

Transmeter

Installation Manual

Connecting the TransMeter to power

Provide power to the TransMeter by connecting the 12v power supply. A weather protected location is required for the three pin plug. The 12v cable can be extended (an extension lead is provided). After power has been provided, there will be a short delay, then the **green** and the **red** LEDs will both light up, then alternate with a 5 second interval. Further LED patterns are dependant on the configuration state of the TransMeter.

Connecting the TransMeter to the internet

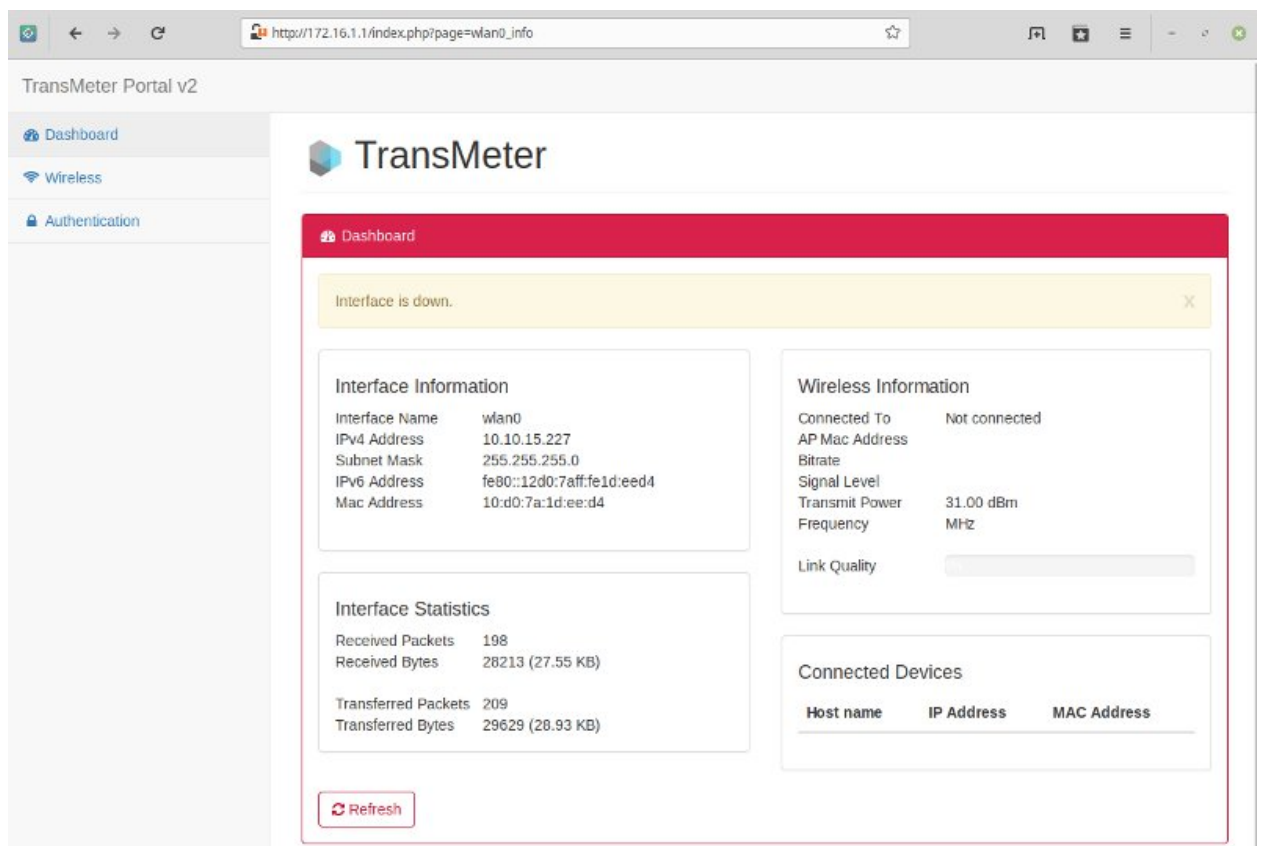
Use your phone, tablet or laptop to find the wireless network that is broadcasted by the TransMeter (for example: **TransMeter-D07A1DEED4**) and connect your phone, tablet or laptop to that wireless network. The password is "**transmeter**".

Now open a browser and open the following page: **http://172.16.1.1**

Log in with username: "**transmeter**" and password "**secret**".

Sometimes browsers automatically replace http with https; this won't work, it needs to be http.

You should now see the following screen:



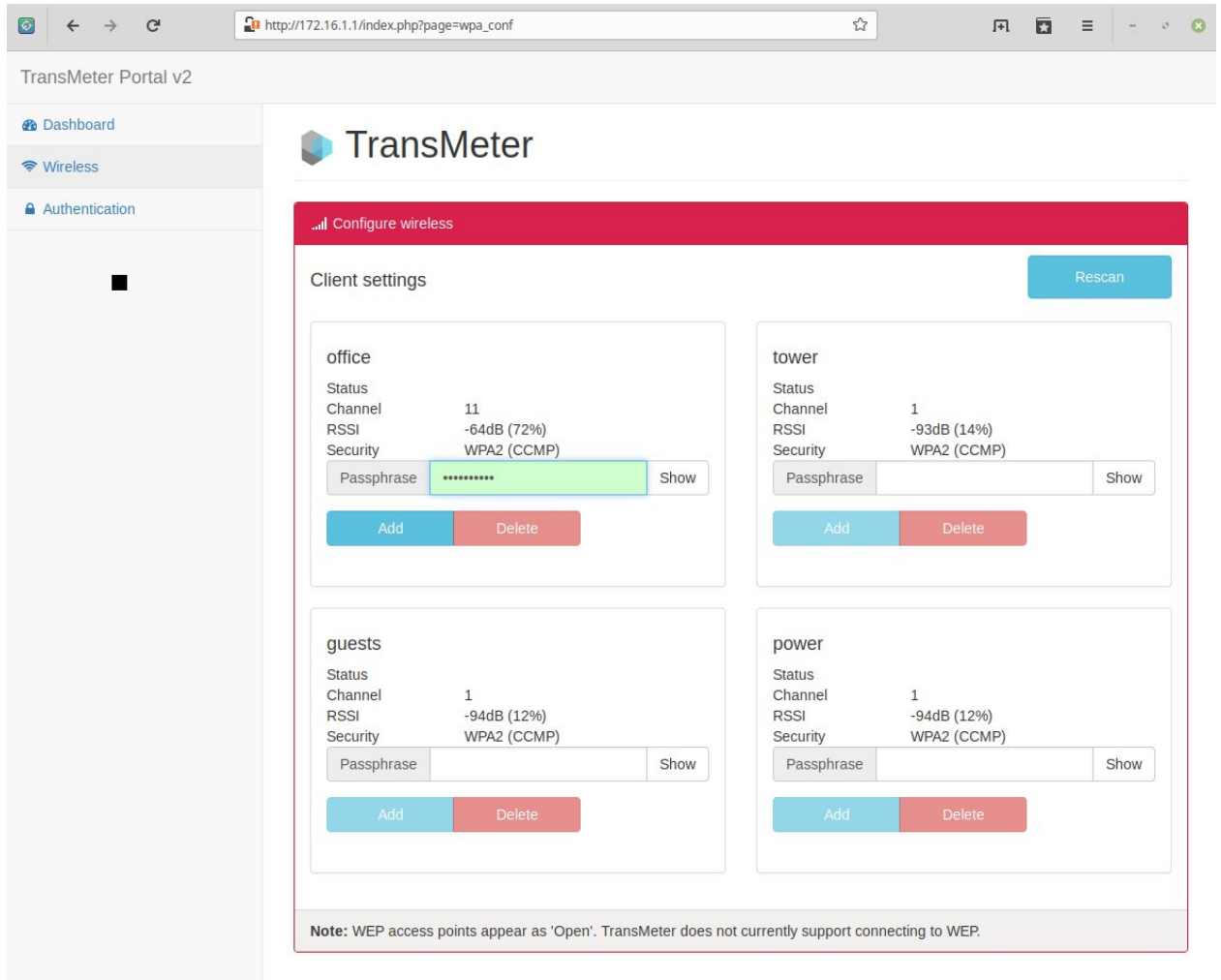


On smaller screens: Select *Wireless* from the menu, accessed by clicking this icon:

On larger screens: Select *Wireless* from the left side menu panel.

The TransMeter will now scan the area for wireless networks and show the wireless networks in range. Pick the wireless network that is to be used by the TransMeter for internet access, type the password for that wireless network, and click on "Add".

In the example below, we're connecting the TransMeter to the "office" wireless network.



When you do this with a laptop, the page will refresh and confirm when you are successfully connected to the wireless access point. When you use a phone or tablet, the page *might* not refresh automatically. You should wait, and check the LEDs of the TransMeter:

While the TransMeter is attempting to connect to the internet, the **green** and the **red** LED will alternate with a 5 second interval. You can connect to it to configure it whilst it is doing this.

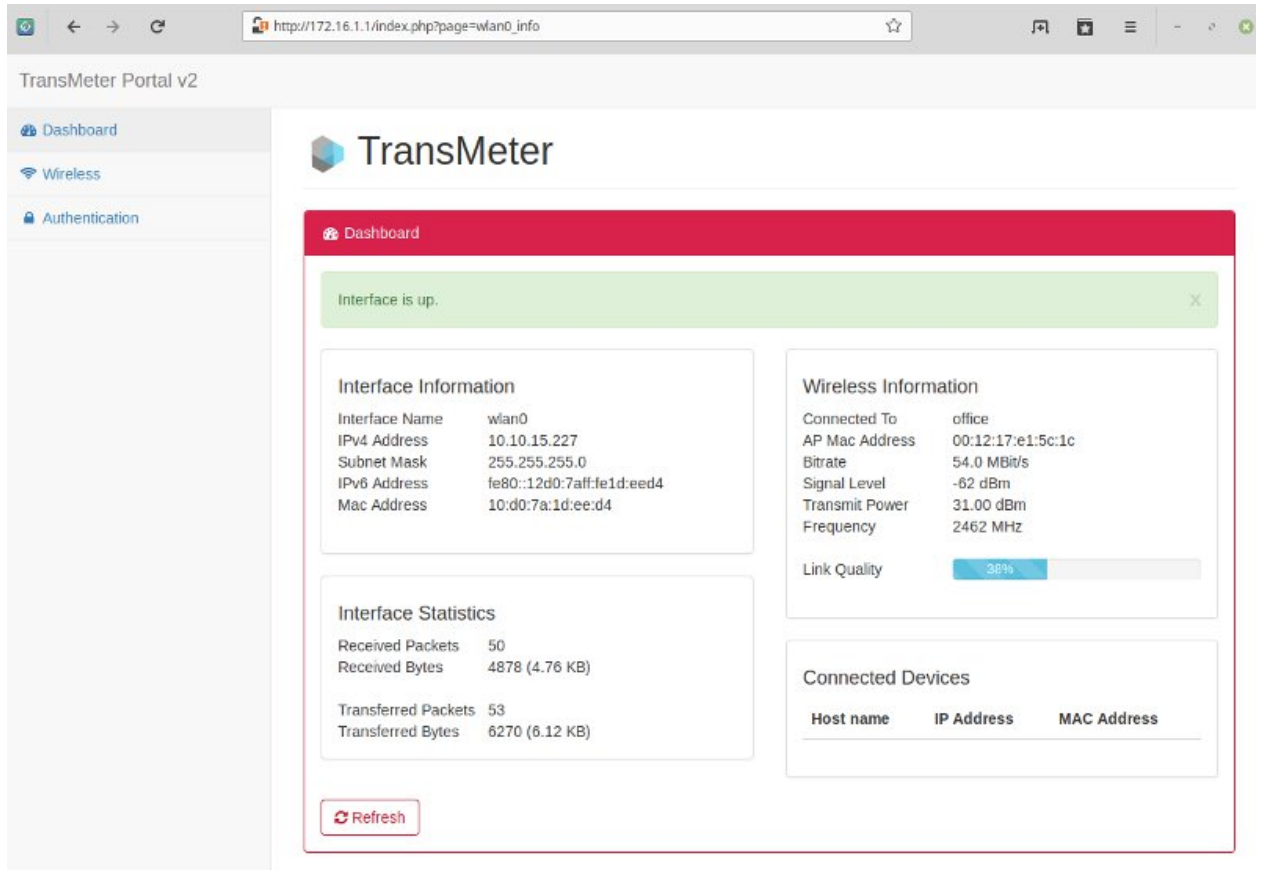
Once the TransMeter is online, *which may take up to five minutes after you have entered the wifi configuration details*, the **red** and **green** LEDs will alternate with a 1 second interval while the TransMeter initialises, and will then turn off.

TransMeter Installation Manual v2.1

After the programmed update interval (60 seconds when installing a new TransMeter), the **red** LED will turn on while the TransMeter connects to the server and will then turn off. Once you've observed these patterns, the TransMeter has been successfully registered with the server and will be operational.

After waiting five minutes to allow time for the connections to occur, you may try manually refreshing by selecting *Dashboard* from the menu. If this won't open, you may disconnect and reconnect to the TransMeter wireless network.

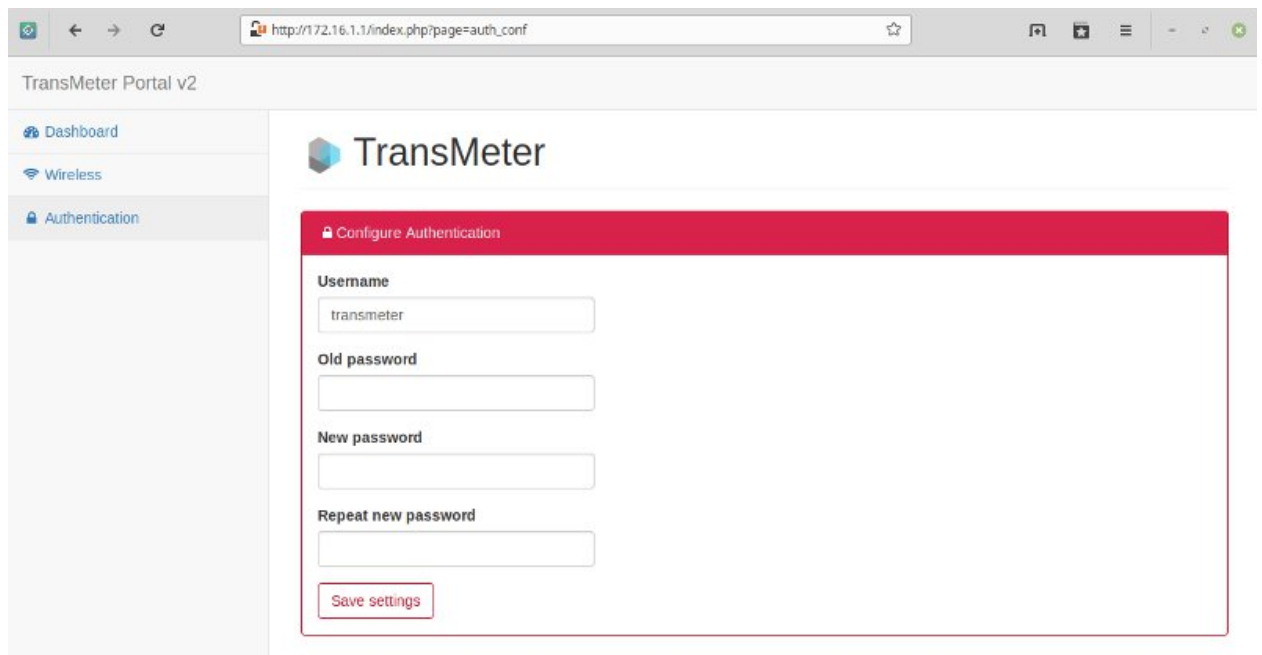
The *Dashboard* should confirm that the TransMeter is connected to the wireless network you picked and it should have been assigned an 'IPv4 address'.



In this example, the TransMeter is now connected to the internet, via the "office" wireless network (your network will likely be called something different). Please send us an email with the ID of the TransMeter (for example: **TransMeter-D07A1DEED4**) so that we can complete the registration process and configure the TransMeter for this site.

Please note that the "office" (or other) wireless network password is stored within the TransMeter. If the "office" wireless network password is changed, it will be necessary to connect again to the local TransMeter wireless link, to update the "office" wireless network password.

It is now a good idea to change the credentials needed to log in to the TransMeter to prevent unauthorised access to the TransMeter, or to the "office" (or other) network. You can do this by clicking on *Authentication* in the left panel. The username and password can only be used to access the local TransMeter wireless link, and connect or disconnect the TransMeter from the internet. They are not the same as the username and password you will use to access the recorded data on the Transmeter Web Portal (not covered in this Installation Guide - refer instead to the User Guide).



Installing the Water Meter

In accordance with the Plumbers, Gasfitters, and Drainlayers Act 2006, the installation must be completed by, or under the supervision of, a licenced drainlayer or plumber. When the water meter is installed into a drainage line to measure wastewater discharges, it must be installed by a drainlayer. When installed with potable water, it must be installed by a plumber.

The Arad-M water meter is a standard multi-jet turbine meter. It is designed for clean water, or highly-treated effluent only. If it is acceptable to discharge the water through drip irrigation pipes, then it is acceptable to use this meter with it. If effluent quality may be low, an alternative meter should be used (contact support@transmeter.nz for details).

In common with all such meter installations, the meter should be installed in such a way that it remains full of water at all times. One way to achieve this is if the discharge area is uphill of the meter and there is a non-return valve between the meter and the pump. Another way to achieve it is if a riser in the pipe is installed after the meter (and sometimes before the meter).

Also in common with all water meter installations, it is recommended to use a length of straight pipe ten times the pipe diameter immediately before the meter and five times the pipe diameter immediately after the meter. Beyond this, it is acceptable to have bends in the pipe, however having two out-of-plane bends close together before the meter is not recommended. Again, contact support@transmeter.nz for further details and assistance.

Connecting the Water Meter to the TransMeter

The grey cable which comes from the water meter dial has a connector on it which fits a socket on the TransMeter (the socket is labelled 'water meter'). It only fits in one orientation due to the shape of the plug and socket, so rotate it to match. Then screw closed the outer part of the connector to hold it in place.

Locating the TransMeter

The TransMeter enclosure and connectors are rainproof and dust proof, once the cables are connected. The enclosure is also UV protected and it has a vent on the top. However, greater

longevity can be expected from the components inside if it can be located under shelter, or at least in the shade.

Affixing the TransMeter

The Cover can be unscrewed from the TransMeter. There are fixing points at each corner into which a screw can be dropped (please check sizing is appropriate for the enclosure and for the substrate) and tightened with a screwdriver. Use a minimum of two screws to affix the TransMeter securely. Then replace the enclosure cover. Take great care not to touch the electronics within the enclosure whilst it is open. As an alternative, strapping can be used to hold the enclosure in place, without needing to open the enclosure. Do not screw any fixtures into the enclosure.

After the TransMeter has been affixed, the cover must be replaced and the installer must place a security sticker on the lower side of the TransMeter, spanning between the cover and the main body of the enclosure. The enclosure must be clean (not dusty or greasy) before the sticker is applied. Two photographs of the installation should be sent to support@transmeter.nz, one showing the wider area in which it is located, and one close-up of the underside of the enclosure, in which the sticker is clearly visible.

Servicing the TransMeter & Warranty Warning

Warning: Warranty will be voided and service may be withdrawn if the enclosure is opened after the security sticker has been affixed!

No part of the TransMeter is user-servicable. If you experience any issues and require service, please contact support@transmeter.nz. Do not open the enclosure, even to remove it to return it for a warranty claim, unless and until Transmeter Ltd. have provided advice and instruction. Transmeter Ltd. can perform remote diagnostics.

Overview of LEDs

Green	Red	Meaning
Alternating 5 second interval		TransMeter is attempting to connect to the internet
Alternating 1 second interval for 5 seconds		TransMeter has successfully connected to the internet
Blinking	On or Off	TransMeter is registering data
On or Off	On (usually briefly)	TransMeter is opening a connection to the server
On or Off	Off (usually for 1 minute)	TransMeter closed the connection to the server
Alternating 1 second interval		TransMeter is attempting to recover from a connection fault
On	On	TransMeter is in maintenance mode, no data will be registered. Please do NOT switch it off. This is rarely necessary; normally updates can be applied on the fly.

In typical operation, the **red** LED will flash on briefly once a minute. If the flash is not brief, it may indicate that the wifi connection is not very strong (signal strength can be checked by accessing the TransMeter configuration portal again, as described in the setup procedure above).

In typical operation, the **green** LED will flash only when the sensor is registering data.

The **green** LED will flash when data is received. This happens once for every liter of water when using the standard ARAD-M flow meter. If it does not happen, first check that the grey cable from the flow meter is connected to the TransMeter, then contact [support@transmeter .nz](mailto:support@transmeter.nz) and we will check that the sensor is correctly configured.

Please note that during normal operation the green LED can stay on for a while. For example, a water meter is typically configured to switch the state (on to off, or off to on) of the green LED for each litre registered. If water stops flowing whilst the green LED is lit, it will remain so until the TransMeter next connects to the server (which it usually does once a minute).

Support

You can contact us during business hours via email or phone.

Email: support@transmeter.nz
Phone: +64 27 499 0646