

**CTM
LYNG**

MICROSAFE®

Installation Instructions



**mKomfy Hybrid 400R
(mKomfy Hybrid 400R Plug & Play)**

Part No. 6251635 (P&P 6251636)

Facts

The mKomfy Cooker Guard is a safety product for use in private homes that has been developed to prevent fires when cooking.

These instructions apply to Hybrid sensors from SN: 2044 -010000

The mKomfy Hybrid is a Class B cooker guard and does not react to flames or smoke. It relies on a clear view from the sensor to the hob in order to detect heat.

The cooker guard will therefore be unable to prevent a fire if the hob is covered with flammable materials (e.g. cardboard, newspaper), or if such materials catch fire near the hob.

In order to avoid false alarms, the cooker guard spends a short amount of time analysing the information from the hob. Hobs powerful enough to start a fire in under 120 seconds work so quickly that the cooker guard may find it hard to react before a fire is ignited, depending on the cookware and the substances in it on the hob.

The product assumes normal care in the use of the cooker and associated cookware. In normal use the cooker should be kept under frequent observation, even if safety equipment such as mKomfy is installed. Lots of smoke will be produced before the device is triggered, so optional extras such as *Power Break* could help to make the kitchen a safer place.

The product must be installed and maintained correctly as described, and may only be fitted by an authorised electrician.

For more information, visit us at
www.ctmlyng.no

If you have further questions or require assistance, please contact our support on

Tel: +47 4648 8100

Email: service@ctmlyng.no

Overheating

The cooker guard monitors the temperature of the cooker and sounds the alarm if it exceeds the upper limit.

The temperature alarm beeps 3 times every 5 seconds for 20 seconds and a red light comes on in the sensor. Reduce the temperature of the cooker immediately to prevent it being turned off, or press the control button on the sensor to approve the higher temperature for a set time.

Anti-tamper function

The cooker guard has an integral safety function which detects if the sensor is not correctly mounted in the fixing bracket. If the cooker is in use and the sensor is incorrectly mounted, the security function will be activated and beep 5 times in 5 seconds before turning the cooker off. Replace the sensor in the bracket and press the control button to continue using the cooker.

Optional timer function (see page 12 for activation)

When the cooker guard detects that the cooker has been turned on, it can start a built-in timer (countdown clock). When the timer reaches zero, the cooker is turned off. To restart the timer, press the control button on the sensor once.

Accessories



Optional extras for the mKomfy Hybrid cover additional needs and safety. Compatible with newer wireless accessories labelled "v2".



External
reset button*



External
master switch



Power Break



mTouch®
HUB

* Recommended for ceiling mounting – performs the same function as a control button

Installation – Socket

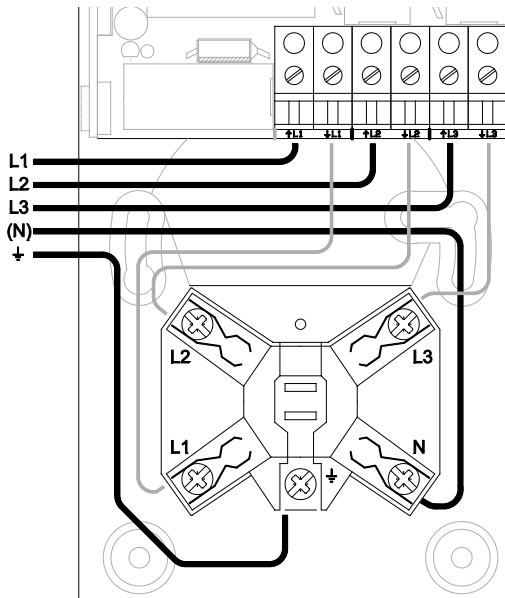
NB: The sensor and socket are factory-paired and ready to install

See page 15 if re-pairing is necessary

Fitting the socket (may only be carried out by authorised personnel)

1. Connect and fit the socket (does not apply to P&P version).
2. Connect the cooker plug to the cooker guard's socket.
3. Check that power is connected to the socket.

Figure 1



Status LEDs

Green	lights up	when relay is ON
Blue	flashes	when data is received from paired units (e.g. sensor)
Blue + Green	flash alternately	1 minute after emergency mode is activated and continue to flash while the product is in emergency mode (12 hours).
Red	flashes	if relay overheats – relay is turned OFF
Red	flashes + beeping	if there is an error, e.g. external switch paired before sensor
Yellow	lights up	when cooker's electricity consumption exceeds 1.2 A**
Yellow	flashes	in pairing mode

* emergency mode = all safety functions deactivated. See page 15.

** 1.2 A is the factory default. After calibration, the LED lights up when the new setting is exceeded (page 12)

If there is no radio communication from the sensor, the relay will shut off after 5 minutes.

Installation – Sensor

NB: The sensor and socket are factory-paired and ready to install

See page 15 if re-pairing is necessary

Fitting the sensor

- The sensor must be fitted at least 70 cm above the hob, either in the hood or on the ceiling.
 - Take note of the coverage (page 7) when fitting the sensor at different heights.
 - The mounting hole is suitable for mounting on a standard wall box.
1. Find a suitable location, see drawings on page 8-10.
 2. Mount the bracket.
 3. Set the DIP switches to the chosen height and angle (page 12).
 4. Insert the batteries (2 beeps = OK), or connect an external power supply.
 5. Put the sensor in the bracket and press the control button on the sensor once. A short beep confirms that the sensor is in communication with the socket and working.
 6. Make sure that only the green LED on the socket lights up when the cooker is connected and turned off. If the yellow LED lights up, the cooker's standby electricity consumption is higher than the default setting. In this case the level in the mKomfy can be calibrated to the cooker's actual electricity consumption, see page 12.

Power supply

The sensor can be used with batteries (3 x AA, supplied) or an external power supply.

NB: It is not possible to use batteries and a power supply at the same time.
The batteries must be removed if an external power supply is used.

Skins for the front panel

On our website, you can find dimensioned sketches for making your own skins, which you can cut to size and position under the sensor's front panel.

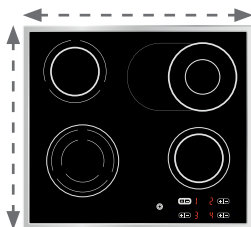
See www.ctmlyng.no/hybrid



Coverage

Dimensions in cm

DISTANCE HOB ↑ SENSOR	MAX. WIDTH HOB	MAX. DEPTH HOB
70	73	44
75	78	47
85	88	54
95	99	60
105	109	66
110	115	69
115	120	73
120	125	76
125	130	79
130	135	82
135	141	85
140	146	88
145	151	91
150	156	95
155	161	98
160	167	101
165	172	104
170	177	107
175	182	110
180	187	114
185	193	117
190	198	120
195	203	123
200	208	126
205	213	129
210	219	132



Orientation

Arrow points towards hob



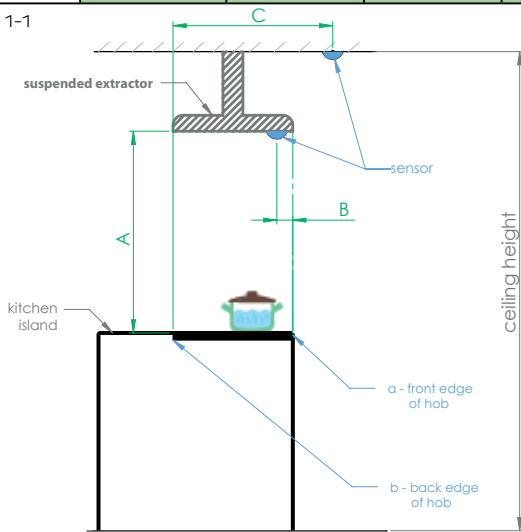
Installation – Sensor

Kitchen island with suspended extractor

Table for figure 1-1

Extractor	Sensor mounted on extractor	Sensor mounted on ceiling, height = 2.4 m	Sensor mounted on ceiling, height = 2.7 m	Sensor mounted on ceiling, height = 3.0 m
A Mounting height above hob	B Distance measured from front edge (a) of hob	C Distance measured from back edge (b) of hob		
70 cm - 80 cm	8.5 cm	not recommended	not recommended	not recommended
80 cm - 99 cm	5.5 cm - 8.5 cm	not recommended	not recommended	not recommended
100 cm - 115 cm	0 cm - 4 cm	not recommended	not recommended	not recommended
≥ 115 cm	0 cm	80 cm	95 cm	110 cm

Figure 1-1

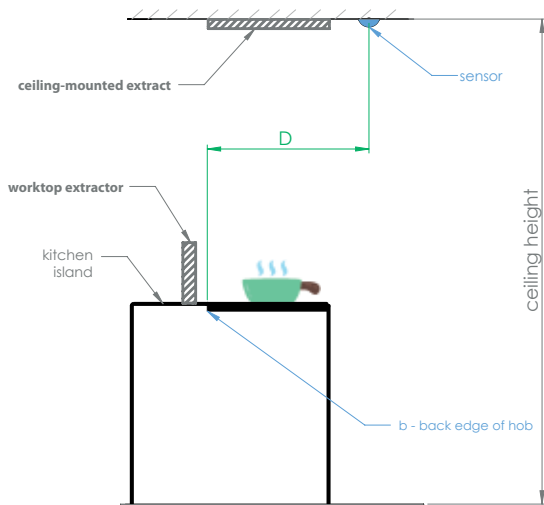


Kitchen island with worktop/ceiling-mounted extractor

Table for figure 1-2

Sensor mounted on ceiling, height = 2.4 m	Sensor mounted on ceiling, height = 2.7 m	Sensor mounted on ceiling, height = 3.0 m
D Distance measured from back edge (b) of hob		
70 cm - 80 cm	70 cm - 95 cm	70 cm - 110 cm

Figure 1-2



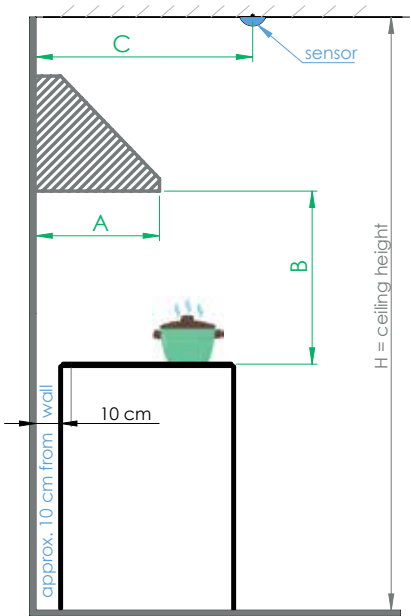
Installation – Sensor

Wall-mounted hob/extractor

Table for figure 1-3

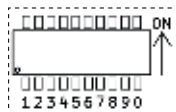
Extractor	Extractor	Sensor mounted on ceiling, height H = 2.4 m (3.0 m)
A depth	B mounting height above hob	C distance from wall
< 50 cm	min. 50 cm	88 cm(119 cm)
≥ 50cm	min. 70 cm	88 cm(119 cm)

Figure 1-3



Settings

All settings are made with DIP switches, which are mounted on the PCB in the sensor.
The switch marked 0 activates test mode.



Taking the sensor off/putting the sensor on the sensor bracket (back cover)



List of DIP switch functions

You will find more information on each function and setting on the next few pages.

To be completed by installer

DIP	Function	Default	Set to
DIP 1	Sound	ON	
DIP 2	Light	ON	
DIP 3	Installation angle	ON	
DIP 4	Installation height	ON	
DIP 5	Installation height	ON	
DIP 6	Timer	ON	
DIP 7	Timer	ON	
DIP 8	Current measurement*	ON	
DIP 9	Autoconnect	ON	
DIP 0	Test mode	OFF	

* Should only be deactivated if an external power supply is used

DIP 1: Audible alarm

DIP 1	Audible alarm	De-fault
OFF	Deactivates all sound	
ON		•

DIP 2: Visual alarm

DIP 2	Visual alarm	De-fault
OFF	Deactivates all lights	
ON		•

Installation – Settings

DIP 3: Installation angle

DIP 3	Installation angle	De-fault
OFF	0 - 45° (sloping ceiling)	
ON	0° (flat ceiling)	•

DIP 4 and 5: Installation height

DIP 4	DIP 5	Installation height above hob	De-fault
OFF	OFF	70 - 104 cm	
ON	OFF	105 - 149 cm	
ON	ON	150 - 194 cm	•
OFF	ON	195 - 210 cm	

DIP 6 and 7: Timer function

The countdown starts when the cooker is turned on. When 5 minutes of the set time are left, the cooker guard beeps once every 15 seconds for 5 minutes. Pressing the control button restarts the countdown.

DIP 6	DIP 7	Minutes	De-fault
ON	ON	Off	•
OFF	ON	45 min.	
ON	OFF	120 min.	
OFF	OFF	240 min.	

DIP 8: Current measurement

NB! Turning current measurement OFF will reduce battery life considerably. Should only be deactivated if an external power supply is used.

DIP 8	Current measurement	De-fault
OFF	Current measurement off	
ON		•

Calibrating electricity consumption NB! May only be carried out by an authorised electrician. If the yellow LED on the SOCKET comes on continuously while the hob is OFF and does not disappear when the control button on the sensor is pressed, the standby current to the cooker is higher than the cooker guard's preprogrammed standby level.

In this case the level can be recalibrated to actual electricity consumption by:

1. Holding the SOCKET's control button in until the red and green LEDs flash – then releasing the button within two seconds.
2. The green LED flashes three times to acknowledge the change.

NB: We strongly recommend measuring the hob's electricity consumption in standby BEFORE doing this calibration. High electricity consumption could be caused by a fault in the hob. Incorrect calibration in the case of high electricity consumption can result in the cooker guard never starting or not working as intended.

DIP 9: Autoconnect

Fifteen minutes after turning the cooker off, the cooker guard will automatically be reset and turn the power back on. On a cooker with rotary switches, all the rings and oven must be turned off before the cooker guard will reset itself automatically.

DIP 9	Autoconnect	De-fault
OFF	Autoconnect off	
ON		•

If this function is deactivated or to reset the cooker guard manually, press the control button on the sensor (or external switch panel, optional extra).

DIP 0: Test mode / Function test

There are three different function tests:

1 = On/Off test 2 = Current test

3 = Temp. test

To activate the function test:

1. Remove the SENSOR cover and set DIP switch 0 to ON
2. Put the cover back on temporarily to stop the batteries falling out.

To change between the three function tests, hold the control button on the sensor in for 5 seconds. The sensor acknowledges with one, two or three beeps to indicate the test type.

DIP 0	Test mode	De-fault
OFF		•
ON	Test mode on	

1 beep	On/Off test
<p>The sensor acts as an ON/OFF switch.</p> <p>Pressing the control button switches between turning the power to the cooker ON/OFF. The light on the sensor comes on when the cooker socket is on (sending power to the cooker).</p>	

2 beeps	Current test	3 beeps	Temperature test
<p>Indicates electricity consumption for the hob.</p> <p>Following activation turn the hob on. A few seconds later the LED on the SENSOR should come on continuously and the green and yellow LEDs on the SOCKET should light up.</p> <p>Now turn the hob OFF. The LED on the SENSOR goes out and only the GREEN LED on the SOCKET should be on.</p>		<p>Turns the cooker on/off based on temperature.</p> <ul style="list-style-type: none"> • Point the sensor at a hot surface/object. The cooker turns off if the temperature is over 35°C. • Point the temperature at a cold surface (at normal room temperature). The cooker comes back on if the temperature is below 35°C. 	

When you have performed the function test(s), remember to set DIP switch 0 to OFF.

Alarm signals

Alarm signal:	One (1) light and sound signal every 15 seconds for 5 minutes.
Cause:	Cooker guard warning that timer is in last 5 minutes.
Action:	Press control button to restart timer.

Alarm signal:	Two (2) light and sound signals every 5 minutes.
Cause:	Battery change necessary.
Action:	Change batteries. NB: Make sure you have new batteries to hand first (3 x AA).

Alarm signal:	Two (2) light and sound signals and the cooker shuts off 10 min. after use.
Cause:	Battery change necessary.
Action:	Change batteries. NB: Make sure you have new batteries to hand first (3 x AA).

Alarm signal:	Three (3) light and sound signals every 5 seconds and a steady red light between signals.
Cause:	Overheating.
Action:	Reduce temperature, or press control button to temporarily approve high temperature.

Alarm signal:	Three (3) light and sound signals every 30 seconds.
Cause:	High temperature continuing after shut-off.
Action:	Reduce temperature, or press control button.

Alarm signal:	Five (5) light and sound signals in the course of 5 seconds.
Cause:	Anti-tamper function detects that sensor has been removed from bracket.
Action:	Replace sensor in bracket and press control button.

EMERGENCY MODE

In the event of problems with the cooker guard that cannot be resolved there and then, you can activate emergency mode, which connects power to the cooker for 12 hours (can be repeated for a further 12 hours).

NB: All safety functions are deactivated in this period.

To activate emergency mode:

Turn the cooker fuse off and on three times at intervals of at least 1 second for a period of 10 seconds.

Pairing

NB: The sensor and socket are factory paired and ready to install

The sensor and socket are factory-paired and ready to install. If re-pairing is necessary:

Remove at least once battery from the sensor (you can get batteries ready for the sensor, but DO NOT fit them).

1. Give the Socket control button a quick press. Yellow LED flashes.
2. Hold the control button on the sensor in and fit batteries in the sensor.
3. There are 2+2 beeps, the blue LED on the socket flashes and the socket turns off.
4. Release the control button on the sensor.

The sensor and socket are now paired.

Thank you for choosing...

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Technical data

Cooker Guard mKomfy Hybrid 400R

Operating voltage:
400 VAC 3-phase

Max. load:
3x16 A

Batteries*:
3 x AA/LR06

Battery life:
Up to 3 years

RF:
868.100 MHz
+5 dBm

Cooker guard type:
Class B

Power supply*:
USB 2.0 micro B, 5 VDC, min. 1 A

*Batteries and power supply
cannot be used at the same time



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