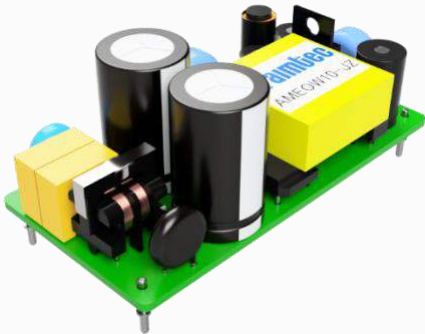


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AMEOW10-JZ



Open Frame

The AMEOW10-JZ series is an open frame switched-mode power supply that is designed to accept an ultrawide input voltage range of 57-528VAC or 80-745VDC. This converter can operate with any two wire connections from the three-phase three-wire or four-wire systems thus enhancing its ease of use.

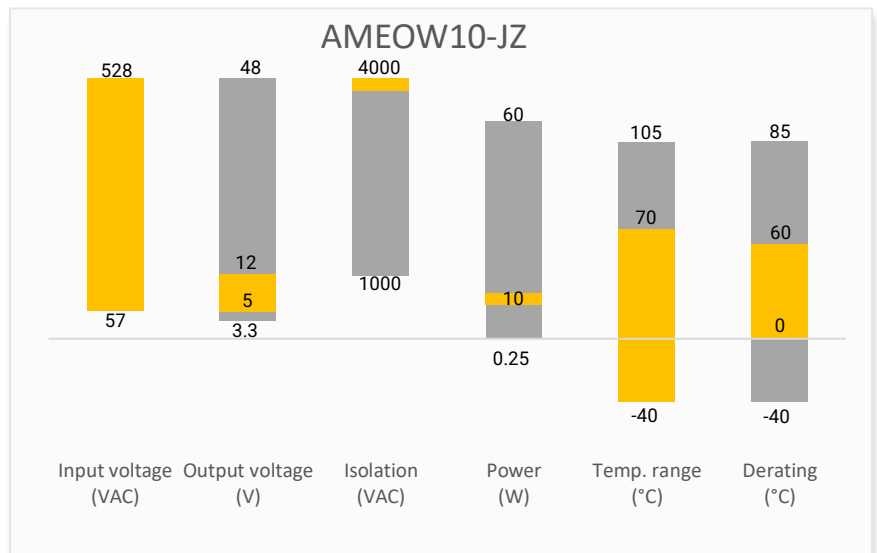
The AMEOW10-JZ series is designed with an isolation voltage of 4000VAC and meets IEC/EN61000 "Burst (4kV)", "Surge (2kV)" and "EN55032 Class B Conduction/Radiation" requirements. The typical applications of this series are meters or industrial equipment that have extremely harsh EMC requirements such as electric-meters that are powered from a three-phase AC supply.

Features

- Input: 57 - 528VAC/80 - 745VDC
- Operating Temp: -40 °C to +70 °C
- High isolation voltage: 4000VAC
- Ripple & noise, 250mV(p-p), max.
- Output short circuit, over-current, over-voltage protection



Summary



Training



Product Training Video
(click to open)



Press Release

Coming Soon!

Application Notes

Applications



Power Grid



Industrial



Instrumentation



IoT

Models & Specifications

Single Output

| Model | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Max Output wattage (W) | Output Voltage (Vo1/Vo2)(V) | Output Current max (Vo1/Vo2) (A) | Maximum capacitive load (Vo1/Vo2) (μF) | Efficiency @ 230VAC (%) Typ. |
|-----------------|------------------------|---------------------|------------------------|-----------------------------|----------------------------------|--|------------------------------|
| AMEOW10-5S12SJZ | 57~528/47~63 | 80~745 | 10.92 | 5.1 / 12 | 1.2 / 0.4 | 4000 / 1200 | 78 |

Input Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-----------------|-------------------------------|---------|---------|-------|
| Input current | 100VAC Input | | 400 | mA |
| Inrush current | 115VAC Input | 25 | | A |
| | 220VAC Input | 40 | | |
| Leakage current | 220VAC Input | 0.3 | | mA |
| Input fuse | 3.15A Slow-blow type required | | | |

Output Specifications

| Parameters | Conditions | | Typical | Maximum | Units |
|------------------|-------------------------|----------|---------|---------|--------|
| Voltage accuracy | Balance load | Output 1 | ± 2 | | % |
| | | Output 2 | ± 10 | | |
| Line regulation | 100% load | Output 1 | ± 0.5 | | % |
| | | Output 2 | ± 1.5 | | |
| Load regulation | 10-100% load | Output 1 | ± 3 | | % |
| | | Output 2 | ± 5 | | |
| Ripple & Noise* | 57-528VAC Input | Output 1 | | 150 | mV p-p |
| | | Output 2 | | 250 | |
| | 220VAC Input | Output 1 | 60 | | |
| | | Output 2 | 120 | | |
| Minimum load | | | ≥10 | | % |
| Hold-up time | 220VAC Input, 100% load | | 80 | | ms |

*20MHz bandwidth

Isolation Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-----------------------|-------------------------|---------|---------|-------|
| Tested I/O voltage | Input / Output, 60 sec | 4000 | | VAC |
| | Output / Output, 60 sec | 4000 | | |
| Insulation resistance | | ≥100 | | MΩ |

General Specifications

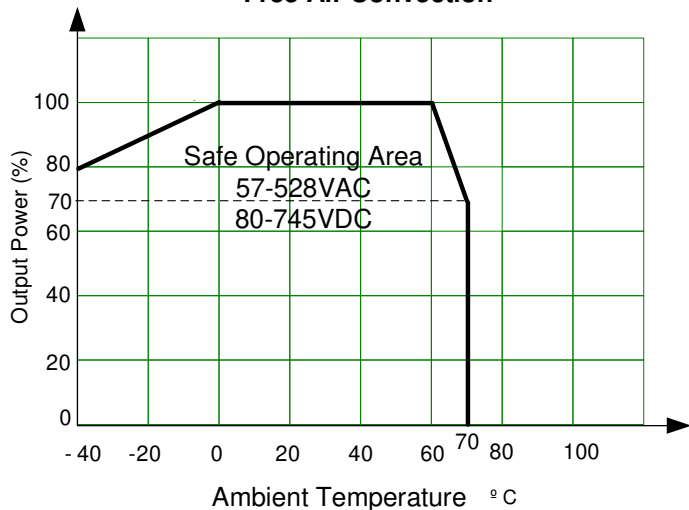
| Parameters | Conditions | Typical | Maximum | Units |
|-------------------------|---------------|---------|---------|-----------|
| Switching frequency | | 60-80 | | Khz |
| Over current protection | Auto recovery | ≥ 120 | 300 | % of Iout |
| Over voltage protection | Output 1 | | 8 | V |
| | Output 2 | | 20 | |

| | | | |
|---|---|-------|--------|
| Short circuit protection | Hiccup, Continuous, Auto recovery | | |
| Operating temperature | -40 to +70 | | °C |
| Storage temperature | -40 to +85 | | °C |
| No-load power consumption | 220VAC Input | 0.3 | 0.5 |
| Switching frequency | 65 | | KHz |
| Temperature coefficient | Output 1 | ±0.02 | % / °C |
| | Output 2 | ±0.06 | |
| Derating | -40°C to 0°C | 0.5 | % / °C |
| | 60°C to 70°C | 3 | |
| Altitude | 2000 | | m |
| Wave soldering | 260±5°C, Duration 5~10 Sec | | |
| Manual soldering | 360±10°C, Duration 3~5 Sec | | |
| Safety class | Class II | | |
| Cooling | Free air convection | | |
| Storage Humidity | 90 | | % RH |
| Weight | 70 | | g |
| Dimensions (L x W x H) | 3.15 x 1.57 x 1.38 inches (80.00 x 40.00 x 35.00mm) | | |
| 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. | | | |

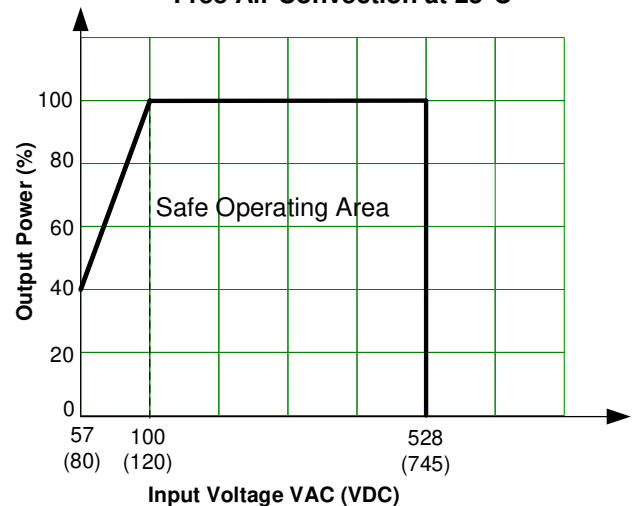
| Safety Specifications | | |
|-----------------------|--|---|
| Parameters | | |
| Standards | EMC - Conducted and radiated emission | CISPR22 / EN55022 Class B |
| | Electrostatic Discharge Immunity | IEC 61000-4-2 Contact ±6KV/ Air ±8KV, Criteria B |
| | RF, Electromagnetic Field Immunity | IEC 61000-4-3 10V/m, Criteria A |
| | Electrical Fast Transient/Burst Immunity | IEC 61000-4-4 ±4KV, Criteria B |
| | Surge Immunity | IEC 61000-4-5 L-L ±2KV, Criteria B |
| | | IEC 61000-4-5 L-L ±4KV with EMC recommended circuit, Criteria B |
| | RF, Conducted Disturbance Immunity | IEC 61000-4-6 10Vr.m.s, Criteria A |
| | Voltage dips, Short Interruptions Immunity | IEC 61000-4-11 0%, 70%, Criteria B |

Derating

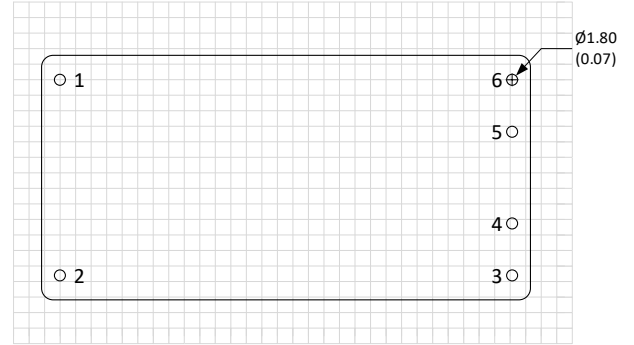
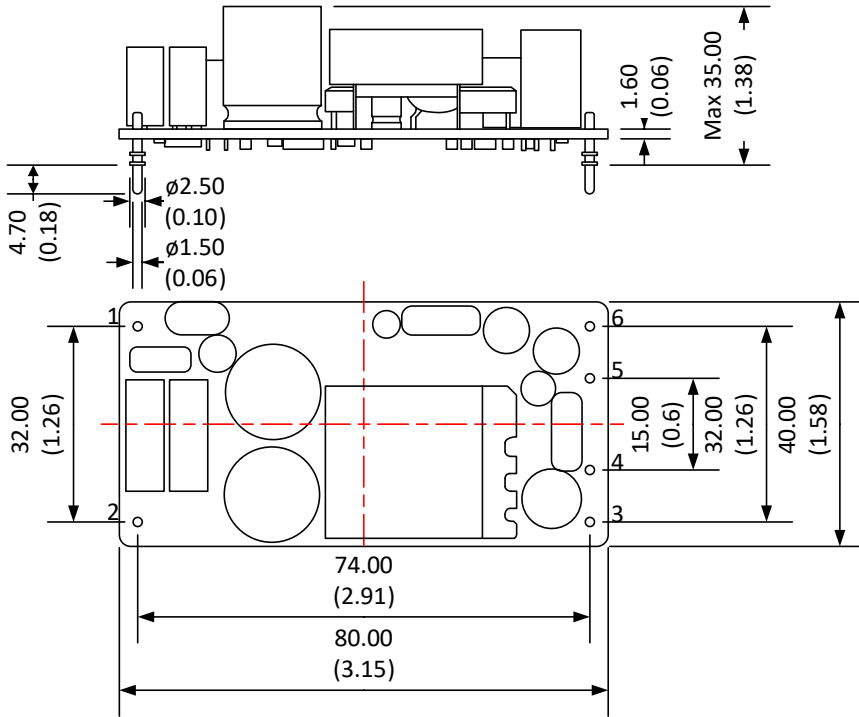
Free Air Convection



Free Air Convection at 25°C



Dimensions



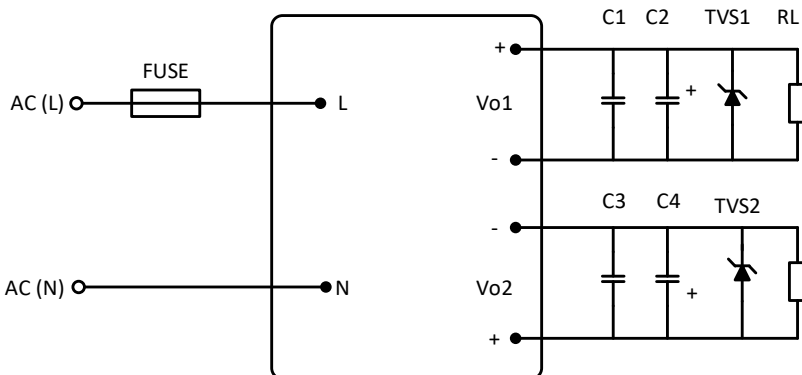
Grid size: 2.54*2.54mm

Note:
 Unit: mm(inch)
 General tolerance: ± 0.5 (± 0.02)
 Pin tolerance: ± 0.1 (± 0.004)

Pin Output Specifications

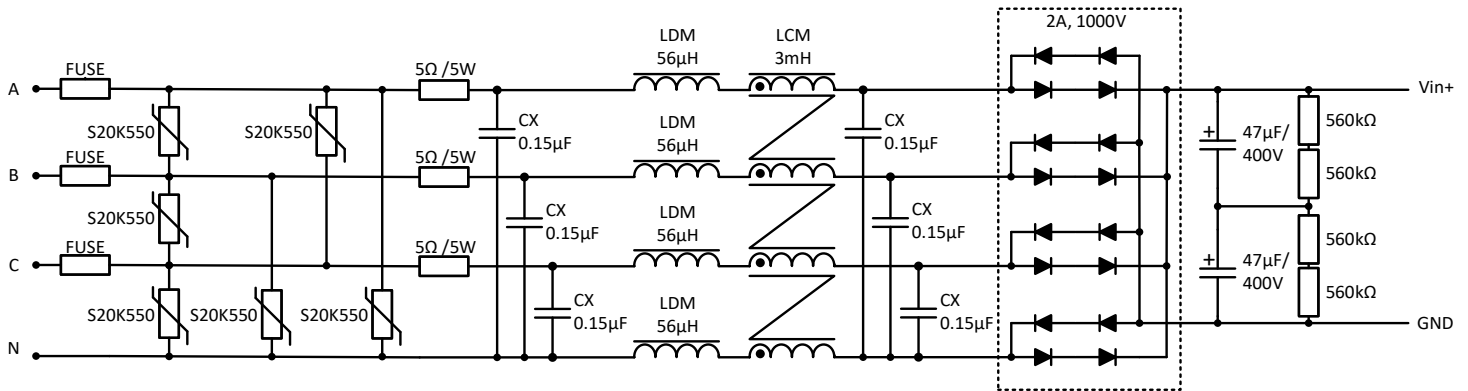
| Pin | Function |
|-----|------------------|
| 1 | AC Input (L)/ +V |
| 2 | AC Input (N)/ -V |
| 3 | +V Output2 |
| 4 | -V Output2 |
| 5 | -V Output1 |
| 6 | +V Output1 |

Typical application circuit

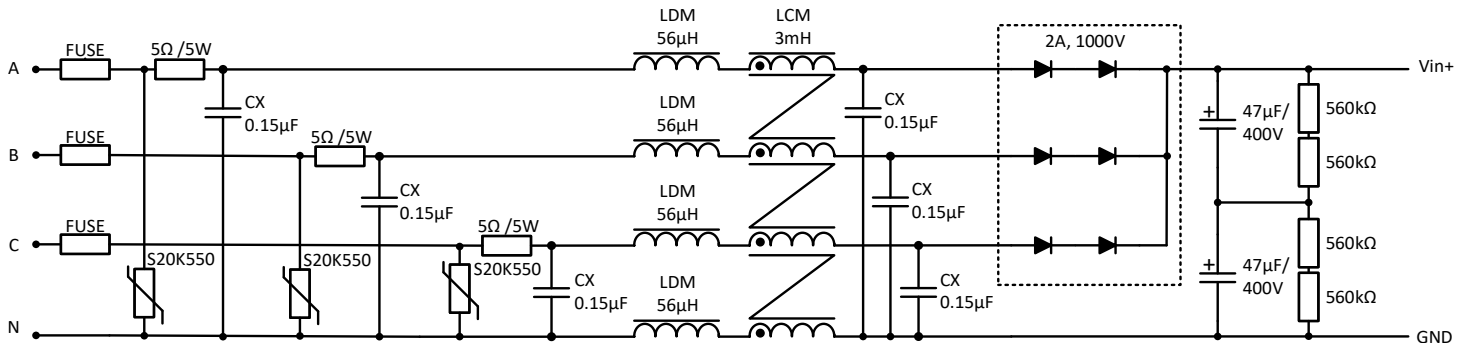


| Component | Value |
|-----------|--|
| C1 | 0.1 μ F/50V (Ceramic capacitor) |
| C2 | 220 μ F/10V (Electrolytic capacitor) |
| C3 | 0.1 μ F/50V (Ceramic capacitor) |
| C4 | 100 μ F/25V (Electrolytic capacitor) |
| TVS1 | P6KE6.8A |
| TVS2 | P6KE15A |

Recommended EMC circuit (Full-wave Rectification)



Recommended EMC circuit (Half-wave Rectification)



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