

FEATURES:



- Input: 90-528VAC, 47-63Hz, or 100-745VDC
- Operating Temp: -40°C to +70°C
- Over current Protection
- I/O Isolation of 4000VAC
- Class II power supply
- Over Voltage Protection
- Up to 83% efficiency
- Short Circuit Protection

Models
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 (%) |
|---------------|------------------------|---------------------|------------------------|--------------------|------------------------|------------------------------|----------------|
| | | | | | | | 230 VAC |
| AME20-3.3SBJZ | 90-528/47-63 | 100-745 | 11.88 | 3.3 | 3.6 | 10,000 | 74 |
| AME20-5SBJZ | 90-528/47-63 | 100-745 | 18 | 5 | 3.6 | 10,000 | 78 |
| AME20-9SBJZ | 90-528/47-63 | 100-745 | 20 | 9 | 2.23 | 7,000 | 79 |
| AME20-12SBJZ | 90-528/47-63 | 100-745 | 20 | 12 | 1.66 | 5,000 | 82 |
| AME20-15SBJZ | 90-528/47-63 | 100-745 | 20 | 15 | 1.33 | 3,000 | 83 |
| AME20-24SBJZ | 90-528/47-63 | 100-745 | 20 | 24 | 0.833 | 1,000 | 83 |

Input Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|----------------------------------|----------------------------|---------|---------|-------|
| Current (full load) | 115 VAC | | 800 | mA |
| | 230 VAC | | 400 | mA |
| Inrush current <2ms (cold start) | 115 VAC | 35 | | A |
| | 230 VAC | 60 | | A |
| Leakage current | 230VAC/50Hz | | 0.25 | mA |
| External fuse | Recommended slow blow type | 3.15 | | A |
| No load consumption | | | 0.75 | W |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|------------------|-----------------|---------|---------|--------|
| Voltage accuracy | | ±2.0 | ±3.0 | % |
| Line regulation | (LL-HL) | ±0.5 | | % |
| Load regulation | 0-100% load | ±1.0 | | % |
| Ripple & Noise* | 20MHz bandwidth | | 150 | mV p-p |
| Hold up time | 230 VAC | 35 | | ms |

*Tested as per the referenced Application Circuit.

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|----------------------|-------------------------|---------|-------|-------|
| Tested I/O voltage | Input to Output, 60 sec | | 4000 | VAC |
| Isolation resistance | | >1000 | | MΩ |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|--------------------|-----------------------------------|---------|-----------|
| Switching frequency | | 65 | | KHz |
| Over current protection | | 130 - 400 | | % of Iout |
| Over voltage protection | | Zener Diode Clamp | | |
| Short circuit protection | | Continuous, Hiccup, Auto recovery | | |
| Operating temperature | See derating curve | -40 to +70 | | °C |
| Maximum case temperature | | | 100 | °C |
| Storage temperature | | -40 to +85 | | °C |
| Temperature coefficient | | ±0.02 | | % / °C |
| Cooling | | Free air convection | | |
| Humidity | Non condensing | | 95 | % RH |

| | | | |
|------------------------|---|--|---|
| Case material | Plastic (flammability to UL 94V-0) | | |
| Weight | 160 | | g |
| Dimensions (L x W x H) | 70.00 x 48.00 x 30.0 mm (2.76 x 1.89 x 1.18 inches) | | |
| MTBF | > 300 000 hrs (MIL-HDBK -217F, t=+25°C)/ Full Load | | |

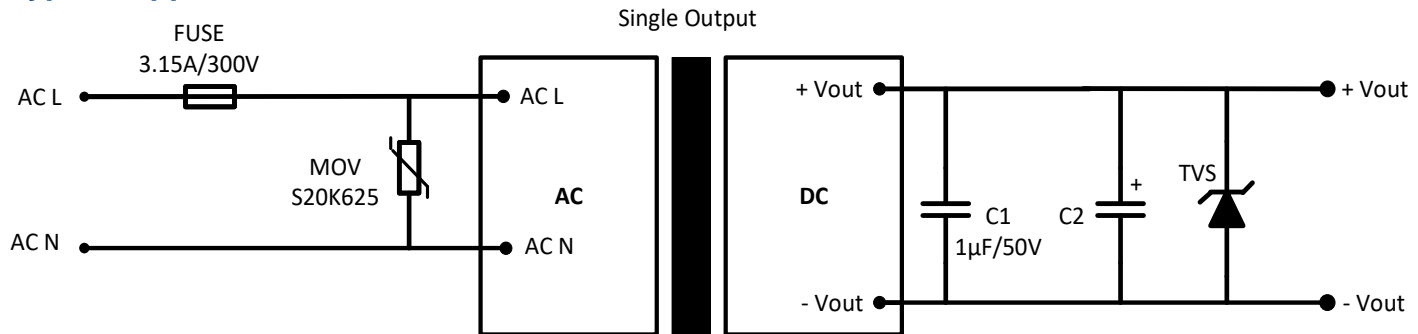
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage (115/230VAC) and at rated output load unless otherwise specified.

Safety Specifications

| Parameters | | |
|------------|--|--|
| Standards | Information Technology Equipment | Designed to meet IEC/EN/UL 62368-1 |
| | EMI - Conducted and radiated emission | EN55032, 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: ±2KV, applying recommended EMC circuit for ±4KV, Criteria B |
| | Surge Immunity* | IEC 61000-4-5: line to line: ±2KV, applying recommended EMC circuit for line to line: ±4KV, Criteria B |
| | RF, Conducted Disturbance Immunity | IEC 61000-4-6: 10Vrms, Criteria A |
| | Voltage dips, Short Interruptions Immunity | IEC 61000-4-11: 0-70%, Criteria B |

* For higher values, external circuit would be required.

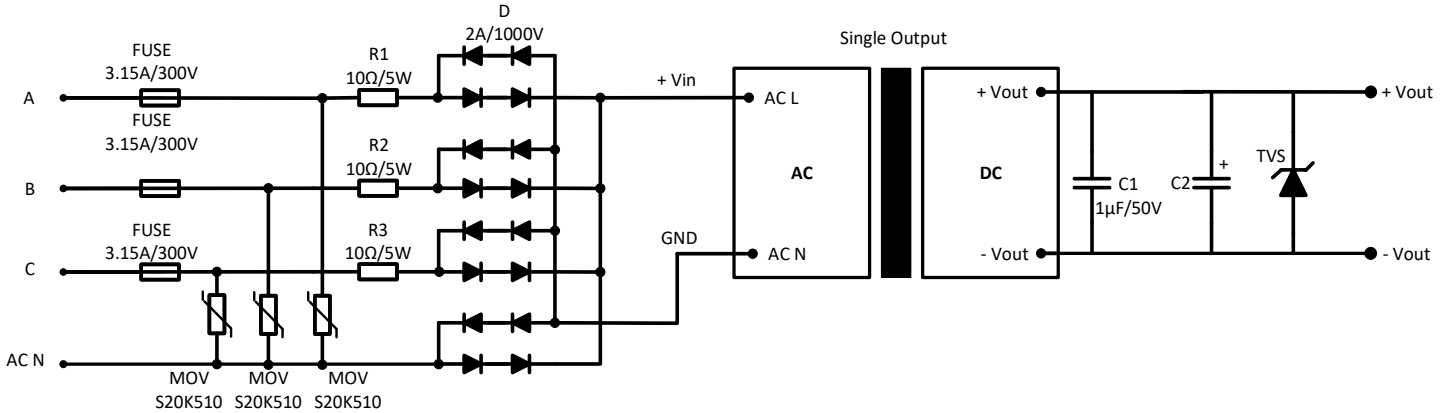
Typical Application circuit



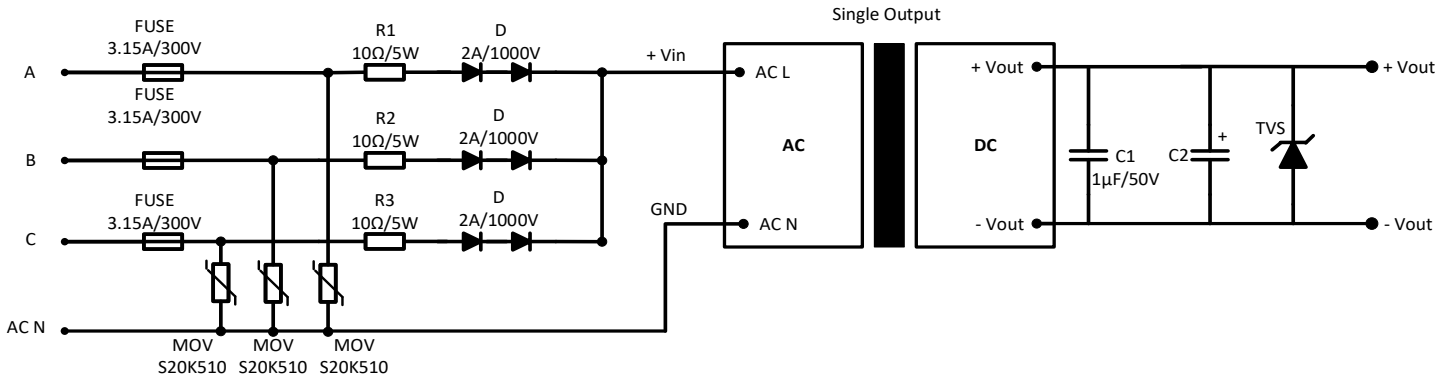
| Vout | C2 | TVS |
|----------|------------|-----|
| 3.3 & 5V | 330 µF/50V | 7A |
| 9V | | 12A |
| 12V | 220 µF/50V | 20A |
| 15 & 24V | | 30A |

3 Phase 4 Wire EMC recommended circuit

Full-wave Rectification for 4KV differential mode inrush standard



Half-wave Rectification for 4KV differential mode inrush standard



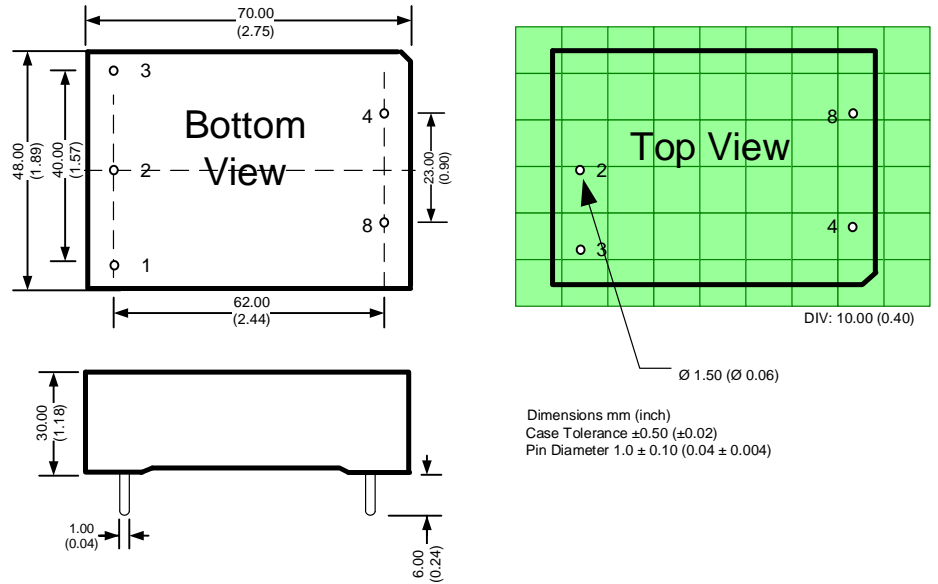
| Vout | C2 | TVS |
|----------|------------|-----|
| 3.3 & 5V | 330 μF/50V | 7A |
| 9V | 220 μF/50V | 12A |
| 12V | | 20A |
| 15 & 24V | | 30A |

Pin Out Specifications

| Pin | Single |
|-----|----------------------|
| 1 | NA (No Pin Present) |
| 2* | AC Input (N) or (L1) |
| 3* | AC Input (L) or (L2) |
| 4 | + V output |
| 5 | - V output |

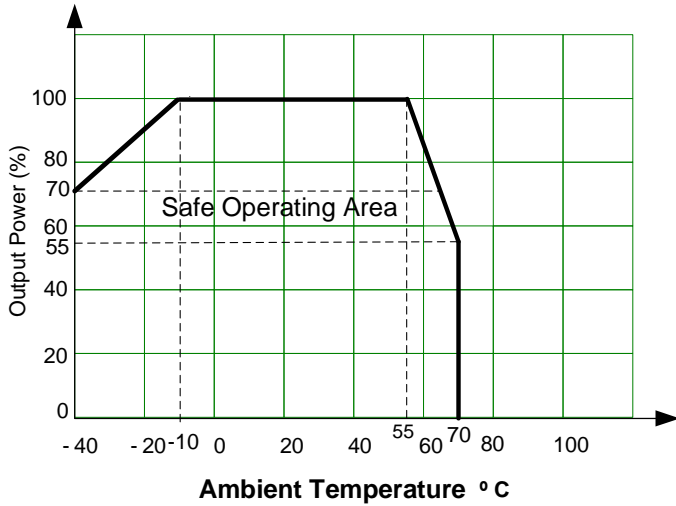
* Note: Input Pins 2 and 3 can be "N" and "L" respectively when the input voltage is supplied from a single phase. Input Pins 2 and 3 can be "L1" and "L2" respectively when the input voltage is supplied from 3 phase line to line voltage 208-480Vac (208 Y/ 120V 3-phase, 240 Y/ 120V 3-phase, 400 Y/ 230V 3-phase or 480 Y/ 277V 3-phase).

Dimensions

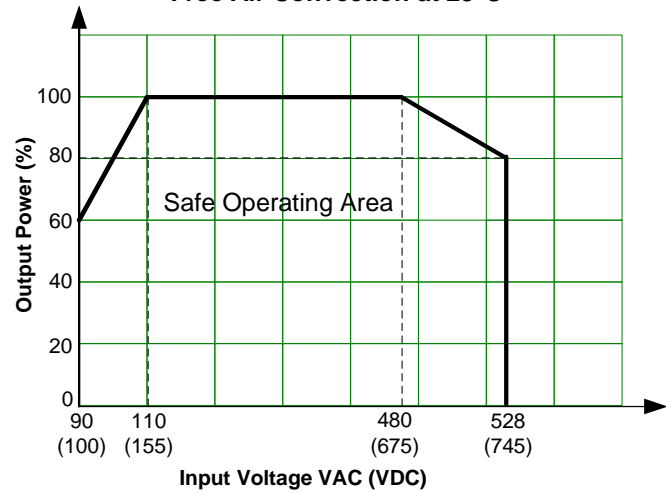


Derating

Free Air Convection



Free Air Convection at 25°C



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