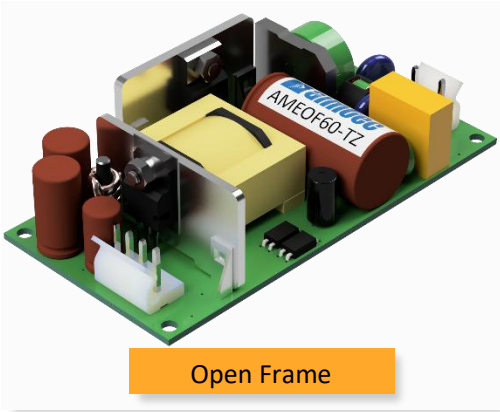


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AMEOF60-TZ



Open Frame

The AMEOF60-TZ series is one of Aimtec's compact size (2" x 4") 60W AC/DC converter. It features a universal AC input and accepts a DC input voltage, while also coming standard with high efficiency, high reliability and double or reinforced isolation.

These converters offer excellent EMC and safety performance, which with CE: EN62368-1 and with UL62368-1 approval and designed to meet EN62368-1 Ed2, IEC60950-1 / IEC62368 Ed2 standards.

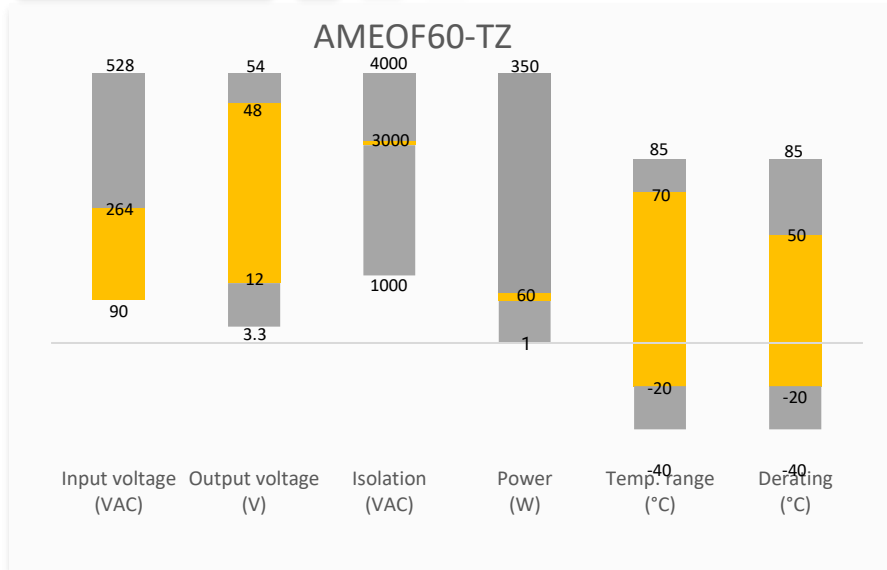
This series is suitable for industrial, streetlight control, security, telecommunications, and smart home applications.

Features

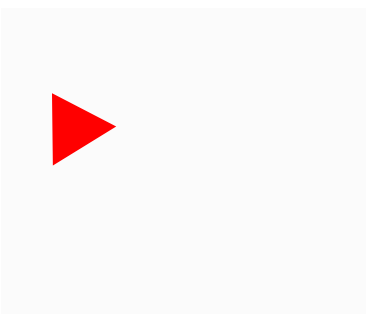
- Universal Input: 90 - 264VAC
- Low leakage current: 3.5mA max
- High isolation voltage: 3000VAC
- Output short circuit, over-current, over-voltage protection
- Certified: CE: EN62368-1, UL62368-1
- Designed to meet EN62368-1 Ed2, IEC60950-1 / IEC62368 Ed2



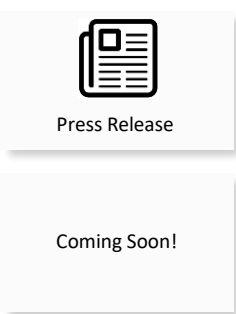
Summary



Training



Product Training Video
(click to open)



Application Notes

Applications



Power Grid



Industrial



Telecom

Models & Specifications



| Model | Input Voltage (VAC/Hz) | Nominal Output wattage (W) | Output Voltage (V) | Output Voltage Adjustable Range (V) | Output Current (A) | Efficiency @230VAC Typ. (%) |
|---------------|------------------------|----------------------------|--------------------|-------------------------------------|--------------------|-----------------------------|
| AMEOF60-12STZ | 90-264/47-63 | 60 | 12 | 10.8-13.2 | 5.00 | 87 |
| AMEOF60-24STZ | 90-264/47-63 | 60 | 24 | 21.6-26.4 | 2.50 | 87 |
| AMEOF60-48STZ | 90-264/47-63 | 60 | 48 | 43.2-52.8 | 1.25 | 87 |

Input Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|----------------|--------------------------------|---------|---------|---------|
| Input current | 100VAC | | 1.4 | A (RMS) |
| Inrush current | 115VAC, 25°C cold start | | 30 | A |
| | 230VAC, 25°C cold start | | 60 | A |
| Leakage | 264VAC, single fault condition | | 3.5 | mA |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-----------------|--|---------|---------|--------|
| Line regulation | 100% load | ±1.0 | | % |
| Load regulation | 230VAC | ±5.0 | | % |
| Ripple & Noise* | 12V, tested with 1µf and 10µf ceramic capacitors | | 120 | mV p-p |
| | 24V, tested with 1µf and 10µf ceramic capacitors | | 200 | mV p-p |
| | 48V, tested with 1µf and 10µf ceramic capacitors | | 300 | mV p-p |
| Hold up time | 115VAC at maximum load | ≥16 | | ms |
| | 230VAC at maximum load | ≥16 | | ms |

* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note for specific details.

Isolation Specification

| Parameters | Conditions | Typical | Maximum | Units |
|----------------------------|------------------------|---------|---------|-------|
| Tested I/O voltage | 60 sec, leakage ≤ 10mA | ≥3000 | | VAC |
| Tested I/O to case voltage | 60 sec, leakage ≤ 10mA | ≥1500 | | VAC |
| Resistance I/O* | 500VDC | >50 | | MΩ |

* Tested under 25±5°C ambient temperature with relative humidity <95% and no condensation.

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|---|---------|---------|-------|
| Protection class | Class II | | | |
| Over current protection | 12V, Auto recovery | | 10 | A |
| | 24V, Auto recovery | | 5 | A |
| | 48V, Auto recovery | | 3 | A |
| Over voltage protection | 12Vout, if the power supply is protected, it will latch off | >13.5 | 16 | VDC |
| | 24Vout, if the power supply is protected, it will latch off | >26 | 32 | VDC |
| | 48Vout, if the power supply is protected, it will latch off | >51 | 58 | VDC |
| Short circuit protection | Auto recovery | | | |

| | | | | |
|------------------------|--|---|------|------|
| Operating temperature | See derating graph | -20 to +70 | | °C |
| Storage temperature | | -40 to +85 | | °C |
| Operating altitude | | | 5000 | m |
| Power Derating | +50 °C to +70 °C | 1.67 | | %/°C |
| Cooling | Free air convection | | | |
| Humidity | Non-condensing, storage | | 90 | % RH |
| Weight | | 130 | | g |
| Dimensions (L x W x H) | | 2.00 x 4.00 x 1.10 inches (50.8 x 101.6 x 27.94 mm) | | |
| MTBF | > 100 000 hrs (Telcordia SR-332, issue 2, t=+25°C) | | | |

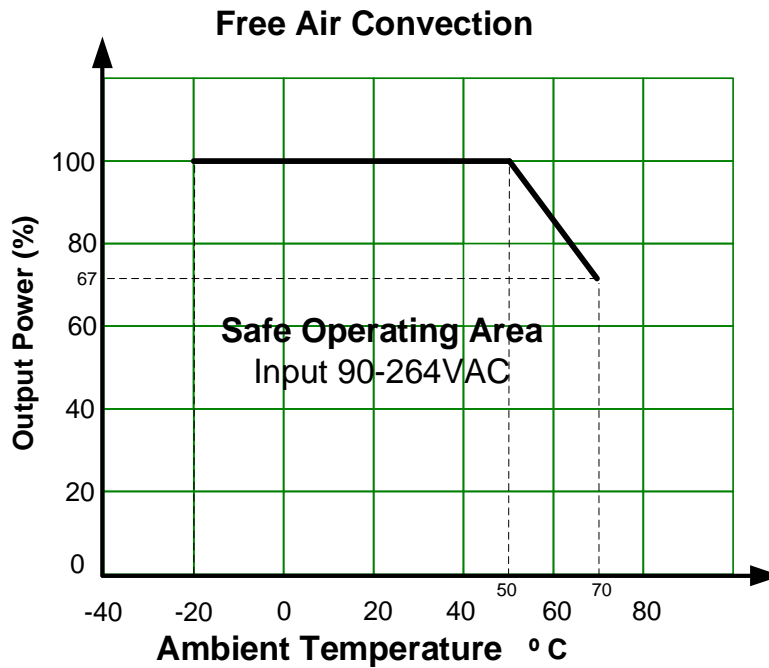
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

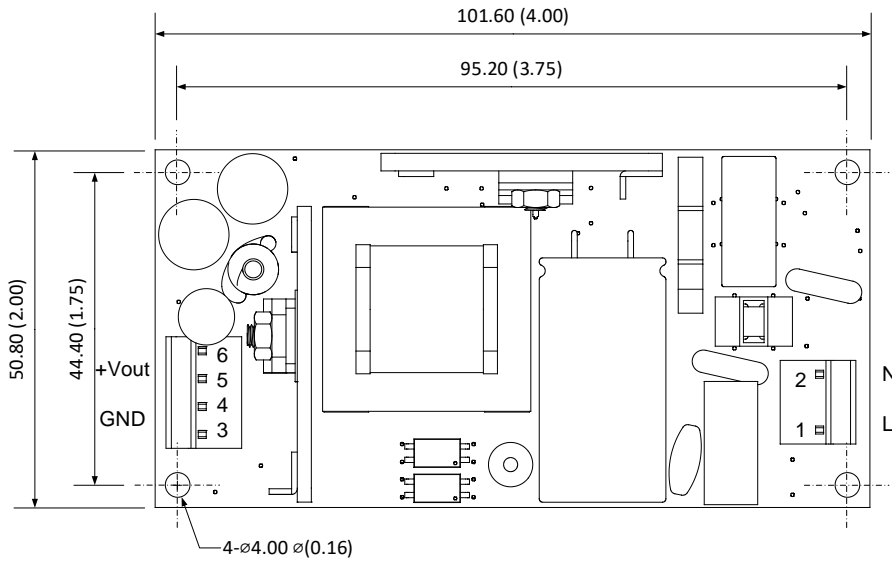
Parameters

| | | | |
|------------------|---|--|--|
| Agency approvals | CE: EN62368-1, UL62368-1 | | |
| Standards | Design to meet EN62368-1 Ed2, IEC60950-1 / IEC62368 Ed2 | | |
| | EMC - Conducted and radiated emission | FCC Class B, EN55032 Class B | |
| | Electrostatic Discharge Immunity | IEC 61000-4-2 Contact ±8KV / Air ±15KV, Criteria A | |
| | Electrical Fast Transient/Burst Immunity | IEC 61000-4-4 ±2KV | |
| | Surge Immunity | IEC 61000-4-5 L-L ±2KV/L-G ±4KV, Criteria A | |
| | Power frequency magnetic field test | IEC 61000-4-8 | |
| | Voltage dips, Short Interruptions Immunity | IEC 61000-4-11 | |

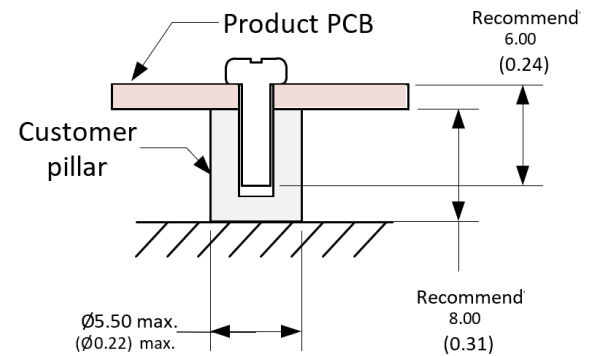
Derating



Dimensions



| Pin Output Specifications | | |
|---------------------------|--------------|--|
| Pin | Function | Recommended connector |
| 1 | AC Input (L) | TKP P8800I-03N2-V0 JWT A3961WV0-3P-D or equivalent |
| 2 | AC Input (N) | |
| 3 | GND | WST M4-I39601 TKP P8800I-04 |
| 4 | GND | |
| 5 | +V Output | JWT A3961WV2-4P or equivalent |
| 6 | +V Output | |



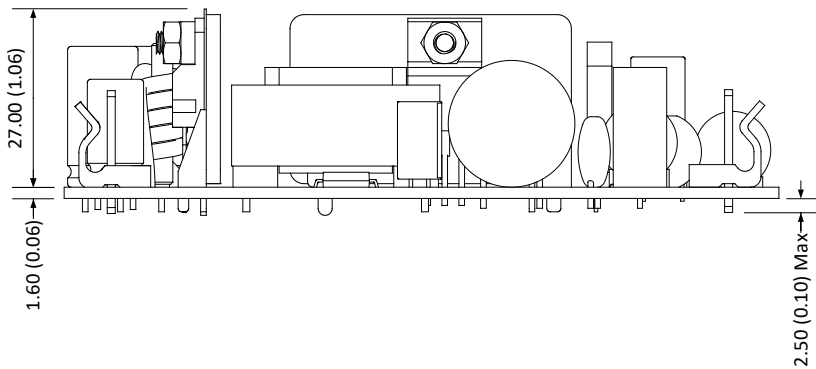
Note:

Unit: mm [inch]

General tolerance: \pm 0.5 (\pm 0.02)

Mounting screw: M3

Mounting screw tightening torque: 0.4N max.



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.