

# Room Thermostat

## EAZY Thermostat 2 LCD

High-quality electronic room thermostat with display for an on-wall installation to activate thermal actuators.



### Simple. Precise. Control.

Precise control behaviour thanks to PWM



### Number of actuators

5



### Temperature setting

Temperature setting with rotary knob



### Setpoint calibration

Fine adjustment of the setpoint



### Switching capacity

1 ampere



### Maintenance-free

No maintenance costs



### Standard conform

EN 60730-1



### Pulse width modulation

Precise control behaviour



### Operating direction

NC normally closed



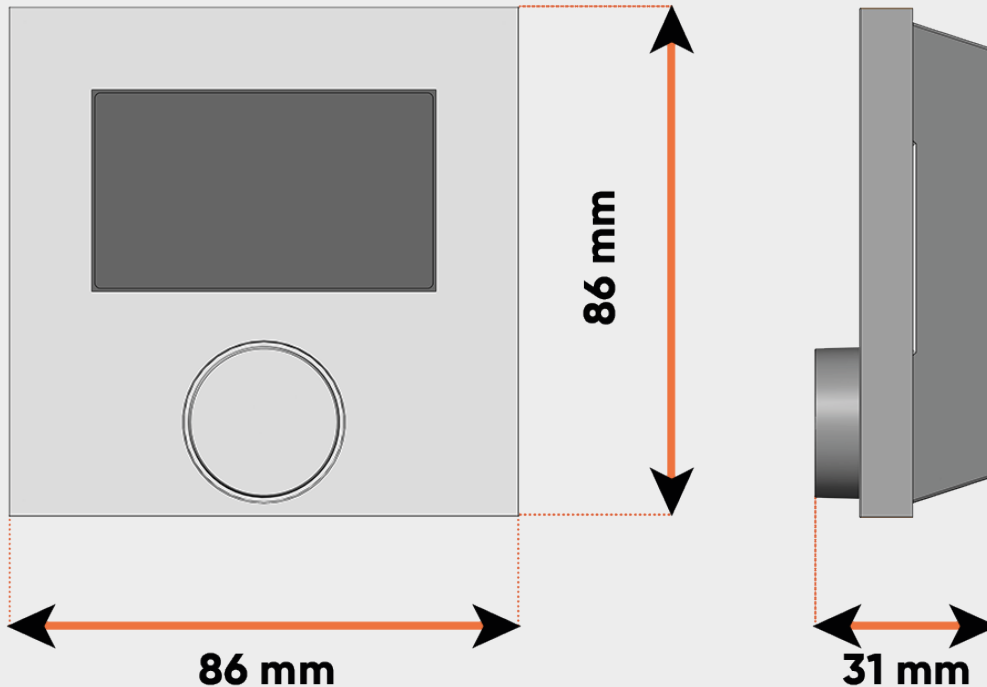
### Valve protection function

Protection against sticking



surprisingly **simple.**

## > Dimensions



EAZY Thermostat 2 LCD	Operating voltage	Article number	GTIN
Regular	230 V	ET-10300-0000	42 6046431023 7
Regular	24 V	ET-10301-0000	40 3160200659 2
Extra	230 V	ET-10400-0000	42 6046431024 4
Extra	24 V	ET-10401-0000	40 3160200661 5
Pro	230 V	ET-10500-0000	42 6046431025 1
Pro	24 V	ET-10501-0000	40 3160200663 9

### Approvals & certificates

All products from EAZY Systems are tested by independent testing institutes in addition to the comprehensive internal functional and quality tests.



The CE marking documents that the marketed products comply with the valid requirements of the EU directives.



The product is certified by the TÜV Rheinland.

surprisingly **simple.**

## > Performance features

- Available in three designs: Regular, Extra and Pro
- Optionally in 24 V and 230 V
- Large, clear LC display with backlight which makes a reading of the display in the dark possible
- Flat design and small dimensions (86 x 86 x 31 mm)
- Control in the standalone design or implemented in the system
- Equipped for heating and cooling systems
- Smart start / smart stop function
- Selectable operating modes
- Comfort programme for heating and cooling operation
- Adjustable setback temperature
- Correction of the actual temperature measurement
- Limitation of the adjustment range of the setpoint temperature
- Valve protection and antifreeze function
- Connection for an external temperature sensor
- Change-over input
- High-quality, modern design
- Appropriate for NC and NO operation
- High functional reliability

### Designs

The list below shows the available designs.

Model	Operating voltage	Equipment	Scope of supply
Standard	230 V	Heating, fixed setback difference, setback input	EAZY Thermostat LCD 2 with display in individual packaging; instruction in 12 languages
Comfort	230 V	Heating/cooling, change-over, heating system selectable, adjustable setback temperature	
Control	230 V	Heating/cooling, change-over, heating system selectable, smart start / smart stop, adjustable setback temperature, setback output	

surprisingly **simple.**

## Equipment

The EAZY Thermostat LCD 2 with display is offered in the different versions with 24 V and 230 V. Different designs with various functional equipment are available:

	Regular	Extra	Pro
Heating	✓	✓	✓
Cooling		✓	✓
Operating direction - normally closed (NC) / normally open (NO)		✓	✓
Fixed setback difference	✓		
Adjustable setpoint temperature for heating and cooling		✓	✓
Comfort programme			✓
Operating mode selectable: day/night/automatic mode	✓	✓	✓
Cooling lock	✓	✓	
Setback input			✓
Setback output			✓
Internal weekly timer			✓
Power reserve			✓
Change-over input		✓	✓
Correction of the actual temperature measurement	✓	✓	✓
Setpoint temperature limitation	✓	✓	✓
Valve protection function	✓	✓	✓
Anti-freeze function	✓	✓	✓
Heating system selectable		✓	✓
Switch output with deactivation possibility	✓	✓	✓
Smart start / smart stop function			✓
Display backlight	optional	✓	✓
Connection for an external sensor			✓

## Accessory

The list below shows the available designs.

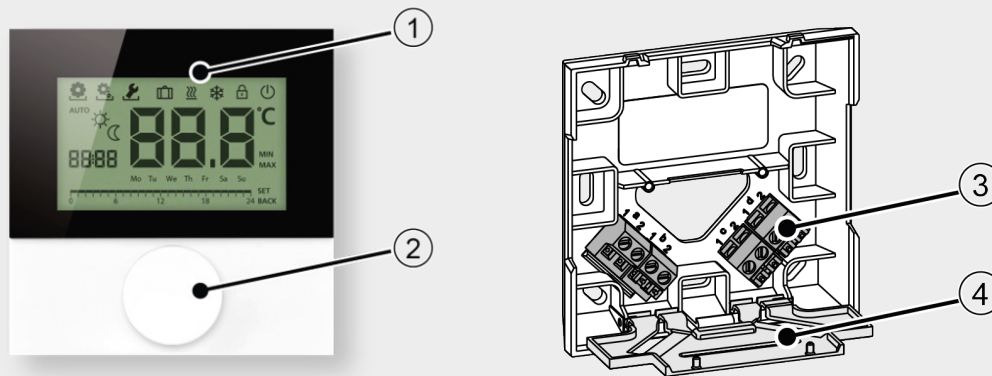
Type	Article description
EAZY sensor	External temperature sensor for the pro design - to monitor the room or floor temperature and the minimum floor heating

surprisingly **simple.**

## > Function

All room temperature controllers of the type EAZY Thermostat LCD 2 with display include identical basic functions; other system functions depend on the design and the respective equipment.

### List of devices (example – EAZY Thermostat 2 LCD with display Pro)



1	Display	<ul style="list-style-type: none"> <li>• Indication of all functions and menus</li> </ul>
2	Rotary knob	<ul style="list-style-type: none"> <li>• Turning–pushing mechanism with fine detent</li> <li>• Operation and navigation through the menus</li> <li>• Setpoint temperature specification               <ul style="list-style-type: none"> <li>– Adjustment of the setpoint temperature for the operating modes day heating, day cooling and night heating, night cooling</li> </ul> </li> </ul>
3	Terminals	<ul style="list-style-type: none"> <li>• Screw terminals for connection cables               <ul style="list-style-type: none"> <li>– Quick connection of a multi-core connection cable for the voltage supply and the signal transmission</li> </ul> </li> </ul>
4	Protective cover	<ul style="list-style-type: none"> <li>• Contact protection against live components</li> </ul>

### Operation

Numerous system functions and parameters can be adjusted by the EAZY Thermostat LCD 2 with display for a comfortable use and an optimisation of the energy consumption. A multi-section menu structure ensures that an unintentional maladjustment of important settings is not possible. The user has different adjustment possibilities in the menus "Life Style Functions" and "Settings". System settings are possible in the menu "Service"; however, this level is reserved to the specialist tradesman and protected by PIN code against an unauthorised use.

surprisingly simple.

### Display indications

The EAZY Thermostat LCD 2 with display has a clear and language-neutral indication. All symbols are clearly indicated on the high-quality display. The internationally understandable symbols guarantee an intuitive use.

#### EAZY Thermostat LCD 2 with display Regular



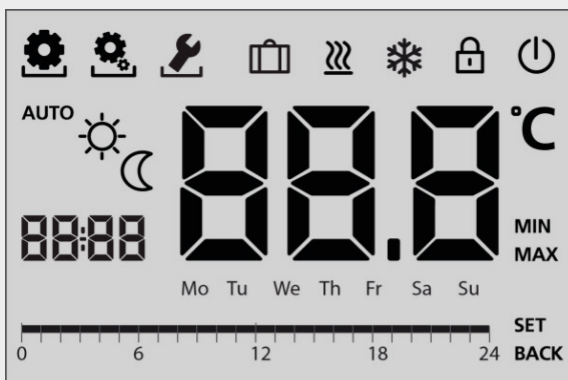
-  Menu Life Style Functions
-  Menu Settings
-  Heating
-  Operation lock
-  Switch-off
-  Automatic mode
-  Day mode
-  Night mode
-  Setpoint/actual temperature
-  Temperature unit
-  Min. temperature
-  Max. temperature
-  Confirm entry
-  Back

#### EAZY Thermostat LCD 2 with display Extra



-  Menu Life Style Functions
-  Menu Settings
-  Menu Service
-  Heating
-  Cooling
-  Operation lock
-  Switch-off
-  Automatic mode
-  Day mode
-  Night mode
-  Setpoint/actual temperature
-  Temperature unit
-  Min. temperature
-  Max. temperature
-  Confirm entry
-  Back

#### EAZY Thermostat LCD 2 with display Pro



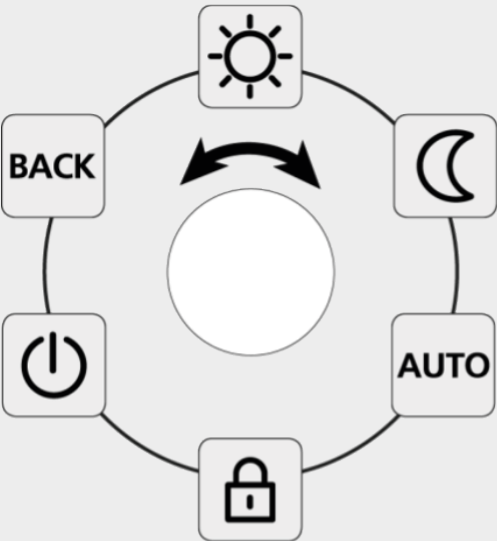
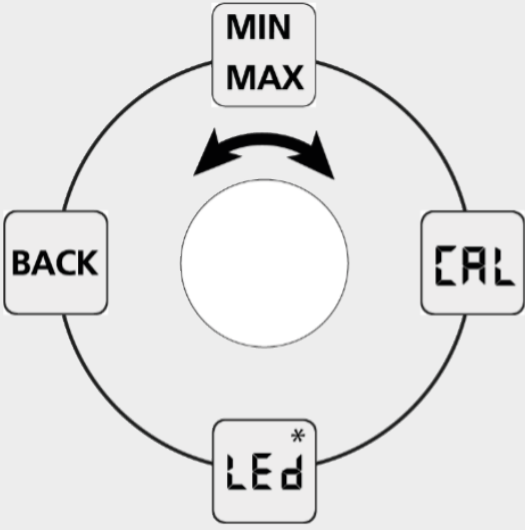
-  Menu Life Style Functions
-  Menu Settings
-  Menu Service
-  Urlaubsfunktion
-  Heating
-  Cooling
-  Operation lock
-  Switch-off
-  Automatic mode
-  Day mode
-  Night mode
-  Time
-  Setpoint/actual temperature
-  Temperature unit
-  Min. temperature
-  Max. temperature
-  Weekdays
-  Timescale
-  Confirm entry
-  Back

surprisingly simple.

### Navigation

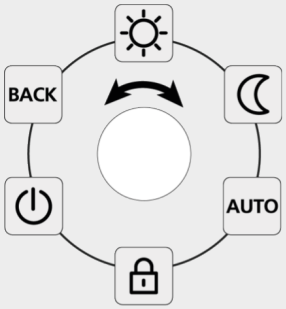
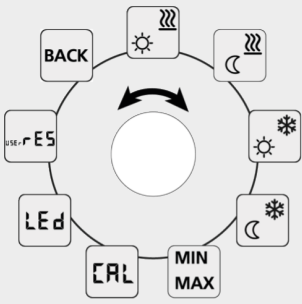
With the rotary knob, the desired room temperature can be adjusted and the comprehensive functions can be used. The intuitive menu structure of the EAZY Thermostat LCD 2 with display offers a comfortable navigation. Functions are selected by turning and pushing the knob and are adapted according to the requests of the user. The soft detent of the rotary knob always provides for a comfortable feeling so that the user clearly knows when the right setting is reached. The following functions, settings and parameters are available on the individual menu levels depending on the design.

### EAZY Thermostat LCD 2 with display Regular

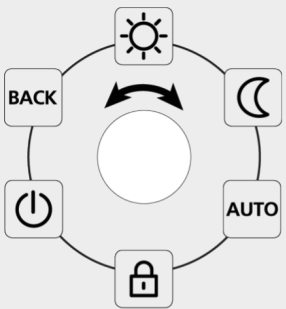
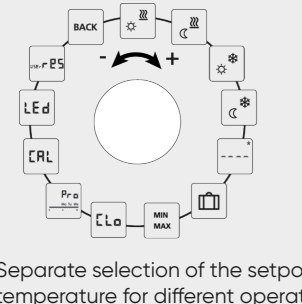
Life Style Functions	Settings
 <ul style="list-style-type: none"> <li>• Operating modes: day mode, night mode, automatic mode</li> <li>• Operation lock to provide protection against an unintentional adjustment and an operation error</li> <li>• Disconnection of the room temperature controller and consequently switch-off of the control mode - the antifreeze mode is automatically activated</li> <li>• Back to the basic level</li> </ul>	 <ul style="list-style-type: none"> <li>• Limitation of the lowest and the highest adjustable room temperature</li> <li>• Correction of the measured temperature</li> <li>• Display illumination to adjust the brightness of the backlight (optional)</li> </ul>

surprisingly **simple.**

**EAZY Thermostat LCD 2 with display Extra**

Life Style Functions	Settings	Service
 <ul style="list-style-type: none"> <li>• Operating modes: day mode, night mode, automatic mode</li> <li>• Operation lock to provide protection against an unintentional adjustment and an operation error</li> <li>• Disconnection of the room temperature controller and consequently switch-off of the control mode - the antifreeze mode is automatically activated</li> <li>• Back to the basic level</li> </ul>	 <ul style="list-style-type: none"> <li>• Limitation of the lowest and the highest adjustable room temperature</li> <li>• Correction of the measured temperature</li> <li>• Display illumination to adjust the brightness of the backlight (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• Protection by PIN code against an unauthorised use</li> <li>• Individual, optimal configuration of the system by the system parameters as <ul style="list-style-type: none"> <li>- adjustment of the heating system used as e. g. underfloor heating system, radiator, convector heater, etc.</li> <li>- lock of the switch outputs depending on the activated operating mode (heating/cooling)</li> <li>- definition of the operation lock with / without PIN</li> <li>- change of the operating direction of the system (normally open/ normally closed)</li> <li>- cooling lock</li> </ul> </li> </ul>

**EAZY Thermostat LCD 2 mit Display Profi**

Life Style Functions	Settings	Service
 <ul style="list-style-type: none"> <li>• Operating modes: day mode, night mode, automatic mode</li> <li>• Holiday mode for a setback to the defined holiday temperature</li> <li>• Operation lock to provide protection against an unintentional adjustment and an operation error</li> <li>• Disconnection of the room temperature controller and consequently switch-off of the control mode - the antifreeze mode is automatically activated</li> <li>• Back to the basic level</li> </ul>	 <ul style="list-style-type: none"> <li>• Separate selection of the setpoint temperature for different operating modes as day/night mode or holiday mode</li> <li>• Limitation of the lowest and the highest adjustable room temperature</li> <li>• Setting of the time and the date</li> <li>• Comfort programmes for individual weekdays, weeks, weekends and weeks including weekends</li> <li>• Correction of the measured temperature</li> <li>• Display illumination to adjust the brightness of the backlight</li> <li>• Restore factory settings</li> </ul>	<ul style="list-style-type: none"> <li>• Protection by PIN code against an unauthorised use</li> <li>• Individual, optimal configuration of the system by the system parameters as <ul style="list-style-type: none"> <li>- adjustment of the heating system used as e. g. underfloor heating system, radiator, convector heater, etc.</li> <li>- lock of the switch outputs depending on the activated operating mode (heating/cooling)</li> <li>- deactivation of the valve protection function</li> <li>- activation/deactivation of the smart start / smart stop function</li> <li>- definition of the operation lock with / without PIN</li> <li>- change of the operating direction of the system (normally open/ normally closed)</li> <li>- cooling lock</li> </ul> </li> </ul>

surprisingly simple.

## > Function

The technical data mentioned below refers to the maximum functional equipment of the EAZY Thermostat LCD 2 with display. Depending on the model, it is possible that individual positions do not apply.

	24 V design			230 V design		
	Regular	Extra	Pro	Analogue	Analogue HC	Pro
Design	ET-10301-0000	ET-10401-0000	ET-10501-0000	ET-10300-0000	ET-10400-0000	ET-10500-0000
Operating voltage	24 V ±20 % 50 Hz			230 V ±10 % 50 Hz		
Voltage supply	via base station/transformer			via base station/mains supply		
Power reserve	-	-	10 hours	-	-	10 hours
Power consumption in idle	<0.3 W					
Switching element	triac			relay		
Switching capacity	1 A resistive load			1 A resistive load, 200 VA inductive		
Fuse protection	T1A			T1AH		
Max. number of connectable actuators	5 (max. 3 W/actuator)					
Rated current without actuators	±20 mA			±2 mA		
Max. permissible current consumption of the connected actuators	1 A			1 A		
Operating direction of the connectable actuators	NC	NC/NO	NC/NO	NC	NC/NO	NC/NO
Adjustment range of the specified setpoint temperature	5 to 30 °C					
Resolution of the specified setpoint temperature	0.2 °C					
Actual temperature measuring range	0 to 40 °C					
Correction of the measured actual temperature	± 2 °C					
Measurement accuracy of the actual temperature	± 0.5 K between 17 and 24 °C					
Control accuracy	± 0.5 K between 17 and 24 °C					
Change-over input	-	electronic	electronic	-	electronic	electronic
Cooling lock	-	yes	yes	-	yes	yes
Setback input	yes	yes	-	yes	yes	-
Setback output of the weekly timer/switch current	-	-	yes/100 mA	-	-	yes/100 mA
Setback difference / setback temperature	2 °C	adjustable value for day and night temperature (heating & cooling)	adjustable value for day and night temperature (heating & cooling)	2 °C	adjustable value for day and night temperature (heating & cooling)	adjustable value for day and night temperature (heating & cooling)
Antifreeze temperature	5 °C					
Valve protection function	every 14 days for 10 minutes					
Permissible ambient temperature	0 to 50 °C					
Permissible storage temperature	-20 to +70 °C					
Permissible ambient humidity	80 % non-condensing					
Temperature ball pressure test	550 °C					
Backlight	optional	yes	yes	optional	yes	yes
Type of installation	on-wall installation					
Connection line	NYM-J 5 × 1.5 mm <sup>2</sup> /	NYM-O 5 × 1.5 mm <sup>2</sup>	NYM-O 5 × 1.5 mm <sup>2</sup>	NYM-J 5 × 1.5 mm <sup>2</sup> /	NYM-O 5 × 1.5 mm <sup>2</sup>	NYM-O 5 × 1.5 mm <sup>2</sup>
Terminal	4 screw terminals 0.22 - 1.5 mm <sup>2</sup>	6 screw terminals 0.22 - 1.5 mm <sup>2</sup>	8 screw terminals 0.22 - 1.5 mm <sup>2</sup>	4 screw terminals 0.22 - 1.5 mm <sup>2</sup>	6 screw terminals 0.22 - 1.5 mm <sup>2</sup>	8 screw terminals 0.22 - 1.5 mm <sup>2</sup>
Protection class	III			II		
Protection degree	IP20					
Contamination degree	2					
Rated surge voltage	1500 V					
Operating direction	Type 1			Type 1. C		
Material	Casing					
	Design disc					
Surface structure	ABS					
	acrylic glass XT					
Colour	eroded					
	signal white (RAL 9003)					
Weight	signal white (RAL 9003)					
	105 g ±0.5 g					
Dimensions (w x h x d)	Casing					
	Display					
	Design disc					
	86 x 86 x 31 mm					
	58 x 34 mm					
	86 x 86 x 31 mm					

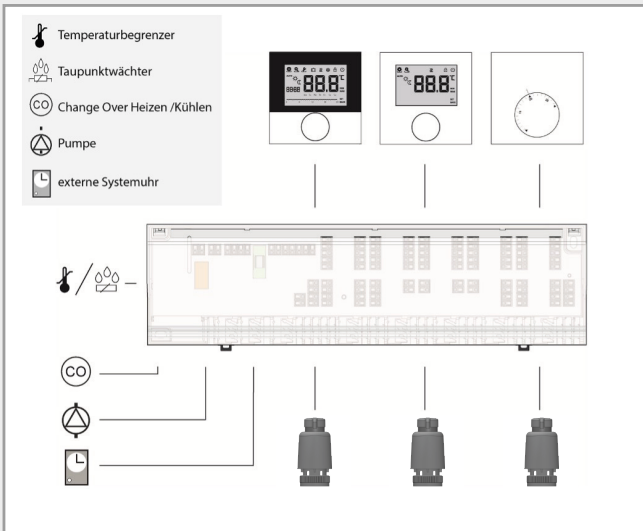
surprisingly simple.

## > System visualisations

A selection of possible system versions to set up a single room control is shown below. A standalone system can be implemented with the EAZY Thermostat LCD 2 with display and directly connected thermal actuators. Up to five thermal actuators can be connected directly to the room temperature controller. An individualisation of the single room control is possible by adding compatible components to the system as

- the EAZY Base 2,
- the EAZY Thermostat Analogue and
- the thermal actuators of the EAZY Drive Series 1 & EAZY Drive Series 2 in 230 V or 24 V.

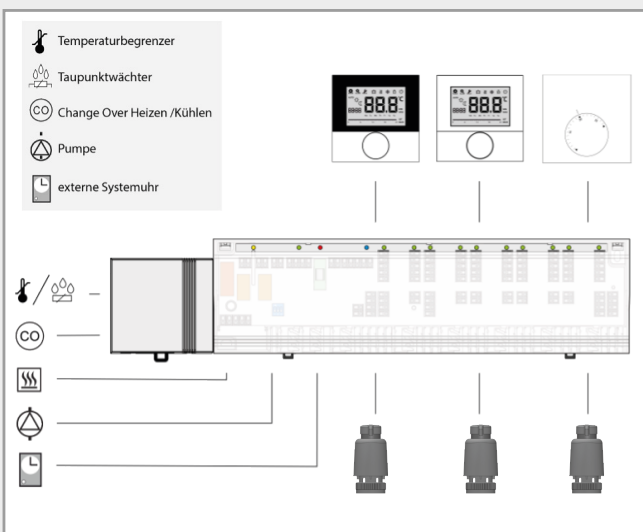
### Standalone EAZY Thermostat LCD 2 with display Pro – 230 V version



Features	
Heating	✓
Cooling	✓
Simple pump control	
Advanced pump/boiler control with run-up and run-down time	
Connection for an external system clock	
Internal weekly timer of an EAZY Thermostat 2 LCD with display	✓ <sup>1</sup>
Temperature limiter or dew point sensor	✓ <sup>2</sup>
EAZY Thermostat Analogue	
EAZY Thermostat Analogue HC	
EAZY Thermostat Regular	
EAZY Thermostat Extra	
EAZY Thermostat Pro	✓

<sup>1</sup>not in combination with an external system clock

### Standalone EAZY Thermostat LCD 2 with display Pro – 230 V version



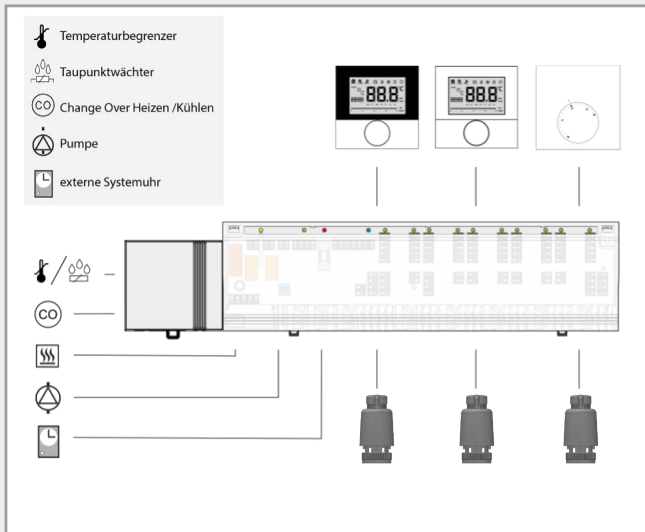
Features	
Heating	✓
Cooling	✓
Simple pump control	✓
Advanced pump/boiler control with run-up and run-down time	
Connection for an external system clock	✓ <sup>2</sup>
Internal weekly timer of an EAZY Thermostat 2 LCD with display	✓ <sup>1</sup>
Temperature limiter or dew point sensor	✓
EAZY Thermostat Analogue	
EAZY Thermostat Analogue HC	✓
EAZY Thermostat Regular	
EAZY Thermostat Extra	
EAZY Thermostat Pro	✓

<sup>1</sup>not in combination with an external system clock

<sup>2</sup>not in combination with an internal weekly timer of an EAZY Thermostat LCD 2 with display Pro or a timer module

surprisingly simple.

Controller with EAZY Base 3 Extra – 24 V version



Features	
Heating	✓
Cooling	✓
Simple pump control	
Advanced pump/boiler control with run-up and run-down time	✓
Connection for an external system clock	✓ <sup>2</sup>
Internal weekly timer of an EAZY Thermostat 2 LCD with display	✓ <sup>1</sup>
Temperature limiter or dew point sensor	✓
EAZY Thermostat Analogue	
EAZY Thermostat Analogue HC	✓
EAZY Thermostat Regular	
EAZY Thermostat Extra	
EAZY Thermostat Pro	✓

<sup>1</sup>not in combination with an external system clock  
<sup>2</sup>not in combination with an internal weekly timer of an EAZY Thermostat LCD 2 with display Pro or a timer module

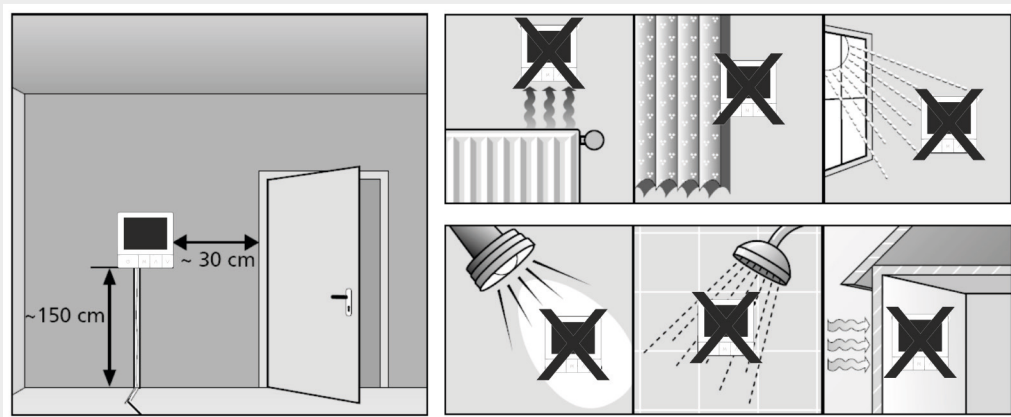
surprisingly **simple.**

## > Installation instructions

The EAZY Thermostat LCD 2 with display is installed very easily, comfortably and intuitively in only a few steps.

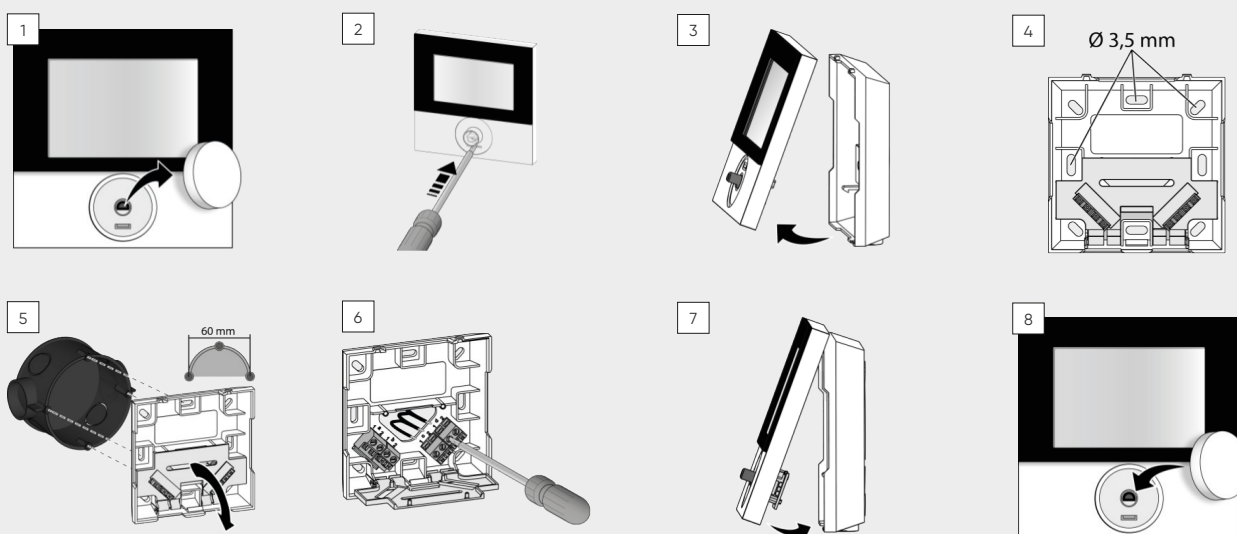
### Place of installation

A freely accessible area is recommended for the installation of the EAZY Thermostat 2 Analogue to provide for an exact measurement of the room temperature. No additional heating source should impair the function of the controller at the place of installation.



### Installation

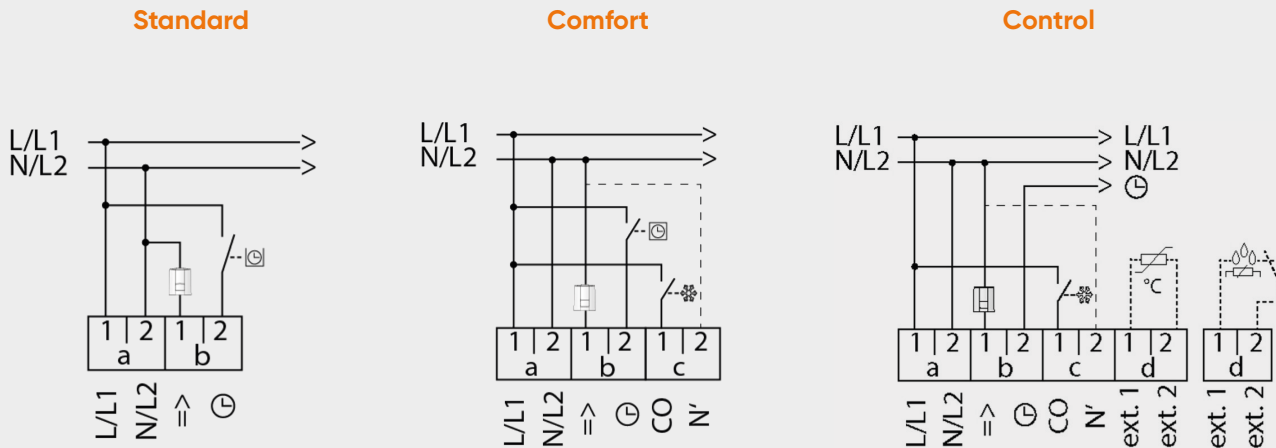
The EAZY Thermostat LCD 2 with display is installed conveniently on the wall or in an on-wall socket in only a few steps.



surprisingly **simple.**

## Electrical connection

The EAZY Thermostat LCD 2 with display and the components to be connected are wired with a multi-core cable.



- Mains connection
  - Voltage supply by the EAZY Base 2 or a separate voltage source
- Setback input (standard design)
  - Reception of an external timer signal for a time-controlled setback of the room temperature
- Setback output (control design)
  - Transmission of the switching signals of the internal weekly timer to other components
- Change-over input
  - Change-over between heating and cooling via an external signal (potential-free contact)
- Connection for actuators
  - Two wiring possibilities for the neutral conductor
  - The neutral conductor can be wired directly from the supply line or via the internal terminal N'. The wiring via the terminal N' is marked by a dashed line in the wiring diagrams.
  - Integrated valve protection function
  - A cyclic activation of the connected actuators every 14 days for 10 minutes prevents that the valves get stuck when there is no temperature control
  - Is activated for 10 minutes every 14 days after the last activation
  - Integrated antifreeze function
  - Prevents a freezing of the lines when there is no temperature control, for example in times of a longer absence
  - Not active in cooling operation
- Connection of an external sensor
  - Monitoring of the room and floor temperature and the minimum floor heating

surprisingly **simple.**