

Data Sheet

RET2000-OT Electronic Room Thermostat for use with OpenTherm boilers

Application



The RET2000-OT is a sophisticated room thermostat which provides modulating control of OpenTherm equipped condensing gas boilers.

RET2000-OT exchanges data with the boiler it controls as opposed to on/off commands. This type of control, in addition to providing closer, more accurate room temperature control, also ensures that the flow temperature from the boiler is modulated down to as low a level as prevailing load permits. Compared to simple on/off thermostats RET2000-OT significantly increases the proportion of the boiler operating time that is spent in economic condensing mode.

The thermostat is fully compliant with the OpenTherm communications protocol including low load regulation.

The thermostat micro processor control provides an accurate PI control algorithm and manages the bi-directional data communication with the boiler.

Technical Performance

When comparing the performance of the RET2000-OT OpenTherm room thermostat with that of a traditional electro-mechanical on/off thermostat, tests clearly show that modulating control gives the best level of comfort, the lowest level of energy consumption and the lowest level of harmful CO₂ emissions.

The speed of response of the modulating thermostat is also significantly faster than its on/off counterpart allowing even small changes in room temperature to be communicated to the boiler.

User interface is by means of a generous, easy to read display that clearly shows the room temperature and output status of the thermostat. The backlit display is ideal for those with poorer eyesight or in locations which are dimly lit.

- Provides full modulation to OpenTherm equipped boilers
- Simple to install 2-wire non-polarised low voltage communications
- Accurate PI room temperature regulation
- Significantly improves boiler efficiency
- Timer setback input to 5°C frost protect level
- Button lock option

The RET2000-OT incorporates a timer input which when activated places the thermostat in off mode while maintaining a 5°C frost protect heating setback temperature.

Results from tests made in a controlled laboratory environment, show that savings in the order of 15% are achievable when comparing the control of an OpenTherm boiler controlled by a modulating room thermostat compared to the same boiler being controlled by a traditional mechanical on/off thermostat.

Specifications

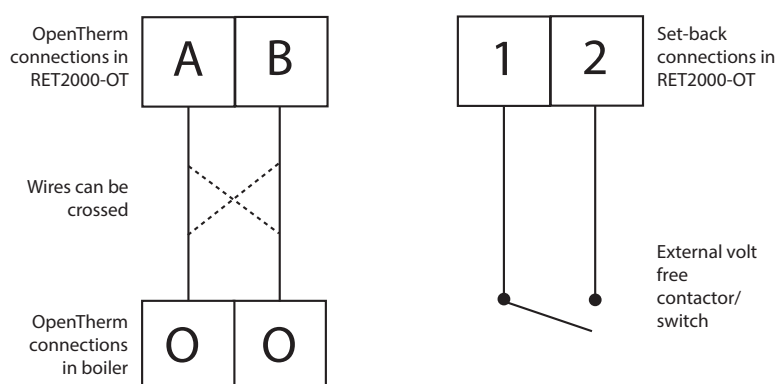
Features	RET2000-OT
Code Number	087N7889
Supply voltage	24V DC from boiler
Thermostat output	Data
Wiring	non-polarised 2 wire bus
Setting temperature range	5 - 30°C
Operating temperature range	0 - 45°C
IP rating	IP20
OpenTherm software version	v4.0
Low load control	Yes
Construction	EN60730-2-9
Control pollution situation	Degree 2
Rated impulse voltage	2.5kV
Ball hardness test	75°C
Dimensions (mm)	H84 x W84 x D35
Software classification	A

ErP Class

ERP Class		
The products represented within this document are classified according to, and allow completion of, the Energy Related Product (ErP) Directive System Package fiche and the ErP system data label. ErP Labelling obligation is applicable from 26th September 2015.		
ErP Class	Product Function and ErP Description	Additional efficiency gain
V	Modulating Room Thermostat, for use with modulating heaters An electronic room thermostat that varies the flow temperature of the water leaving the heater dependent upon measured room temperature deviation from room thermostat set point. Control is achieved by modulating the output of the heater.	3%



Wiring



Important - To avoid damage to Boiler and Thermostat, connect only to OpenTherm connections on boiler, do not connect to any other power source.

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