
- Input Range: 100VAC 305VAC/47- 63Hz
- Very Low Standby Power Consumption<0.5W
- IP65 Rating For Indoor Or Outdoor Installations
- 3 In 1 Dimming(1V to 10Vdc or 10V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

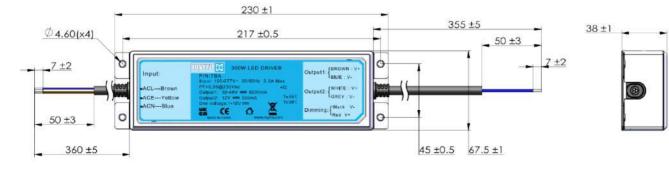
- Safety: Compliance With All Requirements of: IEC/EN61347-1, IEC/EN61347-2-13, UL8750 CALSS 2, CSA C22.2NO.250.13-12,CE,UKCA,IP65
- Materials: Uses UL 94-V0 Resin
- EMC : Conducted And Radiated Emission conform To EN55015, FCC Part 15, CLASS B, IEC/EN61000-3-2 CLASS C, EN61000-3-3 without any additional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













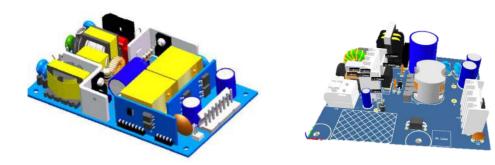


| Model: 300 Watt | | Specification | | |
|-----------------|---|--|--|--|
| | Rated input Voltage | 120~277Vac | | |
| | Input Voltage Range | 100~305Vac | | |
| | AC Input Frequency Range | 47Hz~63Hz | | |
| AC Input | Rated AC Input Frequency | 50/60Hz | | |
| Characteristics | Input Current | 3.0A 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.

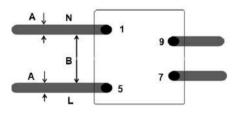
Non-encapsulated type product:

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:

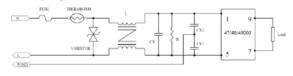
MYRRA power supplies should be stored in their original packaging before use. In the warehouse, there should not be harmful gas, inflammable, explosive products, corrosive chemical products, strong mechanical vibration, shock and strong magnetic field effects. The package box should be stored above ground 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.



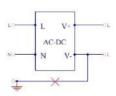
5- Recommended circuit for applications requiring higher EMC performance :

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

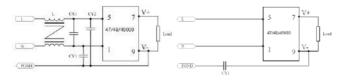


6 – Application of the connection to ground :

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

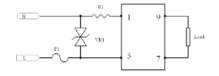
Fuse: recommended parameters : 5A to 10A/250Vac, Time-lag type.

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

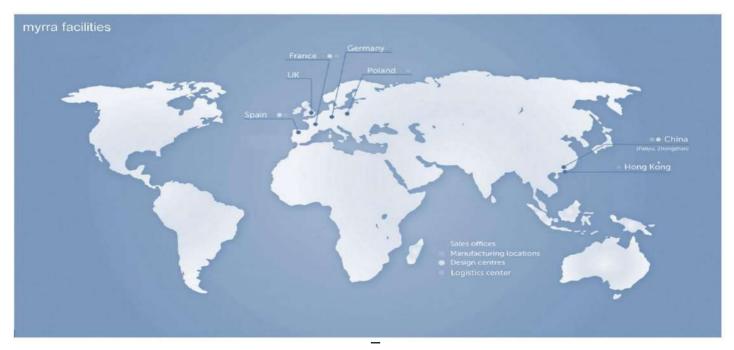
TECHNICAL SERVICES :

- 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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