

Digital Room Thermostat for under floor Heating

Model No:- ERT30



Electronic room thermostat for radiant panel, radiator and convector heating systems Installation and operating instructions

General

Congratulations on purchasing a SALUS room thermostat. In buying the ERT 30 model you have chosen an electronic, digital room temperature control device which offers key benefits compared with conventional, mechanical products: the control device can be very easily operated by means of two push buttons and, thanks to its highquality electronics, guarantees unparalleled ease in controlling all kinds of heating applications. The standard display shows the current temperature.

Operation

The ERT 30 electronic room thermostat is used for regulating the temperature in dry, enclosed rooms with a normal environment and maximum humidity of 95% (noncondensing).

The desired temperature can be very quickly and easily adjusted with the push buttons. This electronic control system ensures that the set room temperature is maintained virtually without fluctuation and, when required, automatically activates a reduction in temperature.

Each time you press any button, the display's illumination will automatically switch on. If no input is made for more than 5 seconds, the illumination will also switch off again automatically.

Pressing the + or - buttons will take you to the display of the desired temperature set. You can now modify this temperature. By pressing the + or - button again and again, in steps of 0.5K, until you reach your desired temperature. It is not possible to set temperatures of below 10°C or above 35°C.

If you do not press any button for more than 5 seconds, the thermostat will automatically adopt the amended desired temperature and will revert to the standard display.

By pressing both the + and - buttons at the same time for at least 3 seconds, you will activate or deactivate the frost protection mode. If the frost protection mode is activated, this will be indicated by a flashing * symbol in the display. In this mode, you will not be able to modify the desired temperature.

Pressing the Reset button will reset the ERT 30 to the factory settings.

If a timer is connected and temperature lowering is active, this will be displayed by a C symbol in the display.

If the thermostat requests heat because the actual temperature is below the desired temperature set, this will be indicated by a flame symbol in the display.

Cleaning

Never use anything other than a soft, dry cloth to clean the unit. Never use any cleaning agents containing solvents or any sharp objects to clean the unit!

The following features of the ERT 30 guarantee precise, simple and energy-saving operation of your room heating system.

Technical characteristics

Frost protection

Frost protection is automatically guaranteed by the fact that temperatures of below 10°C cannot be set. By activating the mode for special frost protection (see above), you can use the thermostat simply as a frost protection thermostat. In this mode, 5°C will be set as a fixed value.

Pulse width modulation (PWM)

Radiant panel heating systems tend to have a problem with overshooting, i.e. rooms continue to be heated even after the desired temperature has been reached and the valve has been closed.

The ERT 30 solves this problem electronically and especially effectively using what is known as pulse width modulation. By continuously comparing set temperature with actual temperature, the lengths of opening times for the valve actuators are regulated in such a way that the temperature is almost completely prevented from exceeding or falling below the set temperature. In this way, the required temperature setting is regulated in a precise and convenient way.

Note: When the ERT 30 is used with radiator or convector heating systems, pulse width modulation can be switched off if necessary (see Basic settings section).

Switching over between heating - cooling

The electronic room thermostat ERT 30 offers you an opportunity of selecting heating or cooling operation. The thermostat is set to heating operation at the factory. If you want to switch over to cooling operation, please change over the relevant switch which you will find under the housing lid (indicated by "heat" and "cool"). In the event of the thermostat being changed over to cooling, the pulse-width modulation will be automatically switched off. The adjustment to cooling operation will be indicated in the display by the * symbol.

Valve protection function

To ensure that valves remain movable and ready for use even when they are unused for considerable periods - e.g. over the summer - the ERT 30 includes a valve protection function. Briefly once a week, even when there is no requirement for any heat, the valve actuators open the valves that they control.

Note: The valve protection function can be switched off if it is not required (see Basic settings section).

Temperature reduction

Timed and demand-oriented heating control are amongst the best ways of managing heating energy in an economical way. Thanks to its integrated temperature lowering function, the ERT 30 allows you to automatically reduce the set heating temperature by 4K, without having to adjust the comfort temperature on the thermostat. This, 'night reduction' can be activated by an external signal, e.g. time control from a terminal strip, or using a standard external timer.

Installation

The ERT 30 room thermostat is designed as an electronic, digital temperature controller for the electrical fine adjustment of hot-water based heating systems, and is used for controlling electrothermal valve actuators or other electrical devices.

It is vitally important that the maximum switching current specified in the technical specifications should not be exceeded! We are not liable for any form of improper use.

This equipment must only be installed by an authorised, qualified engineer, and only in accordance with the wiring diagram. Installation must also be in accordance with the latest VDE regulations as well as your electricity supplier's regulations. The system must be in a de-energised state whilst installation is carried out, and all safety instructions must be followed to the letter.

Find a position for the thermostat where it is not covered by curtains, furniture or anything else. The controller must not be installed too close to any heat source (lights, stove, direct sunlight etc.), nor should it be installed in a position where it will be exposed to draughts. The controller must be installed in a suitable location in order for room temperature to be monitored accurately and accordingly regulated with precision.

Important:

The thermostat must be disconnected from its power supply before its housing is opened.

Wall mounting

The housing cover must be separated from the base plate before the controller is fitted. Follow the steps listed below:

1. Loosen the screw on the underside.
2. Open the housing by removing and then lifting off the housing lid on the underside.
3. Now fix the base plate with the screws supplied on the wall or on the flush mounting box.

Factory setting

- Display of actual temperature in °C
- Normal operation (not lowered)
- Desired temperature 20°C

Basic settings

The jumpers on the PCB can be used to turn on or off various functions of the ERT 30:

ERT 30 Jumpers			
Switch	Function	ON	OFF
VP	Valve protection function		
PWM	Pulse width modulation		
	Temperature reduction		

The factory setting for all these functions is ON. You can change these settings according to your own requirements by moving the contact terminals on the jumpers.

Important:

The contact terminals should not be removed!

As long as the installation is carried out to a professional standard, the criteria for protection class II will be satisfied.

Explanation of symbols

ERT 30 symbol	Meaning
	Temperature lowering active
	Heat requested
blinkend	Frost protection mode active
	Cooling operation active

Wiring diagram

The thermostat must be wired in accordance with the wiring diagram below:



ERT 30	230 V Model
Terminal	
	Lead for temperature reduction (timer)
N	Neutral conductor supply lead
L	230 V power supply lead
	Switch output (valve actuator, terminal strip)

ERT 30	24 V Version
Terminal	
L2	24 V power supply
NC	Circuit closed once temperature ¹
→	Centre-point connection
NO	Circuit open once temperature reached ²
L1	24 V power supply

¹ e.g. cooling unit

² e.g. heating unit

Technical data	230 V	24 V
Product no.:		
surface mounted	112.300	112.301
flush mounted	112.306	-
Operating voltage:	230V AC / 50Hz	24V AC / 50 Hz
Electronic switch output		
Max. switching current:	10 (3) A	
Max. no. of valve actuators:	5 Stück · 3W	
Hysteresis	0,5K	
Protection class:	IP 30	
Dimensions W/H/D:	75 mm / 75 mm / 30,5 mm	
Temperature range:	10°C - 35°C	
Storage temperature:	-20°C - 60°C	

Dimensions

- A - 75 mm
- B - 75 mm
- C - 30.5 mm

