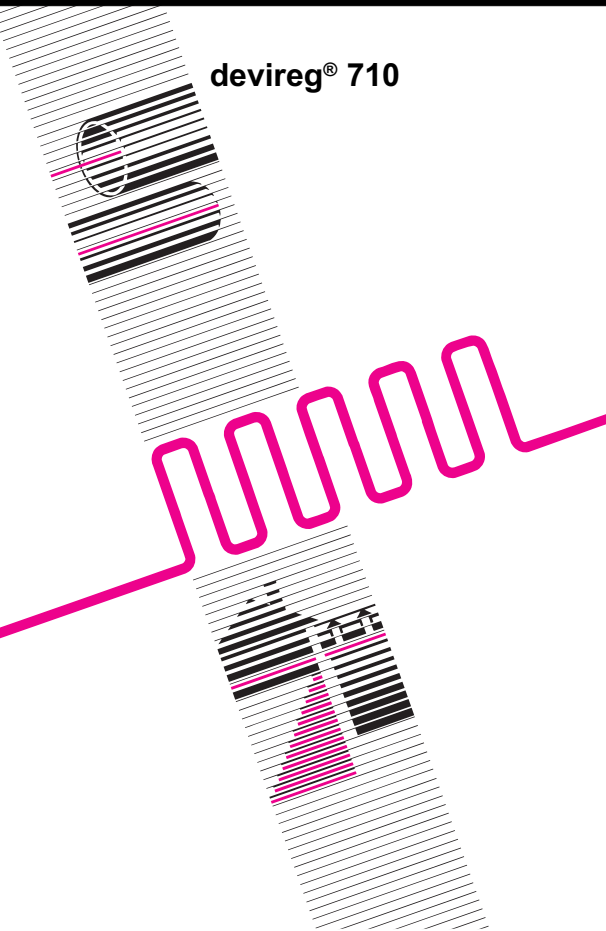


Installation Instructions

devireg® 710



DEVI 

Application:

devireg[®] 710 is designed for control of storage heating systems.

devireg[®] 710 automatically controls the input necessary to the room to achieve the required comfort.

Description:

devireg[®] 710 is delivered with an outdoor sensor and a wire sensor.

The wire sensor is installed in the floor and works as a temperature limiter. Do not connect the sensor if this function is not required.

The outdoor sensor is mounted in the shadow of a building at a place without direct sunlight. By means of the outdoor temperature sensor the **devireg**[®] 710 will allow the input necessary to maintain a comfortable indoor temperature.

The system will only be switched on in connection with the off-peak periods, which is automatically controlled via the off-peak signals, normally provided by the Regional Electricity Company. The **devireg**[®] 710 registers the start and the end of the off-peak periods and will always give the input charge required in the last part of an off-peak period.

System:

When **devireg**[®] 710 is connected it will automatically start monitoring the off-peak periods thus it knows what time each period starts and the length of each period.

devireg[®] 710 is up-dated daily and therefore it always knows the cycle and the length of the off-peak period.

Note: The first day the **devireg**[®] 710 is connected, the energy supply is spread all over the off-peak period. The long off-peak period must last a minimum of 4 1/2 hours and a maximum of 10 1/2 hours per 24 hours.

Short duration power cuts do not influence **devireg**[®] 710.

Installation of devireg® 710:

1. **devireg® 710** is for DIN rail mounting. The **devireg® 710** can be mounted in surface box available from •.
2. The outdoor sensor is placed on an outside north facing wall without direct sunlight.
3. The floor sensor is mounted in the concrete, approx. 3 cm under the floor surface, and installed in an area as indicated by the system design. The sensor works as a temperature limiter.
4. The **devireg® 710** is connected as shown in fig. 2.
5. Off-peak period.
Signal wire for low rate period (off-peak) must be connected on terminal 4 (230 V).
6. Set back.
When terminal 3 is connected e.g. via **devitime 301**, the energy supply is reduced to approx. 50%.
Can be used in connection with holidays etc. when you want to save energy.

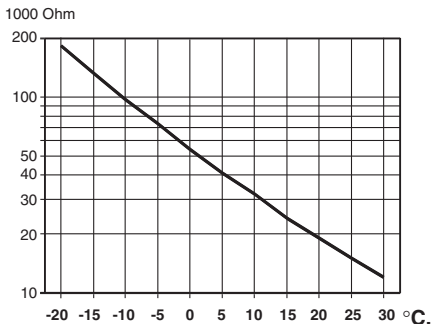
NB!

The heating systems (heating cables involved) must not be connected before the concrete is hardened.

Note: When starting up the system the buttons a and b must be placed in the middle.

(Characteristic for NTC sensor 15 kOhm).

Curve



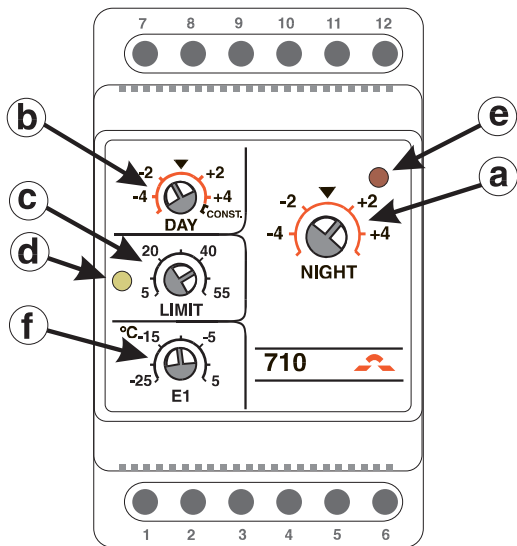


Fig. 1

Lamp (d):

A red light glows when heating is on and a green light when heating is off. When no light is showing the floor temperature has exceeded the setpoint and the floor circuits have been automatically switched off.

Lamp (e):

An intermittent red light will flash at all times, the rate of flashing indicates the percentage of the load being applied.

Control (f):

Normally set by the installer at -1°C (South U.K.) or -4°C (North U.K.). This control relates to the design temperature of the system and should not be altered by the user.

Control Settings and Display Lights:

When used in conjunction with single period, night and multi-period »off-peak« tariffs both control (a) and (b) will be set by the installer at their mid-scale.

In the first 24 hours following connection the controller memorises the start and finishing times of the off-peak periods.

Thereafter the controller will regulate the energy required to achieve and maintain the designed comfort temperatures.

The achieved temperatures may be adjusted by the user by altering controls (a) and (b) as follows:

Control (a):

Turn clockwise (+4) to increase or anti-clockwise (-4) to decrease room temperatures in the morning to personal comfort levels. Adjust control in the evening (i.e. prior to the overnight charge period).

Control (b):

Turn clockwise (+4) to increase or anti-clockwise (-4) to decrease room temperatures late afternoon/evening to personal comfort levels. Adjust control in the morning (i.e. prior to the afternoon/evening charge period).

N.B. On night-only tariffs the control (b) is inoperative and should be set at ▼.

Const. is a TEST SETTING ONLY.

Fit and Forget:

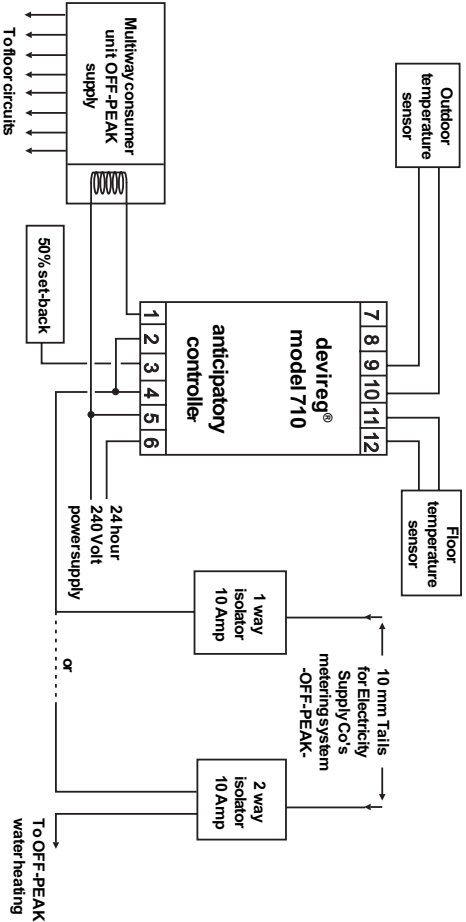
The effect of the above adjustments will not be felt until the next day, but once satisfactory temperatures have been achieved no further adjustments will be necessary as the controller will maintain these chosen comfort conditions regardless of the outside temperature.

Control (c):

The installer will set this dial to the maximum floor temperature required, normally 50°C. Floor circuits will automatically be switched off, if this temperature is exceeded. No further adjustment is necessary.

The user may use this control to reduce overall heating to background or frost protection levels (i.e. when the dwelling is unoccupied for long periods during the heating season) by resetting the dial to a lower setting restoring it to its original position on return.

Example of installation diagram:



NB! Installation, function tests and fault location procedures must be carried out by an authorized electrician in accordance with DEVI instructions.

Diagrams:

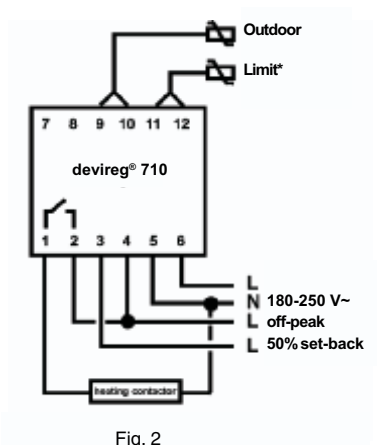


Fig. 2

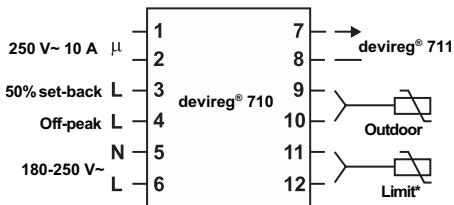
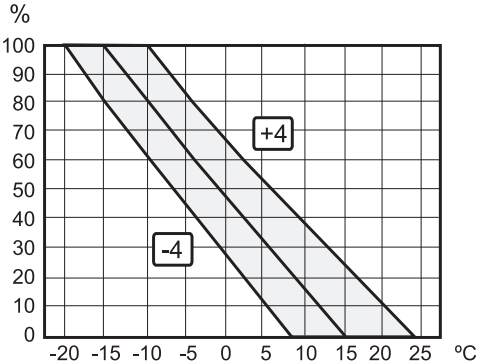


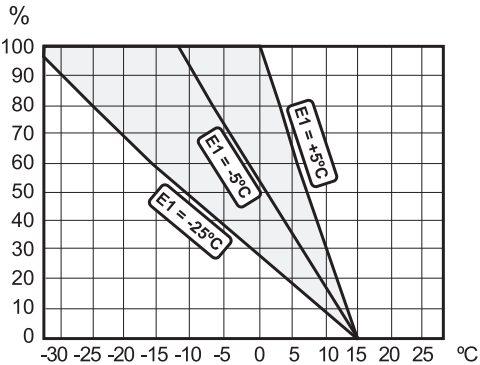
Fig. 3

*Temperature limiter can be omitted

Curves:



- I. Curve showing the energy supply proportional to the outdoor temperature. The curve takes a designed outdoor temperature -7°C (E1) as a starting point. The min to max span demonstrated shows the adjustment available by rotating dials a and b.



- II. Curve showing which influence adjustment of E1 has on the energy supply.

Trouble-shooting

System check:

When starting, the system buttons a and b must be placed in the middle. F set at design temperature.

- Check that there is voltage between terminals 5 and 6. The lamp should either flash on and off or be on constantly.
- Connect off-peak signal on terminal 4 (for test only short-circuit terminals 4 and 6). Turn button b to »CONST«, and bottom c to 55°C. Check that the indicator gives out a red light.
- If floor sensor is used indicator d should be off when button c is turned to the left. Control should now be switched off.

Fault: No heat.

- Carry out the same test as described in system check. In case of defects change the **devireg**® 710.
- If the **devireg**® 710 is activated: check that there is voltage on the signal cable.
- Check that the load installed corresponds to the effect proportioned.
$$P = \frac{U^2}{R} = \frac{52900}{R} \text{ W (at 230 V ~)}$$
- Check contactor if installed. Check the ohm value of the outdoor sensor - see technical data chart.

Fault: Constant heat.

- Carry out the same test as described in system check. In case of defects change the **devireg**® 710.
- Check contactor, if installed.
- Check the ohm value of the outdoor sensor - see technical data chart.

Fault: Sensor defects.

- If the light e and d flash alternatively the outdoor sensor is open circuit.

NB! The lamps should not stabilize until five minutes from start up.

Technical data

Voltage:	180 - 250 V~ 50 Hz								
Load:	max. 10 A								
Load:	Cos φ = 0.3 max. 1 A								
Moisture proof: Control: Floor sensor: Outdoor sensor:	IP 20 IP 65 IP 54								
Indicator:	LED diode								
Resistance value:	<table style="border: none;"> <tr> <td style="padding-right: 20px;">-10°C</td> <td>66 kOhm</td> </tr> <tr> <td style="padding-right: 20px;">0°C</td> <td>42 kOhm</td> </tr> <tr> <td style="padding-right: 20px;">+25°C</td> <td>15 kOhm</td> </tr> <tr> <td style="padding-right: 20px;">+50°C</td> <td>6 kOhm</td> </tr> </table>	-10°C	66 kOhm	0°C	42 kOhm	+25°C	15 kOhm	+50°C	6 kOhm
-10°C	66 kOhm								
0°C	42 kOhm								
+25°C	15 kOhm								
+50°C	6 kOhm								
Sensor cable:	4 m, 2 x 0.7 mm ²								
Sensor type:	Outdoor and floor sensor NTC 15 kOhm at 25°C								

The DEVI Warranty:

You have purchased a deviheat® system, which we are certain will increase your home comfort and economy.

deviheat® provides complete heating solutions with deviflex® heating cables or devimat® heating mats, devireg® thermostats and devifast fitting bands.

If, however, contrary to all expectations, a problem should occur with your heating system, we at DEVI, with manufacturing units in Denmark, are, as European Union suppliers, subject to general product liability rules, as stated in Directive 85/374/CEE, and all relevant national laws which implies that: DEVI provides a warranty for deviflex® heating cables and devimat® heating mats for a 10 year period and all other DEVI products for a 2 year period against defects in material and production.

The guarantee is granted on the conditions that the WARRANTY CERTIFICATE on the overleaf is filled out properly in accordance to instructions and that the defect is inspected by, or presented to, DEVI or authorised DEVI distributor.

Please note, that the wording of the WARRANTY CERTIFICATE must be provided in english or local language with the ISO code for your country in the upper left corner of the

front page of the installation instruction in order to release the warranty.

The obligation of DEVI will be to repair or supply a new unit, free of charge to the customer, without secondary charges linked to repairing the unit. In case of defective devireg® thermostats, DEVI reserves the right to repair the unit free of charge and without unreasonable delay to the customer.

The DEVI warranty only covers connections made by authorised electricians and installations performed in accordance with the installation instruction, and does not cover faults caused by incorrect designs supplied by others, misuse, damage caused by others, or incorrect installation or any subsequent damage, that may occur. If DEVI is required to inspect or repair any defects caused by any of the above, then all work will be fully chargeable.

The DEVI warranty is void, if payment of the equipment is in default.

At all times, we at DEVI will respond honestly, efficiently and promptly to all queries and reasonable requests from our customers.

The above mentioned warranty concerns product liability whereas matters in relation to legislation on sale of goods shall be referred to national law.

Warranty Certificate

The DEVI Warranty is granted to:

Name:

Address:

Postal code:

Phone:

Please Observe!

In order to obtain the DEVI Warranty, the following must be carefully filled in. See other conditions on the overleaf.

Electrical Installation by:

Installation date:

Type of thermostat:

Production code:

Suppliers Stamp:



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