LANDIS & GYR

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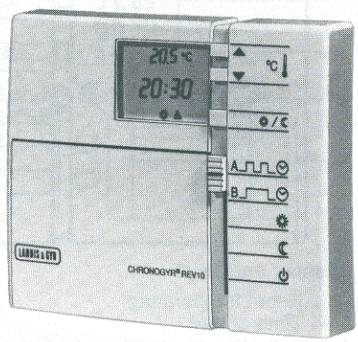
CHRONOGYR®

Room Temperature Controller REV10...



Mains independent on/off controller, 24...250 VAC. PID control with an optional cycle time of 12 or 6 minutes. Can also be operated as a proper on/off controller. Two standard heating programs that can be changed to suit individual lifestyles.

Application

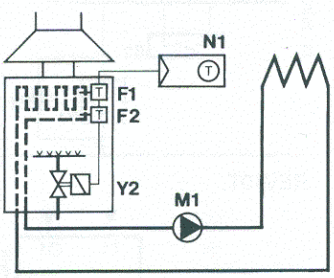
CHRONOGYR REV10... is for use in small heating plants for the control of the room temperature. Application examples:

- Individual rooms, office spaces, consulting rooms
- Heating zones, flats
- One-family houses, holiday houses

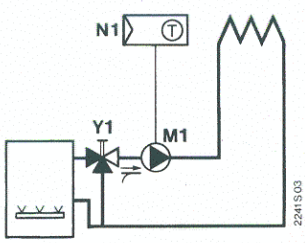
The REV10... is suitable for the control of:

- Gas solenoid valves of gas fired heating appliances
- Gas solenoid valves of natural draught gas burners
- Fans of electric block storage heaters
- Circulating pumps
- Forced draught gas and oil burners
- Zone valves (normally closed types)
- Non-storage electric heating systems

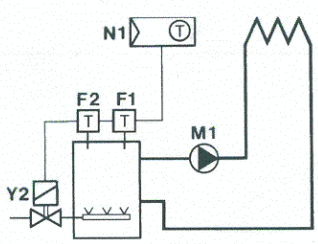
Application examples



Control of a gas fired heating appliance



Control of a circulator, with precontrol via a manually operated mixing valve



Control of a natural draught gas burner

F1 Thermostat
F2 Safety limit thermostat
M1 Circulator
N1 REV10... room temp. controller
Y1 Manually operated three-port valve
Y2 Solenoid valve

Summary of Types

Room temperature controller	**REV10...**
Room temperature controller with connection facility for remote operation	**REV10T**

Technical Features

Control

The REV10... is an on/off controller providing PID control. The room temperature is regulated by cyclic switching of the respective regulating unit. At half load, the switching cycle time is 12 minutes. If there are excessive room temperature fluctuations, the cycle time can be halved. This is recommended in the case of fast control tracks. To control very difficult systems, the REV10 can be set to operate as a proper on/off controller.

Operation modes

The REV10... offers the following operation modes:

- Automatic operation according to heating program A (two setback cycles per 24-hour period), or heating program B (one setback cycle per 24-hour period)
- Continuous normal temperature
- Continuous economy temperature
- Standby with frost protection at a room temperature of about 5°C

Set values

The room temperature set values can be adjusted as follows:

- Normal temperature from 3...29°C (standard setting 20°C)
- Economy temperature from 3...29°C (standard setting 15°C)

Override key

By operating an override key, the current heating program is overridden, i.e. a change can be made from the normal to the economy temperature level, and vice versa. This change then applies up to the next switching time of the currently active heating program.

Remote operation

The REV10T can be connected to a suitable remote operating unit. Using terminals T1 and T2, the controller is switched to economy temperature when the potential-free contact closes. When the contact opens, the controller reverts to the selected operation mode.

Contact open:	Operation according to setting at the controller
Contact closed:	Operation at economy temperature

Suitable remote operating units: Modem, manual switch, window switch, occupancy detector, central station, or similar.

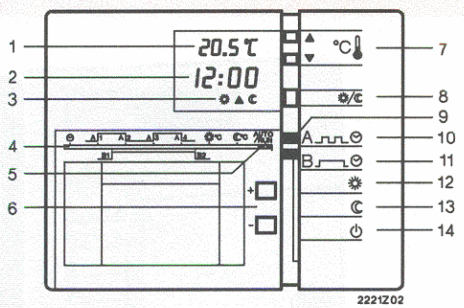
Design Features

Casing

The elegant casing of the unit is made of grey-white plastic. The baseplate carries the connecting terminals. The unit engages in the baseplate and is then secured by a screw.
When the cover is closed, the setting elements are concealed but the operating keys and the LCD remain visible and accessible.
When in operation, the display shows the relay's status, the operation mode, time of day, and actual room temperature, and - when making the settings - the switching times and the desired room temperature.

Controller

The REV10... is a mains independent unit. It is powered by two 1.5 V alkaline batteries. The controller is supplied with the batteries fitted. To prevent inadvertent operation during transport or storage, a paper battery transit tab is inserted. The REV10 is a microprocessor based controller using a potential-free contact as an output relay. The measuring element is an NTC resistor. A reserve of approx. 30 s ensures the stored data will be retained while the batteries are replaced.



Display and keys

1 Room temperature
2 Time of day
3 Indication of operation mode:
- ☼ Normal operation
- ☾ Economy operation
- ▲ Heating

4 Setting positions:
- 🕘 Time of day
- A1...A4 Switching times heating program A
- B1 and B2 Switching times heating program B
- ☼ Set value of normal temperature
- ☾ Set value of economy temperature
- AUTO/RUN Normal operating position

5 Setting slider
6 Keys for adjustment of set values
7 Warmer/colder keys (change of temperature up to the next switching time)
8 Override key
9 Slider for operation mode
10 AUTO operation according to heating program A
11 AUTO operation according to heating program B
12 Continuous normal temperature
13 Continuous economy temperature
14 OFF with frost protection

Technical Data

Operating voltage	3 VDC
Batteries	2 x 1.5 VDC (alkaline)
Battery life	approx. 2 years max.
Switching capacity of relay	
Voltage	24...250 VAC
Current	10 (5) A
Switching cycle time at half load as a PID controller	12 or 6 min (selectable)
Switching differential as an on/off controller	0.5°C
Sensing element	NTC 68 k Ω at 25°C
Measurement range	0...31°C
Time constant of sensing element	2 min max.
Setting ranges	
Set value of normal temperature	3...29° C
Set value of economy temperature	2...29°C
Frost protection set value	5°C
Resolutions	
Set values	0.5°C
Switching times	10 min
Measurement and display of actual value	0.5°C
Time display	1 min
Insulation class	II to VDE 0631
Protection standard	IP 30 to DIN 40050
Radio interference protection	N to VDE 0875
Permissible ambient temperature	
Operation	3...35°C
Transport and storage	–25...+60°C
Permissible ambient humidity	G to DIN 40040
Weight	0.18 kg

Ordering

When ordering, please use the appropriate type reference.

Mounting Guide

The unit is to be mounted on an inner wall of the reference room, about 1.50 m above the floor. Not in niches, shelves, behind curtains and doors, not near heat sources, and not exposed to direct solar radiation.
The controller is supplied complete with mounting instructions.
For remote operation, a separate cable must be used (shielded, if possible).

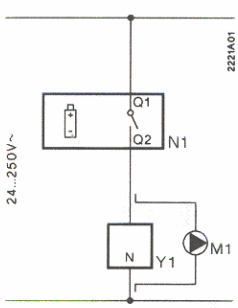
Commissioning Guide

Prior to commissioning the plant, the wiring to the regulating unit is to be checked and a functional test carried out.
The paper battery transit tab, which prevents inadvertent operation of the unit during transport and storage, must be removed.
The control mode of the REV10... can be changed by means of a switch located at the rear of the unit:

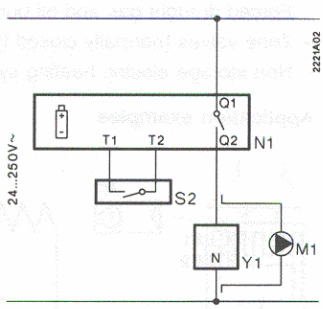
- The standard position, providing PID control with a cycle time of 12 minutes, covers the majority of applications
- If the space temperature fluctuates too much, the cycle time can by reduced to 6 minutes by operating the switch
- For extremely difficult control systems, the position "on/off controller with P control" can be used

In the reference room, the thermostatic radiator valves must be blocked in their fully open position.

Wiring Diagram

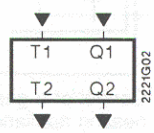


REV10...



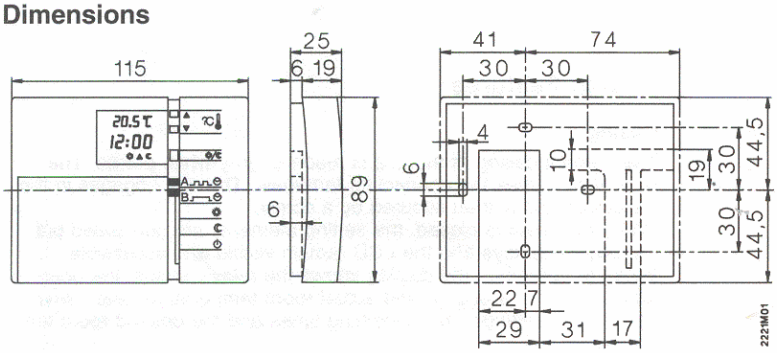
REV10T

M1 Circulator
N1 REV10... controller
Q1 Live, 24...250 VAC
Q2 N.O. contact
Y1 Regulating unit (e.g. solenoid valve, burner, fan, electric resistance heater, or similar)
S2 Remote operating unit (potential-free)
T1 Measuring neutral (potential-free)
T2 Signal remote operation (potential-free)



Connecting terminals

Dimensions



Dimensions in mm

Subject to modification