



Endicott Research Group, Inc.

2601 Wayne St., Endicott, NY 13760
 607-754-9187 Fax 607-754-9255
<http://www.ergpower.com>

K3262

Specifications and Applications Information

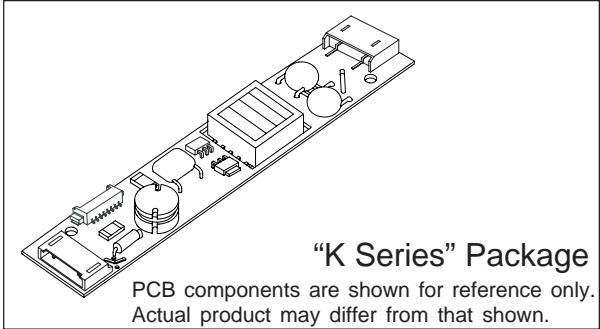
03/26/10 Preliminary

8m Class 2 Lamp DC to AC Inverter

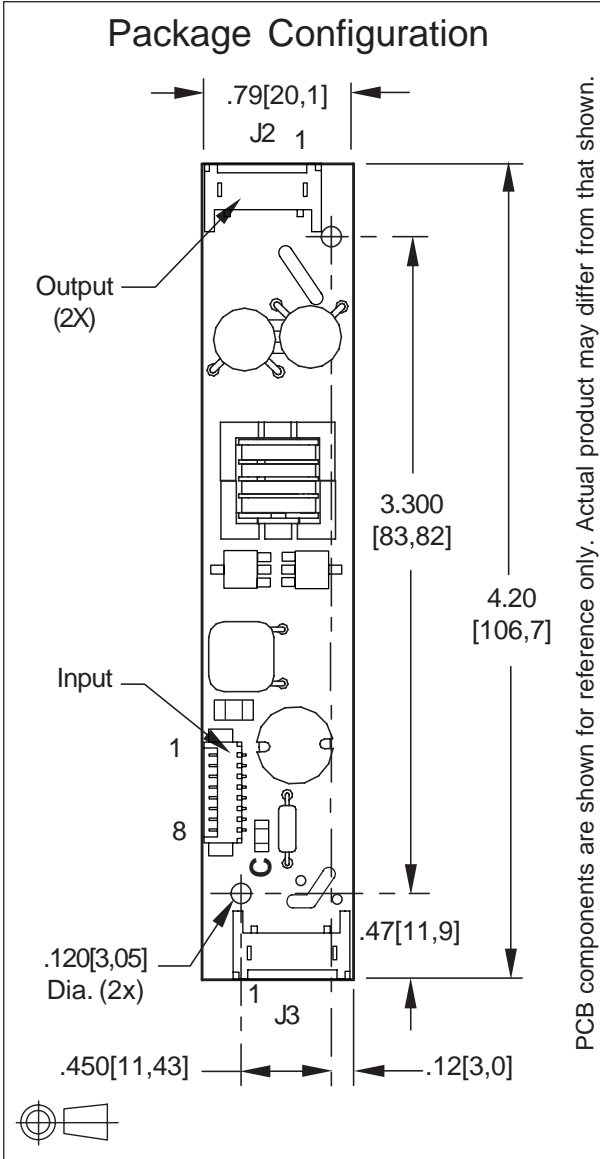
The ERG K3262 (*8m Class*) low profile dc to ac inverter is specifically designed to power the Optrex T-51944D104J-FW-A-A LCD display module to a moderate brightness level from a +12 volt dc source.

This low profile inverter features:

- ✓ Less Than 8 mm in Height
- ✓ LCD Module Specific
- ✓ Display Compatible Output Connector
- ✓ Firm Specifications
- ✓ Application Information
- ✓ Designed, Manufactured and Supported in the USA
- ✓ Custom Input and Output Voltages
- ✓ Flexible System Interface
- ✓ Notebook Display Head Compatible



| Connectors | |
|---|--|
| Input Connector | Output Connectors |
| Molex 53261-0871 | JST SM02(8.0)B-BHS-1-TB |
| J1-1 +Vin J1-2 +Vin J1-3 GND J1-4 GND J1-5 Enable/PWM * J1-6 N/C J1-7 N/C J1-8 N/C | J2-1 ACout J2-2 ACreturn J3-1 ACout J3-2 ACreturn |
| * Valid only with "C" jumper (JP1) removed | |



Absolute Maximum Ratings

| Rating | Symbol | Value | Units |
|---------------------|-----------|---------------|-------|
| Input Voltage Range | V_{in} | -0.3 to +13.2 | Vdc |
| Storage Temperature | T_{stg} | -40 to +85 | °C |

Operating Characteristics

With a load simulating the referenced display and lamp warm-up of 5 minutes.
Unless otherwise noted $V_{in} = 12.00$ Volts dc and $T_a = 25^\circ\text{C}$.

| Characteristic | Symbol | Min | Typ | Max | Units |
|---|-------------------------|-------|-------|-------|-------|
| Input Voltage | V_{in} | +10.8 | +12.0 | +12.6 | Vdc |
| Component Surface Temperature ^(note 1) | T_s | -20 | - | +80 | °C |
| Input Current ^(note 2) | I_{in} | - | 0.58 | 0.67 | Adc |
| Operating Frequency | F_o | 44 | 49 | 54 | kHz |
| Minimum Output Voltage ^(note 3) | $V_{out} \text{ (min)}$ | 1440 | - | - | Vrms |
| Efficiency | η | - | 85 | - | % |
| Output Current (per lamp) | I_{out} | - | 6.3 | - | mArms |
| Output Voltage | V_{out} | - | 470 | - | Vrms |
| Enable Pin Input Current Requirement ^(notes 4,5,6) | I_{Enable} | - | 6.7 | - | mAdc |

Specifications subject to change without notice.

- (Note 1) Surface temperature must not exceed 80 degrees C; thermal management actions may be required.
 (Note 2) Input current in excess of maximum may indicate a load/inverter mismatch condition, which can result in reduced reliability. Please contact ERG technical support.
 (Note 3) Provided data is not tested but guaranteed by design.
 (Note 4) Required User Enable/Disable Interface Circuit is shown on page 3.
 (Note 5) Valid only with "C" jumper (JP1) removed.
 (Note 6) With the inverter powered and JP1 is in place, a ground applied to the enable pin J1-5 will open the inverter fuse.

Application Notes:

- 1) The minimum distance from high voltage areas of the inverter to any conductive material should be .12 inches per kilovolt of starting voltage.
- 2) Mounting hardware to be non-conductive.
- 3) Open framed inverters should not be used in applications at altitudes over 10,000 feet.
- 4) ACreturn should be left floating, not grounded.
- 5) Contact ERG for possible exceptions.



Endicott Research Group, Inc.

2601 Wayne St., Endicott, NY 13760
 607-754-9187 Fax 607-754-9255
<http://www.ergpower.com>

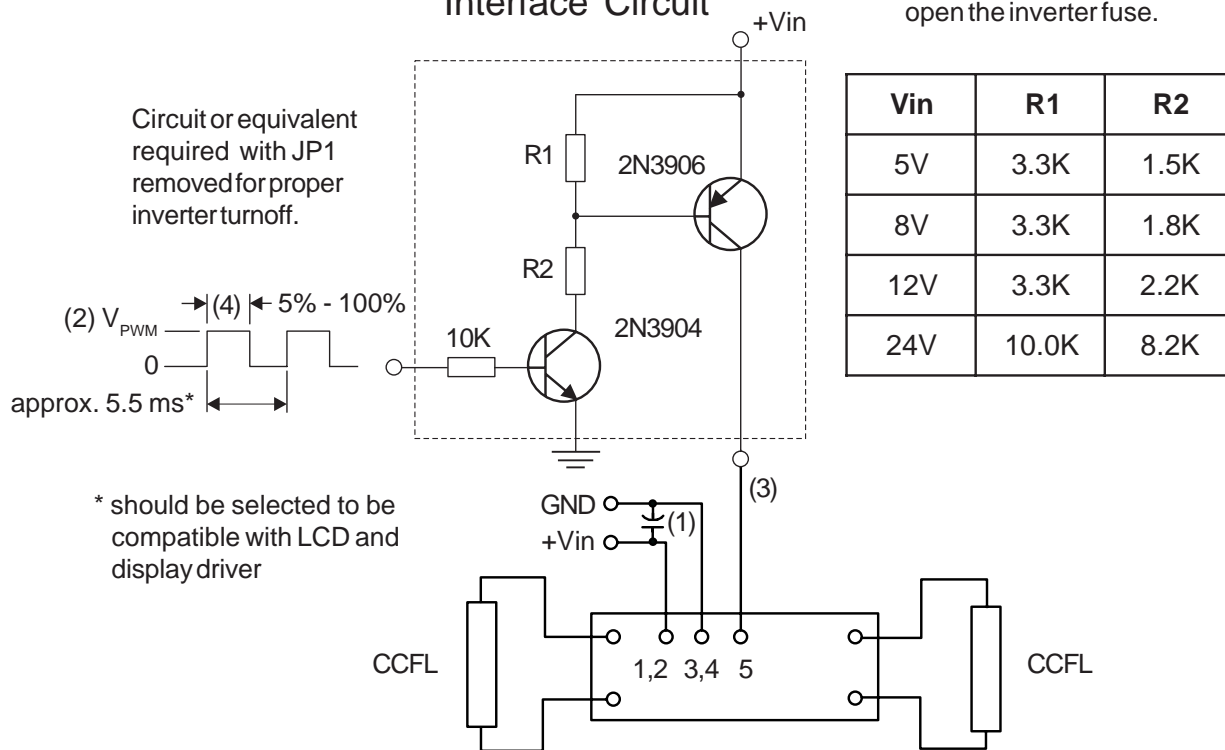
Made in USA

PWM Dimming

(Valid only with JP1 removed)

Required User Enable/Disable Interface Circuit

With JP1 in place, a ground applied to the enable pin J1-5 will open the inverter fuse.



- (1) Low ESR type input by-pass capacitor (22 uF - 100 uF) may be required to reduce reflected ripple.
- (2) V_{PWM} from 2.4V to less than or equal to +Vin.
- (3) Full brightness without PWM control requires that pin 5 be tied to +Vin. Pin 5 must be at 0V to turn off.
- (4) Duty Cycle 5% - 100%.