CookerGuard Tristan

Installation Guide

F1727A

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Tunstall

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1 Safety instructions

Warning
Read this manual carefully before installation and use of this product. Improper installation may result in danger.

The system prevents excessive temperatures on a hob/stove by the use of a controlbox to cut the power to the hob/stove.

CookerGuard can be used for electric cookers and hobs (glass/ceramics, induction and standard electric) with up to 4 heatplates with a maximum width of 60 cm.

CookerGuard is tested and certified by EN50615 and has been tested in daily use. CookerGuard will still **not** be able to detect all possible fires. Classified in category B.

CookerGuard is designed for hobs that stand at or against a wall. The sensor must to be mounted between the 40-55 cm of the stove.
Qualified personnel should only install CookerGuard.
Cleaning the sensor must be done by gentle use of a damp cloth. The user can change the batteries in the sensor by following the instructions for battery change.

The cooking process should be provided under supervision. Also a short time cooking should be provided under constant supervision. The CookerGuard does not replace the necessary awareness, which must be applied when using the hub/stove.

Declaration of conformity

CE

The product is in compliance with the EU directive and has been tested according to:
EMC (Electromagnetic compatibility)

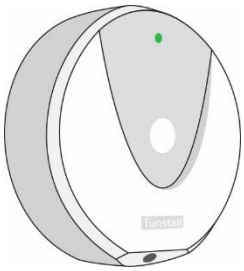
- A 489-01 301 (v1.8.1)
- A 301 489-17 (V 2.2.1)
- A 60669-2-1 (2004)
- A 55014
- A 55015
- A 300 328 (v1.9.1)

Low Voltage Directive

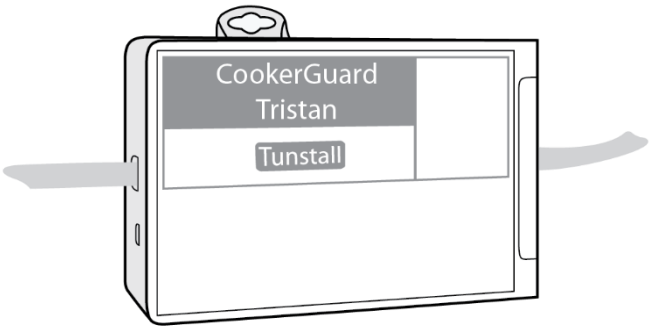
- NEK 502 / IEC 60884-1
- EN60335-1 / EN 50615

Tunstall disclaims all liability for malfunctions caused by errors derived from the installation of the appliance.

1.1 What's in the box



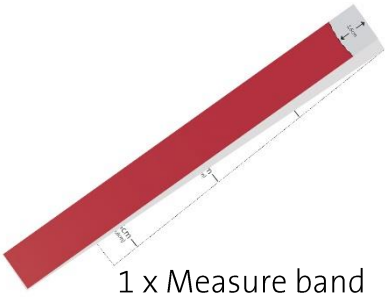
1 x Sensor



1 x Controlbox

4 x AAA Batteries

1 x plastic bag with mounting screws



1 x Measure band

2 Product description

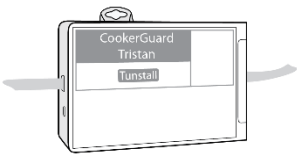
The system prevents excessive temperatures on a hob/stove by the use of a sensor and a controlbox to cut the power to the hob/stove if an abnormally high temperature is detected.

The CookerGuard System is designed for all electric hobs or stoves (ceramics, induction and standard electric heatplates).
The CookerGuard only monitors the temperature on the plates, NOT the temperature in the oven or in any other devices that may connect to the hob.
As an extra feature, the CookerGuard can also monitor the use time of the stove. This gives us an opportunity to shut down the stove, if it has been turned on (at a low level of heat) and then forgotten. As default the timer function is disabled, but it can easily be enabled by the app, as described in section 2.5. The CookerGuard is meant to be an extra precaution against the fires, which starts in pots and pans containing flammable grease or vegetable oils. It does not detect fires caused by covering up the stove with flammable materials or other flammable liquids.

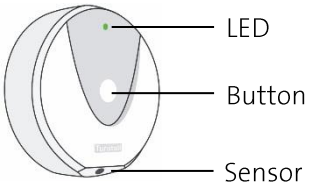
We always recommend the CookerGuard to be supplemented by a smoke detector to increase the security.

2.1 The system

The CookerGuard system consists of two units: a controlbox and a sensor device. The sensor device communicate wirelessly with the controlbox over bluetooth. To change the default settings, an Android mobile phone with installed CookerGuard-app is used.



Controlbox

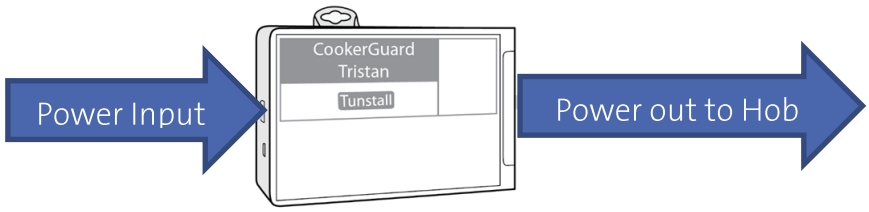


Sensor

CookerGuard app

2.1.1 Controlbox

The controlbox is managing the power to the hob/stove, and turns on and off when told by the sensor. The power that goes from the power outlet in the wall to the hob/stove has to go through the controlbox. The controlbox is setup to cut the power, if any unusual event is happening, so if the controlbox has no connection to the sensor, the power is cut or if the sensor is moved after installation. In that way, we have a very secure solution with a convenient wireless connection that minimizes the installation costs.

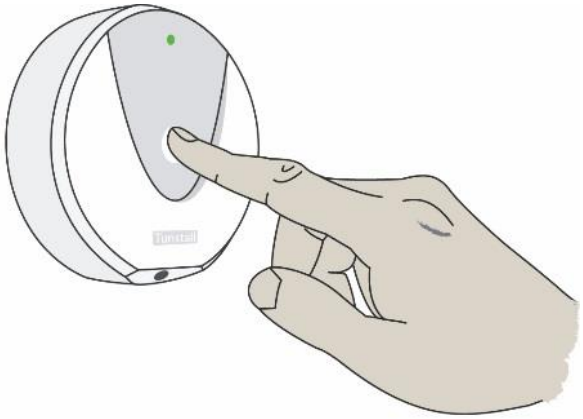


2.1.2 Sensor

The function of the sensor unit is to measure the temperature on the hob, and if it is too high; it sends a message to the control box to turn off the hob. The sensor unit communicates wirelessly, and powered by batteries. The sensor sends alerts to the user via a buzzer and an LED indicator on the front. To operate the sensor unit, the button on the sensor must be activated. The button can change the mode of the sensor: (see Chapter 1.3.2 for more details). Note that the sensor unit sends an alarm and turn off the hob if you move it, after the installation. This is to ensure, that the sensor unit is always situated correctly.

2.1.3 The button

The CookerGuard sensor has only one button and you can change the mode of the sensor by pressing the button accordingly:



Turn ON

Short press, around 1 sec
The sensor emmits a beep-sound
RESULT: **The sensor is turned ON, and the LED is flashing green**

App Mode

Long press, around 3 seconds
Release button when LED is: 🟢
The sensor emmits a beep-sound
The sensor will change to App-mode and the LED is flashing white.
RESULT: The sensor is ready for the CookerGuard-app to connect to it.

Turn OFF

Extra long press, around 5 seconds
The sensor emmits a beep-sound
Release button when LED is: 🔴
When releasing the button the sensor turns off and the controlbox will cut the power to the hob. Use only when taking the sensor out of service

Factory reset

To reset the sensor back to factory defaults
Remove the lid to the battery compartment and take out **one** of the battery cells.
While holding the button down, place the battery cell back in the compartment and the sensor will now be reset to factory settings.
IMPORTANT: The default value of the distance between the hob and the sensor is 45cm, please verify it correspond with the actual height.

2.2 Daily Use

With the CookerGuard installed, the end user will not notice the system. In a daily use scenario, nothing extra needs to be done.
User scenario:
Just turn the stove on as usual and everything works as usual. No actions is needed, to activate the CookerGuard.
The CookerGuard will automatically wake up and start monitoring the heat from the heatplates on the hob/stove, and if everything is normal, without any excessive temperatures, the CookerGuard will silently monitor the activities. When work is done, just turn the hob/stove off, as usual. Nothing else needs to be done, the CookerGuard will automatically go into standby-mode and wait for the next time the stove is turned on.

2.3 User interface (Light & Sound)

The led and buzzer on the sensor provides feedback and information to the user about the status of the system.

When the sensor itself, change status (e.g. from Idle to Active) the light in the led on the unit will change from one green flash every 10 seconds (**idle**) to one green blink every three seconds (**active**).

2.4 LED indicator

- Standby
  LED flashing green, one time every 10th second
  Sound: silent

- Hob/stove in use (heatplates are turned on)
  LED flashing green, one time every 3rd second
  Sound: silent

- Temperature warning/maximum use time exceeded
  LED flashing yellow, one time every 3rd second
  The limit for the temperature has been reached. The power will be cut off in a short while if no action is taken. Turn down the heat to avoid reaching the temperature limit.
  Or the maximum use time is almost exceeded, press button to prolong.
  Sound: short beep

Temperature alarm

The limit of the maximum temperature on the hob/stove is exceeded and the power has been cut off to the hob/stove.
After a temperature alarm the system will be quarantined/locked for 1 minute, and if trying to turn the system on again during quarantine period the sensor will sound a two-toned beep and the LED will be light up red.
A short press on the button when the issue has been resolved will bring the system back to normal.
Alarm Sound: long beep
Quarantine sound: two-toned beep

Search mode

The sensor is scanning for a controlbox to connect with. If successful the sensor goes in standby-mode (refer to the "Standby")
Sound: silent

Low battery warning

The level of the battery has reached a critical level and needs to be replaced soon. Refer to the Error-section in the manual to see how.The battery alarm will sound to indicate the critical condition.
When the hob/stove is in use: One beep every minute and LED flashing red every 10th second.
When the hob/stove is in standby: One beep every minute and LED flashing red every 3rd second.

App mode, ready to connect

When the LED flashes white the sensor is ready for the app to connect to it.

App mode, App connected

The App is now connected and the sensor will remain connected until the user selects "Disconnect" in the App or make a short press on the button.

Flashing light blue

The unit is initializing after a start up

Note that if the sensor is turned on and does not find a switch the sensor will light red and beep, before turning off.

2.5 CookerGuard-App

The CookerGuard-App is an application developed for Android mobile devices. It contains a quick and easy way to setup and to verify the sensor "sees" all the plates on the hob/stove.
The application requires an android device with android version 4.3 or later. The device that is used for the installation must also support Bluetooth low energy, also known as Bluetooth Smart or Bluetooth 4.0.

2.5.1 Download the CookerGuard-App

The CookerGuard-App can be found here:

NB: Please note that the bluetooth on the mobile phone must be enabled before starting up the app.

2.6 Technical Specifications

CookerGuard Tristan	F1727A	Comments
Stoves or Hobs:	Glass/ceramics, induction and electrical heat plates	
Distance between sensor and top of hob/stove	Default 45 cm Can be changed in the App to: 40, 45, 50, 55cm	
Maximum width of the hob/stove	60 cm	
Controlbox F1227		
Voltage	230 V	
Phases	3 phase	
Frequency	50 Hz	
Max current	16 Amp	
Electrical Security (Controlbox F1717)	Class II Double Insulated	
Wireless communication	2,4 GHz/ BLE	
Wireless Sensor F1511		
Batteries	4x AAA batteries	Est. Battery life in normal use 15 months*
Plastic material	Controlbox: PC 940A SABIC Sensor: PC/ABS SABIC C6600	Flammability UL94 V-0
Temperature of use	5 to 40°C	
Storage temperature	-25 to 70°C	
Humidity	8% to 90%	
Dimensions Controlbox	53 × 100 × 150 mm	H x W x L
Weight approx:	1600 g	Brutto
Dimensions Sensor	25 x 91 mm	height x diam.
Weight Sensor	50 g	F 1513

***1-hour of daily use with Duracell Ultra Power batteries**

2.7 Disposal

Equipment must be disposed according to local guidelines for the handling of used electronic appliances.

3 Installation

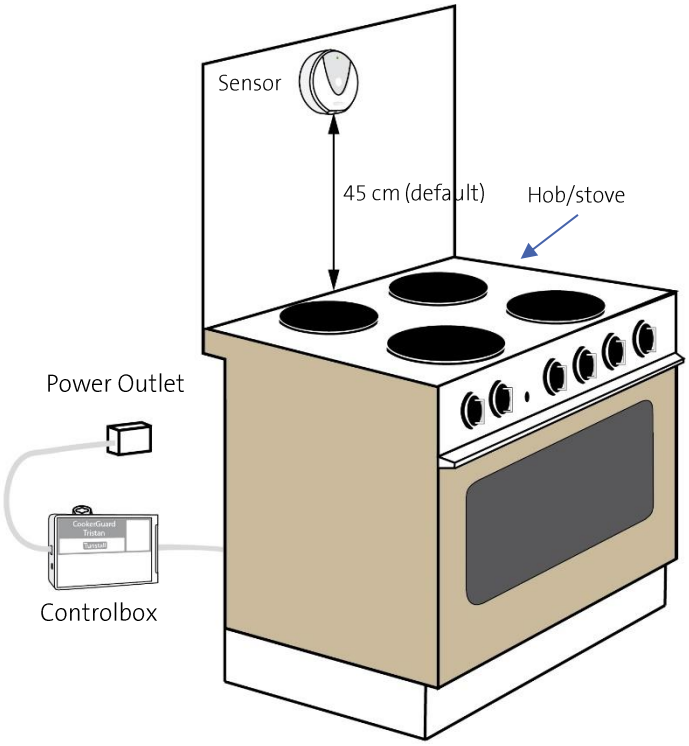


Figure 4.1 – The controlbox is mounted between the power outlet and the hob/stove

3.1 Preparations

The following procedure is to be carried out, by authorized personnel only.

Start by cutting off the power to the local installation

3.2 Installing the controlbox

Mount the controlbox horizontally behind the hub/stove or in a nearby cupboard.

A. Pull out the hob

B. Connect the hob to controlbox

Blue wire:	N (Neutral)
Brown wire:	Phase 1 *)
Black wire:	Phase 2 **)
Grey wire	Phase 3
Yellow-Green	Earth (Grounds)

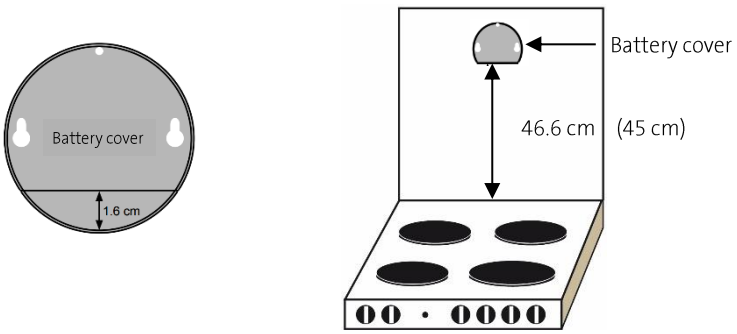
**) In 1 phased installations make sure to use the brown wire for the phase*
***) In 2 phased installations make sure to use the brown wire and the black wire for the phases.*

C. Then connect the controlbox to the wall outlet.
D. If the cables, mounted on the controlbox, is insufficient in length, avoid exchanging them. Instead, we recommend a junction box in between.
E. Remount the lid of the controlbox and push everything back to its original position. Switch the power back on.

3.3 Mounting the sensor

The sensor is mounted above the hob (see Figure 4.1). It is important to measure the distance from the bottom of the sensor to the top of the hob/stove (45 cm). If it is impossible to mount the sensor at 45 cm, other distances can be used: 40 cm, 50 cm, or 55cm,

A. Unmount the battery cover by removing the philips screw
B. Place the battery cover on the wall and add 1.6cm to the desired hight (standard height is 45 cm) which gives 46,6 cm between the hob and the battery cover. And mark the screw holes through the keyholes in the cover.
C. Mount the screws and hang up the sensor
D. Optional: To secure the sensor, a screw can be placed as illustrated in 4.2.1, to prevent tampering.



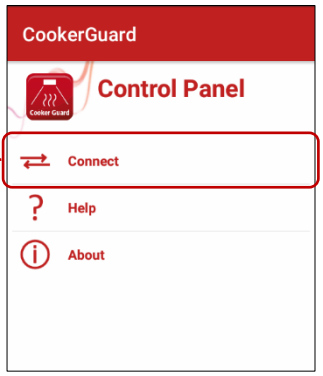
Figur 4.2 – Mounting the sensor.

Figur 4.2.1 – Securing the sensor

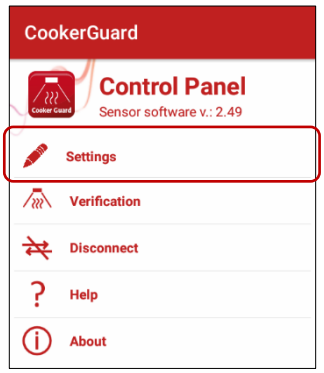
Important: If the distance differs from 45cm (46,6cm), the new distance must be set in the configuration of the sensor (use the app to change the height, see. Chapter 7

4 Startup

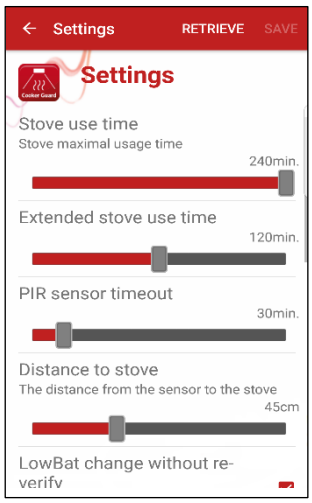
1. Insert batteries in the sensor, put the cover back on again and tighten the screw
2. Place the sensor on the wall
3. Make sure the power to the controlbox is turned back on
4. Press and hold the button on the sensor until it beeps (1-2 seconds)
5. Wait for the sensor to start
   - When the LED changes from fast blinking blue to slow blinking green the system is ready.
6. If you need to change some setting e.g. the mounting hight open the CookerGuard-App on your Android phone
7. Push and hold the button until the LED turns green (aprox 3 sec)
8. The LED blinks white
9. Select “Connect”



10. Under “Settings/Distance to stove” you can adjust the sensor height, choose between 40cm, 45cm, 50cm and 55cm



11. Under Settings/Stove use time” you can set the maximum time the stove can be ON, before the CookerGuard will cut the power. If you set the value to “0 minutes” the maximum runtime will be disabled, and the hob/stove will be able to run, without any time limit.
    The “Extended stove use time” is the extension you get when the maximum stove time has been reached and the warning sounds and the LED flashes yellow, you can then push the button once to extend the time for the amount of time defined under “Extended stove use time”.
12. Select “Save” and select “Disconnect” to end the “App-mode” and go back to normal operation
13. To verify the installation go to section 6



5 Verification

The verification is an easy way to verify sensor can see the whole heating area of the hob/stove. It measures the heat from all the cooking plates on the stove, and we use the Android application to verify the Sensor can see all the cooking plates.

Please note: The test must be completed within 5 minutes, as the controlbox will cut off the power to the hob/stove after 5 minutes due to security reasons.

Before we start the verification, please make sure the sensor is **ON** and the hob/stove is turned **OFF**:

- ⊙ Slow flashing LED on the sensor (one blink every 10 sec)

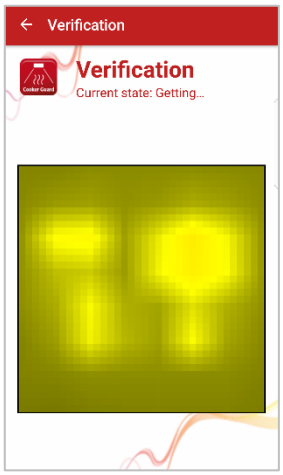
1. Start the Cookerguard-App on your phone.
2. On the sensor, press and hold the button until the LED turns green and release the button.
3. LED now fast blinking white.
4. Select "Connect" and select the sensor from the list
5. Select "Verification"

6. Wait for the square to turn dark

7. Turn on all the heat zones,

   Note: If the hob is the induction type, just place some pots and pans on every zone before turning the heat on.

8. Verify you can see all the heating zones. The dark square turns yellow, as the heat starts to rise



9. If the square remains dark, the sensor is incorrectly mounted and the system may NOT be used, as the security is not present. Please refer to the installation instructions again or try connecting another sensor to the controlbox.
10. If all zones are visible, the system is working correctly and when selecting the "arrow" in the top left corner of the screen and hereafter "Disconnect", then you are ready to go.
11. The CookerGuard system will now be ready to use.
12. IMPORTANT: A final test must be carried out to complete the installation. Place a pan that can withstand the high temperatures. Turn on the the heat on the pan and wait for the temperature to reach the critical level where the the sensor will first sound a warning and shortly after, cut the power.

13. NB: On some new stoves the heat is regulated through a build-in thermostat. If that is the case, it can be impossible to reach the maximum temperature and the test will fail. In that case it will be sufficient, to do the verification, as described in this chapter.

6 Errors

When the LED is lit yellow or red, this indicates a warning or error in the system. To solve this, see the list below or see chapter 2.4 for a complete list of LED indicators.

Heat Warning

When the temperature reaches its near maximum, the sensor emits a warning sound and the LED flashes yellow.
If no measures is taken, to bring the heat down again and the temperature continues to rise, the CookerGuard will cut the power to the hob/stove.
To recover, after the incident, just turn on the sensor by pressing the button until a short beep sounds.

Overheat Alarm

When the temperature limit is reached (around 310℃) the alarm will sound and the sensor LED will turn red and sensor will cut the power to the hob/stove and thereafter the sensor will turn off.
To recover, after the incident, just turn on the sensor by pressing the button until a short beep sounds.

Battery Warning

See section about Battery Exchange

Tamper Alarm

If the sensor is moved after installation, it will detect the tamper incident, sound an alarm and cut the power to the hob/stove and thereafter the sensor will turn off.
To recover, after the incident, just turn on the sensor by pressing the button until a short beep sounds.

Quarantine Period

If the sensor is turned back on within the first minute after the “heat maximum” has been reached the red LED will flash and a double beep will sound. Wait a minute and push the button again to turn the sensor back on.

App modus

Push the button again to leave the App-mode and the sensor will automatically reconnect to the controlbox

6.1 Battery Exchange (Sensor)

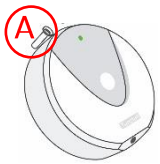
Always use Alkaline batteries 4 x AAA

A. Remove the sensor from the wall and unscrew the Philips screw from the back of the sensor.

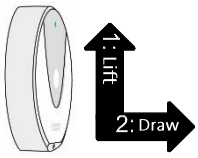
B. Replace all the batteries and make sure to align the batteries correctly according to the symbols in the battery compartment

C. Fasten the Philips screw with battery compartment lid

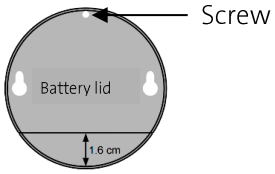
D. Remount the sensor on the wall and turn it on by pressing the button until the beep



Remember to dismount and remount the tamper screw(A) if needed



Dismount the sensor



Open battery compartment

6.2 Reset to factory defaults

Remove one of the battery cells and while holding down the button on the front, reseat the battery cell. Release the button and the LED will then flash light blue and thereafter initiate a search for the controlbox (LED slow flashing blue) and if the connection is complete the LED will be flashing green again.
Please notice after a factory reset the values will be as following:

Max stove use time	0 min (disabled)	
Extended stove use time	120 minutes	
PIR sensor timeout	30 minutes	For future use
Distance to stove	45 cm	

7 Timer/clock in the appliance

If the stove/hob is fitted with a timer or clock, it must be adjusted after every incident where the CookerGuard has detected a dangerous situation and therefor has cut the power to the stove.

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