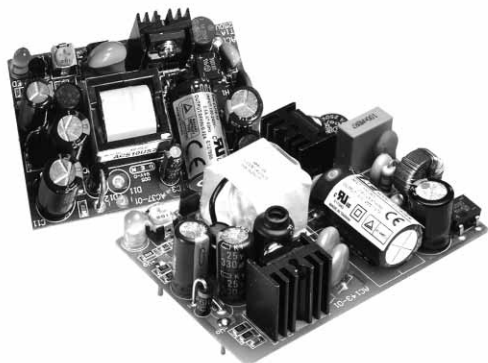


CU10-15 Series



- Low Cost
- Small Size
- PCB Mount
- 15 Watt Medical Version
- Single Output 3.3-24 V
- Peak Load Capability
- Non-standard Outputs Available

Specification

Input

| | |
|-----------------------|--|
| Input Voltage | • 85-264 VAC (120-370 VDC) |
| Input Frequency | • 47-63 Hz |
| Input Current | • 0.13 A rms at 230 VAC (CU10) 0.20 A rms at 230 VAC (CU15) |
| Inrush Current | • 20 A at 115 VAC, 40 A at 230 VAC, cold start 25 °C |
| Earth Leakage Current | • Class 2 (no earth) |
| Input Protection | • 1A fuse (CU10) 2A fuse (CU15, CU15-M) |

Output

| | |
|--------------------------|--|
| Output Voltage | • See table |
| Output Voltage Trim | • ±5% |
| Initial Set Accuracy | • ±1% |
| Minimum Load | • No minimum load required |
| Start Up Delay | • 1.5 s max |
| Start Up Rise Time | • 14 ms max |
| Hold Up Time | • 16 ms typical at full load and 115 VAC |
| Drift | • 0.6% |
| Line Regulation | • 0.5% max |
| Load Regulation | • 1.0% max 10% load to full load |
| Transient Response | • 4% max deviation, recovery to within 1% within 500 μs for 25% load change |
| Ripple & Noise | • 1% max pk-pk (see note 1) |
| Overvoltage Protection | • 130-150% of Vnom, recycle input to reset |
| Short Circuit Protection | • Trip and restart (Hiccup mode) |
| Temperature Coefficient | • 0.05%/°C |

General

| | |
|---------------------|---|
| Efficiency | • See tables |
| Isolation | • 3000 VAC Input to Output (CU10/15) 4000 VAC Input to Output (CU15-M) |
| Switching Frequency | • 100 kHz typical for 10 W models 67 kHz typical for 15 W models |
| Power Density | • 2.43 W/in ³ (CU10); 3.17 W/in ³ (CU15) |
| MTBF | • >500 kHrs per MIL-HDBK-217F (15 & 24 V units >400 kHrs) |

Environmental

| | |
|-----------------------|--|
| Operating Temperature | • CU10/15: 0 °C to +65 °C, derate from full load at +45 °C to no load at +65 °C CU15-M: 0 °C to +70 °C, derate from full load at +50 °C to 50% load at +70 °C |
| Cooling | • Convection-cooled |
| Operating Humidity | • 95% RH, non-condensing |
| Storage Temperature | • -20 °C to +85 °C |
| Operating Altitude | • 3000 m |
| Vibration | • 10 Hz to 500 Hz, 2 g for 10 mins/cycle 60 min each cycle |

EMC & Safety

| | |
|----------------------|---|
| Emissions | • CU15-M: EN55011 Level B conducted Others: FCC20780 Level B, EN55032 Class B conducted |
| ESD Immunity | • EN61000-4-2, level 3, Perf Criteria A |
| Radiated Immunity | • EN61000-4-3, level 3, Perf Criteria A |
| EFT/Burst | • EN61000-4-4, level 2, Perf Criteria A |
| Surge | • EN61000-4-5, level 3, Perf Criteria A |
| Conducted Immunity | • EN61000-4-6, 10 V, Perf Criteria A |
| Dips & interruptions | • EN61000-4-11, 30% 10 ms, 60% 1000 ms, 100% 5000 ms, Perf Criteria A, B, B |
| Safety Approvals | • CU15-M: EN60601, UL2601-1, CSA22.2 No. 601.1 per cUL Others: EN62368-1, UL62368-1 |

Models and Ratings

| Output Power | Output Voltage ⁽³⁾ | Output Current | | Efficiency (typical) | Model Number |
|--------------|-------------------------------|----------------|---------------------|----------------------|--------------|
| | | Nominal | Peak ⁽²⁾ | | |
| 8.25 W | 3.3 VDC | 2.50 A | 3.80 A | 65% | CU10-00 |
| 10 W | 5.0 VDC | 2.00 A | 2.80 A | 70% | CU10-10 |
| | 9.0 VDC | 1.12 A | 1.50 A | 72% | CU10-09 |
| | 12.0 VDC | 0.84 A | 1.20 A | 75% | CU10-12 |
| | 15.0 VDC | 0.67 A | 1.00 A | 75% | CU10-13 |
| | 24.0 VDC | 0.42 A | 0.65 A | 78% | CU10-14 |

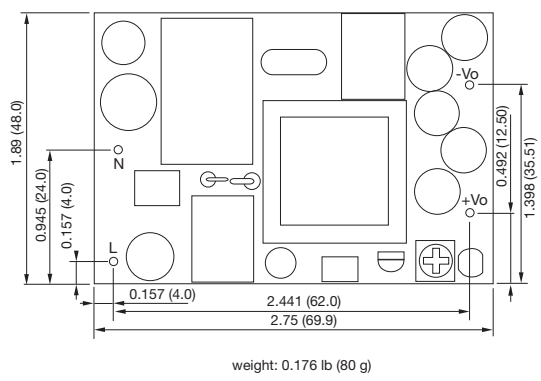
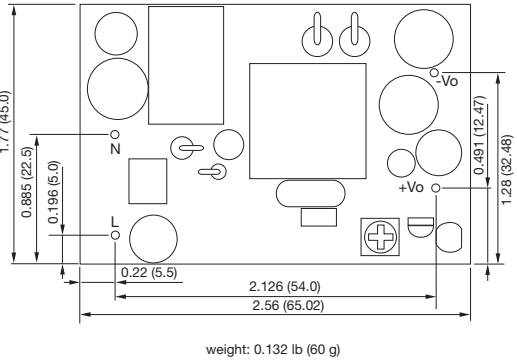
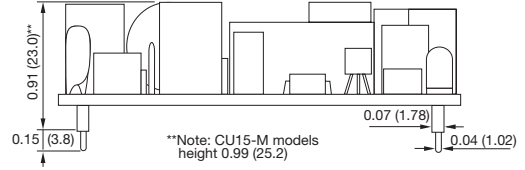
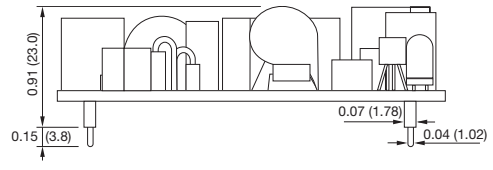
| Output Power | Output Voltage ⁽³⁾ | Output Current | | Efficiency (typical) | Model Number ⁽⁴⁾ |
|--------------|-------------------------------|----------------|---------------------|----------------------|-----------------------------|
| | | Nominal | Peak ⁽²⁾ | | |
| 10 W | 3.3 VDC | 3.00 A | 4.50 A | 70% | CU15-00 |
| 15 W | 5.0 VDC | 3.00 A | 4.50 A | 73% | CU15-10 |
| | 9.0 VDC | 1.67 A | 3.00 A | 75% | CU15-09 |
| | 12.0 VDC | 1.25 A | 1.80 A | 80% | CU15-12 |
| | 15.0 VDC | 1.00 A | 1.50 A | 80% | CU15-13 |
| | 24.0 VDC | 0.63 A | 0.95 A | 82% | CU15-14 |

- Notes**
1. Measured at 20 MHz bandwidth. 3.3 V models are 50 mV maximum.
 2. Peak load lasting <30 s with a maximum duty cycle of 10%.
 3. Alternative output voltages available. Consult sales.
 4. Medical approved 15 W version available. Add suffix '-M' to part number.

Mechanical Details

CU10 models

CU15/CU15-M models



- Notes**
1. All dimensions shown in inches (mm).
 2. For mating connectors only, order part number CU20-60 CONKIT