

UNIVERSAL-TEMPERATURE-SWITCH UTS125

Art.- Nr. 111 46 80



www.h-tronic.de

The universal-temperature-switch UTS125 detects the current ambient temperature and automatically switches the connected device on and off again when the temperature reaches the programmed values. If e.g. the room temperature falls below 20 °C, a fan heater is automatically activated and heats up to the preset temperature. After reaching the temperature the device will switch off by itself. The temperature-switch UTS125 can be used everywhere, where you want to keep the control over the room temperature: in the greenhouse during the hibernation of plants, in the hobby room in the cellar without its own heating, for electric outdoor saunas, in the turtle terrarium, The UTS125 is suitable for all applications in which a temperature control either by heating or by cooling is required. This could be the central heating, air conditioning, incubator, etc. The device can be used independently. It could also be used as a frost monitor, but also serve as a replacement for defective mechanical thermostats or digital thermometers, etc.

The power of the connected device may not exceed 2300 VA.

TECHNICAL SPECIFICATIONS

- Operating voltage: 230 VAC+/- 10 % / 50–60 Hz
- Output voltage: 230 V / 50 Hz / 10 A (230 Volt socket)
- Power consumption: approx. 0.3 VA (stand-by)
- Maximum load: 230 VAC / 2300 VA / 10 A
- Sensor measuring range: -55 to + 127.0 °C
- Accuracy: -55 °C ... -10 °C: +/- 2 °C
-10 °C ... +85 °C: +/- 0,5 °C
+85 °C ... +127 °C: +/- 2 °C
- Resolution: 0.1 °C
- Degree of protection: IP 20
- Working temperature: -10 to +40 °C
- Dimensions without plug (W x H x D): 60 x 98 x 40 mm
- Temperature sensor dimension: 30 x 9 mm
- Display 180° rotatable
- Plug-in and extendable temperature sensor Type: Maxim DS18B20 (with 2 m cable included)
- Min./Max. display
- Switching temperature: -55 ... +127 °C adjustable by 0,1 °C
- Hysteresis (switching accuracy) adjustable (0.1 °C ... 10 °C)
- Remote measurement up to 50 m
- Sensor monitoring for short circuit
- Sensor monitoring for interruption/disconnection
- Output shuts off in case of sensor error
- Operation and maintenance free operation
- Adjustable for heating or cooling
- LC display for temperature setting, relay (socket) on, sensor error, heating, cooling
- programmed switching thresholds storable even with mains voltage failure
- Automatic restart after power failure

Dear customer,

to ensure a correct operation of this device, please read these instructions completely and carefully before use. Please take into consideration that this manual contains important information on the operation and use of this device. This instruction manual is part of the device. Please keep this manual in a safe place for future reference. If you pass the device on to a third person, please make sure that you also pass on the manual. Damages

caused by failure of following the instructions in the manual will void the warranty. No liabilities will be taken for consequential damages. This product is certified according to the applicable EC directives for Electromagnetic Compatibility and complies with statutory requirements.

DESIGNATED USE

The designated use of the device is the temperature-dependent switching of electrical household or other appliances without safety-relevant application. The device can switch a connected load (230 V ~ / 50 Hz, max 10 A, 2300 VA) on or off under temperature control. The switch-on and switch-off temperature is adjustable in the range from -55 °C to +127 °C, increment 0.1 °C. An application other than specified is not permitted!

NOTES ON OPERATION

To operate your UTS125 you need a 230 Volt socket. The user is responsible for complying with the rules and regulations of the country in which the device is operated. This also applies to the application in which the controller is used

1. SAFETY

WARNING: Failure to follow the safety instructions may result in hazards causing damage to property but also serious injury or death.

- Do not touch damaged connecting cables.
- Do not work on the unit or on the connecting cables during a thunderstorm.
- The device may only be used in dry surroundings.
- Do not allow liquids to penetrate the device.
- Check connecting cables and devices regularly for damage and replace them if damaged.
- Repairs may only be carried out by a specialist.

WARNING: Danger of tripping! Tripping can lead to serious injuries.

- Do not obstruct escape routes and stairs.
- Lay the cables so that nobody can step on them or trip over them.
- All work on the mains and device may only be carried out by authorized electricians.

A qualified person is defined as a person, due to his professional training and experience, has sufficient knowledge in the field of wireless transmission of control commands and the relevant health and safety regulations, accident prevention regulations and guidelines, generally has the knowledge of technical regulations (for example, DIN standards, VDE regulations, technical rules, etc.) so that he can assess the safe working condition of devices for the wireless transmission of control commands.

2. SAFETY INSTRUCTIONS FOR INSTALLATION

The applicable laws and standards of the country in which the device is operated must be followed.

The product is not intended to control electrical equipment that has safety-related functions.

Even in normal operation, there is a risk of unexpected malfunction due to a failure or malfunction of the output stage or signal transmission. The user must ensure that no consequential damage occurs as a result of a malfunction or an undefined switching state.

This product has not been tested for use in safety-related applications!

If certain safety requirements apply, they must be implemented by qualified higher-level measures with approved equipment!

This device may be used by children 8 years of age and over, and by persons with reduced physical, sensory or mental abilities, or lack of experience and knowledge, if they have been supervised or instructed in the safe use of the device and understand the possible hazards. Children are not allowed to play with the device. Cleaning and maintenance may not be carried out by children without supervision.

3. WARNING AND SAFETY INSTRUCTIONS

Please observe the following safety instructions to avoid malfunctions, damage and health hazards:

- The operation of the device under adverse environmental conditions must be avoided under all circumstances. Adverse environmental conditions are: Ambient temperatures below -10 °C or above 40 °C, combustible gases, solvents, vapors, dust, humidity above 80% rel.,
- Splash or standing water.
- The UTS125 may only be operated in dry and closed rooms.
- The remote control may not switch devices with a safety function for machines or other devices which are not actively monitored.
- No devices with a risk of fire (such as radiant heaters, irons, etc.) may be switched by the device or operated unattended.
- The device may not be changed, modified, modified or repaired other than approved by the manufacturer.
- If it can be assumed that safe operation is no longer possible, the device must be put out of operation immediately and secured against unintentional operation. Safe operation is no longer guaranteed if the device is no longer functioning, has visible damage, has transport damage and after storage under unfavorable conditions.

– If there are any doubts regarding the application or wiring, it is essential to seek the advice of experts or advice from the manufacturer.

– Maintenance work and repairs may only be carried out by authorized specialist personnel. Before commissioning a device, it must generally be checked whether this device or module is suitable for the application for which it is to be used. In case of doubt, it is absolutely necessary to ask advice from experts or the manufacturer.

– Please note that operating and connection errors are beyond our control. Understandably, we cannot accept any liability for any resulting damage.

– In industrial facilities the accident prevention regulations of the Association of Trade Associations for electrical installations and equipment must be followed.

– In schools, training facilities, hobby and Self-Repair shops it is required, that the operation of devices must be supervised by trained personnel.

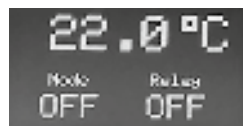
– If the device needs to be repaired, only original spare parts may be used! The use of deviating spare parts can lead to serious damage and personal injury!

– Dispose of unnecessary packaging material or store it in a place inaccessible to children. There is danger of suffocation!

4. OPERATION BUTTONS

- Button ►: the value is increased
- Button ◀: the value is decreased
- Button ●: Confirms the selection

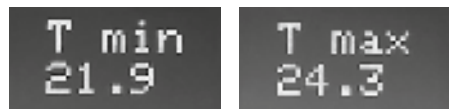
4.1 MAIN DISPLAY OF THE DEVICE (appears after connecting to the mains)



The display will show the following values:

1. Temperature
2. Selected Mode
3. State of the switching relay

By pressing the keys „◀►“ the MIN-/MAX- values are displayed and deleted with the button „Set“.



5. MENU OF THE DEVICE

When the button „Set“ is pressed, the device will enter the input mode. The following menu points are displayed:

- „Mode“
- „T set“ (Switching Temp input)
- „Hyst“ (Switching hysteresis)

- „REL Dly“ (switching delay of the relay)
- „Scr Flip“ (flips the display by 180°)
- „Scr TO“ (automatic sleep time for the display)
- „Exit“ (exit menu)



The navigation through the menu is done with the „◀►“ keys. If a menu item is to be changed and entered, the „Set“ key is pressed. The values can be reduced or increased with the „◀►“ key. When the setting is completed, pressing the „Set“ button will confirm and save the input.

A menu item marked with a [] or [✓] is a so-called „checkbox“. This can only have two settings:

- : OFF
- ✓: ON

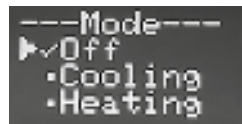


Note 1: If the unit is in the setting mode and no keys are pressed for more than 10 seconds, the input level is automatically exited and returned to the display mode. All changes made are automatically saved.

Note 2: If the device does not have saved temperature data, the message „NO DATA“ is displayed.

Insert the plug of the sensor cable into the socket of the temperature controller. Plug the temperature controller into a mains socket which is located so that it is easy to read the digital display. (If necessary, the display can be turned 180° by menu selection).

5.1 MENU „MODE“



In this menu the mode of the device is set
Mode „OFF“: The device only functions as thermometer. The switching function is switched off. The device only shows the current temperature.
Mode „Cooling“
Mode „Heating“

5.2 MENU „T SET“

Menu point for setting the switching temperature.
Setting range: -55.0 °C ... +127.0 °C

5.3 MENU „HYST“ (SWITCHING ACCURACY)

Menu point for setting the temperature hysteresis (switching accuracy).
Setting range: 0.1 °C ... 10 °C (in steps of 0,1 °C)

5.4 MENU „REL DLY“

Menu point for setting the switch-on delay for the relay (socket).

The setting can be very useful when the switch-on and switch-off temperatures are almost identical. It prevents frequent switching at fast fluctuating temperatures.
Setting range: 0 ... 999.9 sec.

5.5 MENU „SCR FLIP“

Menu point for setting the display is set to „normal“ or „rotated 180°“. You can position the device in the socket with the buttons above or below the display.

5.6 MENU „SCR TO“

In this menu, the timeout of the display is activated. After switching off (display off) and a renewed key operation, the display switches on again. The first pressed key is not an input.

5.7 MENU „EXIT“

Exits the settings menu.

6. FUNCTIONAL PRINCIPLE OF THE DEVICE WITH EXAMPLES

6.1 FUNCTION „HEIZEN“ (HEATING)

Abbr.: (T EIN) = T set; (T AUS) = T set + Hyst;



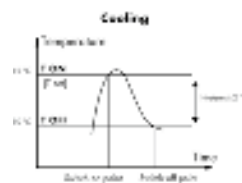
Example: You want to control a room temperature via a fan heater. The selected/desired temperature should be in the range between 22 °C and 25 °C. The fan heater should turn on when the temperature falls below 22 °C - (T ON = T set = 22) and turn off

at 25 °C. In this case set the hysteresis to 3 °C (T set + Hyst = 3).

The socket is switched on when the measured temperature is lower than or equal to T ON. The relay (outlet) is switched off when the measured temperature is greater than or equal to T OFF.

6.2 FUNCTION „KÜHLEN“ (COOLING)

Abbr.: (T EIN) = T set; (T AUS) = T set - Hyst;



Example: You want to control a cooling unit. The selected/desired temperature should be 12 °C. The cooling unit/unit should switch on (if the temperature rises above 12 °C) (T IN = T set = 12) and turn off at 10° C.

In this case set the hysteresis to 2 °C (T set + Hyst = 2).

The socket is turned on when the measured temperature is greater than or equal to T ON. The relay (outlet) is switched off when the measured temperature is lower than or equal to T OFF.

Once the desired switch-on and switch-off temperatures have been set, position the temperature sensor at the desired location. Plug the UTS125 into a 230 V wall socket and then plug in the switched off heating/cooling unit.

PLEASE NOTE: If, after setting the On/Off temperature (heating), the actual temperature is within the temperature window (eg the outlet should switch on when it falls below 20 °C and switch it off at 25 °C) and the current temperature is 23 °C), the relay will not switch. Only when the temperature falls below 20 °C, the relay switches on and off again when reaching 25 °C. Conversely, this also applies to the settings of „cooling“.

7. ERROR MESSAGES

The following error messages might be shown:

7.1 ERROR 1

Err1: A short circuit was detected in the temperature sensor. There might be faults in the sensor cable.

7.2 ERROR 2

Err2: No temperature Sensor connected.

7.3 ERROR 3

Err3: The data read from the temperature sensor is faulty. Maybe the cable is in an interference field. When laying out the cables spatial separation of signal cables and possibly interfering cables such as power lines.

7.4 ERROR 4

Err4: The temperature sensor was unexpectedly reset. Possible error: Fault on line, connector has bad contact, socket has bad contact.

7.5 ERROR 5

Err5: The switching relay is overheated/overloaded.

NOTE: If an error occurs, the device will inevitably switch off the socket or switch it on again when it cools down.

8. GUARANTEE

The dealer/manufacturer from which the device was purchased provides a guarantee of 2 years from the date of handover for the material and manufacture of the device.

In the event of a defect, the purchaser is initially only entitled to supplementary performance. The supplementary performance includes either the repair or the delivery of a replacement product. Any devices or parts which have been replaced will become the property of the dealer/manufacturer. The buyer has to notify the trader of defects immediately. Proof of the warranty claim shall be furnished by means of a proper purchase confirmation (purchase receipt, invoice, if applicable).

Damages resulting from improper handling, improper connection, use of parts from other manufacturers, normal wear and tear, use of force, personal repair attempts or changes to the device, cables or terminals, change of circuit, damage due to ignoring the operating instructions, or improper use or other external influences, if connected to an incorrect voltage or current type, bridged or incorrect fuses, in case of misuse or damage caused by negligence, are not covered by the warranty or void the warranty.


Further claims against the vendor due to this warranty obligation, in particular claims for compensation for loss of profit, compensation for use and indirect damages, are excluded, unless legally mandatory.

We reserve the right to repair, rectify, replace or refund the purchase price. Costs and risks of transport, assembly and disassembly work as well as all other costs which can be connected with the repair are not replaced. Liability for consequential damage resulting from faulty function of the device – of whatever nature – is in principle excluded.

In the following cases, the warranty will expire and the device returned at your expense:

- In the case of damage caused by improper handling, operation, storage, as well as by force majeure or other external influences.
- In the case of changes of any kind and repair attempts on the device, cables or clamps.
- When non-original components have been used.
- In the case of damage caused by failure to follow the operating instructions and the wiring diagram and in case of damage caused by negligent handling.
- In the case of damage caused by overloading the device.
- In the case of damage caused by the intervention of other persons.
- When connected to an incorrect voltage or current type.
- In case of wrong operation or damage caused by negligent treatment.
- For defects caused by bridged fuses or by using incorrect fuses.
- Incorrect connection and/or operation.
- In the case of external forces, damage to the device and/or damage to parts of the device due to mechanical effects or overload.
- When using the device for purposes not described in this manual.
- Unauthorized opening of the appliance.
- Under normal wear and tear.
- In case of consequential damage caused by improper use and/or improper use and/or defective batteries.

9. ENVIRONMENT

 Consumers are legally obligated and responsible for the proper disposal of electronic and electrical devices by returning them to collecting sites designated for the recycling of electrical and electronic equipment waste. This device and/or components within the device can be recycled. For more information concerning disposal sites, please contact your local authority or waste management company.

CE-MARK AND CONFORMITY

H-TRONIC GmbH hereby declares that this device is in compliance with the essential requirements and the relevant provisions of Directive 2014/53/EU and 2011/65/EU. The relevant records are in the hands of the manufacturer: H-TRONIC GmbH, Industriegebiet Dienhof 11, DE-92242 Hirschau



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