kamstrup

Installation and User Guide

How to monitor your electricity consumption via the PowerTab™ in-home display

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Contents

The PowerTab™ in-home display provides you with real-time feedback on your electricity consumption. The display communicates wirelessly with your Kamstrup electricity meter via a ZigBee® module that you plug into your electricity meter.

The display lets you:

- View your current electricity consumption
- Track your electricity consumption over time
- Test consumption of operating individual devices
- Receive and acknowledge messages from your utility.

Safety instructions

To ensure your PowerTab™ is used safely, please read these safety instructions thoroughly before using the product.

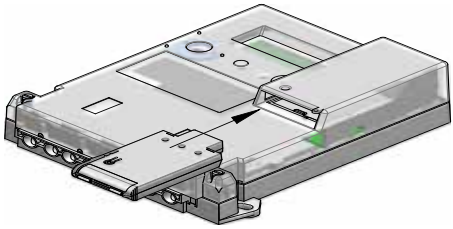
CAUTION: Only rechargeable, Nickel-Metal Hydride batteries may be used in the PowerTab™.
DO NOT USE ANY OTHER CELL CHEMISTRIES WITH YOUR POWERTAB™.

- The PowerTab™ contains a magnet. Do not place your PowerTab™ directly on credit cards, computers, or other pieces of electronic equipment, as this may cause damage.
- Do not attempt to repair your PowerTab™ or DC power adaptor yourself. If you are experiencing problems with the device, contact your service provider for assistance.
  Opening the product casing for any reason will void the product warranty.
- Do not touch any exposed electronic circuitry of the device if it becomes damaged.
- Do not immerse your PowerTab™ in water.
- Avoid using your PowerTab™ in high moisture areas such as a bathroom for extended periods of time.
- Keep your PowerTab™ away from heat sources such as stoves and heaters.
- Do not drop your PowerTab™ or cause any sudden impact to it.
- Take care when handling a damaged LCD display as the liquid crystals can be harmful to your health. If any fluid does leak from your PowerTab™'s LCD, immediately wash with soap and water.

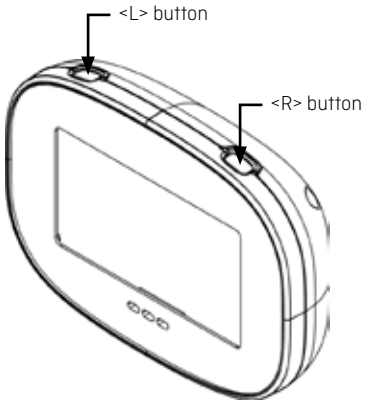
How to create the connection between your Kamstrup electricity meter and the PowerTab™ display

Prerequisites: The Kamstrup electricity meter must belong to the 382L serie.

1 Insert the ZigBee® module in the module area of the Kamstrup electricity meter.



2 Turn on the PowerTab™ display by pressing the <L> or <R> button:



The text "Searching for available services..." appears on the PowerTab™ display until the connection has been established.

How to see your current electricity consumption

1 Press the <R> or <L> button until you reach the **Current Use** screen.

This screen shows your actual consumption measured in kilowatts.

How to determine the cost of operating a single appliance

1 Press the <R> or <L> button until you reach the **Current Use** screen.

2 Compare the displayed electricity consumption when the appliance is both on and off.

The difference between the two rates is a close approximation of the power used by that appliance.

How to track your electricity consumption over time

1 Press the <R> or <L> button until you reach the **Running Total** screen.

This screen shows your consumption measured in kilowatts since the last time you reset the time.

The time elapsed since the last time you reset the time is shown at the bottom of the screen.

Note: You reset the time by pressing the <L> and <R> buttons at the same time while the **Running Total** screen is shown on the display.

How to see a message from your utility company

1 Press the <R> or <L> button until you reach the **Message** screen.

2 If a message ask you to acknowledge it, press the <L> and <R> buttons at the same time while the **Message** screen is shown on the display.

Messages remain on the display until they expire. Expiration time is defined by your utility company. Once a message has expired, it can no longer be viewed.

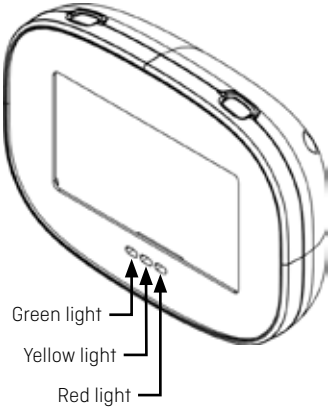
How to see the current date and time

1 Press the <R> or <L> button until you reach the **Date & Time** screen.

Light indications

When a new or unacknowledged message is available on your PowerTab™, the lights show this by simultaneously blinking once every 7 seconds. The lights continue to blink until you have acknowledged this message or changed to another display screen.

When no new messages are present, the lights indicate the current relative cost of electricity. A pulsing light indicates the price period you are currently in, while a blinking light in conjunction with a pulsing light indicates an upcoming price period change. The special case of critical peak pricing is indicated when the red light is blinking on its own. The exact behaviour of the lights is dependent on the number of active price tiers. However, green always indicates the cheapest tiers, and red the most expensive.



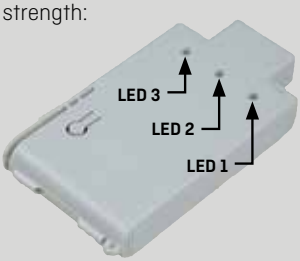
The following table shows examples of the lights' behaviour for a typical time-of-use pricing structure involving four price tiers: Off-peak, mid-peak, on-peak and critical peak pricing:

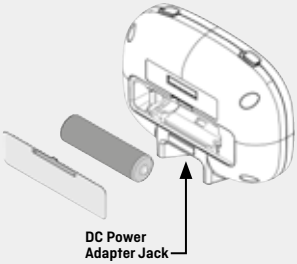
Pulsing light: "_ _ _"	**Blinking light: "-- -- --"**	**Description**
Green (leftmost light)	None	Off-peak price in effect.
Yellow (centre light)	None	Mid-peak price in effect.
Red (rightmost light)	None	On-peak price in effect.
None	Red (rightmost light)	Critical peak price in effect.
Green (leftmost light)	Yellow (centre light)	Off-peak price in effect. Mid-peak price upcoming within 5 minutes.
Red (rightmost light)	Green (leftmost light)	On-peak price in effect. Off-peak price upcoming within 5 minutes.

Troubleshooting

<table>
<tr><th>Problem</th><th>Possible cause</th><th>Solution</th></tr>
<tr><td>The PowerTab™ display has lost connection to the network.</td><td>The display is not within wireless range of your electricity meter.

Your meter's network has gone down due to a power outage or due to being serviced by a field technician.</td><td>Try moving the display closer to the meter or away from large obstacles.

Note that LED 2 and LED 3 on the module show the signal strength:
 

<table>
<tr><th>LED3</th><th>LED2</th><th>Signal strength</th></tr>
<tr><td>On</td><td>On</td><td>High</td></tr>
<tr><td>On</td><td>Off</td><td>Medium</td></tr>
<tr><td>Off</td><td>On</td><td>Low</td></tr>
<tr><td>Off</td><td>Off</td><td>Connection error</td></tr>
</table></td></tr>
<tr><td>The PowerTab™ display does not turn on when you press a button.</td><td>The battery may be dead.</td><td>Try connecting the power adapter to the DC power adapter jack and plug your display into a power outlet.
 
</td></tr>
<tr><td>The PowerTab™ display will not recharge.</td><td>The display has detected a battery that it is unable to charge.</td><td>Replace the battery with a rechargeable Nickel-Metal Hydride (NiMH) battery.</td></tr>
</table>

Problem	Possible cause	Solution
Your running total does not match your electricity bill.	Your PowerTab™ is intended for feedback purposes only and is not a billing tool. Discrepancies may exist between your PowerTab™'s running total and your bill, even if you reset your running total at the beginning of your billing cycle.	
The current consumption value does not change when you turn on/off a light.	Some electrical loads are too small to register a change in your meter's current electricity consumption value. For example, compact florescent light bulbs (CFLs) draw very little electricity and may not cause a change on your PowerTab™'s **Current Use** screen.	