

7-Day Electronic Timer

Model CDN-1224

Operating Instructions





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1. DESCRIPTION

The 7-Day Electronic Timer provides full control of heater operation in either manual and or timed modes.

The 7-Day Electronic Timer is designed to operate on both 12 and 24 volt systems.

Characteristics of both timer and heater operation can be tailored to the requirements of the heating application by pre-programming of the timer via four dip switches.

Dip switches can be accessed through the rear panel of the timer. These settings can be revised at any time should your heating requirements change.

NOTE: Timer requires dismounting and disconnecting of power source before revising dip switch settings.

1.1 Features of Timer

1.1.1 Heater Feedback Incorporated into Display

The 'heater on' LED receives feedback from heater indicating that the heater is on. In case of a fault on the heater, the error code is transmitted from the heater controller to the timer. The error code flashes on the 'heater on' LED if heater is equipped with diagnostic feature (refer to your heater manual).

1.1.2 Truck or Bus Operation

By flipping one of the dip switches on the back of the unit, the timer can be set for either truck or bus operation. The table shown on page 15 illustrates the timing sequence associated with operation in either of these modes.

1.1.3 Surface or Bracket Mount

The timer can be surface mounted and wiring is able to fit into a standard hole size which can be easily drilled into the dash board mounting plate. The timer can be mounted either on top of the dash, or under the dash, with the supplied L shape bracket.

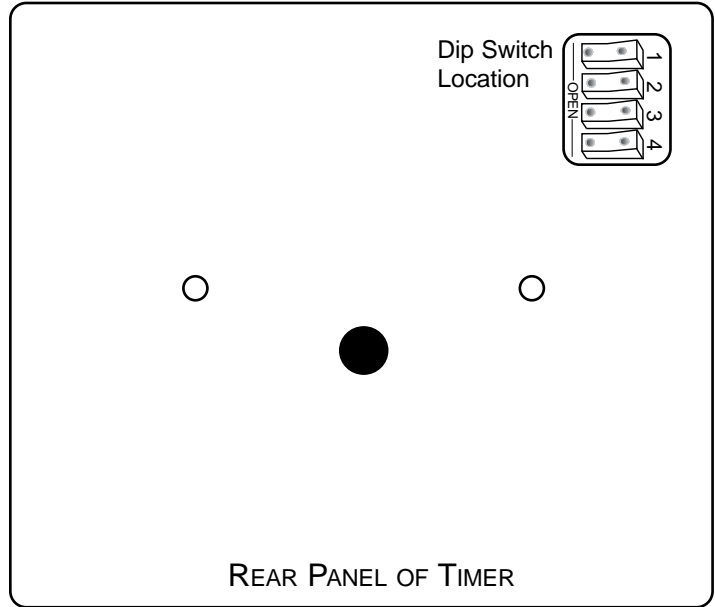
1.1.4 Easily and Safely Cleaned

The unit does not have any exposed buttons which would allow liquids to enter and damage the unit when it is being cleaned.

1.2 Illustration of Timer Front Panel



1.3 Illustration of Timer Dip Switch Location



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1.4 Function Description of Timer Front Panel

- 1 Time Display
- 2 Heater on/off indicator LED (green)
- 3 Timer active status LED (yellow)
- 4 Clock time status LED (red)
This LED will be on during PM time when AM/PM dip switch setting is selected
- 5 Days of the week LED's (red)
- 6 Function buttons



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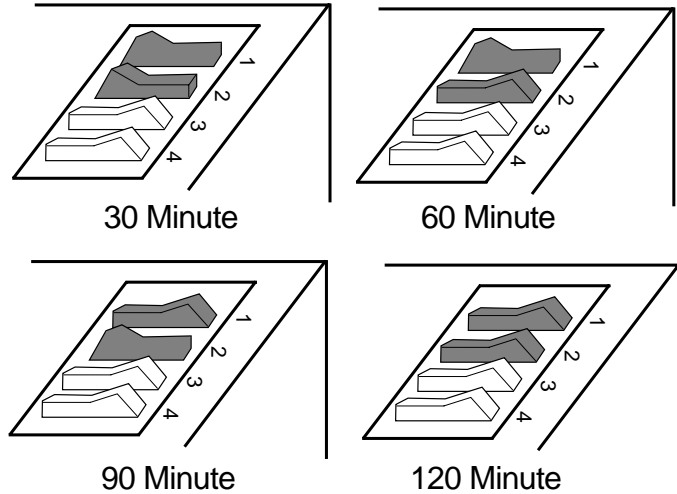
2. DIP SWITCH PROGRAMMING

Prior to installing the timer, all dip switches must be set to the requirements of your application. The dip switches allow for setting the clock in either AM/PM mode or 24 hour (military) mode. Also included is the ability to select the desired heater run time of 30, 60, 90 or 120 minutes. Dip switch settings are accessed through a cut out on the rear panel of the timer. Refer to diagram 2.1 Dip Switch Positions for settings.

Note: Dip switch settings are to be selected PRIOR to connection of power source and programming of all other timer functions.

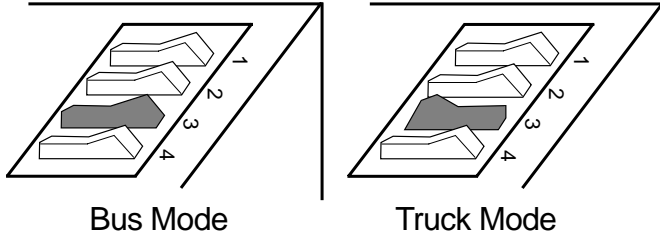
2.1 Dip Switch Positions

Switch 1 & 2 control timer on duration.

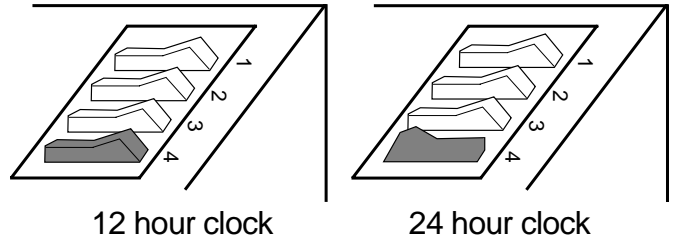


2.1 Dip Switch Positions (Cont.)

Switch 3 controls truck vs. bus operation.



Switch 4 controls 12 vs. 24 hour clock.



Default settings for new timers are:

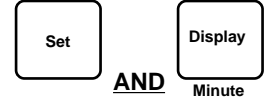
Truck - 60 minute operation time, 12 hour clock

Bus - 60 minute operation time, 12 hour clock

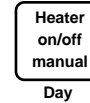
3. PROGRAMMING AND OPERATION

3.1 Clock Programming (Present Time and Day)

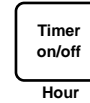
- Depress buttons 'Set' and 'Display' simultaneously to start programming
NOTE-Time display will begin to flash



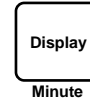
- Depress button 'Day' to select day of week



- Depress button 'Hour' to select correct hour
NOTE-If the dip switch setting is in the AM/PM mode, the red PM LED will respond



- Depress button 'Minute' to select correct minute



- Depress button 'Set' to end timer programming
NOTE-If 'Set' button is not depressed within 15 seconds, programming function will end automatically



3.2 Timer Programming (Timed Heater Start Setting)

- Depress buttons ‘Set’ and ‘Timer on/off’ simultaneously to start programming
NOTE-The yellow ‘T’ LED will flash

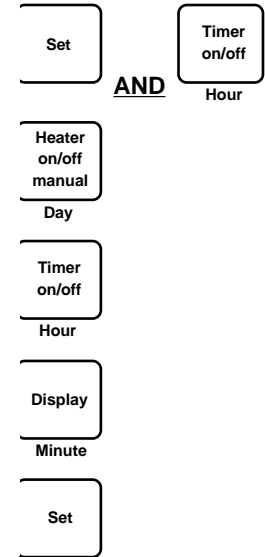
- Depress button ‘Day’ to select day heater is to come on

- Depress button ‘Hour’ to select correct hour.

- Depress button ‘Minute’ to select correct minute

- Depress button ‘Set’ to end timer programming

NOTE-If ‘Set’ button is not depressed within 15 seconds, programming function will end automatically



3.3 Operational Aspects of Timer

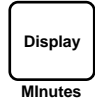
Manual Operation

To manually turn the heater on, press the heater on/off manual button. The heater on/off indicator LED (green) will come on. Press this button a second time to turn the heater off.



Display Stand By Mode

To save battery life, the display will go blank after about 5 minutes if there is no activity. To reactivate the display, press the DISPLAY button.



Timer Operation

Depress the timer on/off button to activate or deactivate the timer. If the timer is active, the timer status LED (yellow) will light and the heater will come on when the next timing program is reached.



The table on page 15 depicts the performance of the timer based upon truck or bus operation.

4. TECHNICAL DATA

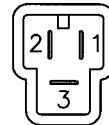
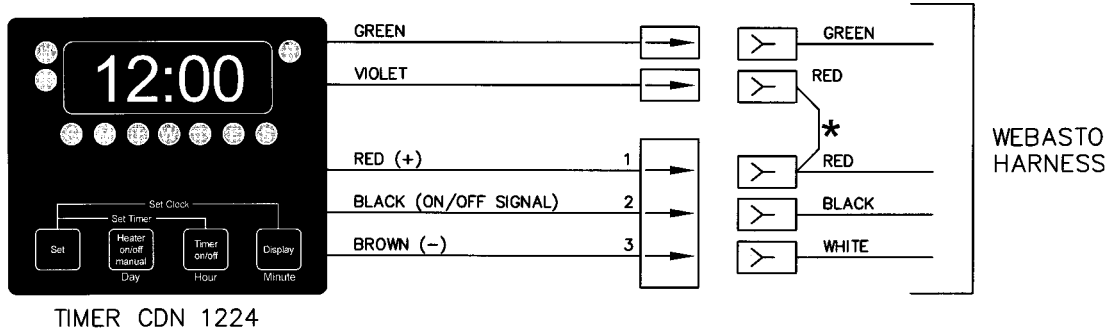
TECHNICAL DATA	7 DAY DIGITAL TIMER
Rated Input Voltage	10 - 30 volts DC
Digital Display	12 or 24 hour clock (selectable) with Sunday through Saturday
Operation	1. Manual on/off 2. Timer mode - One set time. Can be set up to 7 days in advance.
Time Out Duration	30, 60, 90 or 120 min. (selectable)
Temperature range	-40 °C to 50 °C (-40 °F to 122 °F)
Dimensions	Width 78 mm (3.07") Height 25 mm (0.98") Length 74 mm (2.91")

T I M E R O P E R A T I O N I N S T R U C T I O N S

5. WIRING DIAGRAMS

5.1 Truck Application

WEBASTO CDN 1224 TIMER CONNECTION TO 3-WAY PLUG (TRUCK SLEEPER APPLICATION)



DWG NO: 908204

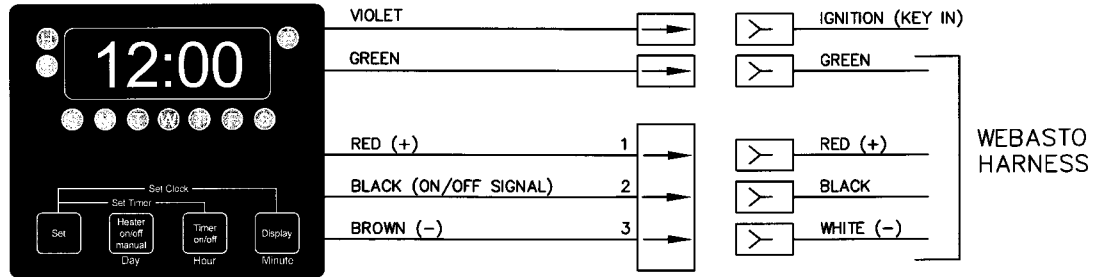
*Disconnect jumper for 'preheat only' mode.

MATING END SHOWN

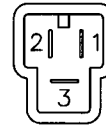
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5.2 Bus Application with 3-Way Plug

WEBASTO CDN 1224 TIMER CONNECTION TO 3-WAY PLUG (BUS APPLICATION)



TIMER CDN 1224



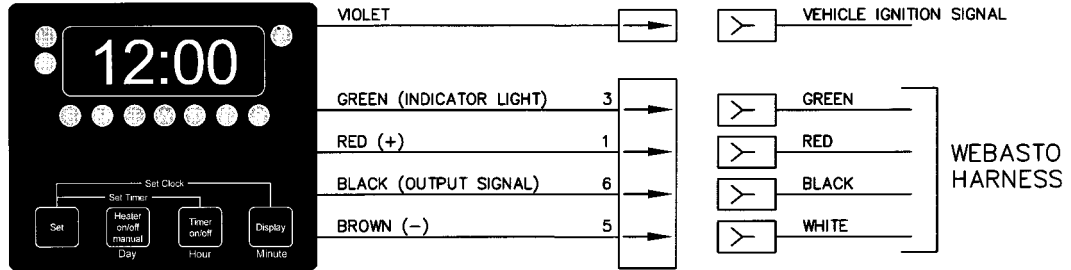
MATING END SHOWN

DWG NO: 908205

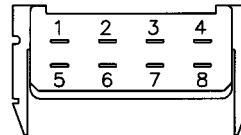
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5.3 Bus Application with 8-Way Plug

WEBASTO CDN 1224 TIMER CONNECTION TO 8-WAY PLUG (BUS APPLICATION)



TIMER CDN 1224



MATING END SHOWN

DWG NO: 908206

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6. TIMER DURATION

Bus Application

Ignition wire is connected and dip switch #3 is in bus mode.

Whether the heater is turned on manually or automatically, it will stay on until the timer duration ends. Except, when the heater is turned on manually while the bus is running (ignition key turned on), the heater will shut off when the ignition key is turned off, or the heater on/off button is pressed.

Truck Application for Preheat Mode Only

Ignition wire is disconnected and dip switch #3 is in truck mode.

Pre-set Mode	Heater on	Timer duration ends	Heater turns off after time duration ends
Manual Mode	Heater on	Timer duration ends	Heater turns off after time duration ends

Truck Application for Preheat and Sleeping Modes

Ignition wire is always live and dip switch #3 is in truck mode.

Pre-set Mode	Heater on	Timer duration ends	Heater turns off after time duration ends
Manual Mode	Heater on	Timer duration ends	Heater stays on until turned off manually

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NOTES

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