OPTIMA AF THERMOSTAT (air and floorsensor)

The **OPTIMA AF** surface-mounted thermostat has been developed to be able to switch electric and conventional heating systems on and off using a set temperature and time.

Options and advantages of the OPTIMA AF thermostat:

- ✓ Large display can be clearly read with the background lighting.
- ✓ Easy to fit and easy to programming of the thermostat.
- ✓ Five buttons make it easy to use.
- ✓ 70 switching programmes per week (10 individual programmes per day by time and temperature).
- ✓ The display shows the set temperature or the measured temperature, time and programme selection.
- ✓ Temperature display in degrees Celsius.
- ✓ Programming or Manuel function
- ✓ The thermostat is supplied with a wall-fixing frame.

Technical specifications:

Thermostat operating voltage:	2 x AA 1.5 V, alkaline batteries.
Backup storage:	EEPROM
Maximum voltage / (ohmic) load:	250 VAC/8 A.
Maximum voltage / (ind./cap.) load:	250 VAC/2 A.
Switching options:	10 programmes per day, irrespective of the day.
Switching contacts:	NO and NC.
Temperature settings air:	0°C ~ 60°C, 0.5°C increments.
Temperature settings external:	5°C ~ 90°C, 0.5°C increments.
Temperature settings frost protection:	0°C ~ 10°C, 0.5°C increments.
Sensor mode:	Internal, external or both
Accuracy:	+/- 0.5°C (+/- 1°F).
Thermostat dimensions:	Surface mounted, 134 mm x 94 mm x 28 mm.
Display dimensions:	69 x 49 mm.
Colour:	White
IP protection rating:	20.
Certification:	CE.

Advice

- ✓ Always switch off the voltage when carrying out installation work.
- ✓ Read the operating instructions fully before installing the thermostat and sensor.
- ✓ The thermostat must be installed by a professional.
- ✓ Installation must be carried out in accordance with (N)EN standards (within the EU).
- ✓ The thermostat has an internal glass fuse to protect the electronics. If the thermostat is not working, check the cable and the fuse. Replace the defective fuse with a correct value replacement fuse.
- ✓ Only use the thermostat as outlined in the operating instructions.
- ✓ Always use alkaline batteries (e.g. Duracell) and charged batteries in the thermostat battery holder.

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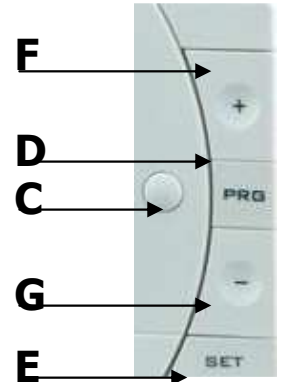
Calibrating of the room temperature:

The measured air temperature of the **OPTIMA AF** is easy to calibrate. Only use this function if the measured temperature deviates (this happens if you place the thermostat in a non logic location).
- Press and hold the **SET** (E) button, in off mode, on the thermostat for 3 seconds.
- Use the **+** (F) and **−** (G) buttons to set the temperature value. This value can be adjusted by -8 to +8°C.
- Press the **SET** (E) button on the thermostat to save this function and leave the menu.

Advanced settings of the thermostat:

To enter into the advanced settings just following the bellowed steps.
- Press and hold the **SET** button (E) for around 3 seconds. The minutes **(01)** in the display (top left in the display) flashes.
- Change this value using the **+** (F) and **−** (G) buttons.
- Press the **SET** button (E). The hour **(02)** display (top left in the display) flashes.
- Change this value using the **+** (F) and **−** (G) buttons.
- Press the **SET** button (E). The day **(03)** display (top left in the display) will flash as a number **1**.
- Change this value using the **+** (F) and **−** (G) buttons. Use 1 for Monday, 2 for Tuesday, 3 for Wednesday, 4 for Thursday, 5 for Friday, 6 for Saturday and 7 for Sunday.
- Press the **SET** button (E). The frost protection **(04)** can be set between 0 ~ 5'C. When the display shown --, then the frost protection is disabled.
- Change this values using the **+** (F) and **−** (G) buttons.
- Press the **SET** button (E). The high temperature set point level **(05)** is shown in display. With this value you be able to maximize the high temperature set point level e.g. 45'C.
- Change this values using the **+** (F) and **−** (G) buttons.
- Press the **SET** button (E). The low temperature set point level **(06)** is shown in display. With this value you be able to maximize the low temperature set point level e.g. 15'C.
- Change this values using the **+** (F) and **−** (G) buttons.
- (example low temperature is 15'C, high temperature is 45'C. The temperature can only be set between these values).
- Press the **SET** button (E). The sensor mode **(07)** can be selected. 0: room sensor, 1: external sensor and 2: internal and external sensor (external is used as high temperature protection).
- Change this values using the **+** (F) and **−** (G) buttons.
- Press the **SET** button (E). The temperature of the external sensor can be calibrated **(08)** between -8'C ~ +8'C.
- Change this values using the **+** (F) and **−** (G) buttons.
- Press the **SET** button (E). The high temperature protection **(09)** external sensor can be changed between 10~90'C.
- Change this values using the **+** (F) and **−** (G) buttons.
- Press the **SET** button (E). The software version **(10)** is shown in the display.
- Press the **SET** button (E), save the settings.

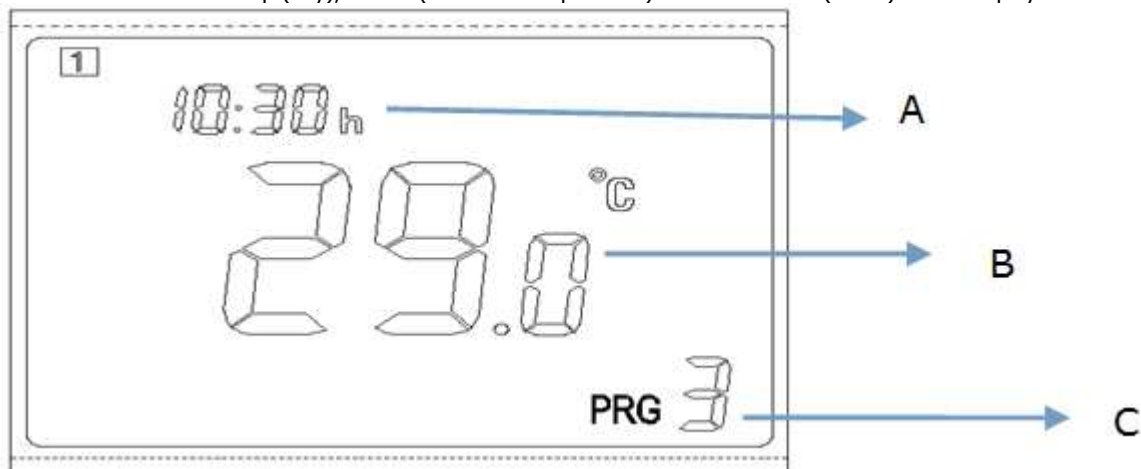| Nr.	Item	Range
01	Minutes	0 ~ 59
02	hours	0 ~ 23
03	weekday	1 ~ 7
04	Frost protection	0 ~ 10°C
05	High temp. setpoint limit	10 ~ 90°C
06	Low temp. setpoint limit	0 ~ 60°C
07	Sensor mode	0: internal (air) sensor
		1: External sensor
		2: Internal and external sensor (external sensor as high temp. protection)
08	External sensor calibration	-8 ~ +8°C
09	High temp. protection setting	10 ~ 90°C
10	Software version	100D

Frost protection:

When the frost protection mode is set on for example 5°C and other temp values are higher, the thermostat activates when the temperature is lower then the frost protection temperature. To disable the frost protection just enter the advanced settings and go to **04** (frost protection) and with the buttons + and – just enter the value --. The frost protection is disabled.

OPTIMA AF THERMOSTAT (air and floorsensor)

Programming:

The **OPTIMA AF** provides the option to program 10 time and temperature settings, irrespective of the day, i.e. a total of 70 switching programmes per week.
These are shown in the top (day), centre (time and temperature) and the bottom (event) of the display.

Carry out the following steps to select the program you want:
- Press and hold the **PRG** button (D) for around 3 seconds to enter the Programming settings, the series of figures at the top and bottom of the display flashes; the day is shown in the top left (starting with 1 as Monday), startup time and temperature in the centre (A and B) and program event in the right bottom corner.
- Change these values using the **+** (F) and **−** (G) buttons. Use the **PRG** (D) button and the **+** (F) and **−** (G) buttons to set the desired values.
- When entered the program setting (see above) the time (A) flashes, change the value with the **+** (F) and **−** (G) buttons. Each step is 15minutes.
- Press the **PRG** (D) button, the temperature flashes (B), change the value with the **+** (F) and **−** (G) buttons. The temperature can be set with steps of 0,5'C.
- Press the **PRG** (D) button, the PRG (program / event) flashes (C). You be able to setup the next event.

The thermostat uses the setting from event PRG 0 till PRG 1. The setting from PRG 1 goes till event PRG 2, from PRG 2 till PRG 3, from PRG 3 till PRG 4, from PRG 4 till PRG 5, from PRG 5 till PRG 6, from PRG 6 till PRG 7, from PRG 7 till PRG 8 and from PRG 8 till PRG 9. These are the 10 events per day.
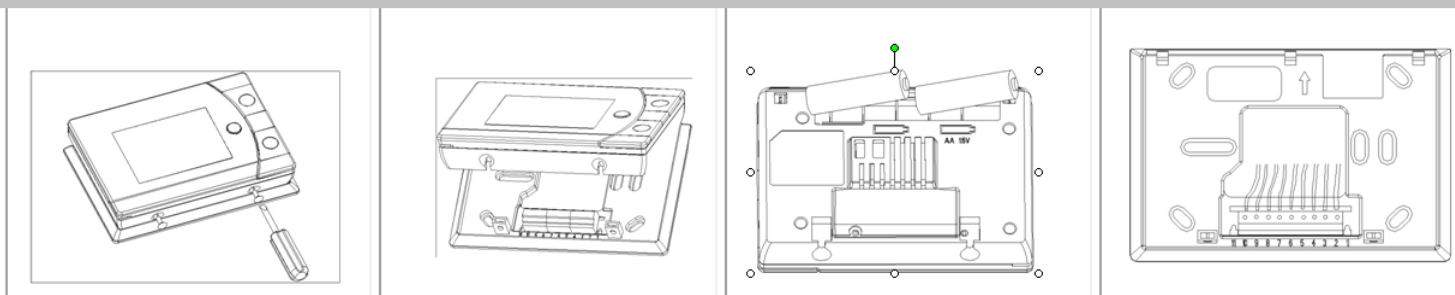
Manuel / Program function:

The desired program function for the **OPTIMA AF** is easy to set.
Press the **PRG** (D) button to set the desired function (program: PRG or manual: MAN)
- When the thermostat has the function PRG (Program) the thermostat act like the pre installed programs (see programming).
- When the thermostat has the manual function (MAN), the thermostat act by the desired temperature used by the + and − buttons. The thermostat doesn't goes automatically to the program function!
- The thermostat shown in the display in the left corner a heating symbol when it is active: ﷽. This symbol disappears when there is no request for heat.

Inserting/replacing the thermostat batteries:
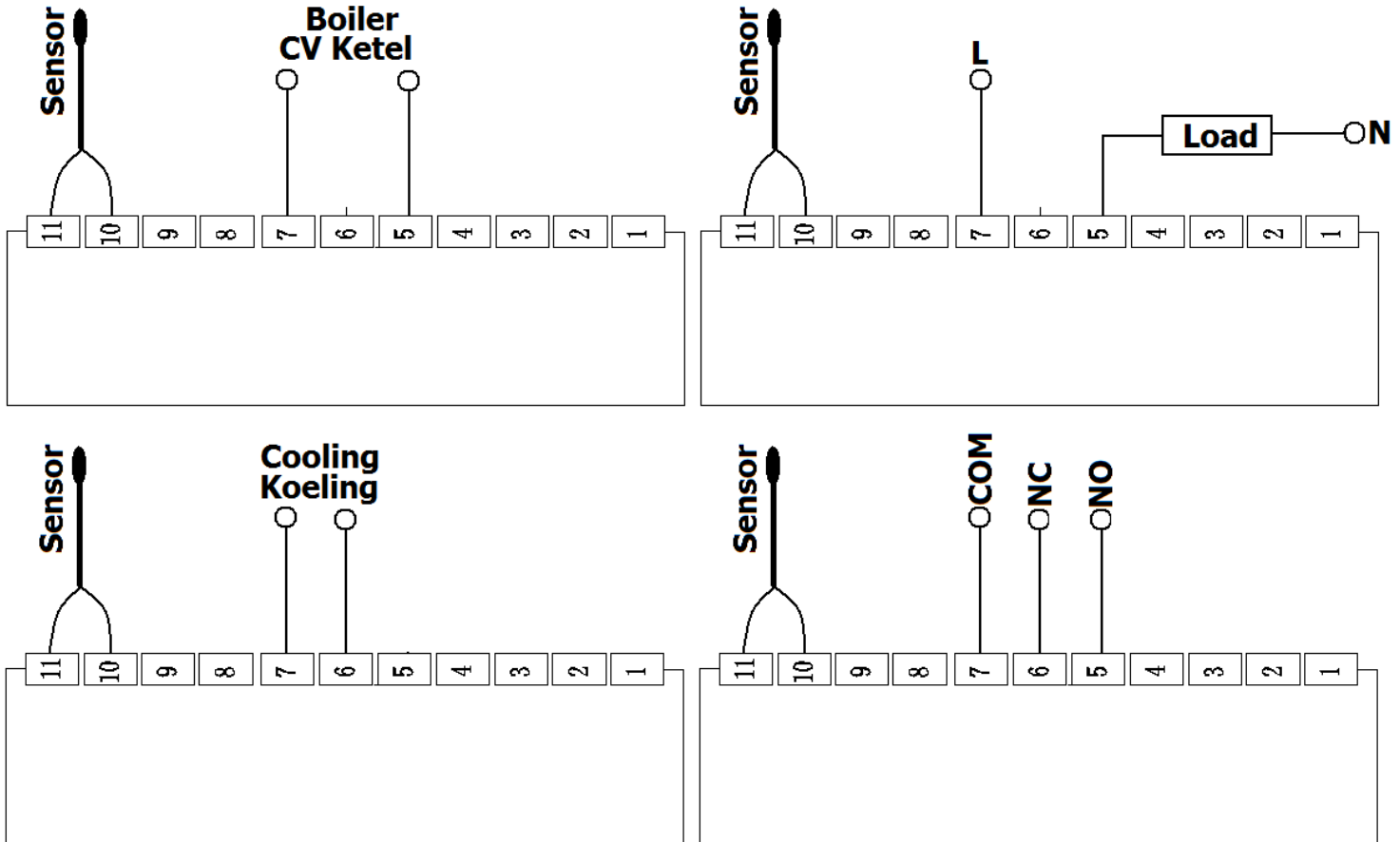

Alarm notation:

When the sensor mode is set on external or internal + external there is a possibility that the thermostat generates a alarm when the sensor is not connected or when it is damaged. The thermostat turns off and the display shown (flashing) the notification **ALARM**.
When the measured temperature is higher then the maximum set temperature, the thermostat shown Alarm in the display. The thermostat turns off. In both situations the Alarm code is flashing in the display. Fix the fault and try it again.

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Connecting the wiring:

The thermostat can be connected with voltages from 0 ~ 250Vac with a maximum load of 8A ohmic load or 2A inductive/capacitive load.

The thermostat has some connection terminals;
External sensor: terminal 10 and 11 (note: when the external sensor is mounted into a concrete floor, or similar, the sensor must be added in a tube. The sensor must be mounted that it can be removed when it is damaged or faulty)
Voltfree output: 5, 6 and 7.
Be sure that you connect wires onto the right terminals and check it.

Miscellaneous:

- Batteries should be replaced once a year to ensure accurate operation (use alkaline AA batteries, 1.5 V, e.g. from Duracell).
- Treat the **OPTIMA AF** thermostat with care; the thermostat have sensitive electronics.
- The **OPTIMA AF** cannot tolerate moisture and extreme heat; ensure that the thermostat is suitably protected.

Miscellaneous:

We hope you enjoy using the OPTIMA AF thermostat.

If you have any questions please contact: