

1000W to 1500W Single Output Medical Power Supplies

<https://product.tdk.com/en/power/rws-b>
www.emea.lambda.tdk.com/rws-b



Medical



The RWS1000/1500-B/ME are 1000W and 1500W rated AC-DC medical power supplies, designed to provide solid performance at an economical price. The series accepts a wide range 85 to 265Vac input with output voltages from 12V to 48V. These 7-year warranty⁽¹⁾ products are certified to the IEC60601-1 safety and IEC60601-1-2 Ed.4 immunity standards. The output to ground isolation (1x MOPP) is 1,500Vac, making the power supplies suitable for B and BF rated equipment.

| Features | Benefits |
|--|---------------------------------------|
| • Seven Year Warranty ⁽¹⁾ | • Low Cost of Ownership |
| • Conservative Electrolytic Capacitor Ratings | • Long Service Life |
| • Class A Conducted and Radiated EMI | • Easier System EMC Compliance |
| • Configurable Output Screw Terminal Block Orientation | • Simplified Cable Connections |
| • Medical Certifications (2 x MOPP) | • Suitable for B & BF Rated Equipment |

| Model Selector | | | | | | | | |
|----------------|-------------|----------------------|-----------------|----------------------|---------------|---------------|---------------------|--------------------------------|
| Model | Voltage (V) | Adjustable Range (V) | Max Current (A) | Max Output Power (W) | Load Reg (mV) | Line Reg (mV) | Ripple & Noise (mV) | Efficiency (typ) % 115/230 Vac |
| RWS1000B-12/ME | 12V | 10.2-13.8V | 84 | 1008 | 96 | 48 | 150 | 82 / 85 |
| RWS1500B-12/ME | 12V | 10.2-14.4V | 125 | 1500 | 96 | 48 | 150 | 81 / 85 |
| RWS1000B-15/ME | 15V | 12.8-17.2V | 67 | 1005 | 120 | 60 | 150 | 82 / 85 |
| RWS1500B-15/ME | 15V | 12.8-18.0V | 100 | 1500 | 120 | 60 | 150 | 82 / 85 |
| RWS1000B-24/ME | 24V | 20.4-28.8V | 42 | 1008 | 144 | 96 | 180 | 85 / 88 |
| RWS1500B-24/ME | 24V | 20.4-28.8V | 63 | 1512 | 144 | 96 | 180 | 85 / 88 |
| RWS1000B-36/ME | 36V | 30.6-41.4V | 28 | 1008 | 216 | 144 | 250 | 85 / 88 |
| RWS1500B-36/ME | 36V | 30.6-43.2V | 42 | 1512 | 216 | 144 | 250 | 85 / 88 |
| RWS1000B-48/ME | 48V | 40.8-52.8V | 21 | 1008 | 288 | 192 | 300 | 85 / 88 |
| RWS1500B-48/ME | 48V | 40.8-52.8V | 32 | 1536 | 288 | 192 | 300 | 85 / 88 |

| | | | |
|------------------|-----------------------------------|----------|-----------|
| RWS1000B- | 12 | / | ME |
| | Output voltage 12, 15, 24, 36, 48 | | Medical |

Option combinations are available, please contact your local sales office.

| Specifications | | |
|---|-----|---|
| Model | | RWS1000/1500-B/ME |
| Input | | |
| AC Input Voltage Range (Operating) | Vac | 85 - 265 ⁽²⁾ |
| Nominal Input Voltage Range | Vac | 100 - 240 (Note: Safety certified for 90 - 264Vac only) |
| DC Input Voltage Range | Vdc | 120 - 340 (Note: Safety certified for AC input only) |
| AC Input Frequency | Hz | 47 - 63 |
| Input Current (110/230Vac) | A | RWS1000B: 13 / 7, RWS1500B: 19 / 10 |
| Inrush Current at 100/200Vac (Cold Start) | A | 60 / 60 |
| Leakage Current | mA | < 1.2 |
| Power Factor (100/200Vac) | - | 0.98 / 0.95 |
| Harmonic Compliance | - | Meets IEC61000-3-2 |
| Hold Up Time | ms | 20 |
| Efficiency | - | See model selector table |
| Conducted & Radiated EMI | - | EN55011/EN55032-A, FCC Class A, VCCI-A |
| Immunity | - | See immunity table |
| Safety Certifications and Markings | - | IEC/ES/CSA/EN60601-1, CE Mark and UKCA Mark |

| Immunity | | | | |
|---------------------------------|---------------------|--|----------|---|
| Test | Standard | Test Level | Criteria | Notes: See IEC61000 immunity test report on website for further details |
| ESD | EN61000-4-2 | Air ± 8kV and contact ± 4kV | B | |
| Radiated Susceptibility | EN61000-4-3 | 80M -1GHz: 10V/m 1.4 - 2.0GHz: 3V/m 2.0 - 2.7GHz: 1V/m | A | |
| Electrical Fast Transient Burst | EN61000-4-4 | ± 2kV | B | |
| Surge | EN61000-4-5 | Normal ± 2kV Common ± 4kV | B | |
| Conducted Susceptibility | EN61000-4-6 | 10Vrms | A | |
| Magnetic Fields | EN61000-4-8 | 30A/m | A | |
| Voltage Dips | EN61000-4-11 | 30% 500ms | B | |
| | | 60% 10ms | B | |
| | | 100% 20ms | A | |
| | | 100% 5000ms | B | |
| Voltage Dips | EN60601-1-2 Ed.4 | 30% 500ms | B | |
| | | 100% 10ms | A | |
| | | 100% 20ms | A | |
| SEMI F47 Line Dip | SEMI F47 | 100% 5000ms | B | At input voltages > 200Vac |

| Specifications | | |
|----------------------------|------|--|
| Model | | RWS1000/1500-B/ME |
| Output | | |
| Switching Frequency | kHz | RWS1000B; 95, RWS1500B; 85, PFC converter 65 |
| Line Regulation | - | See model selector table |
| Load Regulation | - | See model selector table |
| External Load Capacitance | uF | 100,000 |
| Ripple & Noise | mV | See model selector table |
| Temperature Coefficient | %/°C | 0.02 |
| Minimum Load | - | No minimum load required |
| Overcurrent Protection | % | ≥105. Constant current mode with automatic recovery. A prolonged overload of more than 5s will cause unit to shutdown |
| Overvoltage Protection | - | Latching (unit shutdown), cycle AC input to reset |
| Overtemperature Protection | - | Latching (unit shutdown), cycle AC input to reset |
| Remote Sense | - | Yes |
| Remote On/Off | - | Contact sales. ON when the external voltage is applied, OFF when open |
| DC Good / Fan Alarm | - | Contact sales for availability |
| Standby Voltage | - | Contact sales for availability |
| Indicators | - | Green LED indicates DC is OK |
| Parallel Operation | - | Contact sales for availability |

| Specifications | | |
|----------------------------------|--------|--|
| Model | | RWS1000/1500-B/ME |
| Environmental | | |
| Operating Temperature | °C | -20 to +60, derate linearly to 60% load from 50 to 60 |
| Storage Temperature | °C | -30 to +75 |
| Humidity (non condensing) | %RH | Operating: 20 - 90, Storage: 10 - 90 |
| Cooling | - | Forced air. Optional reverse fan direction |
| Altitude | m | 4000 |
| Withstand Voltage (For 1 minute) | Vac | Input to ground 2,000 (1xMOPPs), Input to output 4,000 (2xMOPPs), Output to ground 1,500 (1xMOPP) for 1 minute |
| Vibration (Non operating) | - | 10-55Hz (Sweep for 1min.) 19.6m/s ² Constant X,Y,Z 1 hour each |
| Shock (Non operating) | - | Less than 196m/s ² , 11ms, ±X, ±Y, ±Z 3 times each |
| Other | | |
| Weight (Typ) | g | RWS1000B: 2000, RWS1500B: 3000 |
| Size (WxHxD) | mm | RWS1000B; 127 x 63 x 198, RWS1500B; 127 x 63 x 261 |
| Size (WxHxD) | Inches | RWS1000B; 5 x 2.48 x 7.8, RWS1500B; 5 x 2.48 x 10.28 |
| Connectors | - | Screw terminal input and output. Signal connectors JST S12B-PHDSS |
| MTBF - Telcordia SR-332 issue 3* | Hours | 1,222,361 |
| Warranty | yrs | 7 ⁽¹⁾ |

Notes

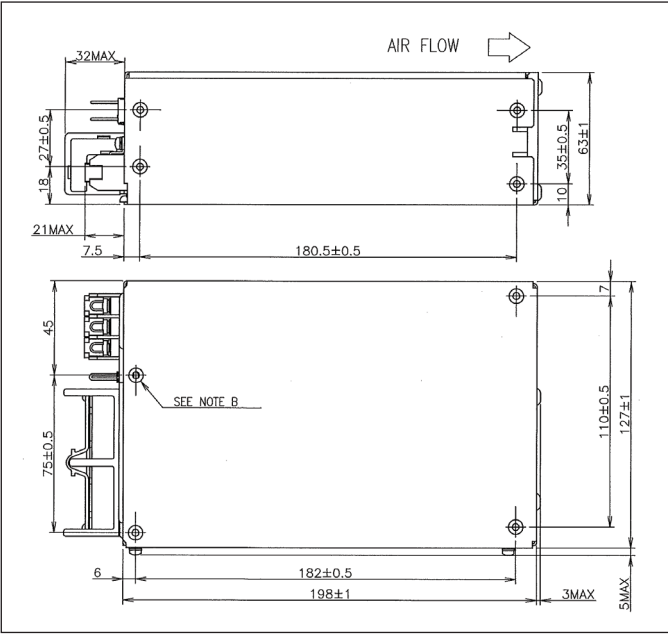
See website for detailed specifications, test methods and installation manual

(1) The Americas and EMEA regions: 7 years. Other regions: 5 years. See applicable regional terms of sale.

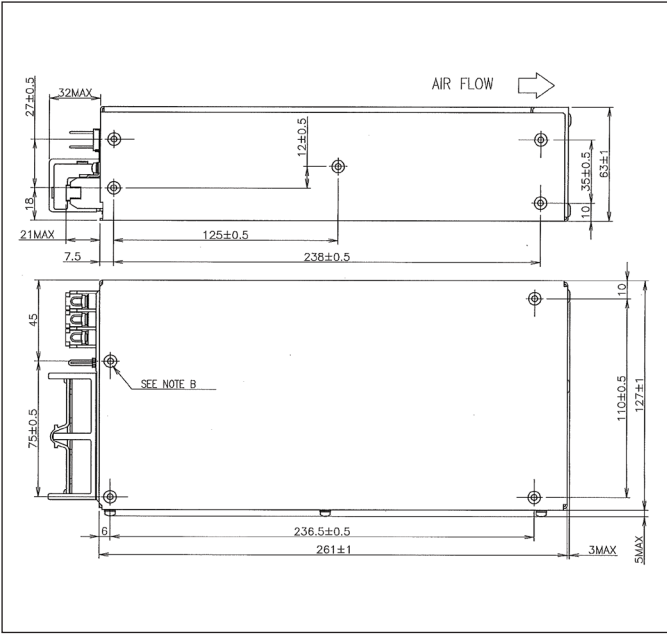
(2) Derate linearly to 80% load from 90 to 85Vac input

*RWS1500B-24 model, 25°C ambient, full load, 24Vdc input

Outline Drawing RWS1000B/ME



Outline Drawing RWS1500B/ME





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