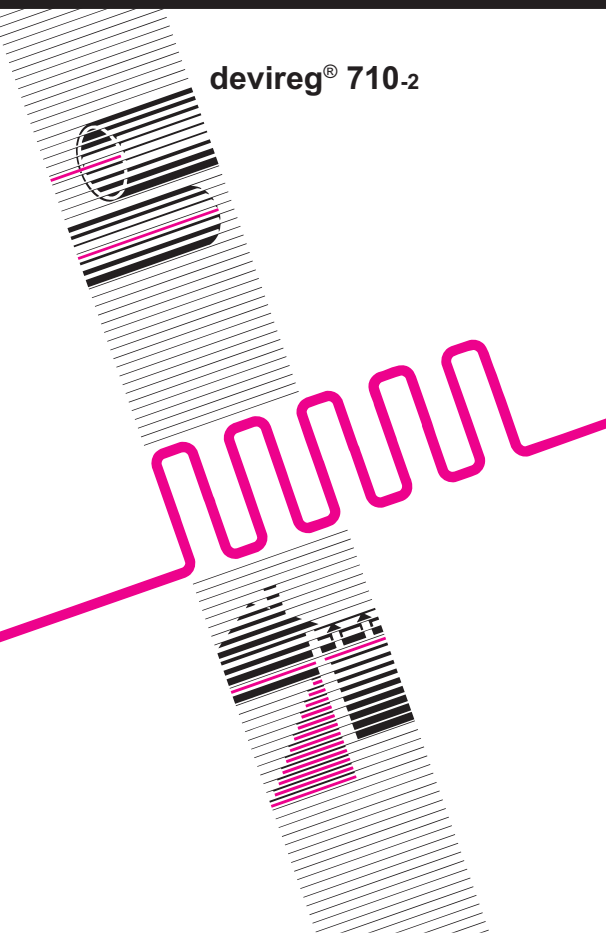


devireg[®] 710-2



Application:

devireg[®] 710-2 is designed for control of storage heating systems.

devireg[®] 710-2 automatically controls the input necessary to the room to achieve the comfort required.

Description:

devireg[®] 710-2 is delivered with an outdoor sensor.

The outdoor sensor is mounted in the shadow face of the building at a place without direct sunlight. By means of the outdoor temperature sensor the **devireg**[®] 710-2 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. Where the percentage load is 100% (i.e. max), the heating will be switched on for the full off-peak period, but at all lower percentages the switched load is proportionally regulated during the off-load period to provide optimum heat when most needed.

System:

When **devireg**[®] 710-2 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[®] 710-2 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**[®] 710-2 is connected the energy supply is spread all over the off-peak period.

Note: 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.

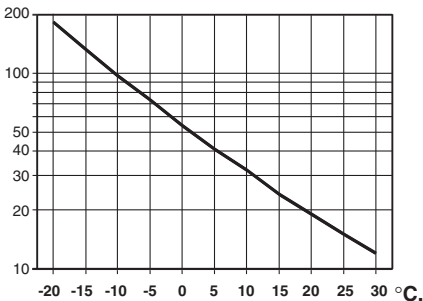
Short duration power cuts do not influence **devireg**[®] 710-2.

Installation of devireg® 710-2:

1. **devireg® 710-2** is for DIN-rail mounting. The **devireg® 710-2** can be mounted in surface box available from •.
2. The outdoor sensor is placed on an outside shadow facing wall without direct sunlight.
3. The **devireg® 710-2** is connected as shown in fig. 2.
4. Off-peak period.
Signal wire for low rate period (off-peak) must be connected on terminal 4, the signal cable must be the same phase as 24 hours supply.
5. Operating Mode (V-R).
Connect a 230 Volt Live signal to terminal 3 for continuous charging (1 hour interval).
If not connected, unit will operate in delayed charging mode (30 min. interval).

Curve

1000 Ohm



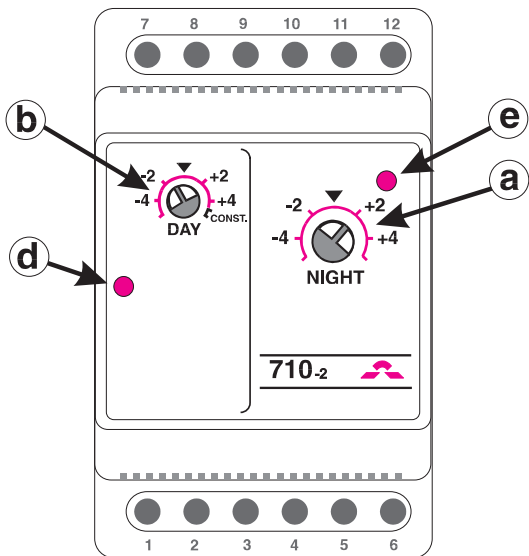


Fig. 1

Lamp (d)

A red light glows when heating is on and a green light when heating is off.

Lamp (e)

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

Internal preset of design temperature: -1°C .

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 consumer 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).

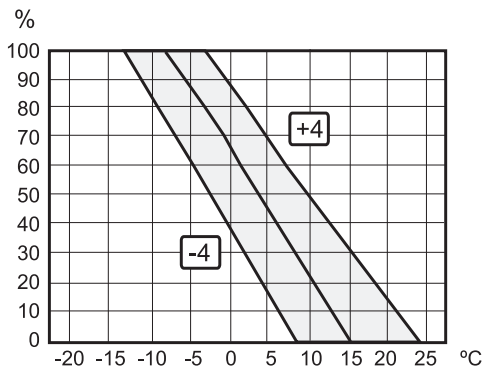
N.B. On night-only tariffs the control (b) is inoperative and should be set at ▲.

Const. is a TEST SETTING ONLY.

Fit and Forget

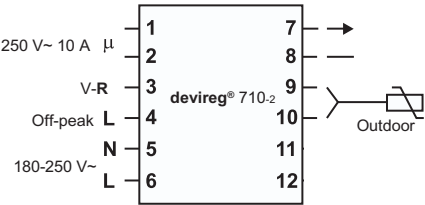
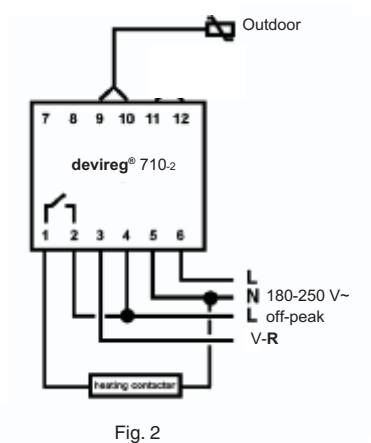
The effect of the above adjustments will not be felt until the next day, but once satisfactory temperatures have been achieved no further adjustments will be necessary as the controller will maintain these chosen comfort conditions whatever the outside temperature.

Curves



- I. Curve showing the energy supply proportional to the outdoor temperature. The curve takes a designed outdoor temperature preset -1°C .
The min to max span demonstrated shows the adjustment available by rotating dials a and b.

Diagrams:



Trouble-shooting

System check:

System check:

When starting, the system buttons a and b must be placed in the middle.

- Check that there is voltage between terminals 5 and 6. The lamp (e) 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«. Check that the indicator (d) gives out a red light.

System faults:

No heat:

- Carry out the same test as described in System Check. In case of defects change the **devireg**® 710-2.
 - If the **devireg**® 710-2 is activated: check that there is a 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 (value, see technical data).

Constant heat:

- Carry out the same test as described in System Check. In case of defects change the **devireg**® 710-2.
- Check contactor, if installed.
- Check the ohm value of the outdoor sensor (value, see technical data).

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: Outdoor sensor:	IP 20 IP 54								
Indicator:	LED diode								
Resistance value:	<table> <tr> <td>-10°C</td><td>66 kOhm</td></tr> <tr> <td>0°C</td><td>42 kOhm</td></tr> <tr> <td>+25°C</td><td>15 kOhm</td></tr> <tr> <td>+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 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 resonable 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:



DE-VI Heat Ltd.

Unit 4

Ballymount Cross Business Park

Dublin 24

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Fax (01) 460 2633