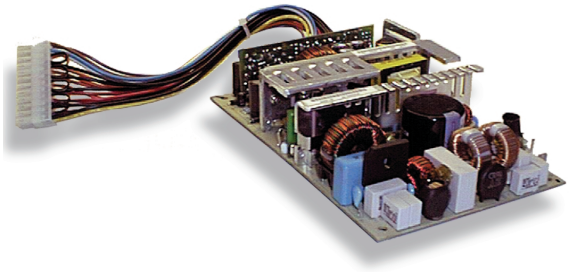
# 120 Watts
# AA20140 Series

| | |
|---|---|
| ***Total Power:*** | **70-120 Watts** |
| ***Input Voltage:*** | **85-264 VAC** |
| ***# of Outputs:*** | **Quad** |



## Special Features

- Active power factor correction
- EN61000-3-2 compliance
- Remote sense on outputs one and two
- Industry-standard 4.25” x 7” footprint
- Adjustable main outputs
- Built-in Class B EMI filter
- Overvoltage protection
- Overload protection
- Thermal overload protection

## Environmental

Operating temperature: 0° to 50°C ambient; derate each output at 2.5% per degree from 50° to 70°C

Electromagnetic susceptibility: Designed to meet EN61000-4, -2, -3, -4, -5, -6, Level 3

Humidity: Operating; non-condensing 20% to 90%

Vibration: 5-32 Hz sinewave .02” double amplitude 32-2 kHz sinewave 1 G peak

Storage temperature: -40° to 85°C

Temperature coefficient: ±.04% per °C

MTBF per mil std 217E: >200,000 hours at full load and 30°C ambient conditions and full load

## Electrical Specs

### *Input*

| | |
|---|---|
| Input range | 90-264 VAC |
| Frequency | 47-63 Hz |
| Inrush current | 40 A max., cold start @ 25°C |
| Efficiency | 65% typical at full load |
| EMI filter | FCC Class B conducted and radiated, CISPR 22 Class B conducted and radiated, EN55022 Class B conducted and radiated, VDE 0878 PT3 Class B conducted and radiated. |
| Power factor | 0.99 typical |
| Safety ground | |
| Leakage current | <2 mA @ 50/60 Hz, 254 VAC input |

### *Output*

| | |
|---|---|
| Maximum power | 70 W convection; 120 W with 30 CFM forced air |
| Adjustment range | ±5% minimum on 3.3 V and 5 V outputs |
| Hold-up time | 15 ms @ 120 W load, 115 VAC input |
| Overload protection | Short circuit protection on all outputs. Case overload protected @ 110-145% above peak rating |
| Overvoltage protection | 3.3 V output: 4.25 V ±.25 V<br>5 V output: 6.25 V ±.75 V, 20-35% above nominal output. Latching type recycle AC to reset. |
| Remote sense | Compensates for 0.5 V lead drop min. Will operate without remote sense connected. |

## Safety

| | | |
|---|---|---|
| **TUV** | EN60950 | 9837006 |
| **UL** | UL1950 | E186249 |
| **CUL** | CSA 22.2-234 Level 3 | E186249 |
| **CB** | Certificate and report | DE2-002056 |
| **CE** | Mark (LVD) | |

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# Ordering Information

| *Model Number* | *Output Voltage* | *Minimum Load* | *Maximum Load with Convection Cooling* | *Maximum Load with 30 CFM Forced Air* | *Peak Load*[1] | *Regulation*[2] | *Ripple P/P (PARD)*[3] |
|---|---|---|---|---|---|---|---|
| AA20140 | +3.3 V | 0 A | 8 A | 16 A | 18 A | ±2% | 50 mV |
| | +5 V | 1 A | 10 A | 20 A | 22 A | ±3% | 50 mV |
| | +12 V | 0.2 A | 1 A | 2 A | 3 A | ±5% | 120 mV |
| | -12 V | 0 A | 0.5 A | 0.5 A | 1 A | ±10% | 120 mV |

1. Peak current lasting <30 seconds with a maximum 10% duty cycle.
2. At 25°C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. Peak-to-peak with 20 MHz bandwidth and 10 µF in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
4. Minimum loads are required.

# Pin Assignments

| *Connector* | | |
|---|---|---|
| **SK1** | PIN 1 | Neutral |
| | PIN 3 | Live |
| **SK2** | PIN 1-10 | Common |
| | PIN 11 | +5 Sense |
| | PIN 12 | +3.3 V Sense |
| | PIN 13 | +12 V |
| | PIN 14-17 | 5 V |
| | PIN 18-22 | 3.3 V |
| | PIN 23 | Return Sense |
| | PIN 24 | -12 V |

***Mating Connectors***

(SK1) AC Input: Molex: 09-50-8031 (USA)
Molex: 09-91-03500 (UK)
PINS: 08-58-0111

(SK2) DC Output: Molex: Right angle
39-30-1240 or
39-29-1248
or
Vertical
39-28-1243

Astec Connector Kit #70-841-013, includes all of the above.

***Notes:***

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance ±.02".
3. Warranty: 1 year
4. Weight: 1.38 lb. / .63 kg

