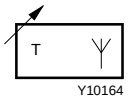
LRT 410: Electronic room thermostat with radio transmission



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How energy efficiency is improved
Individual, optimised energy use through precise adherence to setpoint.

Areas of use
For intelligent unitary control in residential and commercial properties, with wireless, bi-directional data transmission.

Features
- Room operating unit with bi-directional radio transmission for heating/cooling
- Transmission frequency 868 MHz, encoded
- Easy addressing and control using button
- NTC sensor 10kΩ
- Heating/cooling changeover via the input on the controller
- LED indicator for data transmission function and low battery warning
- Modern design with ergonomic setpoint knob
- Contemporary design

Technical description
- Flat housing made of white thermoplastic (RAL9016)
- Temperature range 5…30 °C
- With frost-protection function 5 °C
- Suitable for wall mounting and recessed junction box
- Standard battery 2 × 1.5 V AAA

Type	Temperature range °C	Weight kg
LRT 410R K104	5…30	0.080

Setting range	5...30 °C	Perm. ambient temperature	0...55 °C
Setting accuracy	0.2 K / max. 0.5 K	Perm. ambient humidity	5…80 % rh
Sensor	NTC		
Transmission frequency	868.3 MHz	Type of protection	IP 20 (EN 60529)
Transmission power	13 mW	Protection class	III (EN 60730)
Range [1]	Approx. 40 m	CE conformity as per:	
Data transmission	Every 10 minutes	R&TTE 1999/5/EC	EN 300220-1
Power supply	2 × AAA 1.5 V [2]		EN 300220-3
Service life of battery	Approx. 3 years	Type of protection	IP 20 (EN 60529)
		Dimension drawing	M11491
		Fitting instructions	P100011012

1) In standard buildings or houses, depending on the ambient conditions, 40 m in buildings, 200...300 m in open areas (depending on obstructions and local sources of interference)
2) Supplied with the unit

Operation
The LRA410 electronic room operating unit is a component of the radio system in combination with the LET4 bi-directional wireless controller. The room temperature is measured by a precision temperature sensor and compared with the current setpoint. Depending on the control offset and the control characteristic, the output is regulated on the wireless controller, thereby increasing or decreasing the heating/cooling in the room. Therefore, the required room temperature can be kept constant.

The room operating units and wireless controllers are configured ex works so that underfloor heating control is possible without any additional settings. If a cooling command is entered on the controller via the C/O input, cooling control starts automatically. Note for cooling mode: In the controller a dead zone of 2K is set ex works – this cannot be seen on the adjusting knob of the analogue thermostat. This dead zone can only be set to 0 with a room operating unit of type LRA4.

LED indicator
The red LED indicator on the transmitter is for visually checking the operation of the radio signals and the battery voltage. The LED flashes during the radio transmission. The battery must be replaced when the LED lights up briefly every 2 seconds.

Addressing the room thermostat on the receiver
When the system is put into operation for the first time, the radio connection must be re-addressed between the room thermostat (transmitter) and the receiver. The addressing is not lost when the battery is replaced.

After the desired channel is selected on the receiver, you remove the setting knob from the thermostat and press the button underneath it for 5 seconds. The LED lights up for several seconds, indicating that the connection between the thermostat and the receiver has been established.

Serviceable life and replacement of batteries

The serviceable life of the battery is approx. 3 years, though this depends on the transmission distance to the controller. The transmission strength is constantly adjusted to provide optimal power. This keeps the transmission output as low as possible.

The batteries must be replaced when the LED lights up briefly every 2 seconds. No settings are lost when the batteries are replaced. When installing batteries, ensure that batteries of the same type are used and that both of them are new. Do not mix old and new batteries.

Engineering and fitting notes

The unit should be fitted approx. 1.5 m above the floor, and protected from direct sunlight, draughts and sources of heat and cold.

The room operating unit should be installed in a readily accessible location so that the temperature of the room can be easily set.

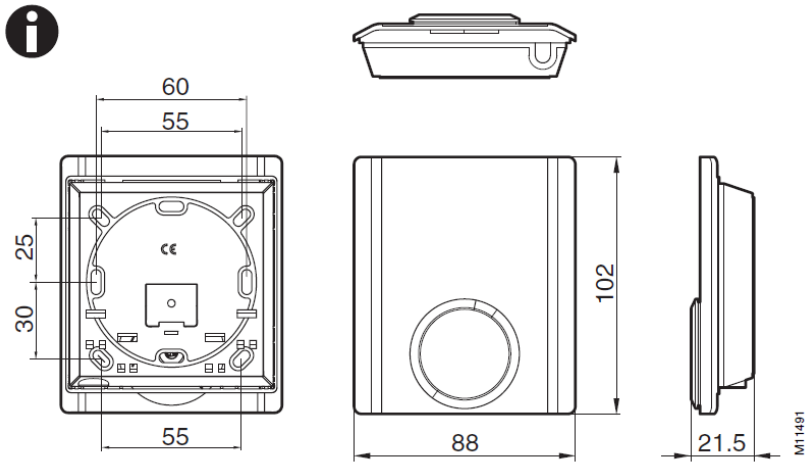
Additional technical data

CE conformity as per:	
Radio	EN 300220
RTTE immunity	EN 301489-3
RTTE emission	EN 300220-3

Operating condition

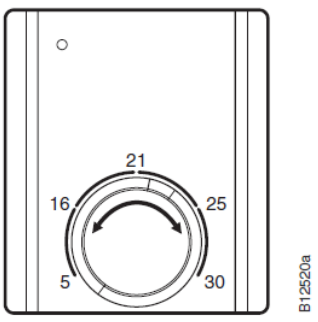
We do not recommend using the analogue room thermostat and the room operating unit with display in the same system. While the devices are compatible, some of the functions might not work. For example, if the installation is switched off via a zone or via the internet, this cannot be detected on the analogue thermostat, and this may lead to complaints.

Dimension drawing



All dimensions in mm

Setting with the adjustment knob



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