

# PRODUCT MANUAL

## ***ELECTRONIC DISPLAYS INC.***

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## **UP/DN-TIMER W/ PRESET & RUN/HOLD + AO**

### **PRODUCT PART NUMBER:**

ED206-104-4D-N1-AO..... 2.25 inch digits

### **DESCRIPTION:**

- Indoor numeric 2.25 inch high, red LED display 4 digits / display
- Up/Down-timer in M:SS format ; 2 contact closure operation (run/hold and pre-set via a 4 position thumb-wheel switch) and Audio output.
- Preset switch and up/down select are located on the right endplate.
- NEMA 1 rated enclosure

### **OPERATION:**

On power up, or when the pre-set input (labeled "IN2") is activated, the displayed time will show the minutes and seconds as read from the thumb-wheels. If the signal at the Run/Hold input (labeled "IN1") is activated, the timer will up or down time depending on the position of the up/down select switch ("IN3"). If the on/off pushbutton is off, the unit will up-time. By placing a on/off switch between "VEXT" and "IN1", the display will time when the switch is closed. When in down-timing mode the timer hits 00:00 an audio output will be activated for 3 seconds.

If there are any questions or comments regarding this order, please call our  
Toll-free number : 1-800-367-6056

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## Unpacking Instructions:

A copy of these instructions is packed with each unit. Open carefully to avoid scratching the unit's paint and plastic lens or cutting the line cord.

## Mechanical Mounting Instructions:

This unit is equipped with two rivnuts in the top of the unit for mechanical mounting purposes. The bolts that are screwed into these rivnuts are standard 5/16 by 1 ¼" bolts. To avoid damaging the rivnuts, do not tighten these bolts more than 10 ft/lbs.

## Power Requirements:

This unit is equipped with a standard, eighteen-gauge, three-wire line cord that is designed to be plugged into a standard, 120 VAC, 60 Hertz, grounded outlet. The maximum current draw at 120 VAC for ED400-104-4D-N1 is 1 ampere and for ED225-104-4D-N1 is ¾ ampere.

## Label Definitions:

The following page shows some commonly used labels and their definitions.

LABEL	DEFINITION
IN1, IN2, IN3	Optically coupled input, active high, requires 12 milli-amperes of current to activate.
IN1	Run/ Hold input.
IN2	For preset momentary switch to read and display thumbwheel values.
IN3	ON/OFF switch for toggle between timing UP or Down. ON position will down-time the display.
Vext	+12 VDC from display. Can be used for IN1, IN2 & IN3.
GND	Used with customer's power supply, Connect ground from customer's power source to this input.

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## Customer Power Supply:

If this unit is equipped with optically coupled inputs, these inputs prevent any electrical or electronic signal from passing directly from the outside world into the logic circuits on the printed circuit boards that we have supplied.

For your convenience, we have also supplied this board with an 'isolated customer power supply' that can be used to drive the customer side of these optically coupled inputs. This isolated supply does not have a direct current connection to the power supply that is used to power the display and logic chips. It will provide 12 VDC to 14 VDC at up to 500 milli-amperes of current. This voltage is unregulated.

## 'Dry' Contact Configuration:

To use 'dry' contacts, the user need only supply a contact closure between the desired optically coupled input and the positive terminal of the 'isolated customer power supply'. The negative terminal of the isolated supply is already connected to the negative side of each optically coupled input. See Figure A.

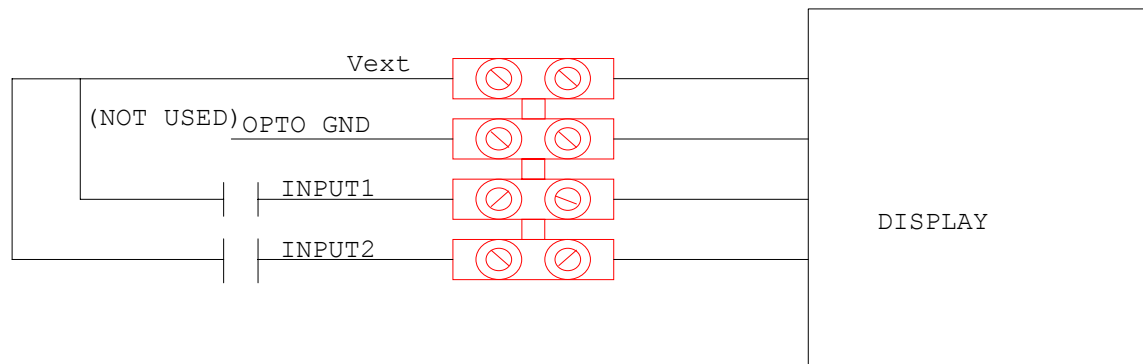


Figure A

## 'Wet' Contact Configuration:

To use 'wet' contacts, the user must supply his own power to activate the desired optically coupled input. The user may also wish to provide a contact closure in this circuit. The user's power supply must be capable of providing approximately twenty milli-amperes of current at 5 to 24 volts of direct current. If necessary, these inputs can also be ordered for use with higher voltages and / or with alternating current inputs. See Figure B.

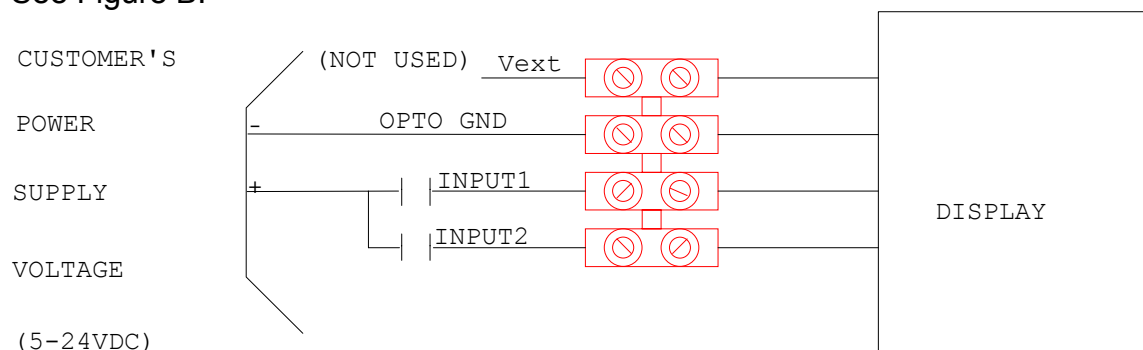


Figure B

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## **Power-up Response:**

When power is first applied, the display will show in minutes and seconds as it is set on the thumb-wheels. If the 'Run/Hold' input (labeled "IN1") is active, it will start up-timing or up-timing at one per minute.

## **Service:**

There are no parts in your unit classified as 'user serviceable' parts. The plastic or glass cover can be cleaned using a soft cloth and a gentle glass cleaning solution.

## **Warranty:**

The standard warranty for all products is one year on all parts and labor at our facilities. All products are designed and manufactured by Electronic Displays Inc. If you need assistance, please call or FAX us and we will be happy to provide technical assistance. If you feel that your unit needs repair, please call us first and then ship the unit to:

Electronic Displays Inc.  
135 South Church Street  
Unit A  
Addison, Ill. 60101  
Attn: Repair department

Our telephone number is:  
(630) 628-0658

Our FAX number is:  
(630) 628-0936