

# INSTRUCTIONS

## Type UTCG, UCCG, UCDG

### English

The thermostat is an electronic on/off thermostat for control of temperature by means of an NTC sensor either placed externally or internally in the thermostat. The thermostat has integrated a Ground Fault Circuit Interrupter (GFCI, Class A). The thermostat and the GFCI is a dual model suitable for 120/240 V 50/60 Hz supply.  
The thermostat is for flush mounting in a wall socket.

#### Product program

##### Thermostats with built-in GFCI

UTCg-9991 Incl. floor sensor 3 m

UTCg-9999 With built-in room sensor

##### Clock-thermostats with built-in GFCI

UCCg-9991 Incl. floor sensor 3m

UCCg-9999 With built-in room sensor

UCDg-9999 With 2 sensors;  
built-in room sensor and  
incl. floor sensor 3m

#### Mounting of floor sensor (fig. 3)

The floor sensor is used for temperature regulation in floor surfaces. For easy replacement the sensor can be mounted in a tube which is placed between 2 heating cables. The tube is ended towards the floor surface and sealed.

If required, the sensor cable can be extended up to about 100 m with a standard installation cable. 2 leads in a multi lead cable, which is used as supply cable for the heating cable, must not be used.

#### Mounting of thermostat with built-in sensor (fig. 4)

The room sensor is used for comfort temperature regulation in rooms. The thermostat is mounted on the wall with free air circulation about 1.6 m above the floor. Draught, direct sunlight, or any other direct heating outlet must be avoided. No external sensor is to be connected.

#### Mounting of thermostat

##### Installation

**TURN OFF THE POWER TO THE HEATING SYSTEM AT THE MAIN POWER PANEL TO AVOID ELECTRICAL SHOCK.**  
**KEEP AIR VENTS OF THE THERMOSTAT CLEAN AND OBSTRUCTION FREE.**

This thermostat is an electrical product and must be installed in conformity with the National and/or Local Electrical Code. The installation must be performed by qualified personnel where required by law. The thermostat is equipped with a ground fault circuit interrupter (GFCI, Class A), which require that the line and load is isolated from each other for correct operation. The resistive load must not exceed 16A (1920W at 120Vac /3840W at 240Vac).

During a ground fault, the two lines will be cut-off.

#### Line Cable

Delivers power from the service panel (breaker panel or fuse box) to the thermostat. This cable shall only be connected to the thermostat's line terminals marked L1 and L2.

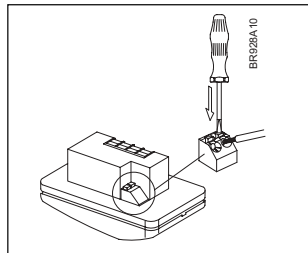
#### Load Cable

Delivers power from the thermostat to the heating cable. This cable shall only be connected to the thermostat's load terminals marked load, 16A.

1. Use a screwdriver to open the lock (fig. 1), and remove the frame
2. Connect cables according to the diagram (fig. 2)
3. The thermostat is mounted in the wall socket. The frame are remounted.

#### Temperature sensor

The floor sensor is connected to the screw less terminals marked sensor. Push with a screwdriver on the terminal spring and mount the wires.



#### Operation

**With integrated clock, type UCCG and UCDG:**  
The first time the thermostat is connected, time and day must be set:

- ☞  $\Delta \nabla \checkmark$  Setting of time (the clock flashes during setting)
- ☞  $\Delta \nabla \checkmark$  Setting of day (day flashes during setting)

#### Without integrated clock, type UTCG:

Actual temperature setting is shown and the thermostat is ready for use.

#### Checking GFCI

It is important that the GFCI has been checked for correct installation and function.

To check the GFCI:

Testing can only be performed if the thermostat has a heating demand  
Adjust the set point until the heating symbol (SSS) appears, use the ( $\Delta$ ), to increase the heating demand. Wait 10 sec to let the thermostat work according to the new set point.

Press the button "TEST"

The test is conclusive if the red light on the thermostat lightens, and the display signs disappear. If this does not occur, check the installation.

Press on RESET button to reset the GFCI.

The red light should disappear and the display will return to normal appearance.

Push ok accept button ( $\checkmark$ ) to cancel the previously set temperature

If the test fails, check your heating cable and the thermostat.

The GFCI test should be carried out monthly.

If the GFCI trips in normal operation, without pressing the TEST button, there could be a ground fault! To check whether it is a ground fault or a nuisance tripping, press RESET. If this cause the red light to shot off and not comes on again, it was a nuisance tripping and the system is functioning. If this cannot be done there is a ground fault!

Check your heating cable, the sensor cable and the thermostat. Exchange the defective part.

#### Programming

See user's manual.

#### Fault location

If the sensor is disconnected or short-circuited, the heating system is cut out. The sensor can be checked according to the resistance table fig. 5.

#### Error codes

- E0: Internal error. The thermostat must be replaced.
- E1: Built-in sensor short-circuited or disconnected. The thermostat must be replaced
- E2: External sensor short-circuited or disconnected.

#### UL LISTED

According to the following standards,

GFCI: UL 943:1993

Thermostat: UL 8730-2-9:1998

UL 60730-1A:2002

UL file number: E157297.

#### Classification

The product is a class II device (enhanced insulation) and the product must be connected to the following leads:

Phase (L, L1) 240 V  $\pm$ 15%, 50/60 Hz or  
120 V  $\pm$ 15%, 50/60 Hz

Neutral (N, L2)

Load max. 16A

The terminals are suitable for field wiring of 12 AWG to 22 AWG conductors

#### Technical Data

Supply .....120/240 Vac 50/60 Hz

Load .....16A maximum (resistive load)

Power .....1.920 W at 120 Vac

.....3.840 W at 240 Vac

GFCI .....Class A (5 mA trip level)

Temperature range .+5 to +40°C, +40 to +104°F

Amb. Temperature range

Thermostat .....0 to +40°C, +32 to +104°F

GFCI .....-35 to +65°C, -31 to +149°F

Fig. 1

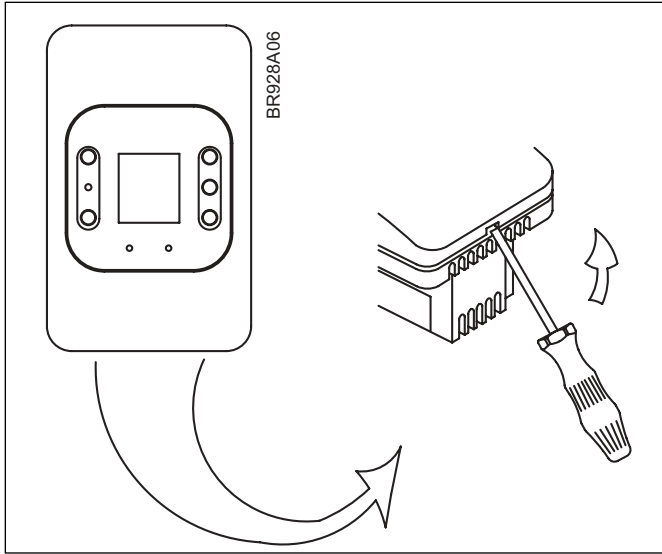


Fig. 2

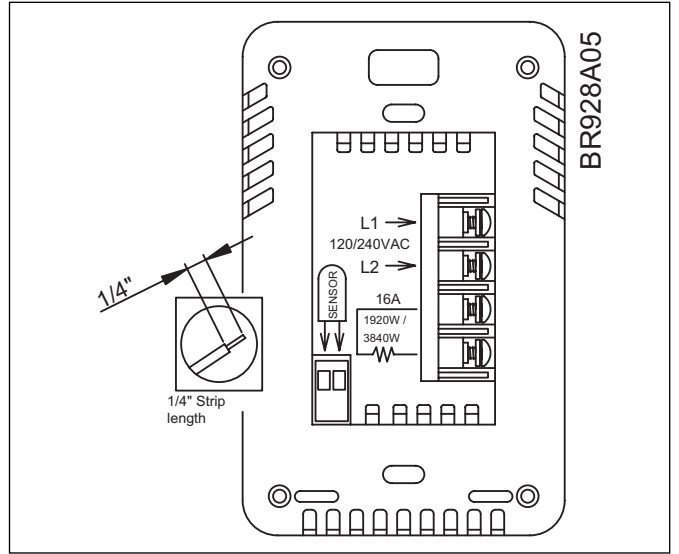


Fig. 3

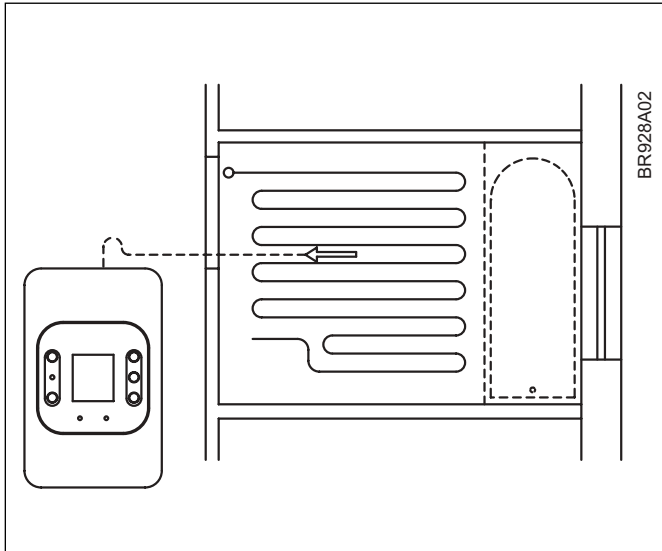


Fig. 4

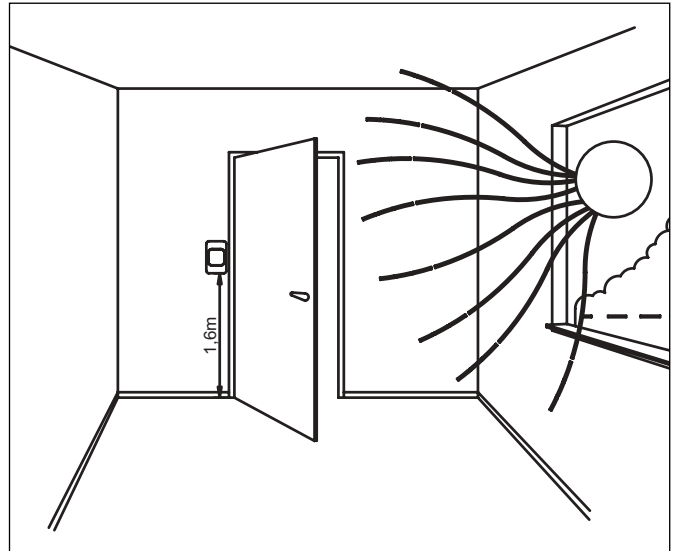


Fig. 5

Sensor		
Temp.(°C)	Temp.(°F)	Value (ohm)
-10	-14	64000
0	32	38000
10	50	23300
20	68	14800
30	86	9700

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