



Endicott Research Group, Inc.

2601 Wayne St., Endicott, NY 13760

607-754-9187 Fax 607-754-9255

http://www.ergpower.com

## Specifications and Applications Information

10/16/06

Preliminary

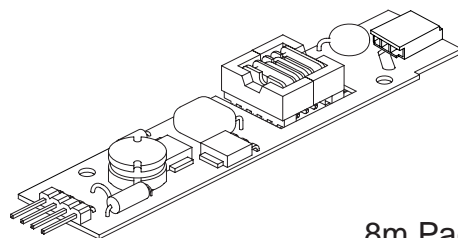
The ERG 8m123532 (**8m Class**) low profile dc to ac inverter is specifically designed to power the Hitachi TX16D11VM2CCA LCD display module to a moderate brightness level from a +12volt dc source.

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

# 8m123532

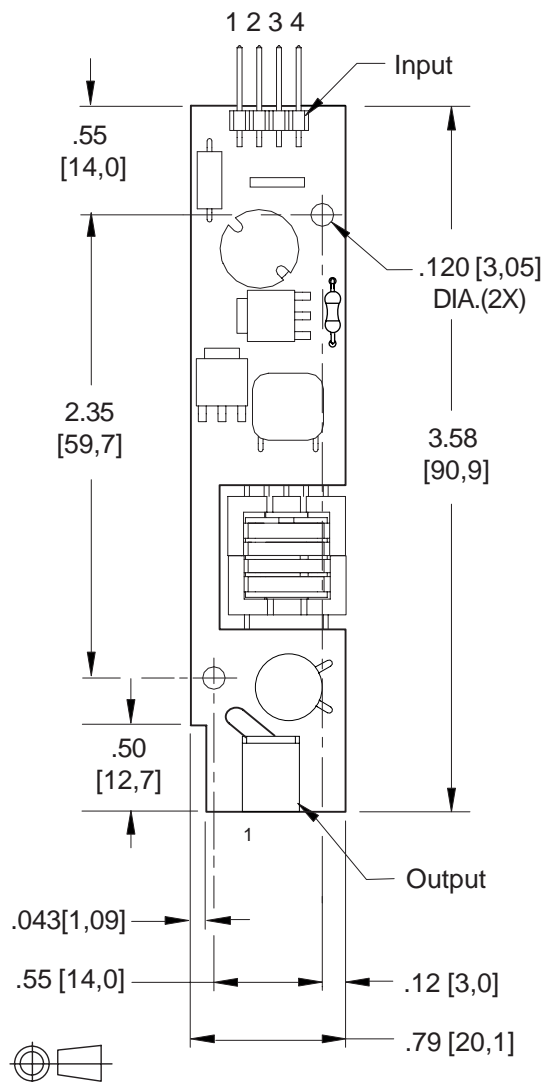
## 8m Class DC to AC Inverter



8m Package

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

### Package Configuration



### 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 Control * 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	V <sub>in</sub>	-0.3 to +13.2	Vdc
Storage Temperature	T <sub>stg</sub>	-40 to +85	°C

## Operating Characteristics

With a load simulating the referenced display and lamp warm-up of 5 minutes.  
Unless otherwise noted V<sub>in</sub> = 12.0 Volts dc and T<sub>a</sub> = 25°C.

Characteristic	Symbol	Min	Typ	Max	Units
Input Voltage	V <sub>in</sub>	+10.8	+12.0	+12.6	Vdc
Component Surface Temperature	T <sub>s</sub>	-20	-	+80	°C
Input Current <sup>(note 1)</sup>	I <sub>in</sub>	-	0.24	0.28	Adc
Operating Frequency	F <sub>o</sub>	38	43	48	kHz
Minimum Output Voltage	V <sub>out</sub> (min)	1300	-	-	Vrms
Efficiency	h	-	91	-	%
Output Current (per lamp)	I <sub>out</sub>	-	5.75	-	mArms
Output Voltage	V <sub>out</sub>	-	450	-	Vrms
Enable Pin Input Current Requirement	I <sub>en</sub>	-	2.2	-	mAdc

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.

### 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 should 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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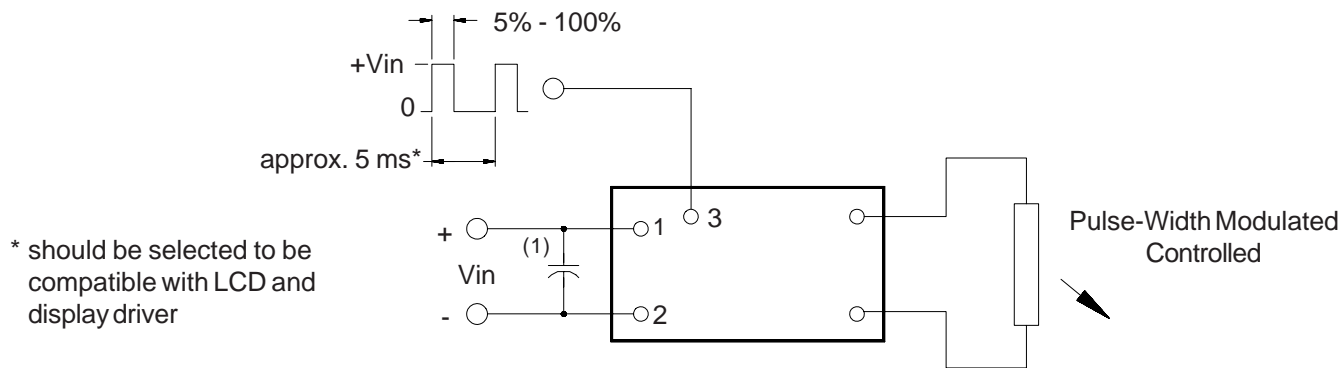
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Made in USA



### Dimming Option (valid with the "C" jumper removed)

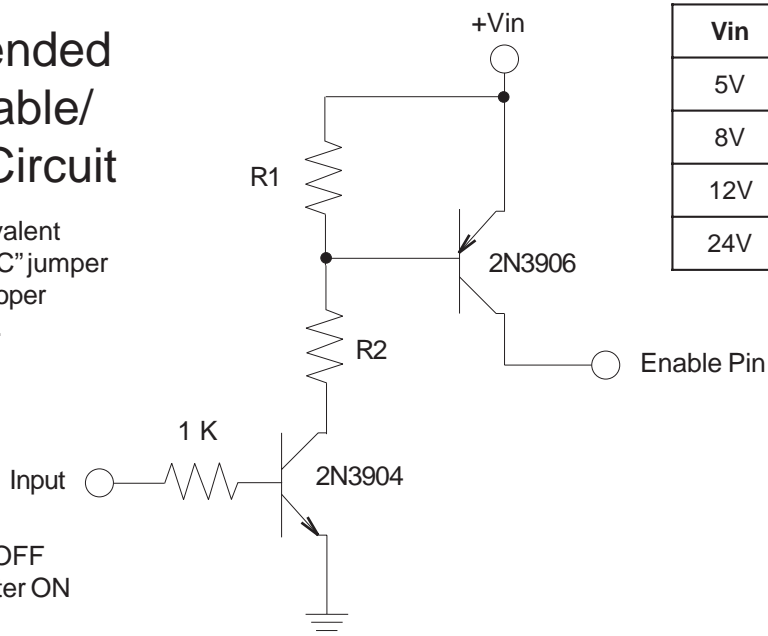


Note 1 Low ESR type Input by-pass capacitor (22 uf - 100 uf) may be required to reduce reflected ripple.

### Recommended User Disable/ Interface Circuit

Circuit or equivalent required with "C" jumper removed for proper inverter turnoff.

0-0.5V Inverter OFF  
2.0V - 12V Inverter ON



Vin	R1	R2
5V	3.3K	1.5K
8V	3.3K	1.8K
12V	3.3K	2.2K
24V	10.0K	8.2K



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.