

1500W Medical and Industrial Power Supplies



The CUS1500M are 1500W rated AC-DC power supplies with output voltages from 12V to 48V. They are certified to IEC60601-1 3rd edition (medical) and IEC62368-1 with compliance to the EN60601-1-2:2015 Edition 4 immunity requirements. The series is also certified to EN62477-1 (OVC III). These 7-year warranty products feature low acoustic noise (<45dBA) and meet both class B radiated and conduction EMI standards. Features include an isolated 5V 1A standby voltage, remote on/off and an output-low/fan-fail isolated signal. Up to five units can be connected in parallel for additional power.

| Features | Benefits |
|--|---|
| • Low Audible Noise Fan (<45dBA) | • Quiet Operation |
| • Medical Certification (2 x MoPP) | • Suitable for B and BF Rated Equipment |
| • Class B Conducted and Radiated EMI | • Easier System Compliance |
| • Compact 127 x 63 x 261mm (5 x 2.48 x 10.28") Package | • Space Saving in End Equipment |
| • Seven Year Warranty | • Low Cost of Ownership |

| Model Selector | | | | | | | | |
|----------------|--------------------|----------------------|---------------------|-------------------|---------------|---------------|---------------------|-----------------------------|
| Model | Output Voltage (V) | Adjustment Range (V) | Maximum Current (A) | Maximum Power (W) | Load Reg (mV) | Line Reg (mV) | Ripple & Noise (mV) | Efficiency (%) (115/230Vac) |
| CUS1500M-12 | 12 | 10.2 - 14.4 | 125 | 1500 | 96 | 48 | 150 | 82 / 85 |
| CUS1500M-15 | 15 | 12.8 - 18 | 100 | 1500 | 120 | 60 | 150 | 82 / 85 |
| CUS1500M-24 | 24 | 20.4 - 28.8 | 63 | 1512 | 144 | 96 | 180 | 85 / 88 |
| CUS1500M-36 | 36 | 30.6 - 43.2 | 42 | 1512 | 216 | 144 | 250 | 85 / 88 |
| CUS1500M-48 | 48 | 40.8 - 52.8 | 32 | 1536 | 288 | 192 | 300 | 85 / 88 |

| CUS1500M- | 12 | / | RF |
|-----------|-----------------------------------|---|---|
| | Output voltage 12, 15, 24, 36, 48 | | blank Dual fuses, air enters over input/output terminals /CO Pcb coating /SF Single input fuse (Line) /RF Reverse fan, air exits over input/output terminals |

Option combinations are available, please contact your local sales office

| Specifications | | |
|---|-----------|---|
| Model | | CUS1500M |
| Input | | |
| Input Voltage range | Vac / Vdc | 85 - 265Vac, 120 - 340Vdc (1) |
| Input Frequency | Hz | 47 - 63 |
| Input Current (110/230VAC) | A | 16 / 8 |
| Inrush Current at 100/200VAC (Cold Start) | A | 60 |
| Leakage Current | uA | <300 |
| Power Factor (10/200VAC) | - | 0.98 / 0.95 |
| Harmonic Compliance | - | Meets IEC61000-3-2 |
| Hold Up Time | ms | 20 typical |
| Efficiency | - | See model selector |
| Conducted & Radiated EMI | - | EN55011 / EN55032-B, FCC Class B, VCCI-B |
| Immunity | - | See immunity section |
| Insulation Class | - | Class I |
| Safety Certifications and Markings | - | IEC/ES/CSA/EN60601-1, IEC/UL/CSA/EN62368-1, 60950-1, EN62477-1 (OVC III), CE Mark and UKCA Mark |

| Immunity | | | | |
|--------------------------------------|-------------------|-----------------------|---|----------------------------|
| Test | Standard | Test Level | Criteria | Notes |
| ESD | EN61000-4-2 | 3 | B | - |
| Radiated Susceptibility | EN61000-4-3 | 3 | A | - |
| Electrical Fast Transient Burst | EN61000-4-4 | 3 | B | - |
| Surge | EN61000-4-5 | 3 (4) | B | Level 4 common mode only |
| Conducted Susceptibility | EN61000-4-6 | 3 | A | - |
| Magnetic fields | EN61000-4-8 | 4 | A | - |
| ESD | IEC60601-1-2 Ed.4 | 4 | A | - |
| Radiated Susceptibility | | 3 | A | - |
| Electrical Fast Transient Burst | | 3 | A | - |
| Voltage Dips and Input Interruptions | EN61000-4-11 | 0% for 1 cycle | A | - |
| | | 40% for 10/12 cycles | B | - |
| | | 70% for 25/30 cycles | B | - |
| | | 0% for 250/300 cycles | B | - |
| | IEC60601-1-2 Ed.4 | 0% for 1/2 cycle | A | - |
| | | 0% for 1 cycle | A | - |
| 70% for 25/30 cycles | | B | Customer to consider essential performance of end equipment | |
| | | 0% for 250/300 cycles | B | - |
| SEMI F47 Line Dip | SEMI F47 | - | - | At input voltages > 200Vac |

| Specifications | | |
|--|--------|--|
| Model | | CUS1500M |
| Output | | |
| Switching Frequency (Converter) | kHz | 83 |
| Line Regulation | mV | See model selector |
| Load Regulation | mV | See model selector |
| External Load Capacitance | uF | 100,000 maximum |
| Ripple & Noise | mV | See model selector |
| Temperature Coefficient | %/°C | <0.02 |
| Minimum Load | - | No minimum load required |
| Overcurrent Protection | % | >105, constant current style. After 5 seconds the unit will shutdown |
| Overvoltage Protection | % | 125 - 150 (115 - 125 for 48V model), cycle AC line to reset |
| Overtemperature Protection | - | Yes, cycle the AC to reset |
| Remote Sense | - | Yes |
| Remote On/Off | - | Apply external or Standby voltage to enable output voltage |
| DC Good / Fan Alarm | - | Isolated open collector signal, high on fail |
| Standby Voltage | - | 5V 1A isolated (always on) |
| Indicators | - | Green LED indicates DC is OK |
| Parallel Operation | - | Up to five units, see installation manual |
| Environmental | | |
| Operating Temperature (-25°C start-up) | °C | -20 to +60, derate linearly to 60% load from 50 to 60 Reverse air (RF): -20 to +70, derate linearly to 50% load from 50 to 70 |
| Storage Temperature | °C | -30 to +75 |
| Humidity (non condensing) | %RH | Operating: 20 - 90, Storage: 10 - 90 |
| Cooling | - | Internal variable speed fan <45dBA noise |
| Altitude | m | 5,000 |
| Withstand Voltage (For 1 minute) | Vac | Input to Ground 2,000 (1xMoPP), Input to Output 4,000 (2xMoPP), Output to Ground 1,500 (1xMoPP) for 1 min. |
| Isolation Resistance | MΩ | >100 at 25°C, 70%RH & 500VDC |
| Vibration (Non-operating) | - | 10 - 55Hz: 19.6m/s ² (sweep 1 min) X, Y, Z for 1 hour |
| Shock | - | < 196.1 m/s ² |
| Other | | |
| Weight (Typ) | g | 3,000 |
| Size (LxWxH) | mm | 261 x 127 x 63 |
| Size (LxWxH) | Inches | 10.28 x 5 x 2.48 |
| Connectors | - | Screw terminal input and output. Signal connectors JST S10B-PHDSS |
| MTBF - Telcordia SR-332 issue 3* | Hours | 769,670 |
| Warranty | yrs | 7 |

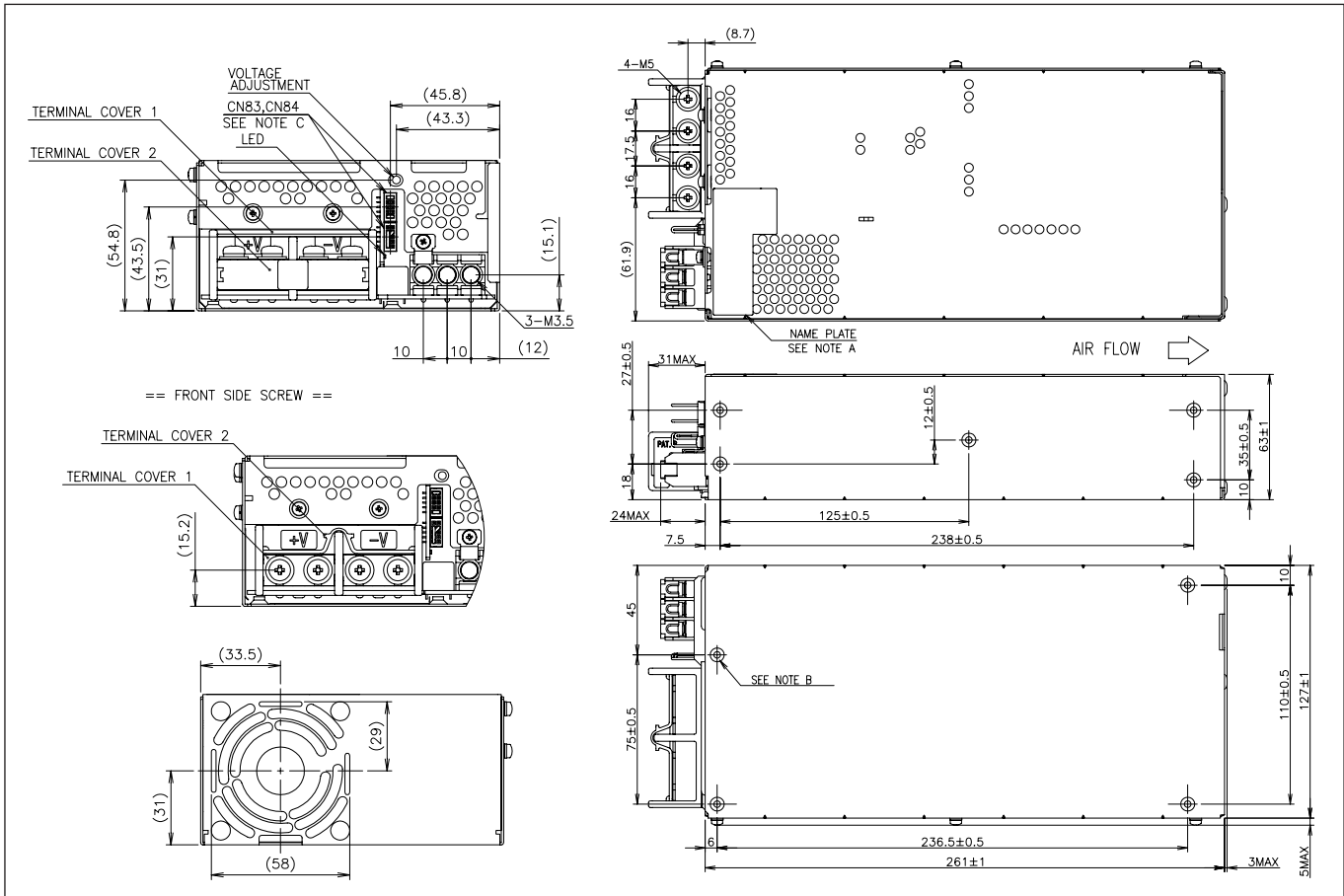
Notes

See website for detailed specifications, test methods and installation manual

(1) Derate linearly to 80% load from 90 to 85Vac input. Safety certified for AC input only

*24V output model, 25°C ambient, full load, 230Vac input

Outline Drawing (/RF version has airflow direction reversed)



To view the complete outline drawing please visit https://product.tdk.com/info/en/documents/2doutline_pdf/cus1500m_out.pdf



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