

Room temperature controller for in-wall mounting

REV26...

with one weekly operating mode including individual 24-hour modes and three 24-hour modes, cooling function



Mains-independent room temperature controller featuring straightforward operation and an easy-to-read display.

Self-learning two-position controller providing PID control (patented).

Weekly mode including individually adjustable 24-hour modes.

Control of cooling equipment.

Use

Room temperature control in:

- Single-family and holiday houses
- Apartments and office spaces
- Individual rooms and consulting rooms
- Commercially used spaces

For the control of the following pieces of equipment:

- Solenoid valves of instantaneous water heaters
 - Solenoid valves of atmospheric gas burners
 - Forced draught gas and oil burners
 - Electrothermal actuators
 - Circulating pumps in heating systems
 - Electric direct heating
 - Fans of electric storage heaters
 - Zone valves (normally closed)
 - Cooling and refrigeration equipment
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Functions

- PID control
- Self-learning or adjustable switching cycle time
- Weekly time switch
- Preselected 24-hour operating modes
- Override button
- Reset function
- Detector calibration
- Setting check
- Holiday mode
- Cooling
- Frost protection function
- Minimum limitation of set point
- Pump kick
- Optimum start control in the morning (P.1)

Type summary

Room temperature controller with weekly time switch	REV26
Adapter-frame for blends Bticino Living International / Bticino Light	AZ26.1
Adapter-frame for blends SIEMENS Delta futura / VIMAR idea	AZ26.2
Adapter-frame for blends GEWISS Playbus / AVE Sistema 45	AZ26.3

Ordering

When ordering, please give type reference according to "Type summary".

Delivery

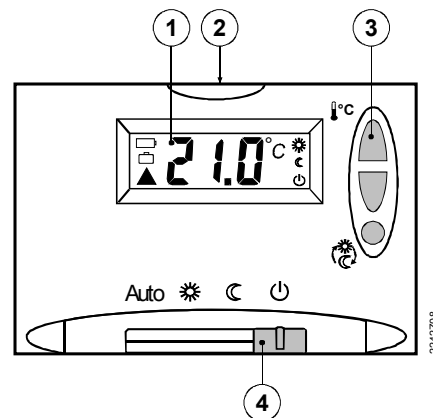
The unit is delivered complete with batteries, adapter-frames AZ26.1, AZ26.2 and AZ26.3, together with the appropriate mounting screws.

Mechanical design

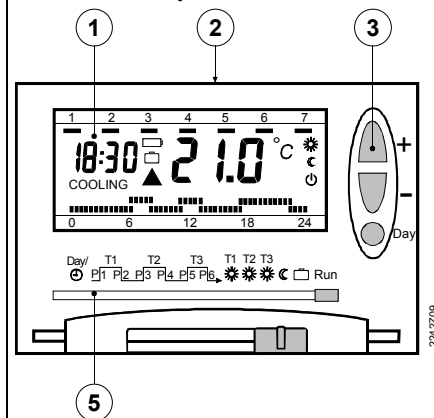
Plastic casing with an easy-to-read display, easily accessible operating elements and removable cover. The base housing can be fitted into all commercially available recessed conduit boxes and can be wired before fitting the controller to it. The unit accommodates the electronics with the DIP-switch. The potential-free changeover contact and the connection terminals are also located in the unit.

Display and operating elements

Front cover closed



Front cover open



① Display

- Normal temperature
- Economy temperature
- Standby with frost protection

- Heating/cooling on
- Holiday mode
- Battery change

- 21.0°C** Room temperature (measured)

① Display

- Normal temperature
- Economy temperature
- Standby with frost protection
- Switching pattern with flashing time position
- Heating/cooling on
- Holiday mode
- Battery change
- COOLING** Cooling mode
- 18:30** Time of day
- 1** Weekday
- 21.0°C** Room temperature (measured)

② Battery compartment

2 Batteries, Type AAA, 1.5 V

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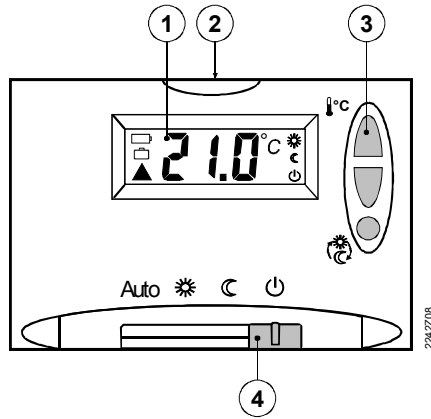
③ Operation buttons

- Warmer/colder button
-
- Override button

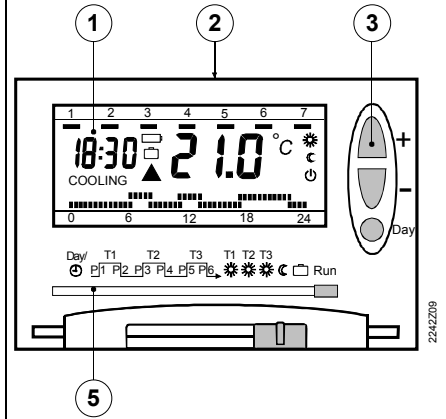
③ Setting buttons

- Set values higher/lower
-
- Block/day-button in setting mode

Front cover closed



Front cover open



4 Operating mode selector

Auto	Weekly mode with up to three heating periods per day
☀	Continuous normal temperature
☾	Continuous economy temperature
⏻	Standby with frost protection

5 Setting slider

Day/☀	Time/weekday
T1 T2 T3 P1 P2 P3 P4 P5 P6	Switching time P.1...P.6
T1 T2 T3 ☀☀☀	Normal temperatures T1...T3
☾	Economy temperature
☐	Holiday mode
Run	Operation mode

Operating modes

Auto	Weekly mode with up to three heating periods per day
☀	Continuous normal temperature
☾	Continuous economy temperature
⏻	Standby with frost protection

Set points

	Standard heating	Setting range	Standard cooling
☀T1	19 °C	3...29 °C	23 °C
☀T2	20 °C	3...29 °C	23 °C
☀T3	21 °C	3...29 °C	23 °C
☾	16 °C	3...29 °C	29 °C

In the weekly and 24-hour operating modes, the set points are freely adjustable. Fixed is only an overheating protection of 29 °C in cooling mode.

Weekly time switch

To simplify the entry of switching times, there is a switching pattern with a maximum of six switching points available.

These can be assigned to the respective weekdays 1...5 and weekend days 6...7 in the form of blocks. This means that with each block, the respective switching times and room temperatures need to be adapted only once.

It is also possible to make individual entries of the individual days 1...7.


Override button








Manual changeover between normal and economy temperature.

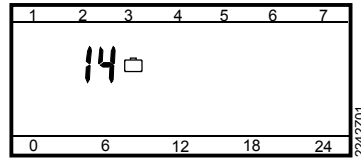
This manual action will automatically be reset when the next switching action takes place or when the operating mode changes.

Setting check

When pressing the button  Day for three Seconds in the weekly mode **Auto** the selected switching patterns of the individual days will be displayed, one by one, each for three seconds.

Holiday setting

Entry of start and duration of the holiday period. In that case, the controller will switch to economy mode at the beginning of the holiday period. The setting is done with the front cover open and the setting-slider on the position . By pressing the button  Day the start (max. 6 days in advance) and with the buttons  + and  - the duration of the holiday (max. 99 days) can be set. The display shows the **holiday symbol**  and the number of **remaining** days in the holiday period, as follows:






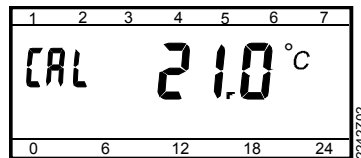
On completion of the holiday period, the controller will resume the with the operating mode selector set operating mode (e.g. **Auto**).



Calibration of detector

If the displayed room temperature does not agree with the measured temperature, the temperature detector can be recalibrated.

First, open the front cover.

When the setting slider is set to the position  Day/ press buttons  + and  - for 3 seconds. Then, the display changes as follows:

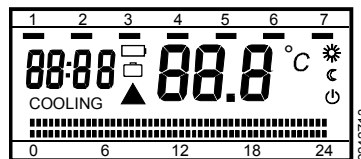


By pressing buttons  + or  - the temperature can be changed in increments of 0.2 °C (max. ± 2 °C). On completion of the readjustment, the setting slider must be reset to the Run position.

Reset


When pressing buttons  +,  - and  simultaneously for at least three seconds, all individual settings will be reset to their standard values.

Resetting also serves as a display check:



After a reset, all individual settings such as time, day, switching times, etc., must be re-entered.

Battery change

If the battery symbol () appears, the batteries must be replaced within the next three months. For that, proceed as follows:

- Get two new alkaline batteries, type AAA, 1.5 V
- Open the front cover, pull on it in order to slide out the complete unit
- Remove the used batteries, insert the new ones
- Close the cover and slide the unit back in place.

Caution!






The setting data are maintained for a maximum of one minute only!

Make certain the old batteries are disposed of properly, in compliance with environmental requirements.

Note

For this operation it is not necessary to remove the blind from the wall.

Technical features / DIP-Switch

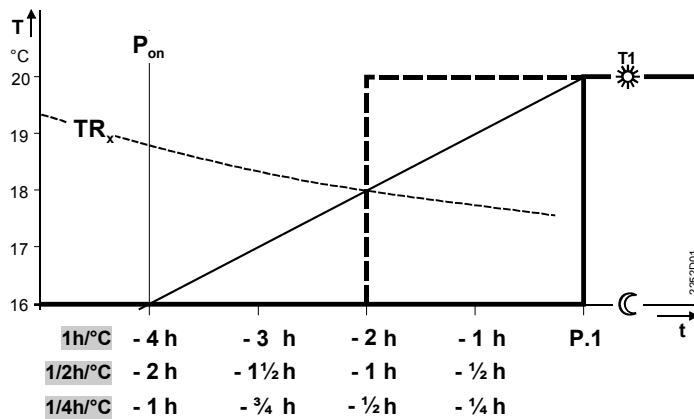
OPTIMUM P.1		1	2	3	4	5	6
	OFF	<input type="checkbox"/>	<input type="checkbox"/>				
	1/4 h / °C	<input type="checkbox"/>	<input type="checkbox"/>				
	1/2 h / °C	<input type="checkbox"/>	<input type="checkbox"/>				
P.1	1 h / °C	<input type="checkbox"/>	<input type="checkbox"/>				
HEATING			<input type="checkbox"/>				
COOLING				<input type="checkbox"/>			
	PUMP OFF			<input type="checkbox"/>			
	PUMP ON			<input type="checkbox"/>			
Self learning					<input type="checkbox"/>	<input type="checkbox"/>	
PID 12					<input type="checkbox"/>	<input type="checkbox"/>	
PID 6					<input type="checkbox"/>	<input type="checkbox"/>	
2-Pt 					<input type="checkbox"/>	<input type="checkbox"/>	

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Optimum start control Switch 1...2

Optimisation brings forward the switch-on point P.1 such that the selected set point will be reached at the desired time. The setting depends on the type of control system in use, that is, on heat transmission (piping system, radiators), building dynamics (building mass, insulation), and heating output (boiler capacity, flow temperature). The optimisation is set with the DIP-switch as follows:

OFF	No effect
1/4h/°C	For fast controlled systems
1/2h/°C	For medium controlled systems
1h/°C	For slow controlled systems



T Temperature (°C)
t Forward shift for switch point (h)
TR_x Actual value of room temperature
P_{on} Starting point for optimum on

Cooling (Switch 3)

The DIP switch is used for switching over to cooling mode when used in cooling applications.

Periodic pump run (pump kick) (Switch 4)

The setting is made with the DIP-switch while the pump is running. Protects the pump against seizure during longer OFF periods. The periodic pump run is activated for one minute every 24 hours at 12:00 h.

Control
(Switch 5...6)
Self-learning mode

The REV26 is a two-position controller providing PID control. The room temperature is controlled through the cyclic switching of a regulating unit.

The controller is supplied with an active self-learning mode, which enables it to automatically adapt to the controlled system (type of building construction, type of radiators, size of rooms, etc.). After a certain learning period, the controller optimises its parameters and then operates in the mode it has learned.




Exceptional cases

In exceptional cases, where the self-learning mode may not be adequate, it is possible to choose PID 12, PID 6 or 2-Pt mode:


- PID 12 mode Switching cycle of 12 min for normal or slow controlled systems (e.g. massive building structures, large spaces, cast-iron radiators, oil burners).
- PID 6 mode Switching cycle of 6 min for fast controlled systems (e.g. light building structures, small spaces, plate radiators or convectors, gas burners).
- 2-Pt mode Pure two-position control with a switching differential of 0.5 °C (±0.25 °C) for very difficult controlled systems with considerable outside temperature variations.

Frost protection

Frost protection is set as a default at 6 °C.

The value is adjustable in mode  when the front cover is closed with buttons  and  between 3...16 °C.

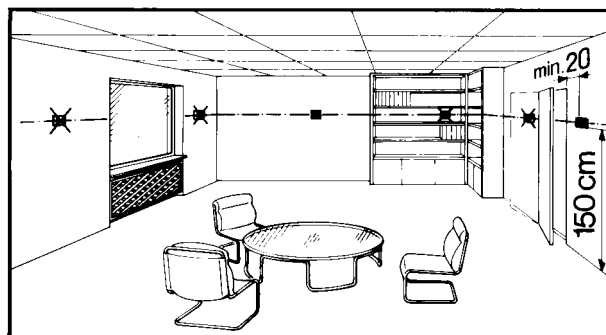
Technical Data

Operating voltage	DC 3 V	Insulation class	
Batteries (Alkaline AAA)	2 x 1,5 V	to EN60730-1	II
Battery life	approx. 2 years	Degree of protection	
Backup for battery change	max. 1 min	to EN 60529	IP30
 -conformity to		Electromagnetic compatibility	
EEC directive	89/336/EEC	Immunity	EN50082-2
low voltage directive	73/23/EEC	Emissions	EN50081-1
Switching capacity of relays		Permitted ambient temperature	
Voltage	AC 24...250 V	Operation	3...35 °C
Current	6 (2,5) A	Storage	-25...+60 °C
Measuring element NTC 68 kΩ at 25 °C		Permitted ambient humidity	
Measuring range	0...31 °C	to DIN 40040	G
Time constant	max. 2 min	Weight	0,24 kg
Set point setting range		Colour	
Normal temperature	3...29 °C	Housing and adapter plate	RAL7016
Economy temperature	3...29 °C	Sliders and buttons	RAL7001
Set point for frost protection			silvery grey
Adjustable	3...16 °C	Housing and cover print	RAL7035
Factory setting	5 °C		light grey
Resolution of settings and display			
Set points	0,2 °C		
Switching times	10 min		
Measurement of actual values	0,1 °C		
Display of actual values	0,2 °C		
Time display	1 min		

Notes

Engineering

- The room temperature controller should be fitted in the main living room.
- The place of installation should be chosen so that the sensor can capture the room temperature as accurately as possible, without being affected by direct solar radiation or other heating or cooling sources.
- Mounting height is approx. 1.5 m above the floor.
- The unit can be fitted in most commercially available recessed conduit boxes.



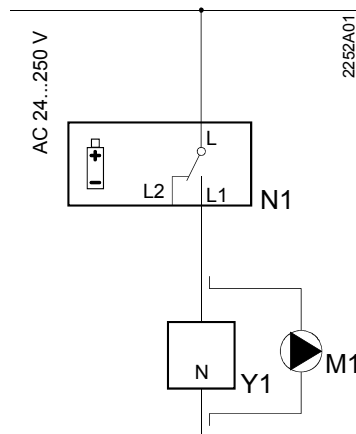
Fitting and installation

- When installing the room temperature controller, the base plate must first be fitted and wired. Then, the unit is fitted inside and secured with two screws.
- For more detailed information, please refer to the installation instructions supplied with the controller.
- For the electrical installation, the local safety regulations and standards must be complied with.

Commissioning

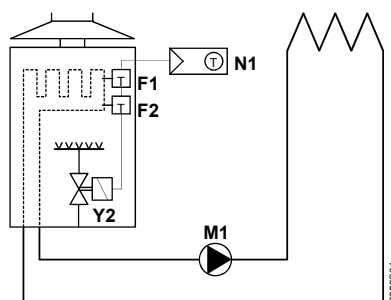
- The battery transit tab, which prevents inadvertent operation of the unit during transport and storage, must be removed from the batteries.
- The control characteristics can be changed with the help of the DIP switches located at the rear of the unit.
- If the reference room is equipped with thermostatic radiator valves, they must be set to their fully open position.
- If the displayed room temperature does not agree with the measured room temperature, the temperature detector should be recalibrated (please refer to "Calibration of detector").

Connection diagram

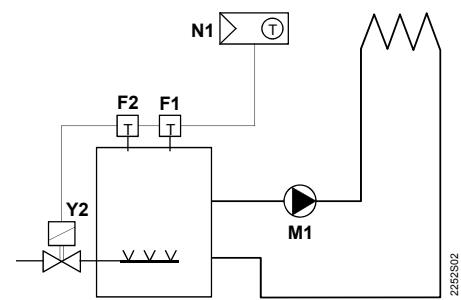


L	Live, AC 24...250 V	N	Neutral
L1	N.O. contact, AC 24...250 V / 6 (2,5) A	N1	REV26... controller
L2	N.C. contact, AC 24...250 V / 6 (2,5) A	Y1	regulating unit
M1	Circulating pump		

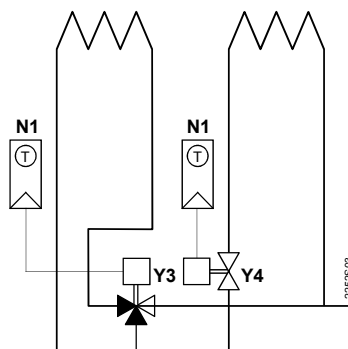
Application examples



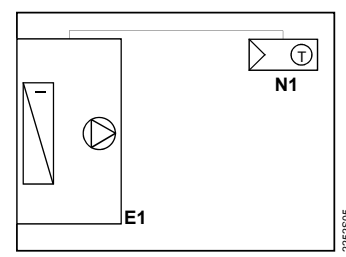
Instantaneous water heater



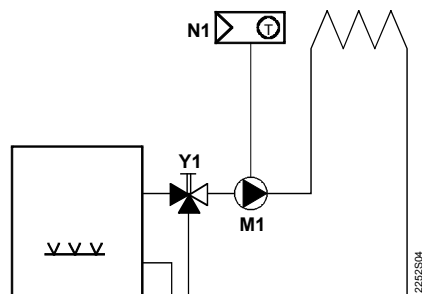
Atmospheric gas burner



Zone valve



Cooling equipment



Circulating pump with pre-control by manual mixing valve

E1	Refrigeration unit	Y1	Manually operated three-port valve
F1	Thermal reset limit thermostat	Y2	Solenoid valve
F2	Manual reset safety limit thermostat	Y3	Motorised three-port valve
M1	Circulating pump	Y4	Motorised two-port valve
N1	REV26 room temperature controller		

Dimensions

