

Smart Energy In-Home Display



Instruction Manual

Model No. CTL3082

CONTENTS

PRODUCT OVERVIEW.....	3
SAFETY INSTRUCTIONS	3
INSTALLATION	4
BACKLIGHT	4
NAVIGATION BUTTONS	4
HOME SCREEN	5
MENU	5
Usage menu.....	6
Forecast menu.....	6
System menu.....	7
Settings menu	7
MESSAGES	8
PRICE	10
SPECIFICATIONS.....	11
FCC DECLARATION.....	12
ETL	14

PRODUCT OVERVIEW

The In-Home Display unit shows the history of your energy and forecasts your energy usage based on the data it collects. The smart ZigBee™ technology enables the unit to communicate with your utility company so you can receive messages about energy saving events and price reductions.

SAFETY INSTRUCTIONS

Purpose and correct use:

- Read these instructions carefully and keep in a safe place for future reference.
- All manual/safety instructions and electricity supplier's regulations must be adhered to.
- Only connect this unit to a UL/ETL approved 5-volt DC power supply provided by manufacturer.
- Do not install this unit at an altitude of over 2000 meters.
- This standalone electronic unit should only be used in dry, closed living and office spaces. Do not place the unit in a bathroom or area of excessive moisture. Do not allow the unit to get wet.
- Place the unit in an easy-to-reach position where you can comfortably reach the buttons and view the screen.
- Do not expose the unit to temperatures below 5°C or above 40°C, humidity above 90% or pollution above level 2.
- Do not expose the unit to voltage beyond 90V-260V AC.
- Clean the unit with a dry, soft cloth. Do not use solvents or aggressive cleaning agents.

The manufacturer accepts no responsibility for damage caused by non-observance of these instructions.

INSTALLATION

1. Plug the power adapter into the adapter socket on the left-hand side of the unit.
2. Pull out the table stand on the back of the unit and place the unit on a firm, flat surface near a power source.
3. Insert the plug into a 120 or 220 V wall socket.

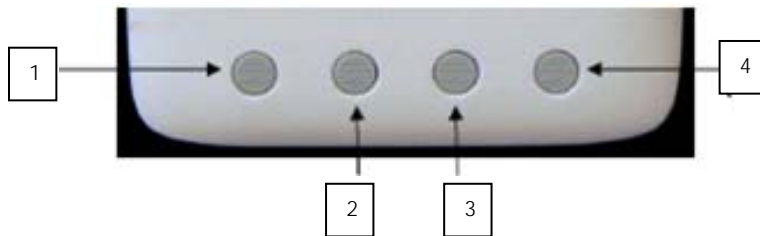
BACKLIGHT

Press any button to turn on the backlight.

Note: If the backlight has turned off, you need to press any button to turn it on again before you can enter the menus.

NAVIGATION BUTTONS

The navigation buttons are as follows:

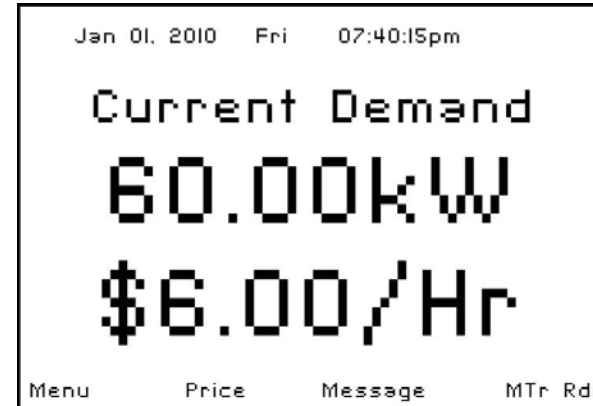


Throughout this manual, the buttons to press in order to access the onscreen commands will be referred to as (1), (2), (3), (4).

HOME SCREEN

The Home screen is the main display screen. It shows the current power consumption and the cost per hour.

From the Home screen, you can access the system menu, current price of your electricity, messages from your utility company, and your current meter reading.



MENU

The Menu page provides navigation to the Usage, Forecast, System and Settings menu pages. To view one of these pages, press (3) or (4) to select the desired page and press (2) to view it. Press (1) to return to the Home Screen.



Usage menu

To view your energy usage:

1. Enter the 'Usage' menu.
2. Press (3) or (4) to select one of the following options and press (2) to view the data:
 - 'Today' – Shows your total energy usage and cost for today.
 - 'Last 24 Hours' – Shows how many hours of energy you have used and the total cost.
 - 'Last 30 Days' – Shows your energy consumption and the total cost for the last 30 days.

Forecast menu

To view your energy forecast:

1. Enter the 'Forecast' menu.
2. Press (3) or (4) to select one of the following options and press (2) to view the data:
 - 'Today vs 30-Day Average' – Shows today's energy usage/cost and compares it to your average daily usage and cost for the last 30 days.
 - '30-Day Forecast' – Forecasts the next month's energy usage/cost based on your average daily usage/cost for the last 30 days.



System menu

To join a network and connect to the utility company:

1. Enter the 'System' menu.
2. The default status should be "No Network". The Channel should display "Auto".
3. Press (2) to scan and join a network.
4. The status will update and show 'Joined Network' if it successfully connects to your utility meter. It will display 'Joined Failed' if your connection was unsuccessful. It takes approximately one minute for the connection process to complete. If you experience problems connecting to your utility network, please contact your utility company.



To disconnect from a network:

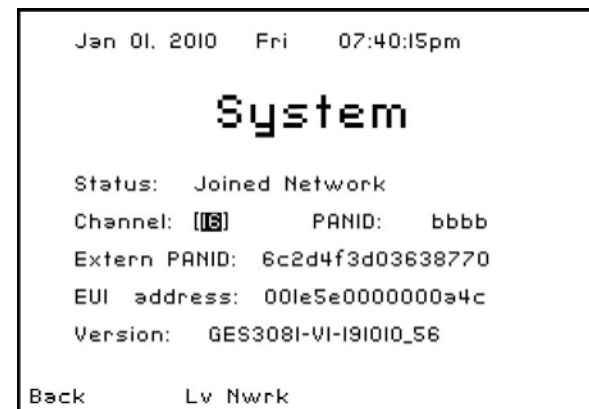
1. Enter the 'System' menu.
2. 'Lv Nwrk' appears on the screen. Press (2) to exit the network.

Note: PANID/Extern PANID/E01 Address/VERSION – are all codes that you may be asked to supply if you phone to the utility company for technical support.

Settings menu

To change the LCD brightness:

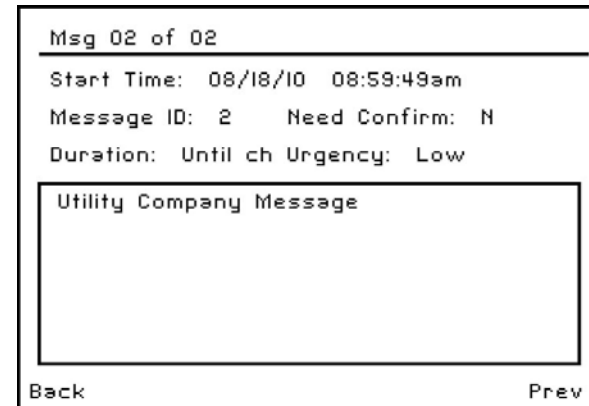
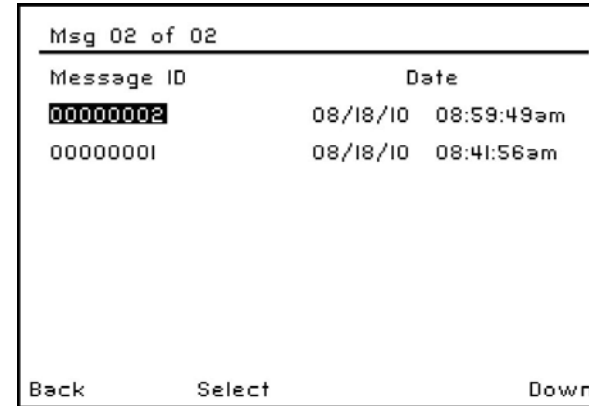
1. Enter the 'Settings' menu.
2. Press (2) to select 'LCD Brightness'. Use (3) or (4) to adjust the brightness of the LCD screen.



MESSAGES

To view utility messages:

1. Press (3) while on the Home Screen and the following Message screen is displayed. This screen displays a history of your last 64 messages. It lists the message ID and date/time for each message.
2. To view the actual utility message, press the (3) or (4) buttons to select the desired message. Press (2) to view.
3. Press (3) or (4) to view additional utility messages.
4. To exit the message screen, press (1) to return to the list of messages. Press (1) again to return to the Home Screen.



Understanding the Message screen information:

Screen Message	Description
Msg 33 of 33	The number of the message you are viewing, followed by the number of total messages you have received.
Publish Time	The date and time the message was sent to you.
Message ID	The Message ID is a utility company generated identification number.

Duration	The energy saving event lasts for this period.
Urgency	The level of urgency can be 'Low', 'Medium' or 'High'.
Message Box	<p>Your utility company will send you a wide range of messages that appear in this message box. The standard energy saving messages as shown above provide the following information:</p> <ol style="list-style-type: none"> 1. Level 1: This energy saving event is Level 1. There are 9 different event levels: <ul style="list-style-type: none"> • Green – Energy saving • Levels 1-5 – Level of message importance; 1 is low and 5 is high • Emergency • Planned outage • Service Disconnect 2. 16/4: The date. 3. Heat: Advises if your system is currently in Heat or Cool mode. 4. 25°C: The new setpoint temperature level for this event. <ul style="list-style-type: none"> • 08:00-10:00: The time the energy saving event will take place.

PRICE

To view current price information:

5. Press (2) and the Price screen opposite appears. A description of the information displayed on this screen can be found in the below table.
6. Press (1) to return to the Home Screen.

Price Information	
ProviderID:	1
Commodity:	
Start Time:	07/08/10 05:48:32pm
Duration:	4095 Minutes
Price Tier:	01 Label: BASEal
TOU Tier#:	02 of 02
Price Ratio:	--
--Price--:	0.1 \$/kWh
Back	

Screen Message	Description
Provider ID	ID number correlates to the utility company.
Commodity	Electricity
Start Time	Date and time of the price information.
Duration	The length of time the price information relates to.
Price Tier	The Price Tier values range from 1 (the least expensive tier) to 6 (the most expensive tier).
TOU Tier	Identifies the meter register being used for energy accumulation.
Price Ratio	Ratio to the normal price chosen by the supplier.
--Price--:	Price of kilowatt-hour.

SPECIFICATIONS

LCD Screen Resolution	240 x 160
Backlight	LED
RF Frequency	2405-2480 MHz
RF Range	Up to 1300 ft (400 m) line of sight
Device Power Input	DC 5V
A/C Adapter Input	AC 90V to 260V
Size	4.2" (L) x 4.2" (W) x 1.1" (H) 10.6 (L) x 10.6 (W) x 2.8 (H) cm
Weight	0.63 lb (285 g)

FCC DECLARATION

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC RF Radiation Exposure statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

ETL DECLARATION

This device must be connected to an ETL/UL Approved 5V DC adapter provided by manufacturer.

Conditions for operating this device:

Location of Usage	Indoor and dry location
Operating Voltage of Adapter	90 V to 260 V AC
Operating Temperature	5 °C to 40 °C
Relative Humidity	Max. 90% RH non-condense
Altitude	Up to 2000 m
Pollution Degree	2

For installation, please refer to the installation section of this manual.

Place the device on a flat surface without any blockage so power can be easily disconnected.

This product has been tested to the requirements of CAN/CSA-C22.2 No. 61010-1, second edition, Including Amendment 1, or a later version of the same standard incorporating the same level of testing requirements.

WARNING: If the equipment is used in a manner not specified by manufacturer, the protection provided by the equipment may be impaired.