Power Meter Instructions

Before you start, please remove the plastic battery tab at the back of the Reduction Revolution Power Meter. The battery allows data to be stored and reviewed, even when the power meter is not plugged in. We recommend completing the set-up process with the power meter plugged into a short extension lead. This allows you to hold the power meter in your hand, rather than it being hard-up against a wall socket.

1.1 Clock Time Set-up

1. To set the time, press the CLOCK button for 2 seconds and release.
2. Press UP to increase the value of the first digit.
3. Press SET to save and move to the next digit.
4. Once complete, press OK to save the time.

1.2 Single Tariff Set-up

1. Press the COST button for 2 seconds and release.
2. Press the UP button to choose your currency symbol then press OK to set.
3. Press OK to select TARIFF 1 and press UP to change the value.
4. Press SET to save and move to the next digit.
5. Repeat the process until you have entered each digit. Press OK twice to exit.

Note: *We recommend you enter your tariff the nearest whole cent per kWh. So, if your electricity bill says 27.678 c/kWh you should enter **00.28**. If you would like to track your appliances with greater accuracy, enter your tariff as 27.69 instead. In this case, you would need to ignore the "$" symbol, as you are now tracking cents, not dollars!*

1.3 Two Tariff Set-up

1. Enter set-up as above, but press UP when TARIFF 1 appears to switch to the DUAL TARIFF setting, then press OK.
2. Press UP to set the cost for TARIFF 1 and then press SET to move on to the next digit.
3. Press OK to change the start time.
4. Press OK and use the same process to set the cost and start time for TARIFF 2.
5. Press OK to exit after setting the time.

Got more than two tariffs? *In this case, we recommend entering an average tariff for your plug-in monitoring. In most cases, hard-wired appliances like hot water, air conditioning, and lighting will have the most significant impact on more complex time-of-use tariffs. To measure these devices, we recommend you also install a wireless energy monitor.*

2.1 Clock & Run Time Display

This is where you choose between the 'Clock Time' mode and the 'Run Time' mode. The Clock Time mode simply displays the time. The Run Time mode enables you to use the meter for an ongoing tally of energy use (plug it in and come back after a period of time).

Press the CLOCK button to switch between Clock Time (clock icon) and Run Time (no icon) in the top part of the display screen. The Run Time reading will accrue as long as the appliance is drawing more than 2W of power. There is also a day count shown in the middle section of the screen if the Run Time exceeds 24 hours.
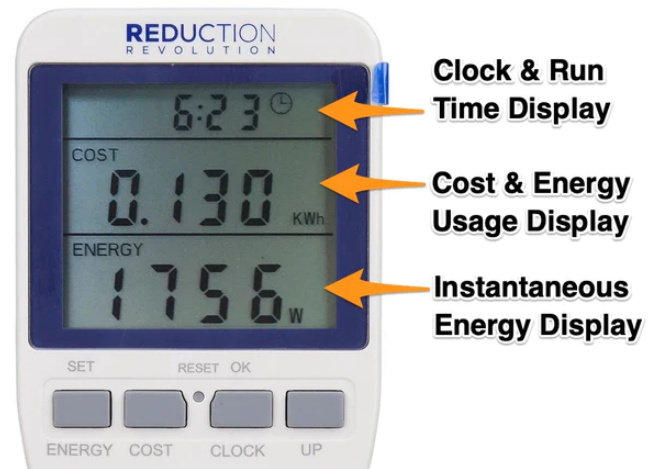
- **To reset** the run time clock, press SET and COST (SET and CLOCK on old model)

2.2 Cost & Energy Usage Display

The middle part of the screen shows four values. Press the COST button repeatedly to scroll through them.

- \$ - Total cost since last reset. **To reset,** press SET and CLOCK at the same time (or SET and COST on the old model)
- kWh - Total energy usage since the last reset. **To reset,** press SET and CLOCK at the same time, also resets kgCO2 (or SET and UP on the old model)
- kgCO2 - Cumulative CO2 emissions at a pre-set value.
- TARIFF 1 & 2 - As per the 'Tariff Set-up' above.

2.3 Instantaneous Energy Display

The bottom part of the display screen shows eight values. Press the ENERGY button repeatedly to scroll through them.

- W - Instantaneous power draw in Watts.
- V - Mains voltage in Volts.
- Hz - Grid frequency in Hertz.
- A - Current flow in Amps.
- Power Factor - Decimal between 0 and 1. Note: Volts x Amps x Power Factor (as a fraction of 1) = Watts
- Max W - Highest power draw in Watts.
- Min W - Lowest non-zero power draw.
- Overload - Optional overload setting. 'Overload' will flash when power draw exceeds this value. Press the ENERGY button for 2 seconds and release to adjust.

Common Power Meter Usage Examples

3.1 Appliances that switch on and off all day (like refrigerators & pumps).

Plug the appliance into the power meter for at least 24 hours. Note the total kWh used and compare this to the average on your power bill (kWh/day). An appliance that uses 1kWh in 24 hours, on a 10kWh/day bill, represents about 10% of total power usage.

3.2 Appliances that complete a set process (like kettles & washing machines).

These can be reviewed over one full cycle. In this way, the running cost of different settings can be checked, such as a 'hot wash' versus a 'cold wash'. Review the total kWh used and the total cost at the end of each test.

3.3 Appliances that are used for a set time period (like heaters & computers).

These can be reviewed over their typical usage time. If you normally use the TV for 4 hours in the evening, measuring it over this period will indicate its contribution to your power bill.

Found an energy-guzzling heater? See our range of [energy-efficient heating & cooling](#) options.

3.4 Electronics that are on all day in standby (like TVs & stereos).

Spot-check how much power these items use in Watts. Anything drawing above a few watts constantly can be switched off at the wall when not needed.

These [timers and standby controllers](#) are ideal for switching off standby loads.

Want to dig deeper into your energy usage?

The [Plug-in Power Meter](#) described above is ideal for assessing any plug-in appliances. But understanding your energy usage can go well beyond this; here are some examples:

1. **[Wireless Energy Monitors](#)** - these devices allow you to track your whole site's energy usage. They're ideal for picking up large loads that the plug-in power meter will miss, like air conditioning and lighting.
2. **[Thermal Imaging Cameras](#)** - these devices allow you to 'see' in the infrared (heat energy) spectrum. This can uncover electrical faults, missing insulation, water leaks, and many other issues in buildings.
3. **[Other Power Meters](#)** & **[Electrical Sub Meters](#)** - options include hard-wired 'sub meters' for on-billing, meters with wifi connectivity, or a 15A power meter.