



Endicott Research Group, Inc.

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Specifications and Applications Information

08/17/04

Preliminary

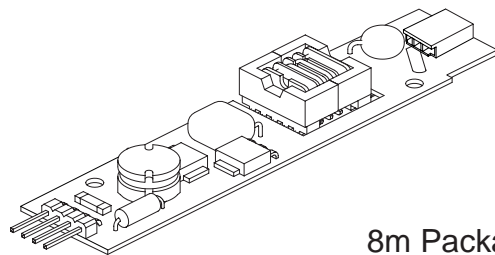
The ERG 8m123178 (8m Class) low profile dc to ac inverter is specifically designed to power the AU Optronics B152EW01 LCD display module to a moderate brightness level from a +12 volt dc source.

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

8m123178

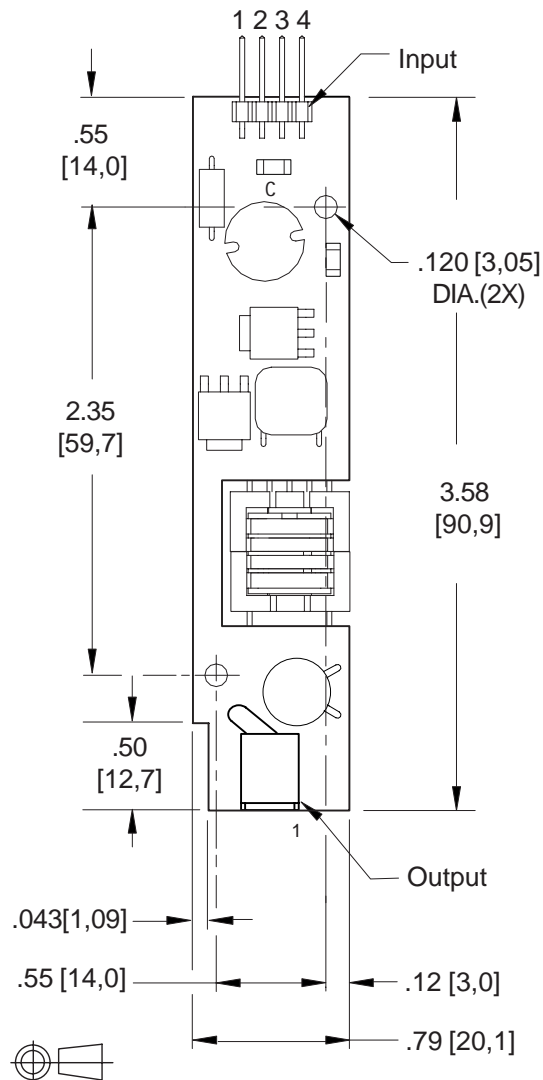
8m Class DC to AC Inverter



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 Control * J1-4 N/C	J2-1 ACout J2-2 ACout
* Valid with "C" jumper removed	

Absolute Maximum Ratings

8m123178

Rating	Symbol	Value	Units
Input Voltage Range	V _{in}	-0.3 to +13.2	Vdc
Operating Temperature	T _o	-0 to +70	°C
Storage Temperature	T _{stg}	-40 to +85	°C

Recommended Operating Conditions

Rating	Symbol	Value	Units
Input Voltage	V _{in}	+10.8 to 12.6	Vdc

Electrical Characteristics

Unless otherwise noted V_{in} = 12.00 Volts dc and T_a = 25°C

Characteristic	Symbol	Min	Typ	Max	Units
Input Current ^(note 1)	I _{in}	-	.52	.60	Adc
Operating Frequency	F _o	37	42	47	KHz
Minimum Output Voltage	V _{out} (min)	1500	-	-	Vrms
Efficiency	-	-	77	-	%
Output Current (per tube)	I _{out}	-	6.2	-	marms
Output Voltage (When powering a load simulating the referenced display)	V _{out}	-	780	-	Vrms
Pin3 Input Current Requirement	-	-	14.6	-	madc

After tube 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) Wire length between the inverter and the display must be short to minimize stray capacitance gains and losses.

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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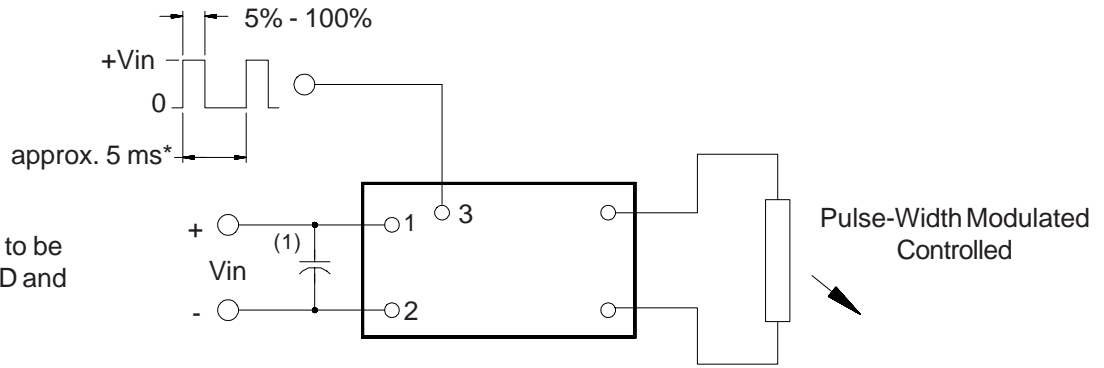
Made in USA



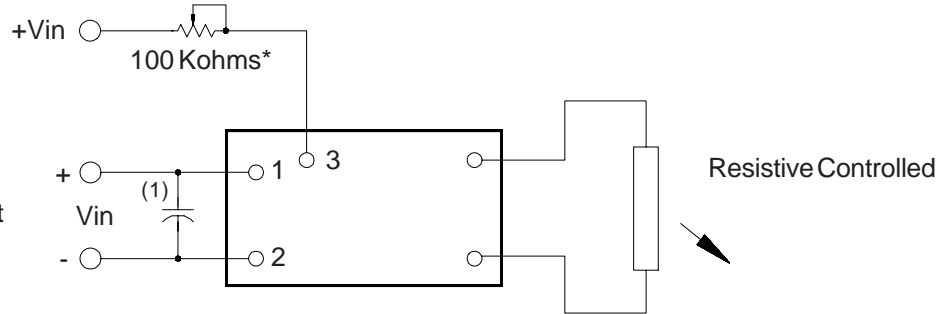
3 Dimming Options

8m123178

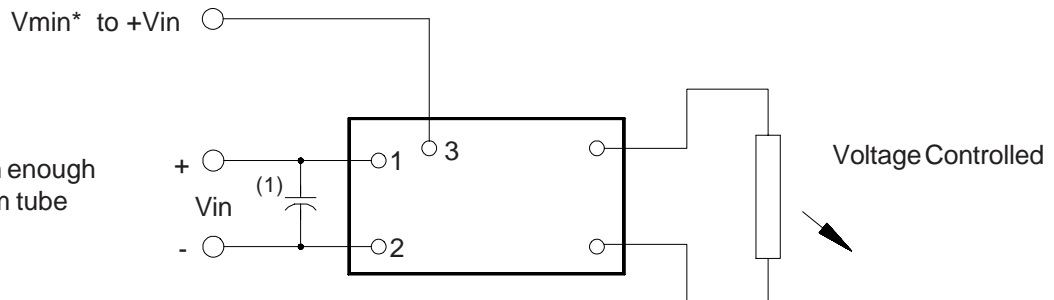
(Valid with "C" jumper removed)



* should be selected to be compatible with LCD and display driver



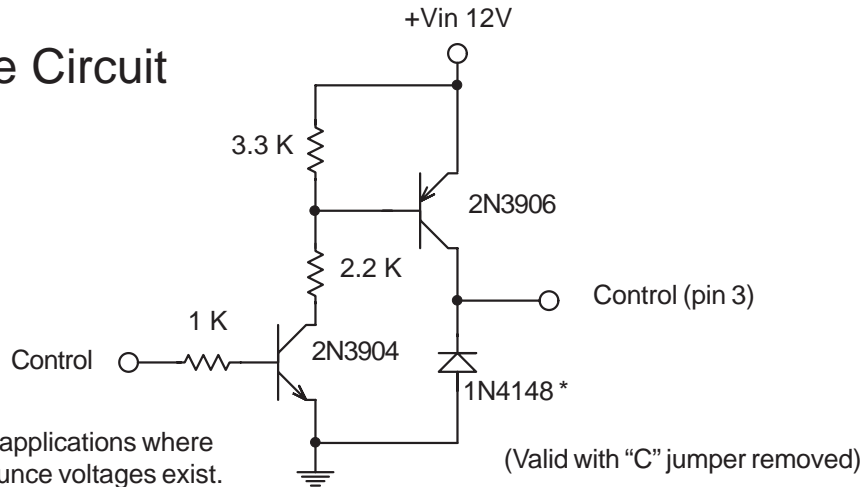
* value should be low enough to maintain minimum tube current at minimum brightness



* Vmin should be high enough to maintain minimum tube current

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

Disable Circuit



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

(Valid with "C" jumper removed)



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.