



Pipit 500
In-home Display Unit
Quick Start Guide

BGX701-006-R01

**CE
Compliance**



Pipit 500 complies with the EU Directive 1999/5/EC, the WEEE 2002/96/EC and the RoHS Directive 2011/65/EC.

Pipit 500 and its batteries (if fitted) must be disposed of responsibly, for example through a licensed WEEE handler.

Copyright © 2015, SIHPL. All rights reserved. E&OE.

Pipit 500[®] is a registered trade name of Secure Meters Ltd.

Other product names are trademarks or registered trade names of their respective owners.

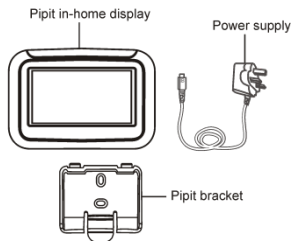
www.securetogether.com

Before you get started

What's inside the box?

Inside your Pipit 500 pack you will find:

- Pipit 500 (in-home display unit)
- Mains power adaptor
- Quick start guide (this document)
- Wall-mount bracket



Care Instructions



Do not immerse in water or any liquid



Do not cause excessive impact or shock



If damaged do not touch the liquid crystals



Do not use sharp objects

Overview

Pipit 500 is an in-home display unit that collects energy usage information from your Smart Meter¹ and displays it on a LCD screen. In addition, the unit receives and displays messages from your energy supplier and allows you to see customised alerts relating to your energy usage. If you are a prepayment consumer it will also display information relating to your account.

Pipit 500 connects (pairs) with your Smart Meter via a wireless Home Area Network. Importantly, data from your Smart Meter will only be visible on your own Pipit 500.

Touch screen: The LCD screen is touch-sensitive and backlit. The buttons and functions on the screen change according to the operation being performed.

Energy usage information: Pipit 500 displays near real-time information on the energy you are using and also allows you to check your past energy usage patterns.

Supplier messages: The unit alerts you when a message from your energy supplier has been received and allows you to view it and retains it for future reference.


Customised alerts: You can to set-up threshold alerts to inform you when your consumption is higher than you want it to be or when your account is low on credit (prepayment only).

¹ *Smart Meter refers to an electronic electricity meter with wireless communications to communicate with an in-home display using ZigBee® SEP 1.x.*

Setting up your Pipit 500

You can see how much energy you are using at any time when Pipit 500 is connected wirelessly with your electricity meter.

Powering the unit

 Only use the adapter provided with your display to power it. Place the unit in an easy-to-view location, near a power outlet.

Step 1: Insert a pair of AAA alkaline batteries, taking care to follow the correct polarity as indicated by the terminal markings in the battery compartment (refer to page 21).

Step 2: Hold the unit with its rear facing towards you and align the small end of the power adapter cable vertically, with the symbol 'B' facing towards you, and plug it into the socket on the back of the unit, as shown in the figure.



Step 3: Push the cable into the groove of the cable grip to secure the connector.

Step 4: Plug the other end into a power outlet and switch the power on. The start-up screen should appear, as shown below.

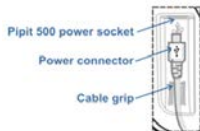


Figure 1: Pipit's start-up screen, displayed after connecting to the network

Pairing Pipit 500 with your Smart Meter

Before you can start using your Pipit it must be connected (paired) wirelessly with your Smart Meter. In order for the display to pair automatically, your Smart Meter should have the pairing window open, so that it can accept connection requests from your Pipit.

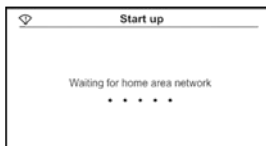





Figure 2: Pipit's pairing window

Pairing the display is normally a one-off task and is a similar process to pairing a mobile phone to a Bluetooth device. The devices that are paired will be remembered, even if power is lost.

After initial start up, press the **Network** icon from the **Settings** menu. The message *'Waiting for home area network'* will be displayed, indicating that it is searching for your Smart Meter. The **No HAN** connection icon  in the top left-hand corner flashes while the pairing process is underway. Joining the network is a self-running process which can take up to 10 minutes and doesn't require you to press anything on the display. Once the display has joined the network the message *'IHD paired successfully'*

will be displayed and the **No HAN** flashing icon  will be replaced by the **Network Connection** icon . On acknowledging the message the **Settings** menu will be displayed, followed by the **Home** screen.

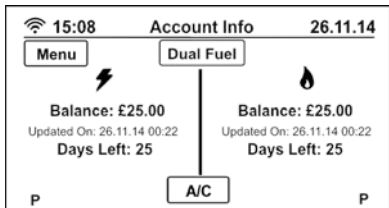




Figure 3: Dual-fuel Home screen (Liberty 100)

Energy usage information, in the left-hand section of the display, is updated approximately every 30 seconds from your  electricity meter (or every 10 seconds for 3 minutes following any interaction with the display touch screen). Information from your  gas meter is updated every minute. Use the rectangular buttons on the display to navigate through the available displays.



Note:

If your display does not link to your network refer to the 'Troubleshooting' section for advice. In order to complete the pairing process, it may be necessary to identify and enter the following information:

1. The MPAN of your electricity meter and MPRN of your gas meter (these can be found on your energy bill or on the front of your meter).
2. The MAC number of your Pipit 500 (this can be found on the underside of the unit).

² Electricity or gas supply company is not the energy retailer that sends you your bill, but rather the company which provides power services to your home, including the meter.

LEDs and battery On/Off switch

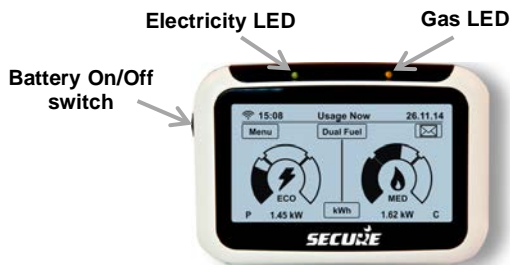





Figure 4: LEDs and battery switch

The colour of the LEDs changes to red, amber or green to indicate how much power is being used in your home. The left-hand LED indicates your rate of electricity consumption and the right-hand LED indicates your rate of gas consumption. If you are a prepayment consumer the colour of the LEDs will indicate the account balance status of your electricity and gas meters when the **Account Info** screen is displayed as shown below:

	Credit and Prepayment Modes	Account Info in Prepayment Mode
	Low power usage (0-60%)	Credit OK
	Average power usage (60-100%)	Credit low
	High power usage (>100%)	No Credit and/or Emergency Credit ON

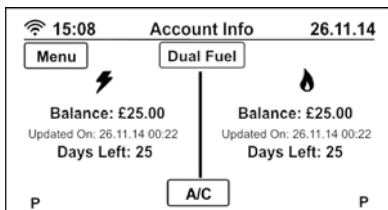


Figure 5: **Account Info** screen in dual-fuel Prepayment Mode

Note: If you are a credit consumer, the LEDs will be off when the **Account Info** screen is displayed.

Understanding the Main Display

The figure below shows the function of the navigation buttons, the significance of the icons and various displays in the dual-fuel **Home** energy usage screen.

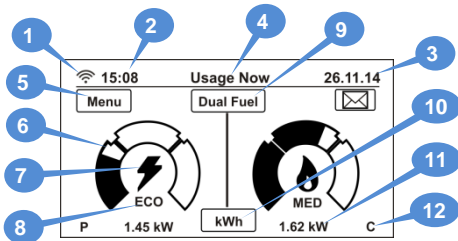


Figure 6: Home energy usage screen

- 1 Network icon: indicates the network connection status.
- 2 Current time: shows the current time in 24-hour format.
- 3 Current date: shows the current date.
- 4 Display title: shows the title of the display screen.
- 5 Menu button: press this to access the main menu.
- 6 Demand indicator dial: indicates the current demand level.
- 7 Fuel-type indicator: shows the symbol for electricity or gas*.
- 8 Rate of consumption indicator: indicates your rate of consumption - **ECO** (economy), **MED** (medium) or **HIGH**. When the indicator is in the ECO or MED range, your current usage is within the permissible £ limits set for the day. When the indicator is in the HIGH range, you will exceed your daily permissible £ limit if consumption continues at the current level. You can set your daily permissible consumption limit from **Menu>Settings>Target** menu.
- 9 Fuel selection buttons - press this to toggle the Home screen display between electricity only, gas* only or dual-fuel*.

10

Unit selection button: press this to toggle the display between kWh, £/h or CO₂kg.

11











Instantaneous numerical value: shows the real-time value of the selected unit; energy cost per hour (£/h), kilowatt hour value (kWh) or carbon dioxide emissions (CO₂kg).

12

Meter operating mode indicator: prepayment (P), credit (C), Emergency Credit (E) or Friendly Credit (F) mode.

* Gas and dual-fuel displays are only available for gas and dual-fuel consumers.

Display Identifiers

	Network connection OK. Slow flashing of  (once every 10 seconds) indicates that the unit has joined the network and is in the process of pairing with the hub.
	Poor signal strength.
	No communication with the meter(s).
	No network connection. Quick flashing of  (once per second) indicates that the unit is searching for a network to join.
	Battery charge low; the battery should be replaced if this icon is displayed.
	Message inbox.
	Electricity supply symbol.
	Gas supply symbol.
ECO	'Economy' for low energy consumption.
MED	'Medium' for medium energy consumption.
HIGH	High energy consumption.
P	Prepayment mode.
C	Credit mode.
F	Friendly Credit active.
E	Emergency Credit active.

Accessing the Main Menu

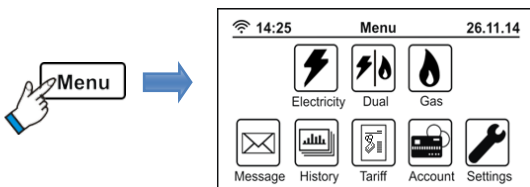


Figure 7: **Menu** screen

Viewing Real-Time Energy Usage

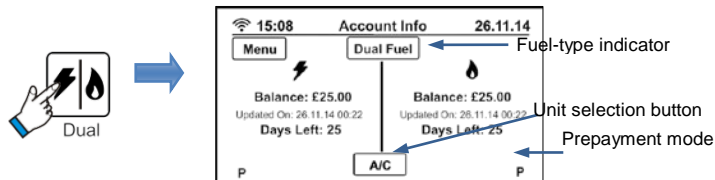


Figure 8: **Account Info** screen in dual-fuel Prepayment mode

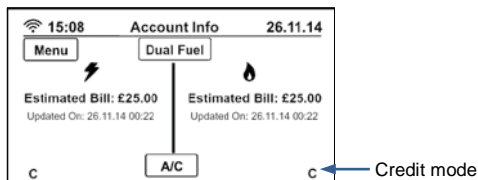


Figure 9: **Account Info** screen in dual-fuel Credit mode

Use the **Unit selection** button to view **demand indicator dials** together with your real-time electricity and gas usage value in kW, £/hour or CO₂ kg/hour. The label on the **Unit selection** button shows the type of information being displayed.

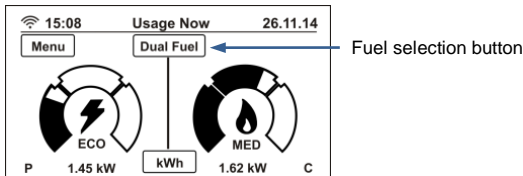




Figure 10: Home screen showing demand indicator dials

The scaling on the dial shows **ECO**, **MED** or **HIGH** according to the daily target thresholds configured for £, kWh or CO₂ kg and the readings received from the electricity meter and gas meter. You can setup the target threshold from the **Settings** menu. When displaying cost per hour (£/h) the scale on the dial is calibrated based on the configured cost (£) target per day and the tariff price read from the meter. If the tariff price is not received from the meter, Pipit cannot display the cost information.

Press the **Fuel selection** button to toggle the display between electricity only, gas only or dual-fuel. You can also use  and  icons from the **Menu** screen to display electricity or gas only usage information.

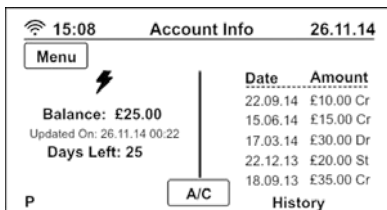


Figure 11: Electricity Prepayment mode Home screen

The meter's current operating mode is shown on the left-hand side, together with the following information:

- account balance (credit or debit), in real-time.
- the date and time when the display information was last updated.
- the number of days that current balance will last, if energy is used at the current rate.

On the right-hand side the five most recent account transactions are displayed, where 'Cr' represents the amount added, 'Dr' represents the amount deducted and 'St' represents the amount sent to the meter for initializing the meter account.

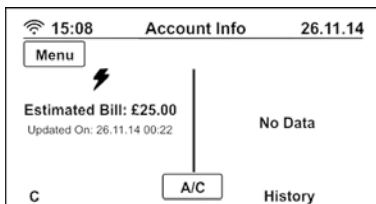


Figure 12: Electricity Credit Mode Home screen

In Credit mode, the left-hand side shows the estimated billing amount since the last billing and the date and time when this was updated.

Comparing Current Day Energy Usage with Yesterday

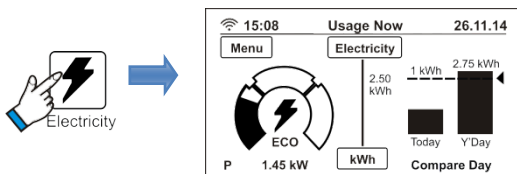


Figure 13: Electricity usage compare screen

Press the **Unit selection** button on the **Electricity Account Info** screen to see the compare screen, as above. The right-hand section of the screen displays the energy consumption graph for today and yesterday, together with the permissible consumption threshold. You can set your own daily permissible consumption threshold to help you control your energy consumption and to help keep your energy bills low.

Use the **Fuel selection** button to select the fuel type and the **Unit selection** button to view cost (£) or the resulting carbon dioxide emissions (CO₂kg), for today and yesterday.

Viewing Historical Energy Consumption Graphs

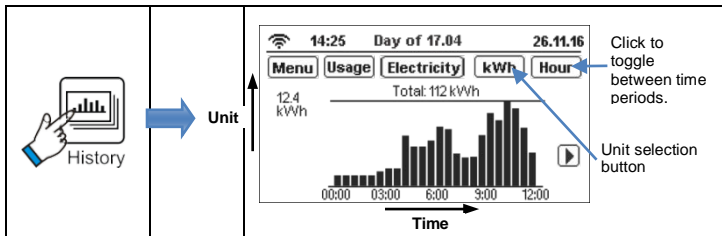


Figure 14: History graph

The **History** button on the **Menu** screen allows you to view your energy consumption pattern graphically. In the above graph you can see your half-hourly electricity consumption pattern over the past 24 hours, the highest half-hourly consumption value (12.4 kWh in the example) and the total consumption (112 kWh in the example). Use the arrow buttons on either side of the graph to scroll backwards or forwards through the data.

On this screen you can also see your daily, weekly and monthly consumption patterns. You can also check your hourly rate of consumption (£/hour) and carbon emissions, by using the **Unit selection** button. If you have a gas supply, press the **Fuel selection** button to see your gas consumption pattern graphically. The **Usage** button displays a list of the user defined tier labels for the currently active tariff in the meter.

Note: The usage button is meter variant specific.

Viewing Tariff Details



Figure 15: Electricity tariff details

The **Tariff** button on the **Menu** screen displays the rate at which you are currently being charged and also the next rate due. The rate you are currently being charged will appear in bold at the top. If your tariff includes a standing charge, it will be deducted from your meter account at the start of each day. In the above example 'Eco 5' is the name of the current tariff, in which the first 10 kWh of electricity consumption is charged at £0.05, beyond which the price increases to £ 0.10 until the next tariff rate becomes active. The tariff display table scrolls upwards as time goes by and consumption advances. You can use the arrow buttons to see subsequent tariff prices.

If you have a gas supply, press the **Fuel selection** button to see your gas tariff details and also the calorific value (CV) and conversion factor (CF) that are used for converting gas volume in m³ to kWh.

Topping-up Meter Account (Prepayment only)

You will need your energy payment receipt to top-up the amount in your meters account.

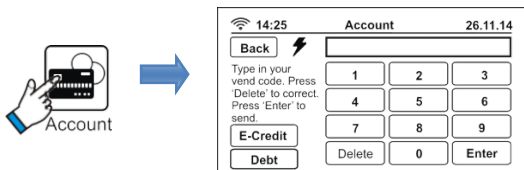


Figure 16: Vend code entry keypad

If your payment has not been received by your meter, press the **Account** button on the **Menu** screen to access the **Account** screen. This allows you to top-up manually. If you are a dual-fuel consumer, Pipit will give you the option to select the fuel type first. In the **Account** screen enter the numeric vend code printed on your payment receipt.

Note: The **E-Credit** button will be visible only if Emergency Credit is available but not in use.

As your gas meter is battery powered it takes longer to process the vend code than your electricity meter, which is powered from the mains supply.

Your Pipit will display a 'processing' screen while it waits for confirmation from the meter and then shows a 'success' or 'failure' message.

If code processing is successful then Pipit will display a 'Transaction successful' message. If it is unsuccessful a 'Transaction Failed' message will be displayed stating the reason for failure together with a **Try again** button. Press the **Try again** button to re-enter the vend code, if you think you have entered it incorrectly, or if you want to enter a different code.



If you have access to your gas meter you can speed up the processing time by pressing the button on the meter to wake it up.

Changing Pipit's Default Settings

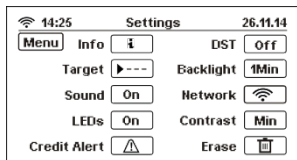


Figure 17: Settings menu screen

From the above **Settings** screen you can do the following:

- Get information on the HAN network and supplier's helpline
- Set your daily energy consumption target level
- Turn the alarm sound on or off
- Turn the indicator LEDs on or off
- Adjust your low credit alert level if you are a prepayment consumer
- Turn the DST one-hour offset on or off (during summer only)
- Set the display backlight to turn off after 1 minute or remain on continuously.
- Adjust the touch-screen display contrast.
- Erase data from your Pipit.

Target level: The **Target** button on the **Settings** screen allows you to set daily permissible consumption thresholds separately for electricity and gas (if available). After setting the target level you can visually check whether the consumption is within your permissible consumption limit.

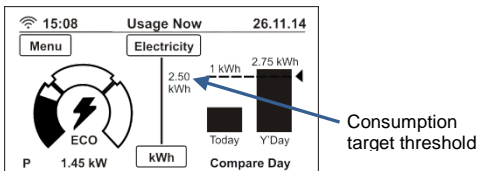



Figure 18: Consumption target threshold

Credit Alert: If you are a Prepayment consumer you can change the default low credit alert setting to different thresholds separately for electricity and gas (if available). The alerts will notify you when the credit in your meter account goes below the set threshold.

Reading Messages

The message notification  icon on the **Home** screen indicates that you have a new unread message in your inbox, press the icon to display the message, as shown below.

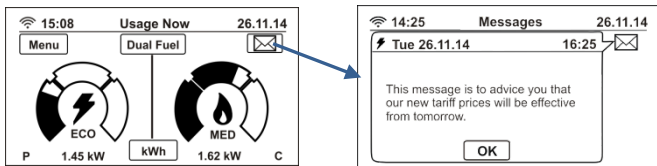


Figure 19: Message display

You can also use the **Message** icon from the **Menu** screen to access all read and unread messages.

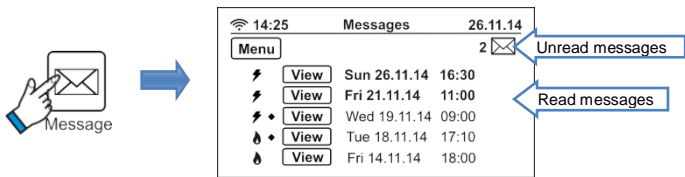


Figure 20: List of read and unread messages

Press the **View** button to see each message in turn. The number of unread messages is also indicated on the top right-hand side of the **Messages** screen.

Activating Emergency Credit (Prepayment only)

You can activate Emergency Credit from the following warning screens.

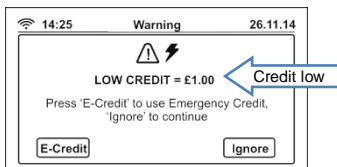


Figure 21: Warning message when credit is low

The above warning message will be displayed when your meter account is low on credit. Press **ignore** if you decide not to activate Emergency Credit. The next warning will appear with the **E-Credit** button when all your credit has been used up.

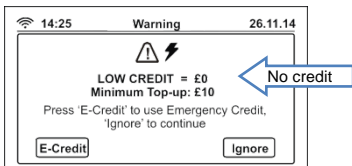


Figure 22: Warning message when meter account has no credit

If you press **Ignore** on the above warning screen your supply will be disconnected and the dial on the **Home** screen will be replaced with the **Supply Off** message, together with the minimum top-up amount required to restore supply.

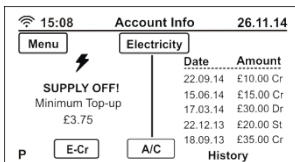


Figure 23: Electricity 'Supply Off' message on the Home screen

Press the **E-Credit** or **E-Cr** button to activate Emergency Credit. When activated, the **Home** screen will display the **E-Credit On** message, together with the Emergency Credit allowance available for use and the date and time when this information was updated.

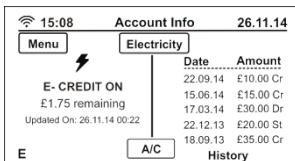


Figure 24: Electricity Home screen when Emergency Credit is in use

You can also activate Emergency Credit when the following Friendly Credit alerts are displayed.

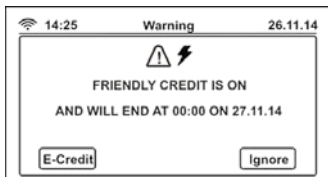


Figure 25: Low Credit warning during Friendly Credit period

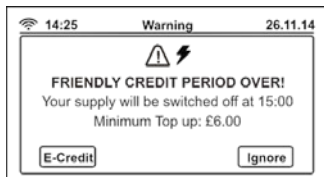


Figure 26: Zero Credit warning during Friendly Credit period

Outstanding Debt Account (Prepayment only)

Press the **Debt** button on the **Account** screen to see if your meter account has any outstanding debt. On the **Debt Account** screen you can see the amount of debt and the rate at which it is being recovered. If you have gas fuel you can press the **Debt** button from the gas fuel **Account** screen to see if your gas meter account has any outstanding debt.

Debt Type	Outstanding	Rate
Debt Acct 1	£25.00	£5/day
Debt Acct 2	£50.00	£1/hour
Debt 3	£25.00	10%/top-up
Accumulated Debt	£5.00	On top-up
Total:	£105.00	

Figure 27: Debt Account Information screen

Boost

Boost mode, when enabled, allows the consumer to manually switch ON a load terminal for a pre-defined interval, during it's scheduled OFF period. Press the **Status** button to view the boost status.

Account Info	
Est. Bill: £25.00 Updt On: 26.11.14 00:22	Est. Bill: £25.00 Updt On: 26.11.14 00:22

Figure 28: Dual-fuel Home screen (Liberty 110)

The following display shows that Boost is available for use.

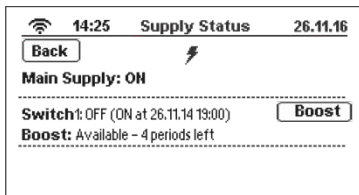


Figure 29: Boost available

Acknowledging Alerts

Friendly Credit (FC) period on/off alerts: 'F' is displayed near the bottom of the Home screen during Friendly Credit period.

Emergency Credit alerts: when Emergency Credit is zero, or very low, you must top-up your meter account and follow the instructions on the screen to acknowledge the message.

Supply restoration alerts: to reconnect your supply, follow the instructions on the 'Restore Supply' alert screens and acknowledge with the appropriate button presses.

Note. You must repay the amount due and put your account above zero before your supply can be reconnected.

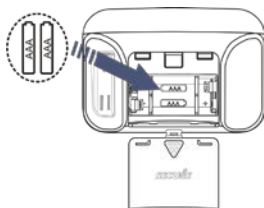


Avoid supply disconnection

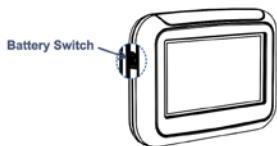
To avoid sudden supply disconnection, you must top-up the meter account accordingly when you receive the low credit warning message.

Using the Pipit 500 on batteries – perform an energy audit of your home appliances

Your display should be normally connected to mains power at all times. However, the display can operate on batteries for short periods. This allows you to disconnect the unit from mains power and move it around your home to identify how much energy is consumed by individual appliances. While on battery power the display will not give audible alarms.



To operate the display on battery power, insert two AAA-size batteries in the battery compartment at the rear, making sure that they are the correct way round, and then press the battery button located on the left-hand side of the unit. When using batteries the display will turn off automatically after approximately 90 seconds, if there is no user interaction, in order to conserve the batteries. Press the battery button to turn the display on again. A low battery strength indicator icon will appear in the top right corner of the screen when the batteries are running out. The batteries should be replaced when discharged.





Use only non-rechargeable alkaline batteries.

My Pipit is not pairing/re-pairing with my Smart Meter

Contact your electricity retailer and confirm that the pairing/binding window at the meter end is open while you try to pair the Pipit with it or, if you are using your retailer's or distributor's consumer portal, ensure that the Pipit is powered-on when the pairing/binding window at the meter end is open.

My Pipit is paired with my Smart Meter but the Home screen displays '___' instead of a value

'___' indicates that the Pipit is not receiving data from your Smart Meter. If the Network icon  is replaced with  then the Pipit is not communicating with your meters. Please contact your electricity retailer for assistance.

What are CV & CF?

CV is the calorific value and **CF** is the conversion factor used for converting gas volume m^3 to kWh.

Limited warranty

This Secure product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Secure will, at its sole discretion, repair or replace the product.

Such repairs or replacement will be made at no charge to the customer for parts or labour, provided that the customer shall be responsible for any transportation cost. This warranty does not apply for (i) cosmetic damage, such as scratches and dents; (ii) consumable parts; (iii) damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature; (iv) damage caused by service performed by anyone who is not an authorised service provider of Secure; or (v) damage to a product that has been modified or altered. In addition, Secure reserves the right to refuse warranty claims against products or services that are obtained and/or used in contravention of the laws of any country.

This product is intended to be used only as an energy monitor aid and must not be used for any purpose requiring precise measurement of energy consumption. Secure makes no warranty as to the accuracy of this product.

The warranties and remedies contained herein are exclusive and in lieu of all other warranties expressed, implied, or statutory, including any liabilities arising under any warranty of merchantability or fitness for a particular purpose, statutory or otherwise. This warranty gives you specific legal rights, which may vary from state to state.

In no event shall Secure be liable for any incidental, special, indirect or consequential damages.



Secure Meters (UK) Ltd
Secure House, Moorside Road
Winchester, Hampshire SO23 7RX
United Kingdom.



BGX701-006