

Wall Industries, Inc.

LTW SERIES

4:1 Ultra Wide Input Voltage Ranges
Triple Outputs
2.0 x 2.0 x 0.52 Inch Package
15W DC/DC Power Converters



FEATURES

- Triple Outputs
- RoHS Compliant
- 4:1 Ultra Wide Input Voltage Ranges
- 15 Watts Output Power
- Efficiency up to 80%
- 100% Burn-in Tested
- Short Circuit Protection
- Remote ON/OFF Control
- Six-Sided Shielding
- 2.0 x 2.0 x 0.52 Inch Package
- 1500VDC I/O Isolation
- Wide Operating Temperature Range: -40°C to +85°C
- MTBF > 1,500,000 Hours
- UL 94V-0 Package Material
- UL60950-1 Approvals
- Custom Solutions Available

APPLICATIONS

- Wireless Networks
- Telecom / Datacom
- Measurement Equipment
- Industry Control Systems
- Semiconductor Equipment

DESCRIPTION

The LTW series of DC/DC power converters provides 15 Watts of continuous output power in a 2.0" x 2.0" x 0.52" package. This series has triple output models with 4:1 ultra wide input voltage ranges of 9-36VDC and 20-72VDC. Some features include 1500VDC I/O isolation, remote ON/OFF control, six-sided shielding, efficiency up to 80%, and short circuit protection. This series is RoHS compliant and has UL 60950-1 safety approvals. These units are well suited for use in wireless networks, telecom/datacom applications, measurement equipment, industry control systems, and semiconductor equipment. All models are 100% burn-in tested.

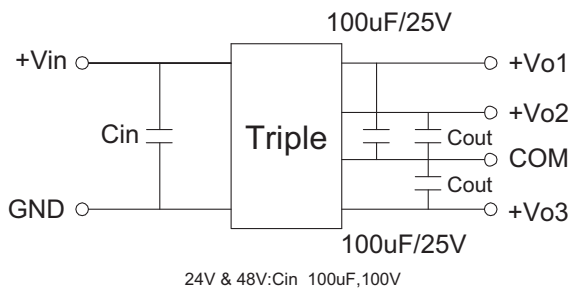
| SPECIFICATIONS: LTW Series | | | | | |
|---|---------------------------------------|--|-----|------|-------|
| All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances. | | | | | |
| SPECIFICATION | TEST CONDITIONS | Min | Nom | Max | Unit |
| INPUT SPECIFICATIONS | | | | | |
| Input Voltage Range | 24VDC nominal input models | 9 | 24 | 36 | VDC |
| | 48VDC nominal input models | 20 | 48 | 72 | |
| Input Filter | | capacitor | | | |
| Remote ON/OFF | | yes | | | |
| OUTPUT SPECIFICATIONS | | | | | |
| Output Voltage | | See Table | | | |
| Voltage Accuracy | 5VDC output, I _o =1.5A | | | ±5 | % |
| | ±12VDC outputs, I _o =0.31A | | | ±2 | |
| | ±15VDC outputs, I _o =0.25A | | | ±2 | |
| Load Regulation | 25% to 100% full load | | | ±0.2 | % |
| Line Regulation | low line to high line at full load | | | ±1.0 | % |
| Output Power | | 0 | | 15 | W |
| Output Current | | See Table | | | |
| Ripple & Noise | 20MHz Bandwidth | | | 100 | mVp-p |
| Transient Response Time | 50% load step change | | 350 | | µs |
| PROTECTION | | | | | |
| Short Circuit Protection | | Continuous, automatic recovery | | | |
| GENERAL SPECIFICATIONS | | | | | |
| Efficiency | | | 80 | | % |
| Switching Frequency | | | 100 | | KHz |
| Isolation Voltage (input to output) | (2sec/0.5mA) | 1500 | | | VDC |
| Isolation Resistance (input to output) | 500VDC | 1000 | | | MΩ |
| ENVIRONMENTAL SPECIFICATIONS | | | | | |
| Operating Temperature | With derating (see derating curve) | -40 | | +85 | °C |
| Storage Temperature | | -40 | | +100 | °C |
| Humidity (non-condensing) | | | | 95 | % |
| Cooling | | Free air convection | | | |
| MTBF | MIL-HDBK-217F at 25°C, ground benign | 1,500,000 hours | | | |
| PHYSICAL SPECIFICATIONS | | | | | |
| Case Material | | black coated copper with non-conductive base | | | |
| Potting Material | | Epoxy (UL94V-0 rated) | | | |
| Shielding | | Six-sided | | | |
| Weight | | 2.51oz (71.2g) | | | |
| Dimensions (L x W x H) | | 2.0 x 2.0 x 0.52 inches (50.8 x 50.8 x 13.2 mm) | | | |
| SAFETY & EMI | | | | | |
| Conducted Emissions | | EN55022 Class A | | | |
| Radiated Emissions | | EN55022 Class A | | | |
| Safety Approvals | | UL 60950-1 | | | |

MODEL SELECTION TABLE

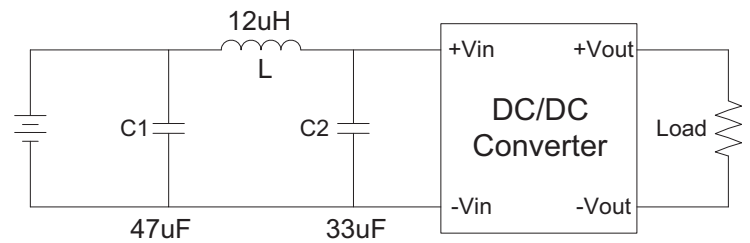
| Model Number | | Input Voltage Range | Output Voltage | Output Current | Output Power |
|--------------|-----------------|-------------------------|----------------|----------------|--------------|
| LTW2412-15EI | V _{O1} | 24 VDC (9 – 36 VDC) | 5 VDC | 1.5A | 15W |
| | V _{O2} | | +12 VDC | 0.31A | |
| | V _{O3} | | -12 VDC | 0.31A | |
| LTW2415-15EI | V _{O1} | 24 VDC (9 – 36 VDC) | 5 VDC | 1.5A | 15W |
| | V _{O2} | | +15 VDC | 0.25A | |
| | V _{O3} | | -15VDC | 0.25A | |
| LTW4812-15EI | V _{O1} | 48 VDC (20 – 72 VDC) | 5 VDC | 1.5A | 15W |
| | V _{O2} | | +12 VDC | 0.31A | |
| | V _{O3} | | -12 VDC | 0.31A | |
| LTW4815-15EI | V _{O1} | 48 VDC (20 – 72 VDC) | 5 VDC | 1.5A | 15W |
| | V _{O2} | | +15 VDC | 0.25A | |
| | V _{O3} | | -15VDC | 0.25A | |

APPLICATIONS

Test Circuit

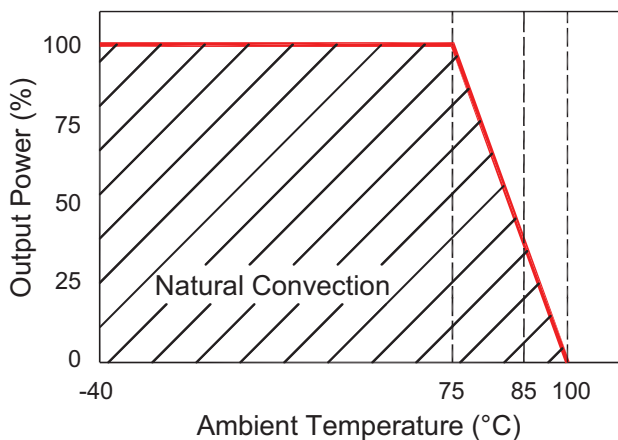


Recommended Filter for EN55022 Class A Compliance

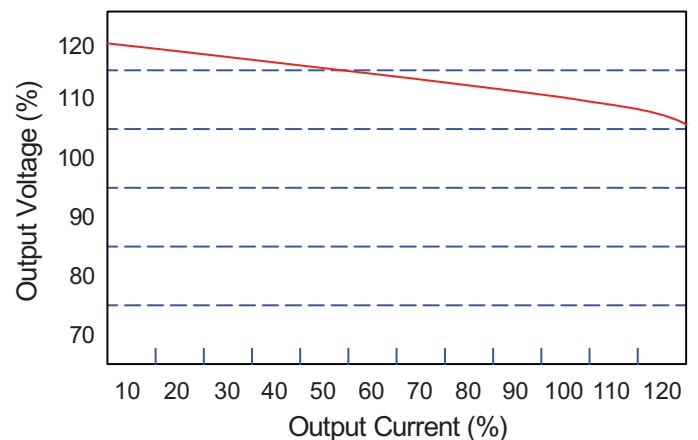


GRAPHS

Derating Curve

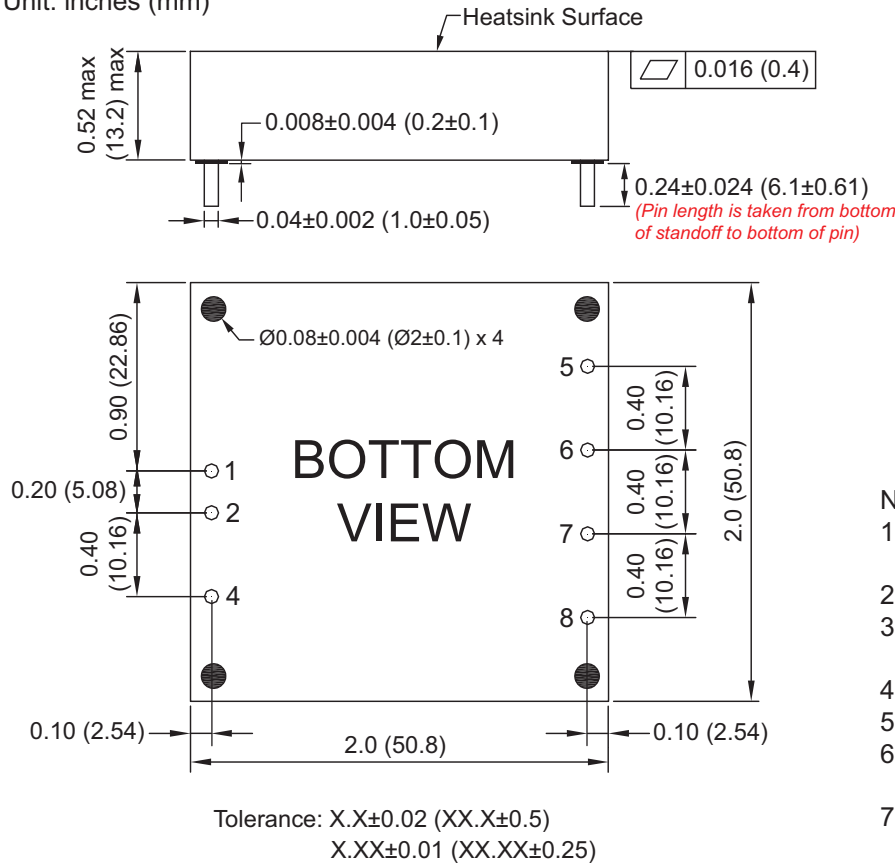


Tolerance



MECHANICAL DRAWING

Unit: inches (mm)



| PIN CONNECTIONS | |
|-----------------|-----------------|
| Pin | Triple |
| 1 | +Vin |
| 2 | -Vin |
| 4 | Control |
| 5 | Vo ₂ |
| 6 | Vo ₁ |
| 7 | COM |
| 8 | Vo ₃ |

NOTES

1. All case and pin to case are for reference only unless otherwise noted.
2. P.C. pins: 0.04 (1.0) dia x 0.26 (6.60) long.
3. Pin to Pin Tolerance: ±0.01 (0.25)
 Pin Diameter Tolerance: ±0.002 (0.05)
4. 10% minimum load required.
5. Remote pin can be left floating if not used.
6. Significant capacitive load on output may inhibit start-up and operation.
7. All DC/DC converters should be externally fused on the front end for protection.

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001-2008 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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