



Endicott Research Group, Inc.

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Specifications and Applications Information

06/19/07

Preliminary

The ERG 8m053183F (*8m Class*) low profile dc to ac inverter is specifically designed to power the AU Optronics G104SN03 LCD display module to a moderate brightness level from a +5 volt dc source.

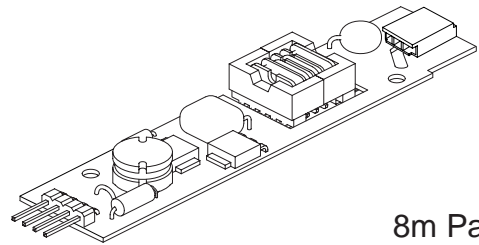
This low profile inverter features:

- ✓ 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

8m053183F



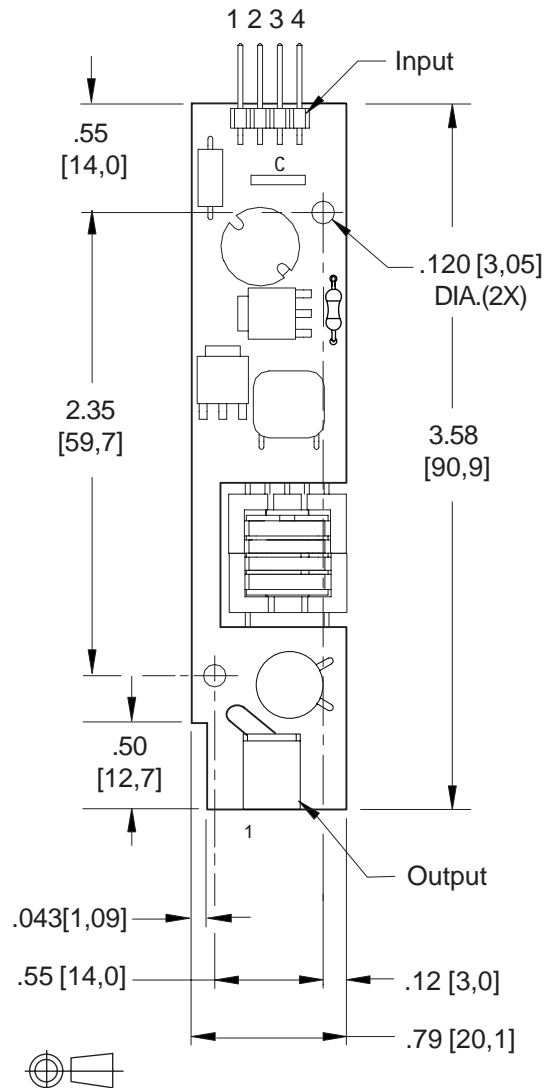
8m Class DC to AC Inverter



8m Package

PCB components are shown for reference only. Actual product may differ from that shown.

Package Configuration



PCB components are shown for reference only. Actual product may differ from that shown.

Connectors

| Input Connector | Output Connector |
|---|--------------------------|
| 4 pins are 0.315" [8,00] Long, 0.025" [0,63] Square and are on 0.100" [2,54] Centers. | JST SM02B-BHSS-1-TB |
| J1-1 Vin(+) J1-2 GND J1-3 Enable * J1-4 N/C | J2-1 ACout J2-2 ACout |
| * Valid with the "C" jumper removed | |

Absolute Maximum Ratings

| Rating | Symbol | Value | Units |
|-----------------------|--------|--------------|-------|
| Input Voltage Range | Vin | -0.3 to +5.5 | Vdc |
| Operating Temperature | To | 0 to +70 | °C |
| Storage Temperature | Tstg | -40 to +85 | °C |

Recommended Operating Conditions

| Rating | Symbol | Value | Units |
|---------------|--------|---------------|-------|
| Input Voltage | Vin | +4.50 to 5.25 | Vdc |

Electrical Characteristics

Unless otherwise noted Vin = 5.00 Volts dc and Ta = 25°C

| Characteristic | Symbol | Min | Typ | Max | Units |
|--|------------|------|-----|-----|-------|
| Input Current ^(note 1) | Iin | - | .68 | .80 | Adc |
| Operating Frequency | Fo | 35 | 40 | 45 | KHz |
| Minimum Output Voltage | Vout (min) | 1300 | - | - | Vrms |
| Efficiency ^(note 2) | η | - | 80 | - | % |
| Output Current (per lamp) | Iout | - | 4.5 | - | marms |
| Output Voltage (When powering a load simulating the referenced display) | Vout | - | 560 | - | Vrms |
| Pin3 Input Current Requirement | - | - | 18 | - | madc |

After lamp has been allowed to warm-up for 5 minutes.
External Disable Circuit shown on page 3.

Specifications subject to change without notice.

(Note 1) 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 2) With a simulated load of 124 kOhms.

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) Contact ERG for possible exceptions.



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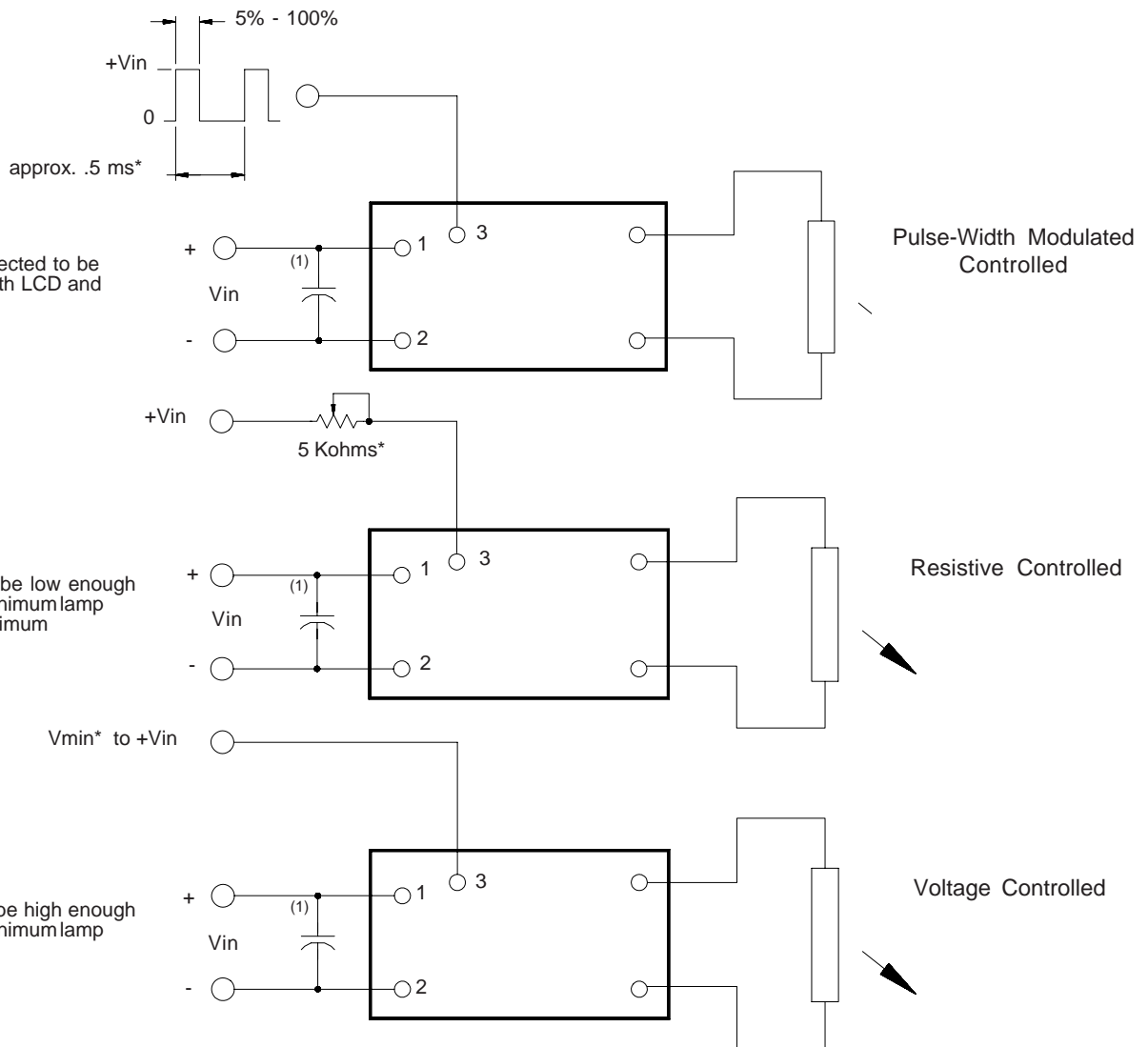
Made in USA



8m053183F

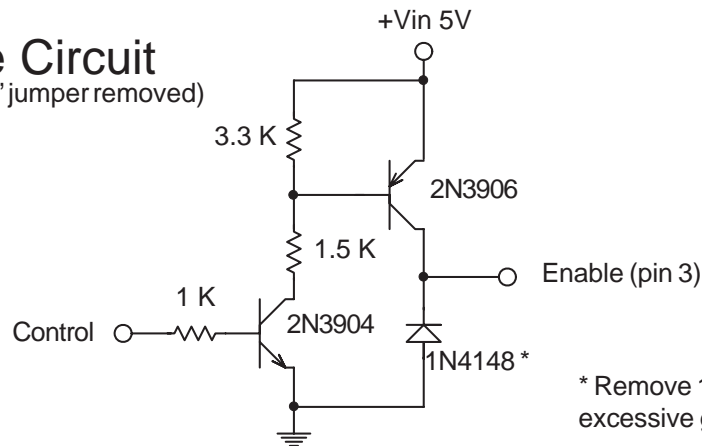


3 Dimming Options (valid with the "C" jumper removed)



Note 1 - Low ESR type input by-pass capacitor (22 uf - 100 uf) may be required to reduce reflected ripple.

Disable Circuit (valid with the "C" jumper removed)



* Remove 1N4148 in applications where excessive ground bounce voltages exist.



Endicott Research Group, Inc. (ERG) reserves the right to make changes in circuit design and/or specifications at any time without notice. Accordingly, the reader is cautioned to verify that data sheets are current before placing orders. Information furnished by ERG is believed to be accurate and reliable. However, no responsibility is assumed by ERG for its use.