

**CTM  
LYNG**

**MICROSAFE®**

Installation and User Instructions



**mKomfy Hybrid 16R400V-D**

SAVE THESE INSTRUCTIONS

## Practical information

The mKomfy cooker is a safety product developed to minimise the risk of fire when cooking. The product provides normal safety when using a cooker and associated cookware. The cooker must not be left unattended while in use even if safety equipment such as the mKomfy is installed.

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

## Accessories



The accessories for the mKomfy include several products that increase the level of safety. Compatible with wireless accessories labelled "v2".



External reset button\*



External master switch



Smoke shut-off

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

## 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](http://www.ctmlyng.no/hybrid)



## Hotplate temperature

The cooker guard monitors the temperature of the hotplates 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 hotplates immediately to prevent them being turned off or press the control button on the sensor to approve the higher temperature for a set time.

## Anti-tamper function

If the sensor is removed from the bracket, a security function will be activated and beep 5 times in 5 seconds before the hotplates are turned off. Put the sensor back and press the control button to continue using the cooker.

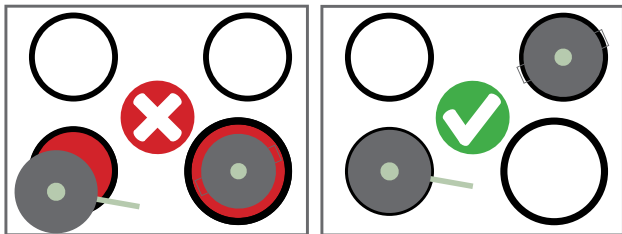
## Optional timer function (see page 12 for activation)

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. The cooker guard will alert the user for the last 5 minutes. Press the control button on the sensor once to restart the timer.

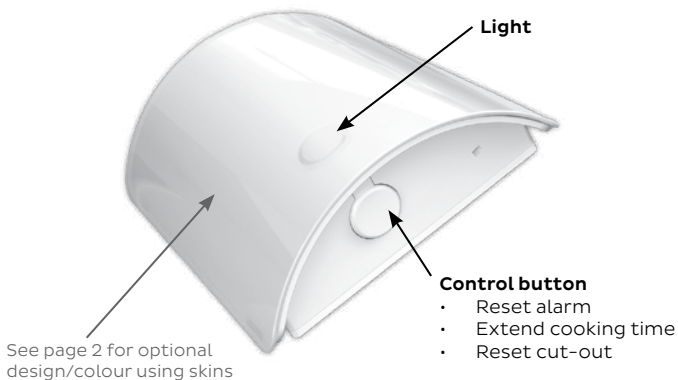
Hold the control button in for 10 seconds to extend the time (see page 5).

## Things to remember when cooking:

Moving a hot pan to another hotplate will expose a very hot surface. The cooker guard may register this as overheating and sound the alarm. To reduce the risk of unwanted temperature alarms, only use pans that cover the entire hotplate.



## Everyday use

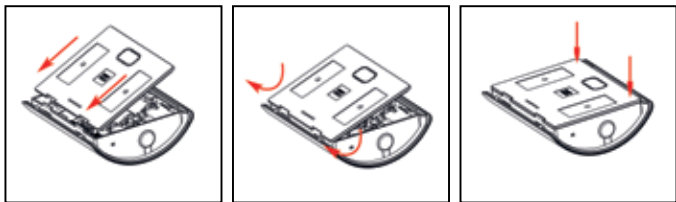


**Batteries** (does not apply if an external power supply is used)

We recommend replacing the batteries once a year or when there is a low battery warning.

1. Remove the sensor from the bracket.
2. Replace the batteries (3 x "AA").
3. Put the sensor back in the bracket.
4. Give the control button a quick press.  
The sensor will beep if the new batteries are in properly.

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



## Alarms

Alarm signal:	<b>One (1) beep</b> every 15 seconds for 5 minutes.
Cause:	Cooker guard warning that timer will run out in 5 minutes.
Action:	Press control button to restart timer.

Alarm signal:	<b>Five (5) beeps</b> in 5 seconds.
Cause:	Anti-tamper function detects that sensor is not positioned correctly in wall bracket.
Action:	Position sensor properly in bracket and press control button.

Alarm signal:	<b>Two (2) beeps</b> every five minutes.
Cause:	Batteries are nearly flat.
Action:	Replace batteries. Remember to check that you have new batteries before taking the old ones out of the sensor (3 x AA).

Alarm signal:	<b>Three (3) beeps</b> every 5 seconds and red light.
Cause:	Hotplates overheating.
Action:	Turn temperature down or press control button to temporarily approve high temperature.

## Temporarily extended time

(Only applies if timer function is activated, see page 3)

The timer (countdown clock) can temporarily be extended to 12 hours by holding the control button in for 10 seconds.

The sensor beeps twice to confirm that the extended cooking time has been activated. The timer returns to normal operation when the countdown ends or the cooker is turned off.

Hold the control button in for 10 seconds to end the extended cooking time. The sensor beeps once to confirm.

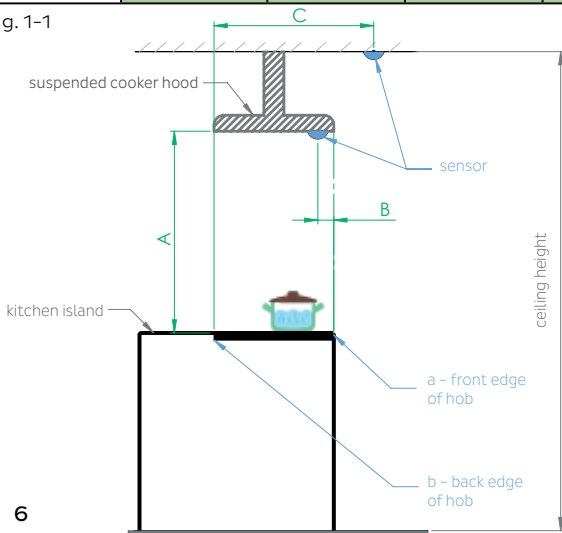
# Sensor installation

## Kitchen island with suspended cooker hood

Table for Fig. 1-1

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

Fig. 1-1

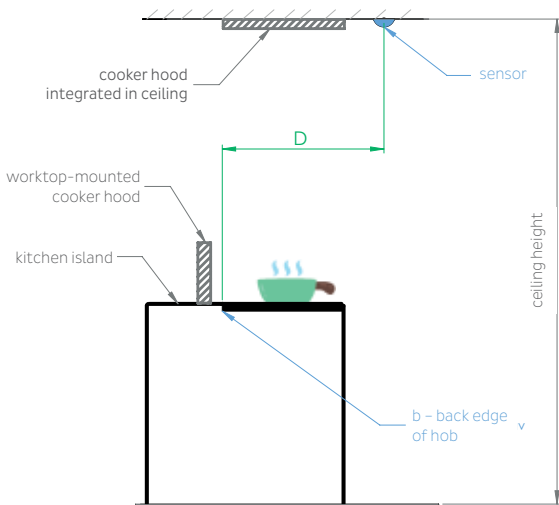


## Kitchen island with worktop/ceiling-mounted cooker hood

Table for Fig. 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
<b>D</b> Distance measured from back edge (b) of hob		
70-80 cm	70-95 cm	70-110 cm

Fig. 1-2



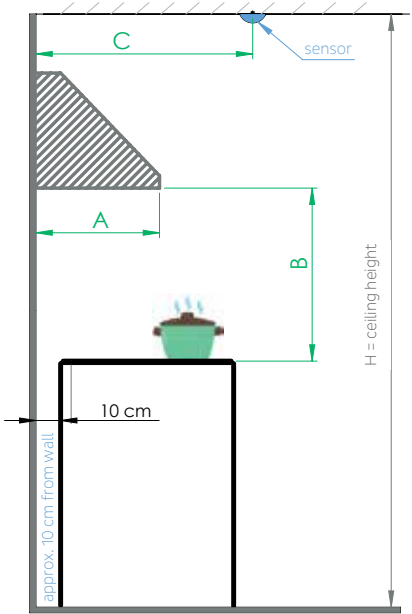
# Sensor installation

## Wall-mounted hob/cooker hood

Table for Fig. 1-3

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

Fig. 1-3

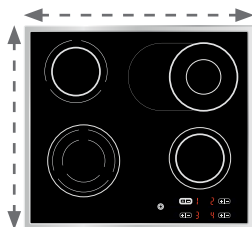




## Coverage

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

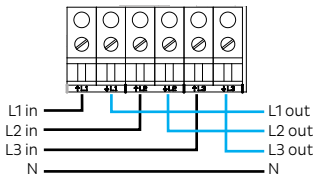


# Installation

The sensor and relay are configured at the factory and ready to install. See page 15 if re-pairing is necessary.

## 1. Connecting wires in the relay (must be carried out by an authorised electrician)

1. Connect the input wires to the terminals.
2. Connect the output wires to the terminals.
3. Turn on the power.



### Status LED (Troubleshooting must be carried out by an authorised electrician)

Green	lights up	when relay is on.
Blue	flashes	when data is received from paired unit (excluding sensor)
Blue + Green	flash alternately	if connection with sensor is lost (emergency mode*)
Red	flashes	if relay overheats – power must be turned off.
Red	flashes + beeping,	if error in external units interrupts pairing before sensor is paired
Yellow	lights up	when cooker's electricity consumption is too high, 1.2 A **
Yellow	flashes	in pairing mode

\* Emergency mode = all safety functions deactivated

\*\* 1.2 A is the factory default. After calibration, the LED lights up if the new calibration level is exceeded.

## 2. Fitting the sensor

- The sensor must be fitted at least 70 cm above the hob on either the cooker hood or the ceiling.
  - Take note of the coverage (page 9) 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 pages 6–8.
  2. Mount the bracket.
  3. Set the DIP switch to the chosen height and angle (pages 11–12).
  4. Insert the batteries (2 beeps = OK) or connect an external power supply (page 11).
  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 oven is connected and turned off. If the yellow LED lights up, the cooker's standby electricity consumption is higher than the default setting. The level in the mKomfy can then be calibrated to the cooker's actual electricity consumption, see pages 10 and 11.

## Power supply

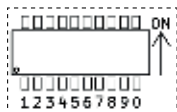
The sensor can be used with batteries (3 x AA, supplied) or an external power supply.

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.**

## Settings

All settings are made with the DIP switches on the PCB in the sensor.

The switch marked 0 activates test mode.



Taking the sensor off/putting the sensor on the sensor bracket (battery 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

# Installation – Settings

## DIP 1: Audible alarm

DIP 1	Audible alarm	Default
OFF	Deactivates all sound	
ON		•

## DIP 2: Visual alarm

DIP 2	Visual alarm	Default
OFF	Deactivates all lights	
ON		•

## DIP 3: Installation angle

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

## DIP 4 and 5: Installation height

DIP 4	DIP 5	Installation height above hob	Default
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 there are 5 minutes to go, the cooker guard beeps once every 15 seconds for 5 minutes. The countdown can be restarted by pressing the control button.

DIP 6	DIP 7	Minutes	Default
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.

Having current measurement activated provides extra peace of mind in the case of cookers with an integrated oven. The timer function will then work even if just the oven is used (and not the hob). We recommend activating the extended cooking time temporarily if the timer is set to 45 min.

DIP 8	Current measurement	Default
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 when 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 calibrated to the actual electricity consumption by:

1. Holding the control button on the SOCKET in until the red and green LEDs flash, then releasing the button within 2 seconds.
2. The green LED flashes 3 times to confirm the change.

NB: We strongly recommend measuring the hob's electricity consumption in standby BEFORE doing this calibration. High electricity consumption may be caused by a fault in the hob. If electricity consumption is high, incorrect calibration may result in the cooker guard not starting or not working as intended.

## DIP 9: Autoconnect

Fifteen minutes after the cooker guard has turned the cooker off, the cooker guard is automatically reset and power reconnected. On a cooker with rotary switches, all the hotplates and oven must be turned off for the cooker guard to be reset automatically.

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 9	Autoconnect	Default
OFF	Autoconnect off	
ON		•

# Installation – Settings

## DIP 0: Test mode/function test

DIP 0	Test mode	Default
OFF		•
ON	Test mode on	

## Function test

There are three different function tests:

1 = On/Off test    2 = Current test    3 = Temperature 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.

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

2 beeps	Current test
Indicates electricity consumption for the hob.	
Following activation turn the hob ON. A few seconds later the red LED on the SENSOR should come on continuously and the green and yellow LEDs on the SOCKET should light up.	
Then turn the cooker OFF. The red LED on the SENSOR goes out and only the GREEN LED on the SOCKET should be on.	

# Installation – Calibration and function test

3 beeps	Temperature test
Turns the cooker on/off based on temperature.	
<ul style="list-style-type: none"><li>• Point the sensor at a hot surface/object. The cooker turns off if the temperature is over 35°C.</li><li>• Point the sensor at a cold surface (at normal room temperature). The cooker comes back on if the temperature is below 35°C.</li></ul>	

**Remember to set DIP switch 0 to OFF after performing the function test(s).**

## Indicator lamps

### Indicator lamps in the sensor

Blue	flashes	during use if the cooker guard detects power. Frequency: battery 5 minutes/mains voltage 30 seconds
Red + Blue	flash + beeping	every 30 seconds for battery warning, but only while cooker guard is in use
Red	lights up	+ beeping every 5 seconds if temperature is too high (see page 5)

## Pairing

The sensor and socket are paired at the factory. If re-pairing is necessary:

Remove at least one 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 insert batteries in the sensor.
3. There are 4 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...

**MICROSAFE®**

1021 Art. No.: 14118

### Technical data

Cooker guard  
**mKomfy Hybrid 16R400V-D**

**Voltage:**  
400 VAC 3-phase

**Load:**  
16 A

**Batteries\*:**  
3 x AA/LR06

**Battery life:**  
Up to 1 year

**RF:**  
868.100 MHz

**Transmitter power:**  
+5 dBm

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

\*Battery and power supply cannot  
be used at the same time.



NORWEGIAN  
QUALITY  
PRODUCTS



Manufacturer: CTM Lyng AS, [www.ctmlyng.com](http://www.ctmlyng.com), tel. +47 72831611