

OpenTherm

What is OpenTherm?

Over twenty years ago, Honeywell invented a way of controlling the burner within the boiler so that it provided only the amount of heat that was required at a given moment in response to a thermostat that sent proportional demand signals. This was contained within a communication protocol that was made into an open standard.

This standard is now managed by the independent **OpenTherm Association**, of which Honeywell is a member. Many boiler and control manufacturers now recognise the energy savings potential of OpenTherm. A list of OpenTherm members can be found on the association's website www.opentherm.eu

How does OpenTherm work?

The standard way to control a heating system is to switch the boiler on and off at intervals with On/Off controls. OpenTherm provides more precise control on the boiler through the control of the gas valve. It allows the amount of heat provided by the boiler to be controlled to match the varying demand signal. By reducing the flow temperature to a minimum as it leaves the boiler, the return temperature is kept below the dew point (55°C) whenever possible, thus allowing the boiler to operate in condensing mode.

What are the advantages of OpenTherm?

- Improves the energy efficiency of heating systems
- Lowers fuel bills
- Ready for technology advancements
- Installation is as quick and easy as On/Off controls
- No batteries
- Remote control

Which are Honeywell OpenTherm controls?



CM937
Wired Modulating
Programmable
Room Thermostat



T87
Modulating Room
Thermostat



CM957
Wireless Modulating
Programmable Room
Thermostat



Y87RF
Wireless
Modulating Room
Thermostat

Some boiler manufacturers also provide controls themselves, but generally, the simplest controls are made by control specialists.

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Can I use OpenTherm controls without an OpenTherm boiler?

OpenTherm cannot work with mains voltage. This is because OpenTherm room thermostats don't have switches within them; instead they have a sensor that sends a variable signal, which is received in the boiler. There it can be acted upon to make the boiler operate efficiently. Therefore OpenTherm controls can't work with traditional (non OpenTherm) boilers.

Are all controls compatible with OpenTherm boilers?

Any OpenTherm control gives any OpenTherm boiler the ability to work to its peak performance. This efficiency is then dependent on the quality of the response of that boiler to a proven demand signal.

OpenTherm enabled boilers work perfectly well with On/Off controls, but they will accept control signals from an OpenTherm control and operate more efficiently. Good examples of this are the simple Honeywell round thermostat T87, the wired programmable room thermostat CM937 and the wireless CM957.



T87



CM937



CM957

Industry testing has demonstrated that energy efficiency improvements can be made to a heating system that has an OpenTherm compatible boiler, just by replacing an On/Off controller (even some of the most sophisticated) with an OpenTherm controller.

An example would be to replace a wireless room thermostat, like the Honeywell Y6630D with a Y87RF OpenTherm room thermostat, or if a programmable room thermostat were fitted, such as a Honeywell CM927, with a similar CM957. In fact, both are wireless and the thermostat part would be exactly the same, just the wireless receiver would be different. By replacing a like for like controller, programmed to the same levels is likely to produce an energy saving of up to 10%.



Y6630D



Y87RF



CM927



CM957

Simple upgrade, both the simplest thermostats

Upgrade invisible to the user, just a different receiver

How can I find out which boilers have OpenTherm?

Some OpenTherm boilers are labelled with the OpenTherm logo, but a quick check with the manufacturers will provide assured information. You can download a complete list of OpenTherm boilers from www.opentherm.eu

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