# WLT150 Series

### 150 Watt 2 x 4 Inch AC/DC Power Supplies

The W-Series of Open Frame Power Supplies are ideal for Industrial, data networking, telecommunications, process controls, automation products, multimedia and point of sale



|                 | 5  | Voltage/Current Voltage/Current |              |  |
|-----------------|--|---------------------------------|--------------|--|
| Model Number    | Description                                      | (Convection)                    | (Fan Cooled) |  |
| LFWLT150-1000   | Class 1 with Screw Terminal                      | 5V @ 16A                        | 5V @ 20A     |  |
| LFWLT150-1000-2 | Class 2 with Screw Terminal                      | 5V @ 16A                        | 5V @ 20A     |  |
| LFWLT150-1300   | Class 1 with JST Connector                       | 5V @ 16A                        | 5V @ 16A     |  |
| LFWLT150-1300-2 | Class 2 with JST Connector                       | 5V @ 16A                        | 5V @ 16A     |  |
| LFWLT150-1001   | Class 1 with Screw Terminal                      | - 77                            | 77/          |  |
| LFWLT150-1001-2 | Class 2 with Screw Terminal                      | 40)/ 6 0 004                    | 101/ 0 10 51 |  |
| LFWLT150-1301   | Class 1 with JST Connector                       | 12V @ 8.33A                     | 12V @ 12.5A  |  |
| LFWLT150-1301-2 | Class 2 with JST Connector                       |                                 |              |  |
| LFWLT150-1002   | Class 1 with Screw Terminal                      |                                 | 15V @ 10A    |  |
| LFWLT150-1002-2 | Class 2 with Screw Terminal                      | 45)/ 6 6 674                    |              |  |
| LFWLT150-1302   | Class 1 with JST Connector                       | 15V @ 6.67A                     |              |  |
| LFWLT150-1302-2 | Class 2 with JST Connector                       |                                 |              |  |
| LFWLT150-1003   | Class 1 with Screw Terminal                      |                                 |              |  |
| LFWLT150-1003-2 | Class 2 with Screw Terminal                      | 0.01.0.1.74                     | 20/ 20 254   |  |
| LFWLT150-1303   | T150-1303 Class 1 with JST Connector 24V @ 4.17A |                                 | 24V @ 6.25A  |  |
| LFWLT150-1303-2 | Class 2 with JST Connector                       | 4 /                             | A            |  |
| LFWLT150-1004   | Class 1 with Screw Terminal                      |                                 | 48V @ 3.13A  |  |
| LFWLT150-1004-2 | Class 2 with Screw Terminal                      | 401/ 6 0 004                    |              |  |
| LFWLT150-1304   | Class 1 with JST Connector                       | 48V @ 2.08A                     |              |  |
| LFWLT150-1304-2 | Class 2 with JST Connector                       |                                 |              |  |
| WLT100-CK N     | letal cover-kit accessory                        |                                 |              |  |

| EMC AND SAFETY SPECIFICATIONS |  |  |  |
|-------------------------------|--|--|--|
| CE Mark                       | Complies with the LVD                                    |  |  |
| EMC                           | EN5022-B,CISPR22-B,<br>FCC Part 15 Class B,<br>EN50082-1 |  |  |
| Agency Approval               | UL, c-UL, NEMKO, IEC                                     |  |  |
| Harmonic Correction           | EN61000-3-2 Class D                                      |  |  |
| Safety Standard               | UL / IEC/ EN60950  |  |  |
| Isolation                     | 4.2KVDC Input to Output<br>2.1KVDC Input to GND          |  |  |
| Insulation Resistance         | 7mOhms Input to Output                                   |  |  |



#### Features:

- > 150 W with Forced Air Cooling.
- > Small 2x4x1.324 inch form factor.
- > High efficiency > 86%.
- > 12V Fan O/P
- > Low conducted and radiated noise.
- > 12V @ 0.5A Fan Voltage auxiliary output.
- > Class 1 & 2 products
- > Light weight
- Cover Kit accessory available.

| INPUT SPECIFICATION |                       |   |  |
|---------------------|-----------------------|---|--|
| AC Input            | Universal             | 90 to 264VAC  |  |
| DC Input            |                       | 120 to 390VDC<br>(Reduce to half load at<br>120VDC Input) |  |
| Efficiency          | All Models            | ≥86%  |  |
| Input Frequency     |                       | 47-63 Hz  |  |
| Input Current       | Full Load at Low line | 2.0Arms , max   |  |
| Inrush Current      | 230VAC,115VAC         | 65A, 33A Max  |  |

| OUTPUT SPECIFICATION     |  |                         |  |
|--------------------------|--|-------------------------|--|
| Output Power             |  | 150W max                |  |
| Leakage Current          |  | 3.5mA                   |  |
| Hold-Up Time             | 115V/230V  | 6ms./10ms               |  |
| Peak Power               |  | 170 Watts for 0.2 Sec's |  |
| Line Regulation          | Low line to high line                                  | ± 0.5%                  |  |
| Load Regulation          | Min to Max load  | ± 2%                    |  |
| Transient Response       | 50% to full load<br>Voltage Deviation<br>Recovery Time | 10%, max<br><5 ms       |  |
| OVP                      | Self Protecting  | Hiccup                  |  |
| Overload Protection      | Primary limited  | > 110%                  |  |
| Short Circuit Protection | Auto recovery <6s                                      | Short Term              |  |
| Ripple and Noise         | Up to 20% load<br>Above 20% load                       | 2%<br><1%               |  |
| Output Rise Time         | All outputs  | <100ms                  |  |

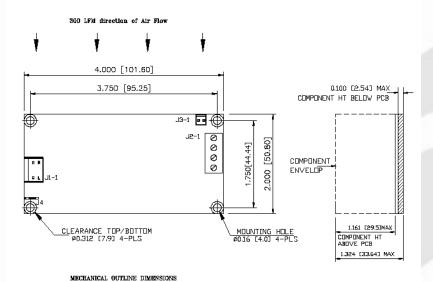
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# WLT150 Series

DIMENSIONS UNIT : INCH [M.M] GEN. TOLERANCE :+/-0.020 [0.50]

# 150 Watt Forced Air Cooled AC/DC Power Supplies



| ENVIRONMENTAL SPECIFICATION             |                                     |   |  |
|---|-------------------------------------|---|--|
| Operating Temperature                   | -20° to 0°C, start up<br>guaranteed | -20 to 50° C  |  |
|   | Reduce Linearly to 50% Load         | 51 To 70° C   |  |
| Storage Temperature                     |                                     | -40 to 85° C  |  |
| Cooling<br>5V model<br>All Other models | 80W / 100W<br>100W / 150W           | Convection / 300LFM Airflow   |  |
| Relative humidity                       | Non condensing                      | 95%, max  |  |
| MTBF                                    | Bell Core TR332                     | > 200,000 hrs   |  |
| Altitude                                |                                     | Operating: 10,000ft   |  |
|   |                                     | Non-Operating: 40,000ft   |  |
| Vibration                               | Operating & Non Operating           | 5-9Hz, 2G PK, 0.5 Oct./min, 2<br>cycles; 9-500Hz 0.5 Oct./min, 2<br>cycles. |  |
| Transients                              |                                     | EN61000-4-2, 4-3, 4-4, 4-5, 4-6,<br>4-11 Level 3                            |  |

#### Notes

- Combined output power from V1 & V Fan should not exceed the total output
- power rating
  Fan output voltage tolerance is +/- 20%
- Peak Fan output is 1A



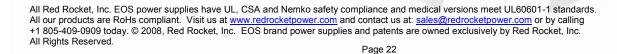
| MECHANIC                  | MECHANICAL SPECIFICATION  |  |  |
|---------------------------|---|--|--|
| AC Input Connector J1     | Molex 26-60-4030, 3 pin, 0.156"<br>Mating Connector: Molex 09-50-<br>3031<br>Pins: 08-50-0106<br>or Equivalent  |  |  |
| Ground Connector          | Molex 19705-4301 PCB Quick<br>Disconnect<br>Mating: Molex AA-1140   |  |  |
| DC Output connector J2    | Option-1:Tyco terminal block 1776112-4, 4 pin, Wire: 13 AWG, side entry  Option-2: JST: B4P-VH-B-C (LF) (SN), 4 pin, 0.156" Mating Connector: VHR-4M Pins: SXH-002T-P0.6, 22-18 AWG |  |  |
| Size                      | 4"x2"x1.324"  |  |  |
| DC Output Connector<br>J3 | Molex 2 Position, 0.100 centre<br>header.<br>Part Number 22-23-2021 or Equiva-<br>lent  |  |  |
| Weight                    | 5.3 Oz (150g)   |  |  |

| INPUT CONNECTOR J1 |            |  |
|--------------------|------------|--|
| Pin1               | AC Line    |  |
| Pin2               | AC Neutral |  |

| INPUT SPADE<br>(CLASS-1 pr |  |  |
|----------------------------|--|--|
| GND AC Ground              |  |  |

| OUTPUT CONNECTOR J3 |     |  |  |
|---------------------|-----|--|--|
| Pin1 V fan          |     |  |  |
| Pin2                | RTN |  |  |

| OUTPUT CONNECTOR J2 |     |  |
|---------------------|-----|--|
| Single Output       |     |  |
| Pin1                | V1  |  |
| Pin2                | V1  |  |
| Pin3                | RTN |  |
| Pin4                | RTN |  |





# **MWLT150 Series**

#### Medical 150 Watt 2 x 4 Inch AC/DC Power Supplies

The M-Series of Medical Open Frame Power Supplies are ideal for Dental & Laboratory products & systems. Endoscopes, Instruments, Pumps, Drips, Medical Monitors, Defibrillators, Sleep Apnea devices and many other uses.



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|---|----|-----|-----|----|
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- > 150 W with Forced Air Cooling.
- > Small 2x4x1.324 inch form factor.
- > High efficiency > 86%.
- > 12V Fan O/P
- > Low conducted and radiated noise.
- > Medical Approvals
- > 12V @ 0.5A Fan Voltage auxiliary output.
- > Class 1 & 2 products
- > Light weight
- > Cover Kit accessory avail

| Model Number                        | December 1 am               | Voltage/Current Voltage/Current |              |  |
|-------------------------------------|-----------------------------|---------------------------------|--------------|--|
| Model Number                        | Description                 | (Convection)                    | (Fan Cooled) |  |
| LFMWLT150-1000                      | Class 1 with Screw Terminal | 5V @ 16A                        | 5V @ 20A     |  |
| LFMWLT150-1000-2                    | Class 2 with Screw Terminal | 5V @ 16A                        | 5V @ 20A     |  |
| LFMWLT150-1300                      | Class 1 with JST Connector  | 5V @ 16A                        | 5V @ 16A     |  |
| LFMWLT150-1300-2                    | Class 2 with JST Connector  | 5V @ 16A                        | 5V @ 16A     |  |
| LFMWLT150-1001                      | Class 1 with Screw Terminal | - 7/ - 7                        | - 77         |  |
| LFMWLT150-1001-2                    | Class 2 with Screw Terminal | 121/ @ 0.224                    |              |  |
| LFMWLT150-1301                      | Class 1 with JST Connector  | 12V @ 8.33A                     | 12V @ 12.5A  |  |
| LFMWLT150-1301-2                    | Class 2 with JST Connector  |                                 |              |  |
| LFMWLT150-1002                      | Class 1 with Screw Terminal |                                 | 15V @ 10A    |  |
| LFMWLT150-1002-2                    | Class 2 with Screw Terminal | 45\/ @ 0.074                    |              |  |
| LFMWLT150-1302                      | Class 1 with JST Connector  | 15V @ 6.67A                     |              |  |
| LFMWLT150-1302-2                    | Class 2 with JST Connector  |                                 |              |  |
| LFMWLT150-1003                      | Class 1 with Screw Terminal |                                 | 24V @ 6.25A  |  |
| LFMWLT150-1003-2                    | Class 2 with Screw Terminal | 041/ @ 4.474                    |              |  |
| LFMWLT150-1303                      | Class 1 with JST Connector  | 24V @ 4.17A                     |              |  |
| LFMWLT150-1303-2                    | Class 2 with JST Connector  | 4                               | A            |  |
| LFMWLT150-1004                      | Class 1 with Screw Terminal |                                 | 48V @ 3.13A  |  |
| LFMWLT150-1004-2                    | Class 2 with Screw Terminal | 401/ 6 0 004                    |              |  |
| LFMWLT150-1304                      | Class 1 with JST Connector  | 48V @ 2.08A                     |              |  |
| LFMWLT150-1304-2                    | Class 2 with JST Connector  |                                 |              |  |
| WLT100-CK Metal cover-kit accessory |                             |                                 |              |  |

| EMC AND SAFETY SPECIFICATIONS |  |
|-------------------------------|--|
| CE Mark                       | Complies with the LVD                                    |
| EMC                           | EN5022-B,CISPR22-B,<br>FCC Part 15 Class B,<br>EN50082-1 |
| Agency Approval               | c-URUS, NEMKO, IEC                                       |
| Harmonic Correction           | EN61000-3-2 Class D                                      |
| Safety Standard               | EN60601-1-2  |
| Isolation                     | 5.9KVDC Input to Output<br>2.6KVDC Input to GND          |
| Insulation Resistance         | 7mOhms Input to Output                                   |

| INPUT SPECIFICATION      |                       |   |
|--------------------------|-----------------------|---|
| AC Input                 | Universal             | 90 to 264VAC  |
| DC Input                 |                       | 120 to 390VDC<br>(Reduce to half load at<br>120VDC Input) |
| Efficiency               | All Models            | ≥86%  |
| Input Frequency 47-63 Hz |                       | 47-63 Hz  |
| Input Current            | Full Load at Low line | 2.0Arms , max   |
| Inrush Current           | 230VAC, 115VAC        | 130A, 65A Max   |

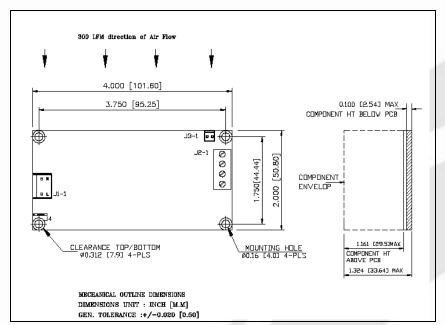
| OUTPUT SPECIFICATION     |  |                         |
|--------------------------|--|-------------------------|
| Output Power             |  | 150W max                |
| Leakage Current          | Normal condition                                       | 250uA                   |
| Hold-Up Time             | 115V/230V  | 6ms./10ms               |
| Peak Power               |  | 170 Watts for 0.2 Sec's |
| Line Regulation          | Low line to high line                                  | ± 0.5%                  |
| Load Regulation          | Min to Max load  | ± 2%                    |
| Transient Response       | 50% to full load<br>Voltage Deviation<br>Recovery Time | 10%, max<br><5 ms       |
| OVP                      | Self Protecting  | Hiccup                  |
| Overload Protection      | Primary limited  | > 110%                  |
| Short Circuit Protection | Auto recovery <6s                                      | Short Term              |
| Ripple and Noise         | Up to 20% load<br>Above 20% load                       | 2%<br><1%               |
| Output Rise Time         | All outputs  | <100ms                  |

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# **MWLT150 Series**

#### Medical 150 Watt 2 x 4 Inch AC/DC Power Supplies



| Molex 26-60-4030, 3 pin, 0.156" ating Connector: Molex 09-50-3031 Pins: 08-50-0106 or Equivalent  Molex 19705-4301 PCB Quick Disconnect Mating: Molex AA-1140  Option-1:Tyco terminal block 1776112-4, 4 pin, Wire: 13 AWG, side entry |
|--|
| connect Mating: Molex AA-1140  Option-1:Tyco terminal block 1776112-4, 4 pin, Wire: 13 AWG, side entry   |
| 1776112-4,<br>4 pin, Wire : 13 AWG, side entry   |
| Option-2: JST: B4P-VH-B-C (LF)<br>(SN),<br>4 pin, 0.156"<br>Mating Connector: VHR-4M<br>ins: SXH-002T-P0.6, 22-18 AWG  |
| 4"x2"x1.324"   |
| Molex 2 Position, 0.100 centre<br>header.<br>art Number 22-23-2021 or Equiva-<br>lent  |
| 5.3 Oz (150g)  |
|  |

**MECHANICAL SPECIFICATION** 

| ENVIRONMENTAL SPECIFICATION             |                                     |   |
|---|-------------------------------------|---|
| Operating Temperature                   | -20° to 0°C, start up<br>guaranteed | -20 to 50° C  |
|   | Reduce Linearly to 50% Load         | 51 To 70° C   |
| Storage Temperature                     |                                     | -40 to 85° C  |
| Cooling<br>5V model<br>All Other models | 80W / 100W<br>100W / 150W           | Convection / 300LFM Airflow   |
| Relative humidity                       | Non condensing                      | 95%, max  |
| MTBF                                    | Bell Core TR332                     | > 200,000 hrs   |
| Altitude                                |                                     | Operating: 10,000ft   |
|   |                                     | Non-Operating: 40,000ft   |
| Vibration                               | Operating & Non Operating           | 5-9Hz, 2G PK, 0.5 Oct./min, 2<br>cycles; 9-500Hz 0.5 Oct./min, 2<br>cycles. |
| Transients                              |                                     | EN61000-4-2, 4-3, 4-4, 4-5, 4-6,<br>4-11 Level 3                            |

| INPUT CONNECTOR J1 |            |
|--------------------|------------|
| Pin1               | AC Line    |
| Pin2               | AC Neutral |

| INPUT SPADE CONNECTOR<br>(CLASS-1 product only) |           |
|---|-----------|
| GND   | AC Ground |

| OUTPUT CONNECTOR J3 |       |
|---------------------|-------|
| Pin1                | V fan |
| Pin2                | RTN   |

| OUTPUT CONNECTOR J2 |               |
|---------------------|---------------|
|                     | Single Output |
| Pin1                | V1            |
| Pin2                | V1            |
| Pin3                | RTN           |
| Pin4                | RTN           |

#### Notes

- Combined output power from V1 & V Fan should not exceed the total output power rating
- 2. Fan output voltage tolerance is +/- 20%
- 3. Peak Fan output is 1A

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