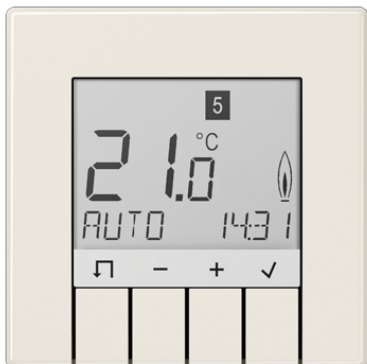


# Product data sheet

## Room thermostat universal with display



### Reference number

TR UD LS 231

### Room thermostat universal with display

Automatic control with programmable time and temperature settings possible  
with white illuminated display  
screw fixing only, without claws

Delivery capacity is ensured until the end of March 2021.

### Intended use

- Measurement and feedback control of the room temperature
- Measuring and controlling the floor temperature
- Room temperature control via floor heating with a limiting function (for example in conjunction with tiled stoves)
- Can be used for "heating only" or "cooling only"
- Installation in flush box according to EN 60670-1
- Only for use in dry, enclosed rooms

### Product characteristics

- Large display with backlighting
- Text display for self-explanatory operation
- Programmable even when the controls are removed
- Different user languages can be selected
- Real-time clock with automatic summer/winter time changeover
- Internal temperature sensor
- An external remote sensor can be connected
- Three selectable and adjustable time temperature programs for automatic mode
- A maximum of nine operating times per day (the setting can also be terminated after a specific operating time)
- Can be individually programmed every day, or a block of operating times can be set: workdays/non-workdays, all days the same
- Can be manually adjusted at any time
- "Vacation" mode with the entered date (from/to)
- "At-home" mode (present)
- Short-time timer ("party function")
- Frost protection function
- Display of energy consumption for electric heating systems
- Pulse width modulation (PWM) or two-point control system
- Adjustable cycle time (PWM), hysteresis and minimum on/off time (two-point)
- Switch-on delay, such as for burners (with two-point control)
- Adaptation to valves normally open or normally closed)
- Valve protection (as a room temperature controller with and without a limiting function)
- Separate resetting of user and installer settings
- Heating interruption acc. to EN 50559 adjustable (not for valves opened without power)

The control method depends on the type of heating and is determined by the installer:

**Room thermostat:** The heating is turned on when the room temperature falls below the set target temperature (measured with an internal sensor or external remote sensor).

**Floor thermostat:** The underfloor heating is turned on when the floor temperature falls below the set target temperature (measured using an external remote sensor).

**Room thermostat with a limiter (in conjunction with underfloor heating):** The room temperature is measured and regulated using the internal sensor. An additional external remote sensor is connected to measure the floor temperature, and a target temperature range for the floor is set. The room temperature control is deactivated when the floor temperature is outside of this range. If temperature falls below this range, the heater is turned on, and if the temperature is above this range, the heater is turned off independent of the current room temperature.

**Accessories:**

external sensor ref.-no.: FF 7.8

**Technical data**

Rated voltage:	AC 230 V ~, 50 Hz, neutral conductor required
Output:	relay (NO contact)
Switching current	
as room thermostat:	10 mA ... 10 (4) A, 230 V ~
as floor thermostat:	10 mA ... 16 (4) A, 230 V ~
Power consumption:	approx. 1.2 W
Ambient temperature:	0 ... +40 °C (no condensation)
Storing temperature:	-20 ... +70 °C (no condensation)
Temperatur-Regelbereich:	in increments of 0.5 °C
as room thermostat:	5 ... 30 °C
as floor thermostat:	10 ... 40 °C
Temperature indication:	in increments of 0.1 °C
Output signal:	pulse width modulation (PWM) or two-point control (on/off)
PWM cycle time:	adjustable (10 ... 30 min)
Hysteresis:	adjustable (with two-point control)
Minimum switching time:	adjustable (1 ... 30 min)
Power reserve:	approx. 10 years (lithium cell)

**Thermoplastic (breakproof) high-gloss**

**Colour:**  
ivory

**Material:**  
thermoplastic