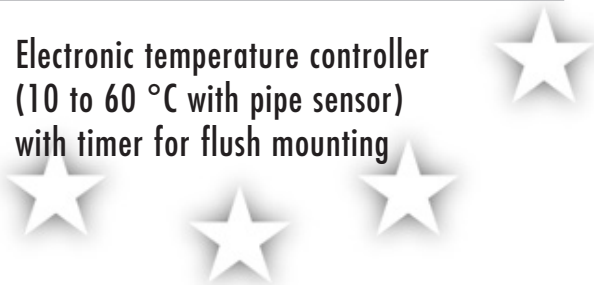




Mounting and operating instructions

Electronic temperature controller
(10 to 60 °C with pipe sensor)
with timer for flush mounting

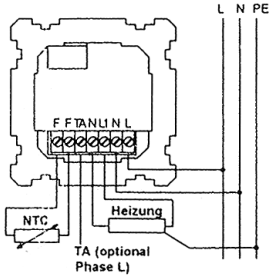


Mounting and operating instructions

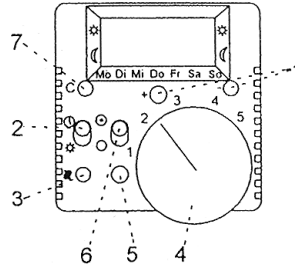
GB · 12/2007

Electronic temperature controller (10 to 60 °C with pipe sensor)
with timer for flush mounting

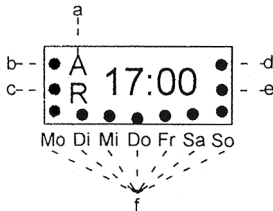
1 Temperature controller connection



2 Overview of appliance (operating controls)



3 Display indications



- a. Day groups: A = weekdays, R = rest days (Sat & Sun)
- b. 1st heating period
- c. 1st temperature reduction period
- d. 2nd heating period
- e. 2nd temperature reduction period
- f. Days of the week: Mon to Sun (from left to right)

Key to figure 2

1. '+' and '-' buttons = function: changing the setting variables
2. Sliding switch ('party switch') = function: changing between timer programme and continuous operation
3. LED display = function: heating ON / OFF
4. Thumbwheel = function: temperature setting
5. RESET button = function: deleting time and day; heating and temperature reduction periods remain unchanged
6. Sliding switch = function: heating ON / OFF
5. 'C' button = function: program sequence

NOTE:

The factory setting is restored by pressing buttons 'C' (item 7), '+' and '-' (item 1) simultaneously.

IMPORTANT NOTE

CAUTION: · Work on the 230 V mains supply may only be carried out by a qualified electrician.
· The national (Germany: VDE) and local electricity supply company safety regulations must be complied with when connecting the appliance.

CAUTION: · In the event of a fault, mains voltage may be present on the sensor cable (see fig. 1). Connecting cables must be straight and the insulation stripped by about 6 mm.
· The sensor cable must be laid in a separate protective pipe and must not be laid together with cables that conduct mains voltage.

NOTE: Please refer to our data sheets.

Valid data sheets and test certificates can be downloaded from www.luxelements.com.

Area of application / functional method

The electronic temperature controller with timer serves for the control of temperature. The appliance comprises the control module for setting the desired temperature and a temperature sensor, which measures the temperature and communicates the measured value to the control module.

Application example for the electric bench heating: the control variable is the bench temperature. This is measured by means of the remote sensor at the heating mat level.

The integrated digital clock enables switching from heating to reduced temperature twice per day, i.e. up to two different heating and reduced temperature phases can be specified differently for weekdays (e.g. Mon to Fri) and rest days (e.g. Sat, Sun).

The assignment to weekdays/rest days can be changed.

The sliding switch 'On / Off' (fig. 2, item 6) isolates one pole of the heating from the mains supply and switches off the appliance completely except for the clock.

The sliding switch 'Timer programme/continuous operation' (fig. 2, item 2) enables switching from timer-controlled heating regulation to heating control without timer (e.g. continuous operation for a party).

Mounting

CAUTION! Switch off the mains voltage!

Mounting the temperature controller: both controllers are installed in commercially available flush-mounted boxes \varnothing 55 mm (in accordance with DIN 49073, part 1). If additional intermediate terminals are used, we recommend the use of a deeper switch boxes.

- Lift out the thumbwheel carefully using a screwdriver
- After unscrewing the fixing screw, remove the controller cover
- Refer to fig. 1 when connecting
- **CAUTION!** Position the support ring over the wallpaper and mount the controller in the box using the self-tapping flush-mounted box screw
- Then place the frame and the cover on the flush-mounted insert and screw it tight
- Finally push the thumbwheel (with the groove positioned correctly) onto the appliance

Limiting the temperature range

The temperature setting range of the controller can be mechanically limited by reducing the angle of rotation of the thumbwheel.

To do this, proceed as follows:

- Lever up the thumbwheel (see fig. 2, item 3) carefully using a screwdriver
- Pull out the stop pin (of the range limiter on the appliance cover) with the aid of a pair of long-nosed pliers
- Turn the small gear wheel in order to limit the movement of the thumbwheel
- To fix the thumbwheel again, proceed in the reverse order
- The mains voltage need not be switched off to limit the temperature range

Technical data

· Mains voltage: 230 V $\sim \pm 10\%$, 50 Hz	· Temperature sensor: NTC (according to DIN 44574), length 4 m	· Connecting cables: max. 2,5 mm ²												
· Switching current for 6025: approx. 16 A $\varphi = 1$, switching power 3,6 KW	· Setting range room temperature controller: 5 to 30 °C (scale 1 to 6), floor heating controller 10 to 60 °C (scale 1 to 6)	· Sensor characteristic curve:												
· Switching temperature difference: 0,7 K	· Ambient temperature: -10 to +40 °C	<table border="1"> <thead> <tr> <th>Temp</th> <th>Resistance</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>3,66</td> </tr> <tr> <td>20</td> <td>2,43</td> </tr> <tr> <td>30</td> <td>1,66</td> </tr> <tr> <td>40</td> <td>1,15</td> </tr> <tr> <td>50</td> <td>0,82</td> </tr> </tbody> </table>	Temp	Resistance	10	3,66	20	2,43	30	1,66	40	1,15	50	0,82
Temp	Resistance													
10	3,66													
20	2,43													
30	1,66													
40	1,15													
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· The relay contact opens when the set temperature is reached														

NOTE: Please refer to our data sheets.

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Commissioning

The controller is factory-programmed as follows:

- 6:00 to 21:59: heating period, temperature selection via thumbwheel
- 22:00 to 5:59: reduced temperature of 15 °C
- Weekdays (Mon to Fri)
- Rest days (Sat, Sun)

Commissioning / setting the time

If you wish to use the factory-set values, proceed as follows to commission the appliance:

- Press button 'C' and set the time using the buttons '+' and '-'.

- The time will be shown on the display.

Press button 'C' again and set the day of the week using the buttons '+' and '-'.

- The day of the week will be displayed (see fig. 3, item f)

The controller switches automatically to operating mode after 3 minutes. The values entered previously (time and day of the week) will thereby be adopted. Commissioning is now complete and the appliance is operating.

NOTE: To adapt the controller to your individual requirements, please proceed as described in the chapter 'Programming'.

Programming

If you wish to use other values (see also chapter 'Commissioning'), the controllers are programmed in the following order (factory settings in brackets):

- Reduced temperature (15 °C)

for weekdays:

- Start of 1st heating period (06:00)
- Start of 1st reduced temperature period (22:00)
- Start of 2nd heating period (00:00)
- Start of 2nd reduced temperature period (00:00)

for rest days:

- Start of 1st heating period (06:00)
- Start of 1st reduced temperature period (22:00)
- Start of 2nd heating period (00:00)
- Start of 2nd reduced temperature period (00:00)

The following steps are necessary in order to program each individual category:

- Press button 'C' and set the new value using the buttons '+' and '-'.
- The values / indications will be updated on the display.
- Press button 'C' to end programming

NOTE: Programming can be ended at any time by pressing button 'C'. The controller will display the 'current' time again automatically after three minutes and will continue to work with the values entered.

Programming example:

In the following example, the reduced temperature and the first heating and first reduced temperature period for the weekdays are to be changed; the settings for the rest days should remain unchanged.

Proceed as follows to programme:

- Press button 'C'
- the current time will be displayed
- Press button 'C' again
- the current day of the week will be displayed
- Press button 'C' again
- Set the reduced temperature using '+' and '-'
- the new reduced temperature, e.g. 15 °C, is displayed
- Press button 'C' again
- the symbol A and the weekdays are displayed
- Set the first heating period using '+' and '-'
- the start of the new first heating period, e.g. 7:00, is displayed
- Press button 'C' again
- the symbol A and the weekdays are displayed
- Set the first reduced temperature period using '+' and '-'
- the start of the new first reduced temperature period, e.g. 22:00, is displayed
- Press button 'C' again
- Do not make any further entries
- The controller works with the new values after 3 minutes

Restoring the factory setting:

The simplest way to restore the above-mentioned factory setting is as follows:

- Press the buttons 'C', '+' and '-' simultaneously (see fig. 2)
- After that please update the time and day of the week (see chapter 'Commissioning').

NOTE: Please refer to our data sheets.

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Programming

Definition of work and rest days

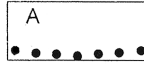
The factory-defined weekdays (Mon to Fri) and rest days (Sat, Sun) can be changed as follows:

- Press the buttons '+' and '-' simultaneously

- Then press button 'C'

- the symbols for all days of the week appear on the display

- the symbol 'A' and 'Mon' flash



- Press button '+' to turn Mon into a rest day

- the symbol 'A' disappears and the symbol 'R' appears



- the symbol 'Mon' flashes

- Press button 'C' to activate the next day (Tue) and proceed in the same way

- Press buttons '+' and '-' simultaneously to return to normal controller mode

You can switch between 'R = Rest days' and 'A = Workdays' using buttons '+' and '-'.

Confirm each change by pressing button 'C'.

Operation

Continuous operation

If you do not wish your heating to be controlled by the timer, switch the left sliding switch (fig. 2, item 2) downwards to 'Continuous operation' (sun symbol).

(The clock programming is not affected by this.

After switching back to the 'Timer programme' position, the controller continues to work in accordance with the defined heating period pattern).

Switching off the heating

If you wish to specifically turn off your heating, please switch the right sliding switch (fig. 2, item 2) downwards (circle symbol).

Switching on the heating

If you wish to specifically turn on your heating, please switch the right sliding switch (fig. 2, item 2) upwards (circle/dot symbol).

NOTE: the LED display lights up only when heating is required.

Power cut

In the event of a power cut or an open or short circuit of the sensor cable, the heating is switched off. The display (fig. 2) starts to flash. The time will be displayed for approx. two more days. The programmed values are retained, however. Reset the time if necessary (see chapter 'Commissioning').

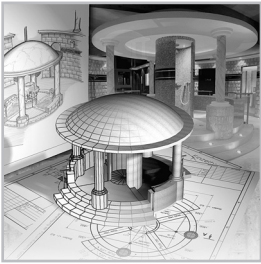
CAUTION! In the event of a fault, mains voltage may be present on the sensor cable.

Troubleshooting

Diagnosis	Possible cause/remedy
Heating doesn't work	<ul style="list-style-type: none"> - Switch on/check the mains voltage - Check the heating - Check the sensor cable - Check the set temperature - Check the reduced temperature
Display is blank	<ul style="list-style-type: none"> - Switch on/check the mains voltage - Check the appliance
Controller switches too early/late to heating/reduced temperature period	<ul style="list-style-type: none"> - Check work and rest day settings - Press RESET, then carry out settings again
LED flashes	<ul style="list-style-type: none"> - Sensor is not connected or is defective

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