

RET1000 Smart Room Thermostat

Features



RET1000 Smart Room Thermostats combine sleek modern design with high performing energy saving control. The well-proportioned dial and clear temperature scale makes setting easy, including an easy to set upper and lower temperature limiting feature. All RET1000 thermostats include stylish backlit LED icons providing clear indication of power and output status. As well as standard on/off control the user can select to benefit from Danfoss chrono-proportional control. Normally set at installation although easy to change via a DIP switch this micro-processor based control system will deliver increased comfort and improved economy.





When chrono-proportional mode is set, the thermostat introduces a fixed cycle rate on the system and then determines the duration of the On and Off periods within each cycle in proportion to load. The control algorithm used to determine the on/off periods uses a proportional + integral (PI) routine to eliminate offset normally associated with on/off or simple proportional control.

Chrono-proportional control significantly improves comfort and generally improves boiler efficiency by optimising water temperature.













- Selectable Chrono Proportional or On/Off control
- User Set Upper and Lower Temperature Limits
- Output On Indication
- Power Indication

Installer Settings

On/Off Control

| Switch | Setting | Function |
|--------|---|------------|
| 1 |  | On/Off |
| 2 |  | Not Active |
| 3 |  | Not Active |
| 4 |  | Not Active |

Chrono-Proportional Control

| Switch | Setting | Function |
|--------|---|--------------------|
| 1 |  | Chrono |
| 2 |  | 3 cycles per hour |
| 3 |  | 3 cycles per hour |
| 4 |  | Not Active |
| or 1 |  | Chrono |
| 2 |  | 6 cycles per hour |
| 3 |  | 6 cycles per hour |
| 4 |  | Not Active |
| or 1 |  | Chrono |
| 2 |  | 12 cycles per hour |
| 3 |  | 12 cycles per hour |
| 4 |  | Not Active |

Datasheet

RET1000 Smart Room Thermostat

Specifications and Ordering Information

| Thermostat Features | RET1000MS | RET1000M | RET1000B |
|-----------------------------|------------------------|------------|-----------------------------|
| Ordering codes | 087N645200 | 087N645000 | 087N645100 |
| Product Line | 03 | | |
| Type | Dial Thermostat | | |
| Power Supply | 230Vac +/-15%, 50/60Hz | | 2.5 – 3VDC (2xAA batteries) |
| Output | 230Vac | Volt free | |
| Setting temperature range | 5-30 °C | | |
| Operating temperature range | 0-45 °C | | |
| Switch rating | 3A at 230Vac | | |
| Switch type | SPDT type 1B | | |
| Battery lifetime | N/A | | Min. 2 years |
| IP Rating | IP20 | | |
| On/Off Control | Yes | | |
| Chrono-proportional control | Yes | | |
| Dimensions (mm) | H84 x W84 x D37 | | |

Product Conversion Table

| New Part | Can Replace |
|-----------|---------------------|
| RET1000MS | RET230, RET230L |
| RET1000M | RET230VF, RET230VF2 |
| RET1000B | New |

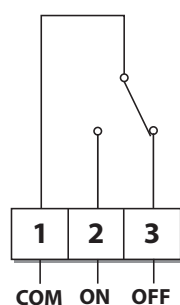
ErP Class



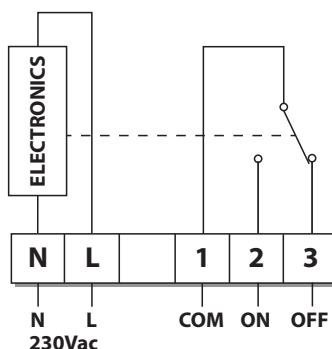
| ErP Class | | |
|---|--|----------------------------|
| The products represented within this document are classified according to, and allow completion of, the Energy Related Product (ErP) Directive System Package fiche and the ErP system data label. ErP Labelling obligation is applicable from 26th September 2015. | | |
| ErP Class | Product Function and ErP Description | Additional efficiency gain |
| IV | TPI Room Thermostat, for use with on/off output heaters An electronic room thermostat that controls both thermostat cycle rate and in-cycle on/off ratio of the heater proportional to room temperature. TPI control strategy reduces mean water temperature, improves room temperature control accuracy and enhances system efficiency. | 2% |

Wiring Details

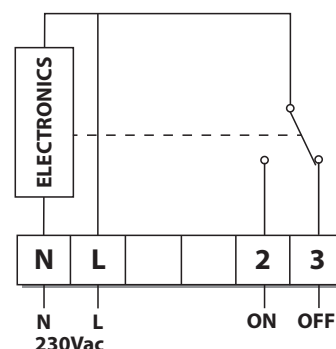
RET1000B



RET1000M



RET1000MS



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