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AMEDP480-NZ



DIN Rail

The AMEDP480-NZ is a brand-new DIN rail bracket AC/DC converter that offers much greater cost effectiveness due to material normalization and production automation also leading to improved reliability and performance. Offering a commercial input voltage range of 85-264VAC and an output voltage range from 24-48V, this series will offer many benefits to your new system design.

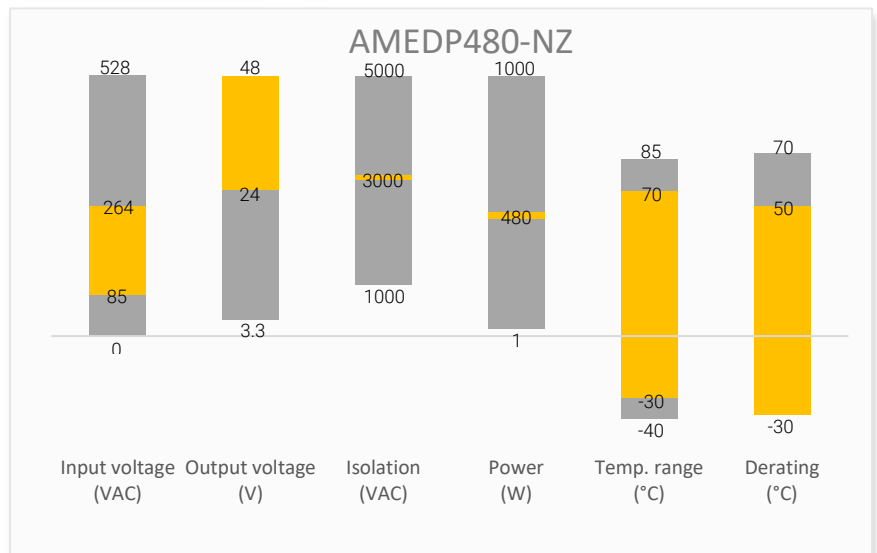
This new series offers great operating temperatures, from -30°C to 70°C also features an isolation of 3000VAC for improved reliability and system safety. Furthermore, a higher MTBF of 300,000h, output short circuit protection (OSCP), output over-current protection (OCP) and an output over-voltage protection (OVP) come standard with the series.

The AMEDP480-NZ is perfect for street lighting controls, grid power, LED, instrumentation, industrial controls, communication and civil applications.

Features

- Universal Input: 85 - 264VAC/120 - 370VDC
- Operating Temp: -30 °C to +70 °C
- High isolation voltage: 3000VAC
- Low ripple & noise, 120mV(p-p), max.
- Output short circuit, over-current, over-voltage, over-temperature protection

Summary



Training



Product Training Video
(click to open)



Press Release

Coming Soon!

Application Notes

Applications



Power Grid



Industrial



Telecom



Instrumentation

Models & Specifications

| Single Output | | | | | | | |
|----------------|------------------------|---------------------|------------------------|--------------------|------------------------|------------------------------|------------------------------|
| Model | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Max Output wattage (W) | Output Voltage (V) | Output Current max (A) | Maximum capacitive load (μF) | Efficiency @ 230VAC Typ. (%) |
| AMEDP480-24SNZ | 85~264/47~63 | 120~370 | 480 | 24 | 20 | 4700 | 94 |
| AMEDP480-48SNZ | 85~264/47~63 | 120~370 | 480 | 48 | 10 | 2700 | 94 |

| Input Specifications | | | | |
|----------------------|------------|---------|---------|-------|
| Parameters | Conditions | Typical | Maximum | Units |
| Input Current | 115VAC | | 5 | A |
| | 230VAC | | 2.5 | A |
| Inrush Current | 115VAC | 20 | | A |
| | 230VAC | 40 | | A |
| Power factor | 115VAC | ≥ 0.99 | | -- |
| | 230VAC | ≥ 0.95 | | -- |
| Leakage current | 240VAC | | 0.8 | mA |

| Output Specifications | | | | |
|--------------------------|--------------------------------|---------|---------|--------|
| Parameters | Conditions | Typical | Maximum | Units |
| Voltage accuracy | Full load | ± 1 | | % |
| Line regulation | Rated load | ± 0.5 | | % |
| Load regulation | 0 - 100% load | ± 1 | | % |
| Ripple & Noise | 20MHz bandwidth, 24 VDC Output | | 100 | mV p-p |
| | 20MHz bandwidth, 48 VDC Output | | 120 | mV p-p |
| Hold up time | | ≥ 16 | | ms |
| Voltage adjustable range | 24 VDC Output | 24 – 28 | | V |
| | 48 VDC Output | 48 – 55 | | V |
| DC OK signal | 30VDC | | 1 | A |

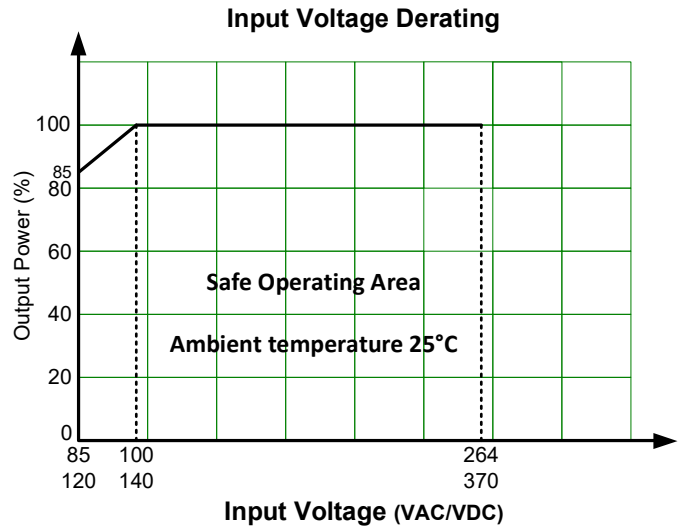
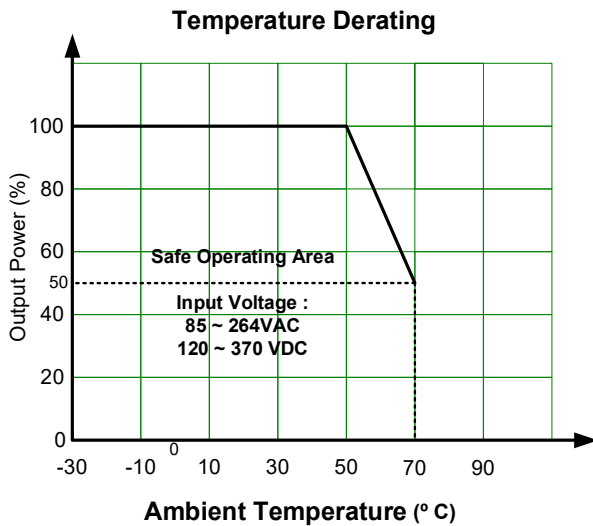
* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application not for specific details. Measured with 47μF electrolytic capacitor and 0.1μF ceramic capacitor.

| Isolation Specifications | | | | |
|------------------------------|--------------------------------|---------|---------|-------|
| Parameters | Conditions | Typical | Maximum | Units |
| Tested I/O voltage | 60 sec, Leakage current < 10mA | 3000 | | VAC |
| Tested Input to GND voltage | | 2000 | | VAC |
| Tested Output to GND voltage | | 500 | | VAC |
| Insulation resistance | 500VDC | >100 | | MΩ |

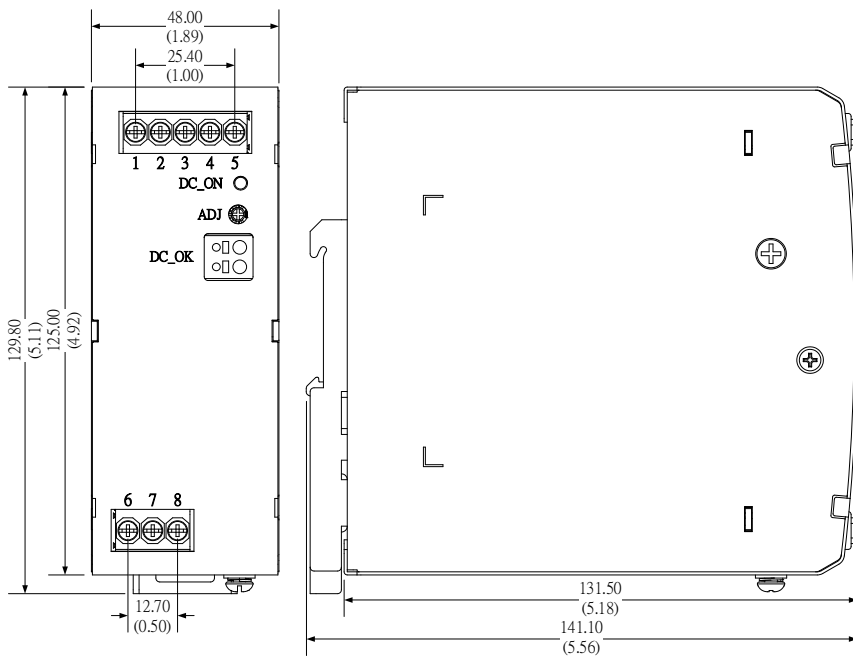
| General Specifications | | | | |
|---|---|------------|---------|-----------|
| Parameters | Conditions | Typical | Maximum | Units |
| Over Current protection | 230VAC, Self- recovery, normal or high temperature | 110 - 150 | | % of Iout |
| | 230VAC, Self- recovery, low temperature | ≥ 105 | | % of Iout |
| Over voltage protection | 24 VDC Output, output off or clamp, manual or self-recovery | 29 | 35 | VDC |
| | 48 VDC Output, output off or clamp, manual or self-recovery | 56 | 60 | VDC |
| Over temperature protection | 230Vac, full load, protection start | | 90 | °C |
| | 230Vac, full load, protection release | 60 | | °C |
| Short circuit protection | Hiccup, Continuous, Self-recovery (Recovery time < 10S) | | | |
| Operating temperature | | -30 to +70 | | °C |
| Storage temperature | | -40 to +85 | | °C |
| Power derating | 50 °C to 70 °C | 2.5 | | % / °C |
| | 85 to 100 VAC | 1.0 | | % / VAC |
| Temperature coefficient | | ± 0.03 | | % / °C |
| Protection Class | Class I | | | |
| Cooling | Free air convection | | | |
| Storage Humidity | | 10 | 95 | % RH |
| Operating Humidity | | 20 | 90 | % RH |
| Case material | Metal (AL1100, SGCC) and Plastic (PC940) | | | |
| Weight | | 980 | | g |
| Dimensions (L x W x H) | 5.18 x 1.89 x 4.92 inches (131.50 x 48.00 x 125.00 mm) | | | |
| MTBF | > 300 000 hrs (MIL-HDBK -217F, t=+25°C) | | | |
| NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. | | | | |

| Safety Specifications | | |
|-----------------------|--|---|
| Parameters | | |
| Agency approvals | CE EN62368 | |
| Standards | Design to meet UL61010-1 | |
| | EMC - Conducted and radiated emission | CISPR32 / EN55032, Class B |
| | Harmonic current | IEC/EN 61000-3-2, Class A |
| | Electrostatic Discharge Immunity | IEC/EN 61000-4-2 Contact ±6KV, Air ±8KV, Criteria A |
| | RF, Electromagnetic Field Immunity | IEC/EN 61000-4-3 10V/m, Criteria A |
| | Electrical Fast Transient/Burst Immunity | IEC/EN 61000-4-4 ±2KV, Criteria A |
| | Surge Immunity | IEC/EN 61000-4-5 L-L ±2KV, L-G ±4KV, Criteria A |
| | CS, Conducted Disturbance Immunity | IEC/EN 61000-4-6 10V r.m.s, Criteria A |
| | Voltage dips, Short Interruptions Immunity | IEC/EN 61000-4-11 0%, 70%, Criteria A |

Derating



Dimensions



| Pin Output Specifications | |
|---------------------------|--------------------|
| Pin | Function |
| 1 | +V Output |
| 2 | +V Output |
| 3 | -V Output |
| 4 | -V Output |
| 5 | -V Output |
| 6 | Input (N) |
| 7 | Input (L) |
| 8 | GND |
| ADJ | Voltage adjustment |

Note:

Unit: mm (inch)

General tolerance : ±1.0 (0.04)

Wire gauge : 28 - 10AWG

Tightening torque : 0.4N·m Max.

Mounting rail : TS35, rail need to connect safety ground

NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.