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ETHERMA°

ETHERMA eBASIC Combi Floor Thermostat

SETUP

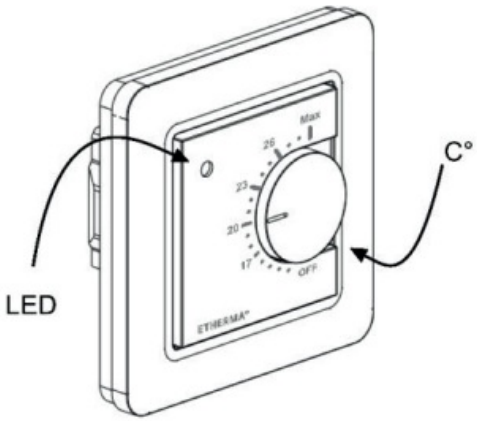
This manual describes the main features and technical specifications of the thermostat eBASIC. The instruc-tions will help the user to operate the thermostat and the electrician to install and configure the thermostat. The manufacturer is not liable if the instructions below are not followed. The equipment must not be misused, i.e. used contrary to its intended use.

CONTROL FUNCTION CODES

		Code of tempera-turecontrol (TC)	Control functions							
			f1	f2	f3	f4	f5	f6	f7	f8
Type of temperature control	Single stage, no temperaturecontrol	NC								
	Two or more manual stages, no temperature control	TX								
	Mechanic thermostat room temperature control	TM								
	Electronic room temperature control	TE								
	Electronic room temperature control plus day timer	TD								
	Electronic room temperature control plus week timer	TW								
Control functions	Presence detection		1							
	Open window detection			2						
	Distance control option				3					
	Adaptative start control					4				
	Working time limitation						5			
	Black bulb sensor							6		
	Self-learning functionality								7	
	Control accuracy with CA < 2 Kelvin and CSD < 2 Kelvi									8

TECHNICAL DATA

- **Bluetooth:** Version 4.2
- **Power supply:** 230 V – 50/60 Hz
- **Maximum load:** 16 A (ohmic)
- **Temperature range:** + 5 °C / + 35 °C
- **External temperature lowering:** 230 V- 50/60 Hz
- **IP class:** IP 21
- **Standard color:** white
- **Sensor:** Built-in room sensor and external floor sensor NTC or wireless BLE sensor



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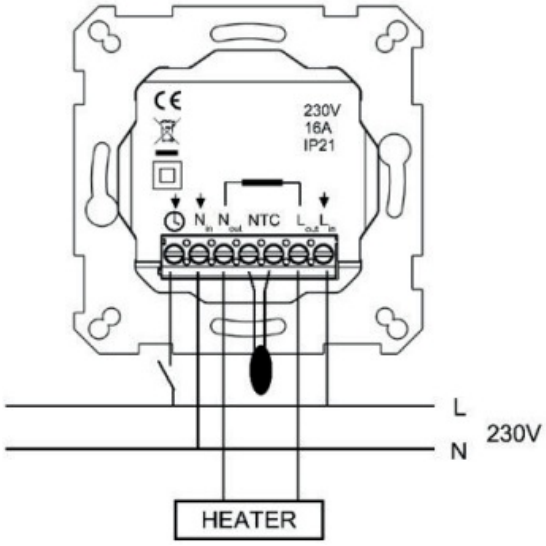
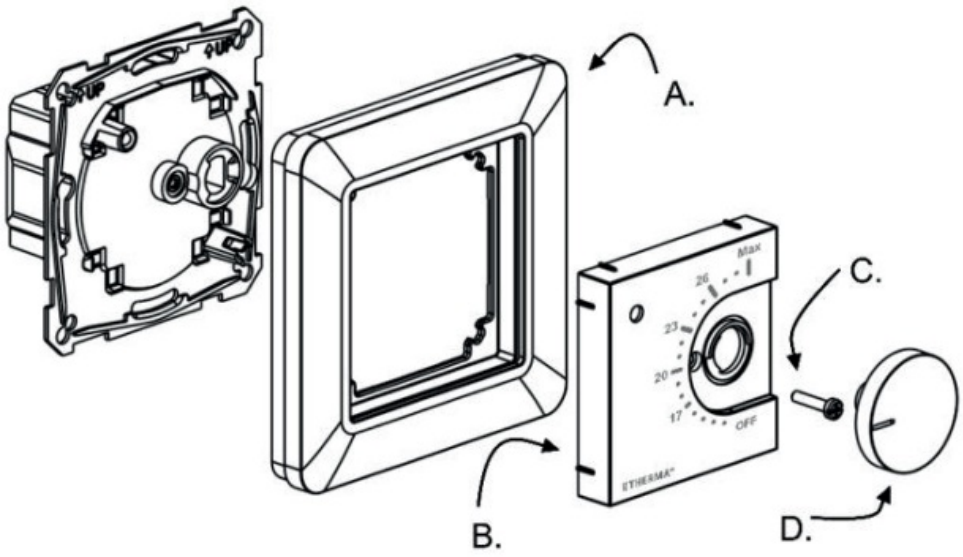
INSTALLATION

Installation must be performed by a qualified electrician in complian-ce with wiring and building codes. Disconnect the power supply of the thermostat from the main network before installation.
To loosen the visible parts (A) and (B), pull out the knob (D) and remove the screw (C). You can now easily pull off the plastic covers.
Connect the cables to the terminals of the thermostat:

- **LOWERING:** External contact (if applicable)
- **N:** Power connection (neutral conductor)
- **HEATING (N):** Heating cable connection (Neutral)
- **FLOOR FEEDER:** Floor temperature sensor NTC
- **HEATING** (L): Heating cable connection (phase)
- **L:** Power connection (phase)



Now position the thermostat and fasten it in the wall installation box with 2 screws. Install the cover parts, fasten them with the screw and, finally, press the rotary knob in at the correct position.



COMMISSIONING

After the thermostat is switched on for the first time, the thermostat de-tects whether a floor sensor is connected or not and performs an appro-priate initialization (selection between floor and air mode). The following settings are initialized accordingly (floor/air).

- **NAME OF THE THERMOSTAT:** RANDOM number
- **MODE:** Floor / Air
- **FLOOR TEMPERATURE MIN:** 5 °C / NaN
- **FLOOR TEMPERATURE MAX:** 27 °C / NaN
- **FLOOR TEMPERATURE OFFSET (CALIBRATION):** – 3 °C

- **AIR TEMPERATURE MIN:** 5 °C
- **AIR TEMPERATURE MAX:** 28 °C
- **AIR TEMPERATURE OFFSET (CALIBRATION):** 0 °C
- **PWM MIN:** 0 %
- **PWM MAX:** 100 %
- **USER PROGRAM ACTIVATED ECO-TEMP:** 19 °C
- **EXTERNALLY ACTIVATED ECO-TEMP:** 19 °C
- **VALVE PROTECTION:** OFF
- **SENSOR TYPE:** 10 k Ohm
- **LED INTENSITY:** 70 %
- **NETWORK KEY**: Empty
- **WEEKLY PROGRAM:** OFF

Use the eControl App to check and change settings.

BASIC OPERATION

The thermostat is operated with a rotary knob and an optional lowering switch. The basic operation of the thermostat is simple:

- Switch off the device by turning the rotary knob to the OFF position
- Switch on the device by turning the rotary knob to the ON position set the desired temperature with the rotary knob
- Use the external 230VAC lowering switch to activate the Eco temperature (19 °C by default)

LED indicator lights show its status:

- **red:** ON => Comfort temperature reached
- **red flashing** => Heating: ON
- **Green:** ON => Eco temperature reached
- **green flashing** => Heating: ON
- **both LEDs flash** => Error

Additionally with eControl App (see next chapter):

- **red flashing** => bluetooth connection
- **green flashing** => Confirmation to save changes by briefly turning the rotary knob to the OFF state

EXTENDED USE

You can access all thermostat data with the free eControl App, which runs on Android and iOS mobile devices. Use the App to read logged tem-peratures, change settings, and define a weekly user program. The App can also generate e-mail reports. Follow the instructions in the eControl app. The thermostat indicates the connection with the mobile device with a fast flashing red LED.

SETTINGS

The thermostat has various settings that can be easily adjusted with the eControl app. Note: remember to save after each change!

Thermostat name

A free and descriptive name that is displayed in the eControl App.

Heating mode

The thermostat can measure and set the floor temperature, air tempe-rature, air temperature with a floor limitation (dual) and a heating ratio (PWM control).

FLOOR TEMPERATURE MIN AND MAX

This setting has two main functions. In floor mode, the min and max values indicate the active range of the controller. In dual mode, this setting does not affect the controller, but the thermostat keeps the floor temperature between the limits. This function can be used to protect wooden floors (maximum limit) or to ensure a warm floor in a room with a fireplace, for example. Note: N/A in PWM and in air mode.

FLOOR TEMPERATURE OFFSET (CALIBRATION)

If the user’s temperature measurement has a difference from the controller set point, this setting is used for calibration. Note: the floor sensor in the floor construction is much warmer than the actual tem-peratures measured in the room. Therefore, the default setting is set to -3 °C so that the setting range of the rotary knob is in the realistic range

of 18 °C – 24 °C.

AIR TEMPERATURE MIN AND MAX

This setting has two main functions. In Air and Dual modes, it sets the active controller range. In all other modes it can be used as a limitation of the maximum air temperature.

AIR TEMPERATURE OFFSET (CALIBRATION)

If the user's temperature measurement has a difference from the controller set-point, this setting is used for calibration.

PWM MIN AND MAX

This setting has two main purposes. In PWM mode, the min and max values indicate the active controller range. In all other modes the maximum pulse ratio is set. Note: the setting can be used, for example, to limit the maximum heating power to comply with the installation stan-dard EN 50599. The cycle time of the PWM is 10 minutes.

USER PROGRAM ACTIVATED ECO-TEMP

During all green hours in the user program, the temperature is set to this value.

EXTERNALLY ACTIVATED ECO-TEMP

When 230 VAC (pilot signal) is connected to the lowering input terminal, the desired temperature value is defined by this parameter.

VALVE PROTECTION

The valve protection turns on the heating for 5 minutes once a week, even in the summertime. This setting is typically used with water-carrying floor heating valves. The function prevents the valve from failing in the summer.

FEEDING TYPE

Floor sensors from different manufacturers can be used. Supported ty-pes are 2k, 10k, 12.5k, 15k, 33k NTCs.

LED BRIGHTNESS

Brightness of the LED display.

USER PROGRAM MODE

AUTO switches the user program on, OFF switches it off.

WIRELESS TEMPERATURE SENSOR

Adding a wireless BLE temperature sensor allows the best location for accurate temperature measurement. To add a wireless sensor, you must select it in the eControl App and write the sensor address in the network key fields.

RECEIVING WIRELESS ECO CONTROLS

A thermostat with an external lowering switch can control several other thermostats to go into temperature-lowering mode. This function saves the user from hard wiring the Home/Away switch to many room sensors. To form a group of thermostats, you must receive and activate the wireless Eco controls and write a freely selectable group name in the Network key field.

NETWORK KEY AND CONFIRMING THE NETWORK KEY

The network key is used to identify the radio temperature sensor or the group of thermostats that should receive the radio eco-controls. Both fields must contain exactly the same text string and you must save the settings. For the wireless sensor, you can use the QR code printed on the back of the device. Just use the camera function in the app (at the bottom of the screen) to read the code, then accept and save it.

WEEKLY SCHEDULE

You can create a 24/7 weekly schedule in the eControl App. The weekly schedule allows you to program the thermostat to lower the tempe-rature during periods when the room is not in use. The Comfort/Eco status is indicated by a red/green LED.

The execution of the weekly schedule requires a correct real time in the thermostat. In case of an invalid real time, the weekly program is deactivated and the user is warned by flashing LEDs. Real-time is updated by the eControl App every time the thermostat is connected to a mobile device. The real time of the thermostat has a backup for up to 2 hours of power interruption.

ERROR MODES

The thermostat indicates a faulty condition by flashing the LEDs. The most typical case is that the real time is distorted during a power interruption that is too long. This is automatically fixed by connecting to the eControl App. Possible error codes (visible on the info page of the App) are:

- 1 Floor sensor error
- 2 Overheating
- 3 Internal error
- 10 Calendar time is not valid

You can try to fix the error by turning off the power to perform a soft reset or by creating a hard reset with the eControl App.
In case of errors 1, 2, 3, the heating will be permanently switched off. In error 10, the user program is disabled.

ETHERMA ECONTROL APP CONNECTION
You can use the App for mobile devices (Android/iOS) to read the set temperatures, make settings and create a weekly user program. Follow the user manual in the ETHERMA eControl App.

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Documents / Resources

	ETHERMA eBASIC Combi Floor Thermostat [pdf] Instruction Manual eBASIC Combi Floor Thermostat, eBASIC, Combi Floor Thermostat, Floo r Thermostat, Thermostat

References

- User Manual

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Combi Floor Thermostat, eBASIC, eBASIC Combi Floor Thermostat, ETHERMA, Floor Thermostat, Thermostat

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