



## SALUS ERT 20

Electronic room temperature controller for panel, radiator and convection heating systems.

### Operating and mounting instructions

#### General

Congratulations on choosing a SALUS brand room thermostat. In selecting the ERT20 model you have chosen an electronic room temperature controller which offers key advantages over conventional mechanical products: The controller is easy to operate using the conventional backlit adjusting dial and offers you unique control convenience for heating applications of all types thanks to the high quality device electronics.

The following characteristics of the ERT20 guarantee you precise, comfortable and energy saving operation of your room heating system.

#### Technical characteristics

##### Pulse-Width-Modulation (PWM)

Panel heating has the basic problem of temperature overshoot. i.e. the room continues to be heated even when the valve is closed when the desired temperature has been reached. The ERT10 solves this problem electronically and extremely effectively using so-called Pulse-Width-Modulation (PWM). Using a constant comparison of desired and actual temperature, the opening period of the actuators is adjusted to avoid, to as large degree as possible, exceeding or sinking below the desired room temperature. This achieves an exact and comfortable controlling of the set desired temperature.

**Notice:** When using ERT20 for radiators or convection heating systems, the Pulse-Width-Modulation (PWM) can be switched off (see basic settings section).

##### Switching between heating/cooling

The electronic room thermostat ERT20 offers you the option of selecting between heating and cooling operation. The thermostat factory setting is for heating operation. To switch to cooling, please switch the corresponding switch under the housing cover (marked with

“heat” and “cool”). When in cooling operation mode, the Pulse-Width-Modulation (PWM) is automatically switched off.

##### Valve protection feature

In order to ensure that the valves remain movable and functional even after long periods out of operation - i.e. in summer - the ERT20 has a valve protection feature. The valves which are to be controlled are opened temporarily by the actuators once a week, even when no heating energy is required.

**Notice:** The valve protection feature can be deactivated if required (see basic settings section).

##### Temperature reduction

You can achieve particularly efficient heating energy management with time-controlled demand-linked heating control. With the integrated temperature reduction feature the ERT20 allows you to automatically reduce the set temperature by 4K, without the need to adjust the thermostat for the set temperature. This ‘night reduction’ can be achieved via an external signal e.g. via time-control of a strip terminal or using a commercially available external clock timer.

##### Installation

The ERT20 room thermostat was designed as an electronic temperature controller for electrical readjustment of warm water heating systems and serves to control electro-thermal actuators or other electrical devices. The maximum switching current indicated in the technical data must be observed! We accept no liability for any form of misuse.

The installation may only be carried out by professional installers in accordance with the connection plan. Furthermore, the installation must also comply with the current VDE regulations and the specifications of your energy supplier. The installation is always to be carried out with the power supply disconnected, the security specifications are to be observed.

Position the thermostat such that it is not covered by curtains, pieces of furniture or other objects. The control cannot be installed close to heat sources (i.e. lamps, fireplaces/chimneys, direct sunlight etc.) and should not be affected by draughts. This allows the room temperature to be exactly measured and correspondingly exactly controlled.

**Important notice:** Before opening the thermostat, separate it from the power supply.

##### Wall mounting

Before mounting the thermostat, separate the housing cover from the base plate. Please proceed as follows:

1. Carefully remove the dial.
2. Remove the screw on the underside.
3. Open the housing by lifting the housing cover on the bottom edge and then lifting it.

Now firmly mount the base plate on the wall or the flush-mounted socket with the screws provided.

##### Connection

Wire the thermostat exclusively in accordance with the following connection plan:

ERT 20 230 V version	
Terminals	
⊕	Temperature Setback
N	Neutral
L	230 VAC supply
←	Switching output (actuator, strip terminal)

ERT 20 24 V version	
Terminals	
⊕	Temperature Setback
N	Neutral
L	24 VAC supply
←	Switching output (actuator, strip terminal)

##### Jumper settings

Different ERT20 features can be switched on or off with the jumpers:

ERT 20 switching bridges			
Switch	Feature	ON	OFF
VP	Valve protection feature	⊙ ⊙ ⊙	⊙ ⊙ ⊙
PAWM	Pulse-Width-Modulation	⊙ ⊙ ⊙	⊙ ⊙ ⊙
⊕	Temperature reduction	⊙ ⊙ ⊙	⊙ ⊙ ⊙

All features are switched to on in the factory. You can change the settings in accordance with your requirements, by switching over the contact clamps on the jumpers.

**Important notice:** Please do not remove the clamps!

The requirements for protection rating II will be maintained through complete, professional mounting.

##### Operation

The electronic ERT20 room thermostat controls the temperature in dry closed rooms with normal environs and a maximum relative room humidity of 95% (non-condensing).

The desired room temperature can be set very easily and comfortably with the control dial. The electronic control ensures as stable as possible maintenance of the set room temperature as well as the automatic activation of temperature reduction where necessary.

Clean the device exclusively with a dry soft cloth. Please do not use any cleaners using solvents or strong cleaners!

SALUS® CE □

Technical data	230 V	24 V
Article no.:	112.200	112.201
Operating voltage:	230VAC / 50Hz	24VAC / 50 Hz
electronic switching output		
Max. switching current:	10 (3) A	
Max. number of actuators:	5 units - 3W	
Hysteresis:	0.5K	
Protection rating:	IP 30	
Dimensions W/H/D:	80 mm / 80 mm / 30.5 mm	
Temperature range:	5°C - 30°C	
Storage temperature:	-20°C - 60°C	