

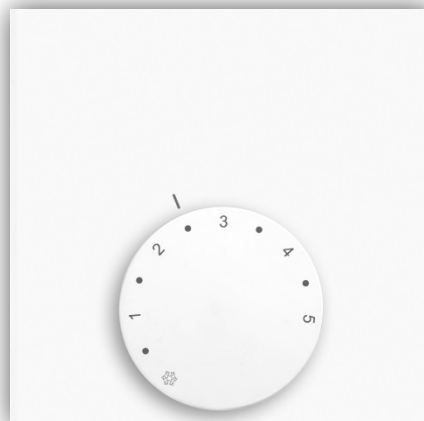
Home Inclusive Original Room Thermostat Analogue

The Home Inclusive Original Room Thermostat Analogue is a high-quality room thermostat for the registration and regulation of the desired room temperature, offering maximum user comfort.

The Home Inclusive Original Room Thermostat Analogue is available for the operating voltages 24 V and 230 V. A simple room-by-room temperature control is already possible with directly connected actuators. In conjunction with the connection unit Base Station, a perfectly matched overall system for surface temperature adjustment can be realized.

The desired room temperature can be set comfortably via a rotary control with soft ratchet. A set value calibration as well as a limitation of the setting range are also possible.

Two versions can be chosen in order to comply with the desired installation requirements. Depending on the selection, applications for heating or heating/cooling is possible. All versions of the Home Inclusive Original Room Thermostat Analogue are marked by their high-quality appearance, integrating harmoniously into a modern room architecture not least due to its slim design. An optimum price-performance ratio is offered for rooms where only a very good temperature control is desired, without the comfort function of the display variant.



1.1 Features

- Available in two versions: Analogue and Analogue HK
- Versions in 24 V and 230 V
- Flat design and small dimensions (86 x 86 x 29 mm)
- Regulation in stand-alone or in the system
- Equipment for heating and cooling systems
- Reduction input for room temperature reduction
- Set value calibration
- Limitation of the target temperature setting range
- Valve and antifreeze protection function
- Change-over input
- High-quality, modern design
- High functional security

The Möhlenhoff product quality ensures easy, intuitive installation, operation and maintenance of the entire system.

1.2 Variants

In the basic version, the Home Inclusive Original Room Thermostat Analogue will be delivered as neutral device without logo and in white. The subse-quent list shows the available versions.

Type	Model	Operating voltage	Equipment	Scope of supply
R 40203-10N4	Analogue	24 V	Heating, fixed reduction temperature, reduction input, target value calibration, antifreeze function	<ul style="list-style-type: none"> • Home Inclusive Original Room Thermostat Analogue in individual • Instructions in 12 languages
R 40203-40N4	Analogue HK	24 V	Heating/cooling, fixed reduction temperature, reduction input, change-over input, Blocking of cooling, target value calibration, valve protection function, antifreeze function	
R 20203-10N4	Analogue	230 V	Heating, fixed reduction temperature, reduction input, target value calibration, antifreeze function	
R 20203-40N4	Analogue HK	230 V	Heating/cooling, fixed reduction temperature, reduction input, change-over input, Blocking of cooling, target value calibration, valve protection function, antifreeze function	

1.3 Equipment

The Home Inclusive Original Room Thermostat Analogue is offered in the versions 24 V and 230 V. Different versions are available; they differ in their functional equipment.

	Analogue	Analogue HK
Heating	✓	✓
Cooling		✓
Blocking of cooling		✓
Change-over input		✓
Reduction input	✓	✓
Fixed setback difference	✓	✓
Set value calibration	✓	✓
Valve protection function		✓
Antifreeze function	✓	✓

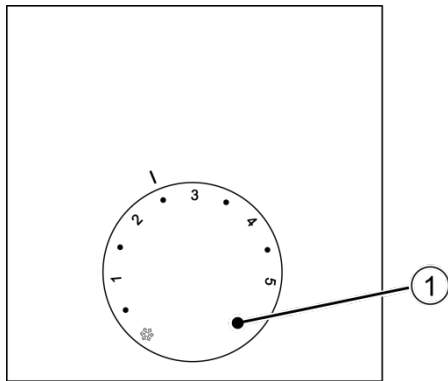
1.4 Accessories

Type	Article description
Target value limitation	Insertable set point limiters for temperature range limitation

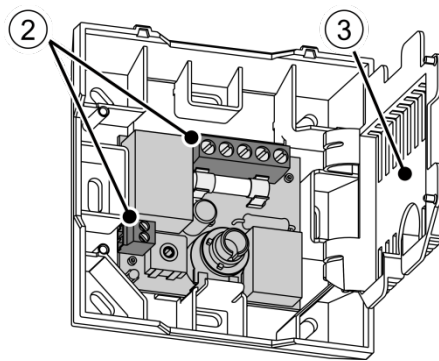
2 Function

All Home Inclusive Original Room Thermostat Analogue have the same basic functions; further system functions depend on the version and the individual equipment.

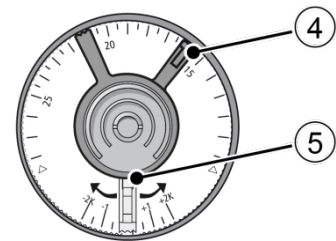
2.1 Device overview (example – Home Inclusive Original Room Thermostat Analogue HK)



Top view



Clamp contacts



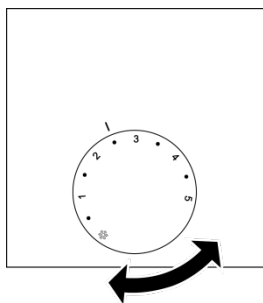
Set value element – rear view

1 Set value element	<ul style="list-style-type: none"> Setting the target temperature - Fixed reduction temperature of 4 K
2 Comfortable clamp terminals	<ul style="list-style-type: none"> Screwed terminals - Quick connection of a multi-core connection line for voltage supply and signal transmission
3 Protective cover	<ul style="list-style-type: none"> Protection against accidental contact of life components
4 Target value limitation	<ul style="list-style-type: none"> Specification of the minimum and maximum adjustable room temperature by mechanical limitation
5 Set value calibration	<ul style="list-style-type: none"> Adjustment of the internal temperature sensor by ± 2 K

2.2 Operation

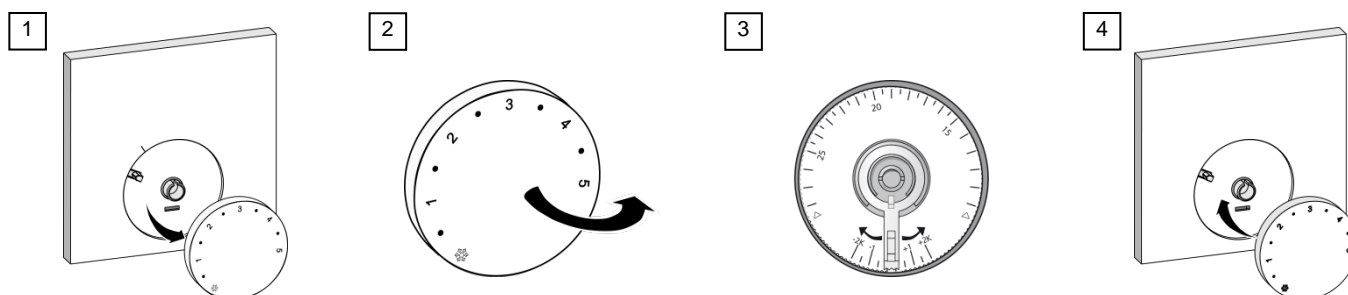
2.2.1 Setting the comfort temperature

The thermostat can be operated comfortably via the set value element. The user sets the desired temperature by simple turning.

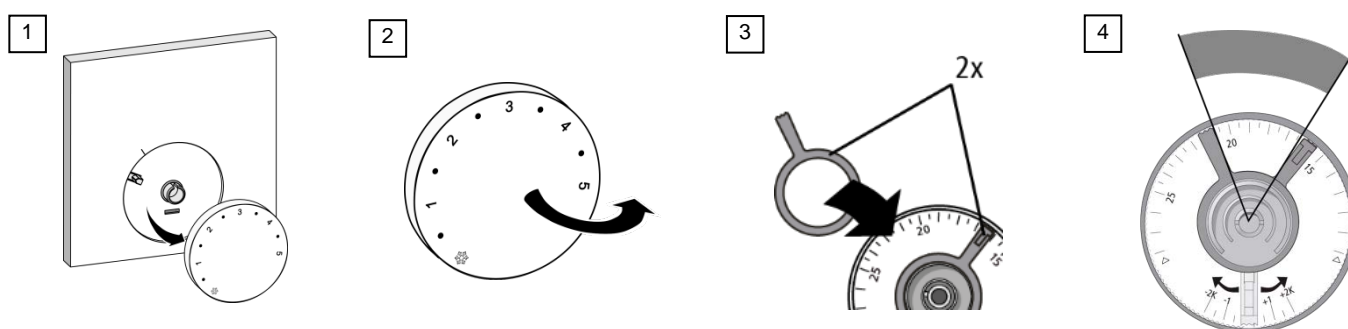


2.2.2 Set value calibration

The target value calibration integrated into the set value element allows a set value balance of -2 K to +2 K in 0.25 K increments.

**2.2.3 Limiting the temperature range**

Two set point limiters can be inserted into the removable set value element, allowing a limitation of the temperature range. One of the limiters sets the minimum, the other one the maximum settable room temperature.

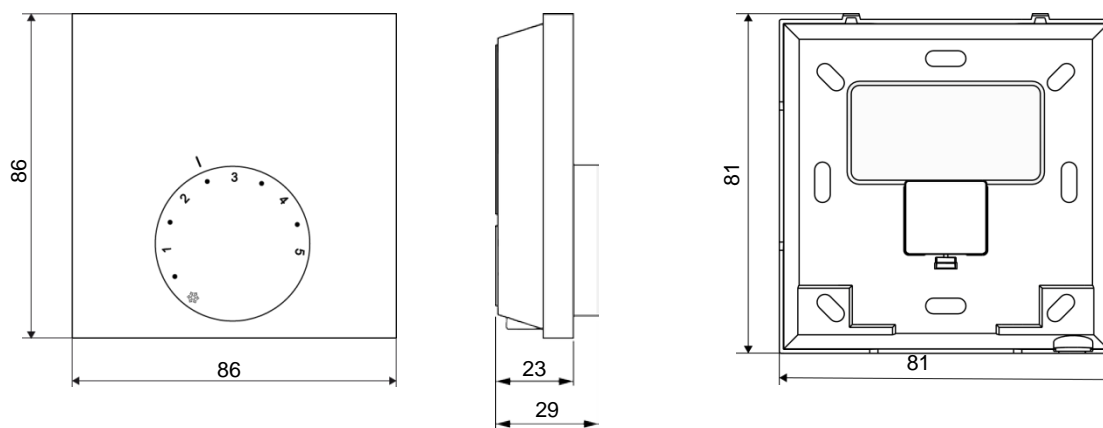


3 Technical data

The listed technical data relate to the maximum functional equipment of the Home Inclusive Original Room Thermostat Analogue. Individual positions may be omitted depending on the model.

		24 V variant		230 V variant	
		Analogue	Analogue HK	Analogue	Analogue HK
Type		R 40203-10N4		R 20203-10N4	
Operating mode		Heating		Heating/Cooling	
Operating voltage		24 V ±20 % 50 Hz		230 V ±10 % 50 Hz	
Voltage supply		via base / external supply unit			
Power consumption in idle operation		<0.3 W			
Switching element		Triac	Triac	Relay	Relay
Switching power		1 A ohmic load		2 A ohmic load, 200 VA inductive	
Fuse		T1A		T2AH	
Max. number of connectible actuators		5 (max. 3 W/actuator)		10 (max. 3 W/actuator)	
Control direction of actuators to be connected		NC			
Target temperature setting range:		10 °C to 28 °C			
Target temperature resolution		0.25 K			
Actual temperature registration (int. sensor)		0 °C to 40°C			
Measuring accuracy of internal NTC		±0.5 K			
Set value calibration		±2 K			
Change-over input		-	switchable via potential-free contact	-	switchable via potential-free contact
Blocking of cooling		-	Yes	-	Yes
Reduction input		Yes			
Reduction temperature		4 K			
Antifreeze temperature		6 °C			
Valve protection function		-	once every 14 days for 6 minutes	-	once every 14 days for 6 minutes
Admissible ambient temperature		0 to 50°C			
Admissible storage temperature		-25 to +75 °C			
Admissible ambient humidity		80%, not condensing			
Type of installation		On-surface wall installation			
Connection line		NYM-J 5 x 1.5 mm²	NYM-O 5 x 1.5 mm²	NYM-J 5 x 1.5 mm²	NYM-O 5 x 1.5 mm²
Connection terminals	Analogue	5 screw terminals - 0.22 mm² to 1.5 mm²			
	Analogue HK	7 screw terminals - 0.22 mm² to 1.5 mm²			
Protection class		III		II	
Degree of protection		IP 20			
Material		PC + ABS			
Surface structure		anodised			
Colour	Set value element	Signal white (RAL 9003)			
	Casing	Signal white (RAL 9003)			
Weight		90 g			
Dimensions (W x H x D)		86 x 86 x 29 mm			

3.1 Dimensions



All indications in mm

3.2 Approvals and certificates

In addition to our numerous internal function and quality tests, all Möhlenhoff products are tested by independent testing institutes.



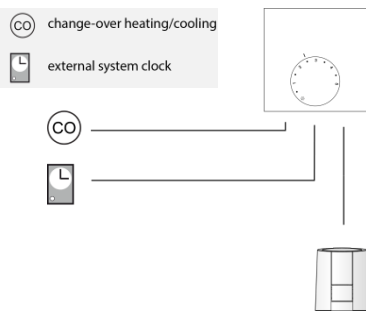
The product is certified by the TÜV Rheinland.

4 System visualisations

A selection of possible system variants for the realization of a room-by-room temperature control is shown in the following. A stand-alone system can already be performed with an Home Inclusive Original Room Thermostat Analogue and with directly connected actuators. The connection of up to ten actuators is possible depending on the voltage version of the thermostat. An individualisation of the room-by-room temperature control can be realized by adding to the system of compatible components, as e. g.

- the Home Inclusive Original Base Station,
- the Home Inclusive Original Room Thermostat Display, and
- the thermal actuator of the type A 20405 (230 V) or A 40405 (24 V) with a power input of 1 watt

4.1 Stand-alone Heating/Cooling – 230 V version



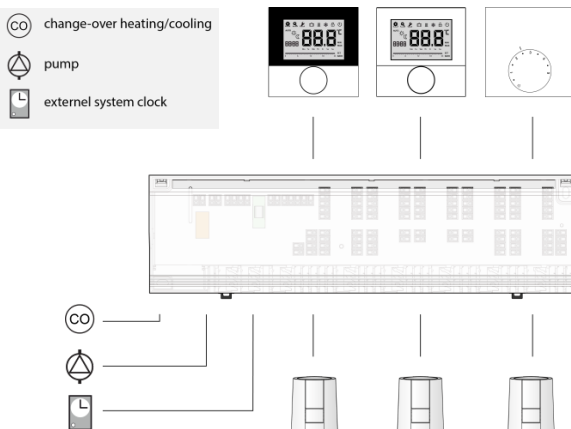
Characteristic

Heating	✓
Cooling	✓ ¹
Simple pump control	
Extended pump/boiler control with lead time and follow-up time	
Connection for external system clock	✓ ²
Internal timer of an Home Inclusive Original Thermostat Display	
Temperature limiter or dew point sensor	
Home Inclusive Original Room Thermostat Analogue	✓
Home Inclusive Original Room Thermostat Analogue HK	✓
Home Inclusive Original Room Thermostat Analogue Standard	
Home Inclusive Original Room Thermostat Control	

¹ Only version Analogue HK

² not in combination with the external timer of an Home Inclusive Original Room Thermostat Control

4.2 Room thermostat with Home Inclusive Original Base Station Standard PLUS – 230 V version



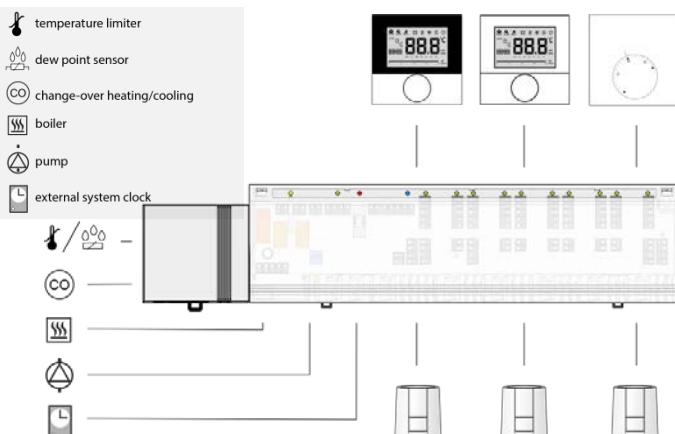
Characteristic

Heating	✓
Cooling	✓
Simple pump control	✓
Extended pump/boiler control with lead time and follow-up time	
Connection for external system clock	✓ ²
Internal timer of an Home Inclusive Original Thermostat Display	✓ ¹
Temperature limiter or dew point sensor	✓
Home Inclusive Original Room Thermostat Analogue	
Home Inclusive Original Room Thermostat Analogue HK	✓
Home Inclusive Original Room Thermostat Analogue Standard	
Home Inclusive Original Room Thermostat Control	

¹ not in combination with an external system clock

² not in combination with the external timer of an Home Inclusive Original Room Thermostat Control

4.3 Room thermostat with Home Inclusive Original Base Station Comfort – 24 V version



Characteristic

Heating	✓
Cooling	✓
Simple pump control	
Extended pump/boiler control with lead time and follow-up time	✓
Connection for external system clock	✓ ²
Internal timer of an Home Inclusive Original Thermostat Display	✓ ¹
Temperature limiter or dew point sensor	✓
Home Inclusive Original Room Thermostat Analogue	
Home Inclusive Original Room Thermostat Analogue HK	✓
Home Inclusive Original Room Thermostat Analogue Standard	
Home Inclusive Original Room Thermostat Control	✓

¹ not in combination with an external system clock

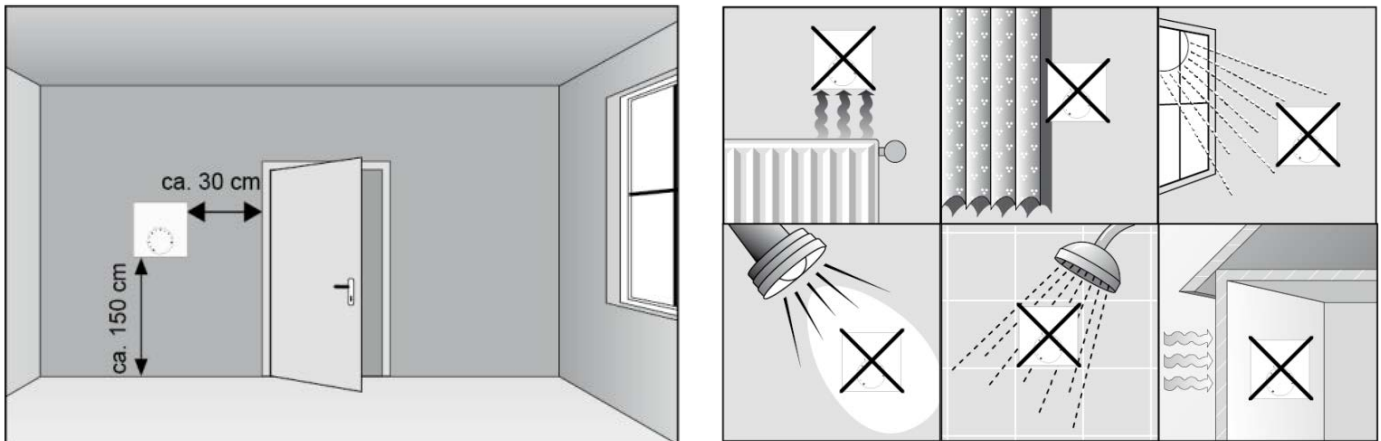
² not in combination with the external timer of an Home Inclusive Original Room Thermostat Control

5 Installation notes

The installation of the Home Inclusive Original Room Thermostat Analogue can be performed in a few simple, comfortable and intuitive steps.

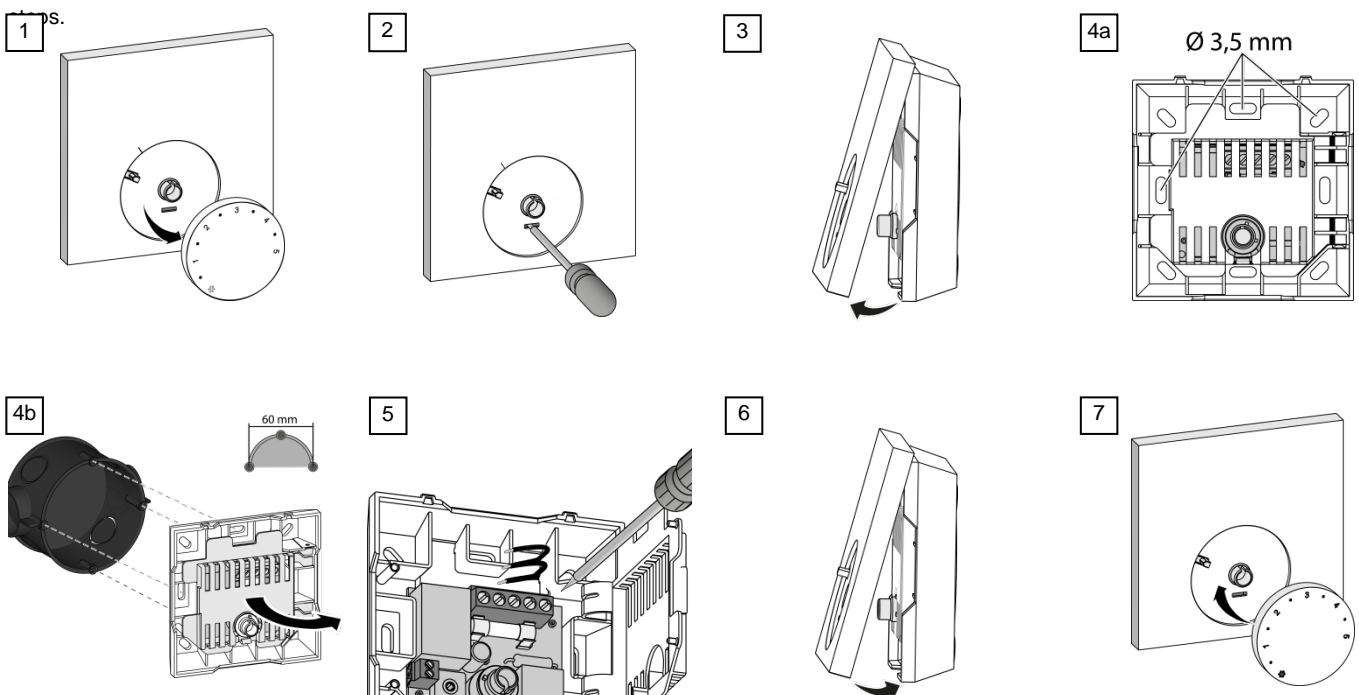
5.1 Installation place

A freely accessible area is recommended for installation in order to allow the Home Inclusive Original Room Thermostat Analogue to detect the correct room temperature. There must be no additional heat sources at the installation position which could affect the thermostat.



5.2 Installation

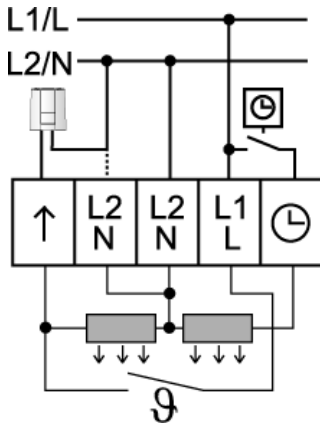
The Home Inclusive Original Room Thermostat Analogue is installed comfortably on-surface or in a flush-type box in a few simple



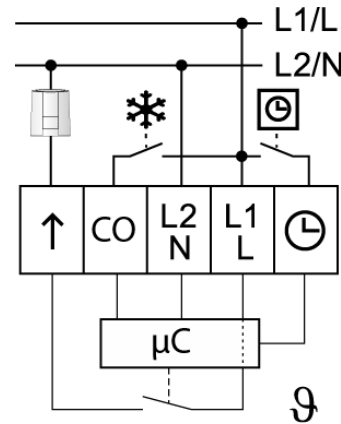
5.3 Electric connection

The wiring between the Home Inclusive Original Room Thermostat Analogue and the components to be connected is realised with a multi-core cable.

Analogue



Analogue HK



- Mains connection
 - Voltage supply via Home Inclusive Original Base Station or via an external voltage source
- Reduction input
 - Reception of an external reduction signal for the time-controlled reduction of the room temperature, from an Home Inclusive Original Room thermostat Control, or an Home Inclusive Original Base station Control, or an external system clock.
- Change-over input
 - Toggle between heating and cooling via an external signal (potential-free contact)
- Connection for actuators
 - Integrated valve protection function
 - Cyclic activation of connected actuators, avoids the clogging of valves in times without temperature control
 - Will be activated once every 14 days for 6 minutes after the last triggering
 - Integrated antifreeze function
 - Avoids the freezing of lines during times without temperature control (e. g. in case of longer absence)
 - Inactive in cooling operation

5.4 Blocking of cooling

For the room thermostats Analogue HK, the cooling function can be blocked by inserting a cable bridge.

