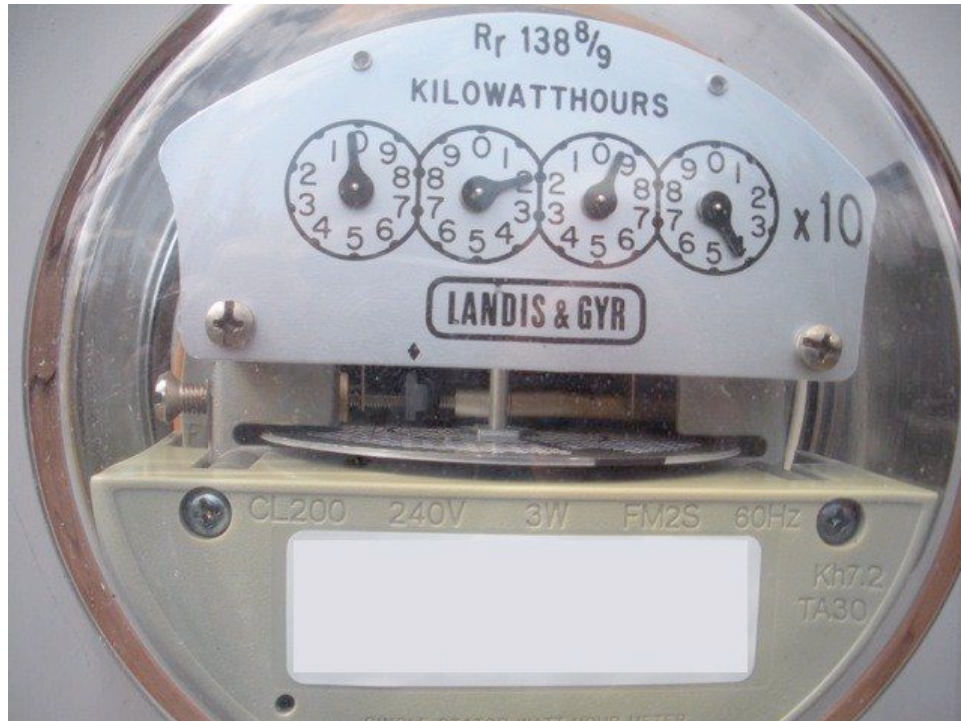


The stealth meters: Analog meters with hidden transmitters



Analog meter with hidden wireless transmitter. The serial number is blanked out to protect privacy.

Analog electrical meters sometimes transmit to the utility, just as a digital smart meter. Many people with these meters are unaware that they have a transmitter on their house, as these meters look like regular analog meters.

These “stealth meters” have been in use for well over a decade. New analog meters are probably no longer installed, but it is possible to upgrade some models by installing a transmitter.

There are meters available which transmit by wireless or by PLC, which both can cause health problems.

Keywords: wireless, electrical meter, smart meter, wired smart meter, wireless analog meter, analog smart meter, wireless electromechanical meter, power line carrier, PLC, hidden transmitter, health

2 Stealth meters



Analog meter with hidden PLC transmitter. The serial number has been blanked out to protect privacy.

Analog meters which may contain a transmitter

The following models of analog meters can be equipped with a transmitter. The list may not be complete:

ABB	AB1 D5S
Elster	AB1R
General Electric	I-70-S
Landis+Gyr	MS MX
Schlumberger	J5S
Siemens	MS MX

These meters are also available without transmitters. Having a meter of these models does not mean it has a transmitter.

How to identify a transmitter

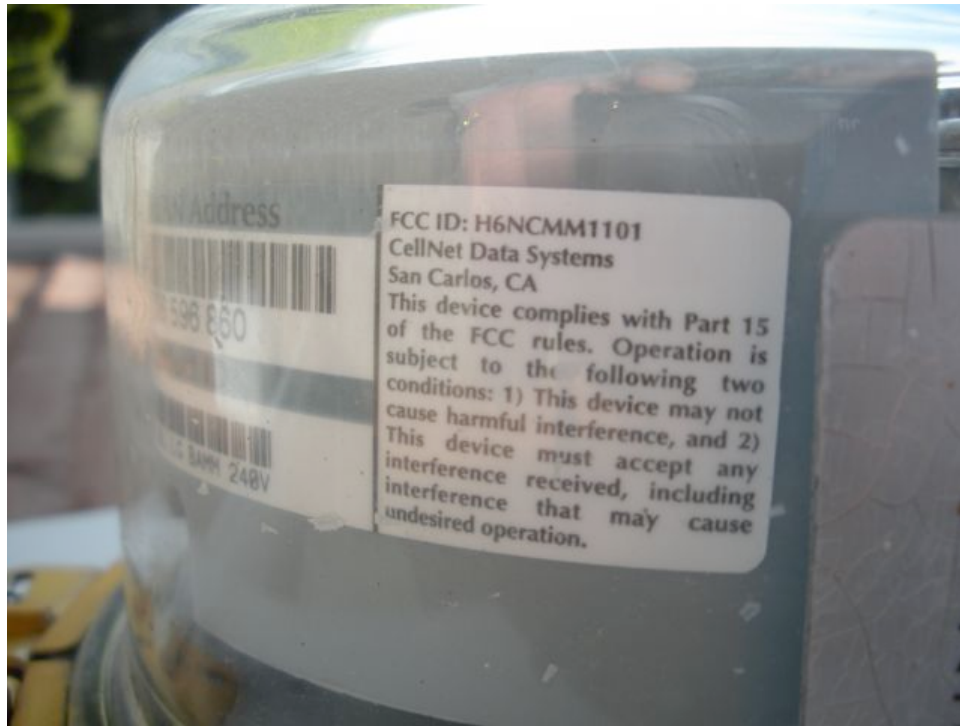
The transmitter can sometimes be seen as a circuit board mounted inside the electrical meter, if looking very closely. A purely mechanical meter does not have any electronic circuits inside.



A General Electric meter with a PLC transmitter mounted on the bottom. The green circuit board can be seen. The Turtle logo on the white label identifies the meter as a PLC transmitter. The white label has a bar code on it, which is blanked out for privacy.

Look closely at all labels on the front, the sides and the bottom of the meter. Especially at the bottom. These labels can help identify what sort of transmitter is inside, if any.

All wireless meters must display a label with an FCC ID number. This identifies the type of transmitter, not the individual meter. See the end of this document on how to look up what the FCC ID number means.



*The FCC ID label on a Landis+Gyr meter.
The ID identifies the type of transmitter, not the individual meter.*

If there is a label stating that the meter complies with FCC regulations, but no FCC ID, there is probably no wireless transmitter inside.

PLC transmitters are not considered wireless (even though they radiate). A PLC meter does not have an FCC ID, except when it also has a wireless transmitter (this author is not aware of any dual-transmitter analog meters).

The labels can provide other clues about hidden transmitters. Any mention of “ERT” will mean a wireless transmitter. Other keywords, such as “LAN”, “AMR”, and “Network” mean either PLC or wireless.

Look for labels identifying a vendor. Meters with a Turtle PLC transmitter usually have a little turtle logo.

How it works

An electromechanical (analog) electrical meter has a rotor inside, which spins as electricity passes through the meter. The rotor turns gears, which count the revolutions and turn the dials. This basic system has been used to measure electrical usage for about a century.

Some meters have a slot to insert a little circuit board with a transmitter. The circuit measures the electricity by counting the turns of the rotor, which is often done optically with a little white dot on the spindle. The circuit board then transmits back to the utility using wireless or PLC.

Are they smart meters?

The definition of a smart meter is usually that it has two-way communication. Some of the stealth meters have such two-way communication, using TWACS or Turtle TS2.

Many stealth meters use simpler one-way communication, which has various names, such as ERT, AMR, “bubble-up”, “wake up” and Turtle TS1.

The health issues are essentially the same for all these technologies.

For more information

For more information about smart meters, see
www.eiwellspring.org/smartmeter.html

For instructions on looking up the FCC ID, see
www.eiwellspring.org/tech/FCC_ID.htm