

Comet Zigbee®

ENERGY-SAVING RADIATOR THERMOSTAT
WITH ZIGBEE



MADE IN
GERMANY 

 **EUROTRONIC**
Technology GmbH

 **zigbee**

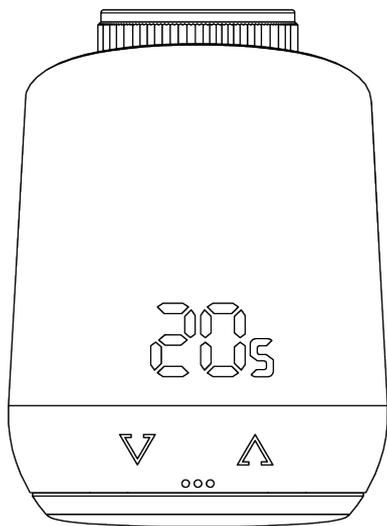
CONTENT

1	Delivery scope	3
2	Warnings	4
3	Introduction of Comet Zigbee	5
4	Control and display elements	5
	4.1 Buttons	5
	4.2 LED-lights	6
5	Installation	7
	5.1 Insert batteries	7
	5.2 Set up into a Zigbee network	8
	5.3 Mounting at radiator	9
	5.4 Adapters	9 - 10
	5.5 Adaption	10 - 11
	5.6 Delete a device out of a Zigbee network	11
	5.7 Dismounting Comet Zigbee	12
	5.8 Factory reset	12
6	Operating the device	13
	6.1 Setting the target temperature	13
	6.2 Child protection / Key lock	13
	6.3 Changing the operating mode	13
	6.4 Window open detection	13
7	Operating Zigbee	14
	7.1 Basic	14
	7.2 Power Configuration	15
	7.3 Thermostat	16
	7.3.1 SW Build ID attribute	16
	7.3.2 PI Heating demand attribute	16
	7.3.3 Errors	16
	7.3.4 Current temperature setpoint	16
	7.4 Attribute reporting	16
8	Errors and messages help	17
9	Cleaning and storage	18
10	Technical specification	18
11	Support and contact	18
12	Warrenty	19
13	Legal information	19

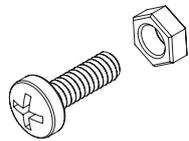
1. DELIVERY SCOPE

- 1x Comet Zigbee Energy saving radiator
- 1x Quick Start Guide
- 3x Adapter for Danfoss Ventile (Danfoss RA / RAV / RAVL)
- 1x Screw for adapter
- 2x LR6/Mignon/AA batteries

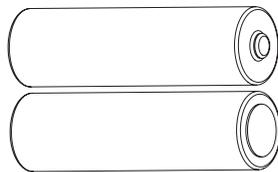
NOTE: The illustrations below are for illustrative purposes only and may differ from the actual product.



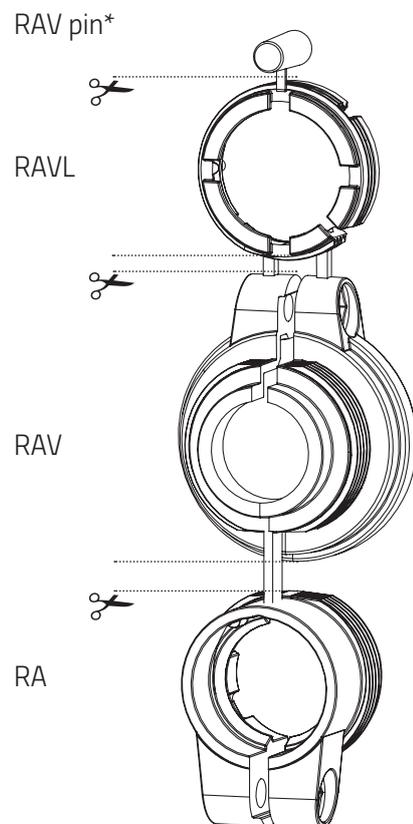
Comet Zigbee
Energy saving radiator



Screw for
adapter



2x batteries AA LR6



* When using the RAV adapter, you need the RAV pin to extend the valve tappet.

NOTE: Check the scope of delivery for completeness and intactness.

2. WARNINGS

WARNING!

This signal word designates a hazard with a medium level of risk which, if not avoided, can result in death or serious injury.

A NOTICE! This signal word warns of possible damage to property.

Safety notice

- Comet Zigbee is intended for indoor use.
- Operate Comet Zigbee only as described in the user manual.
- Comet Zigbee should only be stored in a dry and dust-free place out of direct sunlight be put into use.
- Do not continue to operate the device if it shows obvious damage.
- Comet Zigbee may not be rebuilt, modified or opened.

WARNING! EXPLOSION HAZARD!

Improper handling of batteries can cause an explosion.

- Do not heat batteries and do not throw batteries into open fire.
- Do not place batteries in direct sunlight.
- Protect batteries from excessive heat.
- Do not short-circuit the batteries.
- Never try to charge non-rechargeable batteries.
- Never disassemble batteries.
- Do not mix new and used batteries.
- Observe the correct polarity (+/-) when inserting the batteries.
- Before inserting the batteries, clean the batteries and the contacts in the thermostat.

WARNING! RISK OF BURNS!

Leaking battery acid can cause burns.

- Avoid contact of battery acid with skin, eyes and mucous membranes.
- In the event of contact with battery acid, immediately rinse the affected areas with plenty of clear water and see a doctor.

WARNING! RISK OF INJURY!

If children play with the thermostat or the packaging, they can swallow small parts and choke.

- Do not let children play with the thermostat or the packaging.
- Keep batteries away from children. Consult a doctor immediately if batteries were swallowed.

3. INTRODUCTION OF COMET ZIGBEE

Thank you for choosing a product from Eurotronic Technology GmbH. This device can conveniently adjust the temperature in your rooms according to your wishes and help you effectively reduce your heating costs. Development and manufacturing are 100% "Made in Germany", which ensures the highest quality and technology. This instruction manual will help you to start using your device easily and quickly.

THIS IS COMET ZIGBEE

Comet Zigbee is an energy-saving radiator controller that is compatible with the Zigbee wireless standard and offers modern and simple operation. It automatically controls your room temperature according to your specifications and is configurable, directly on the controller or conveniently via smartphone through your Zigbee network.

4. CONTROL- AND DISPLAY ELEMENTS

4.1 BUTTONS



Minus



Plus

Button	Action	Meaning
	short push	Decrease target temperature for 0,5°C
	press and hold	Decrease target temperature for 0,5°C, then decrease by 0.5°C every 0.5 seconds as long as the button is pressed or the end value is reached.
	short push	Increase target temperature for 0,5°C
	press and hold	Increase the target temperature immediately by 0.5°C, then increase by 0.5°C every 0.5 seconds as long as the button is pressed or the end value is reached.
Button in battery compartment	press and hold for 5 seconds	Comet Zigbee reacts to remove commands from the gateway. (Exclusion)
Button in battery compartment	press and hold for 10 seconds	The device gets a factory reset.
&	press and hold both for 3 seconds	Activate or deactivate key lock/child lock.
&	when displayed „Ad“ press and hold both for 3 seconds	Adaptation get started

4.2 LED-LIGHTS



Radio symbol:

Informs about radio connection and adding operations.
Is switched on when radio connection is established.
Turns off when radio connection is lost.



Pairing mode (Inclusion) active.



Exclusion mode active.



Adaptation must be started.



Animation: Lights up while adaptation is running.



Animation: Lights up when the key lock is activated/deactivated.



Lights up when the battery level is less than 15%.



Removal operation (Exclusion) failed.



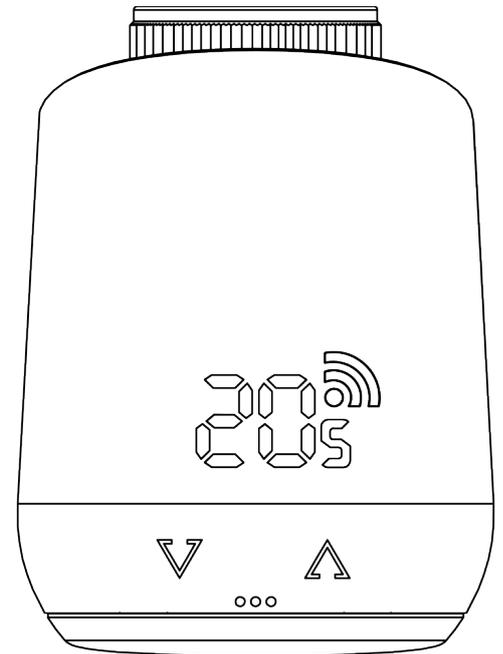
Valve not mounted or no valve detected.



No valve movement possible or valve stuck.



Add operation (Inclusion) failed.



5. INSTALLATION

The Comet Zigbee does not belong to any Zigbee network ex works. The Comet Zigbee must be added to an existing network in order to communicate with other Zigbee devices. This process is called inclusion. The Comet Zigbee can also leave a network. This operation is called removal (exclusion). Both operations must be initiated by a primary Zigbee controller. To do this, the controller must be put into Add or Remove mode. Please refer to the user manual of your Zigbee controller how to start the modes. Only when the primary controller is in add/remove mode, Zigbee devices can join or leave the network. If the device already belongs to a network, the device must first be removed from the network. Otherwise, the join attempt will fail.

Behavior in the Zigbee network

The Comet Zigbee can be added to any Zigbee network and operate with other Zigbee certified devices and/or applications from other manufacturers. All non-battery powered network nodes (nodes), regardless of manufacturer, act as repeaters within the network and improve the reliability of the wireless network.

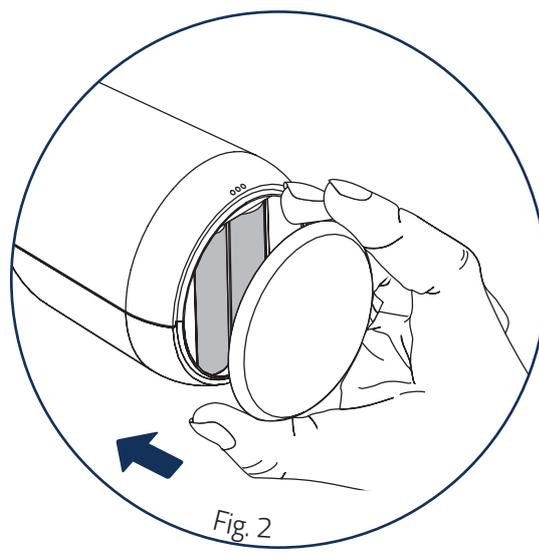
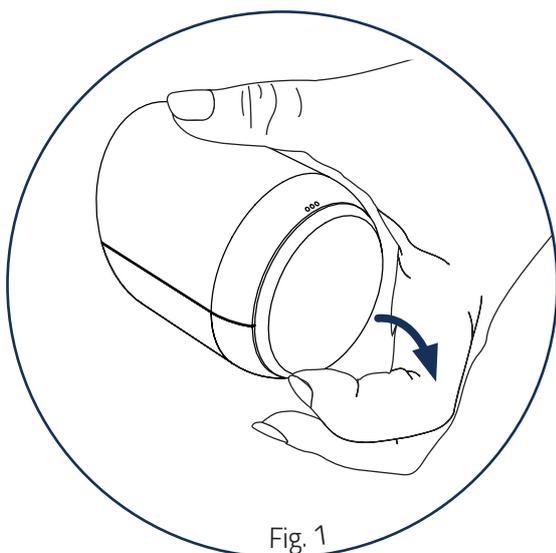
Network security

Comet Zigbee can communicate encrypted with other Zigbee devices, if they also support encrypted communication. If this is not the case, Comet Zigbee communicates unencrypted.

NOTE: To use the full functionality of the Comet Zigbee, a security enabled Zigbee controller is required.

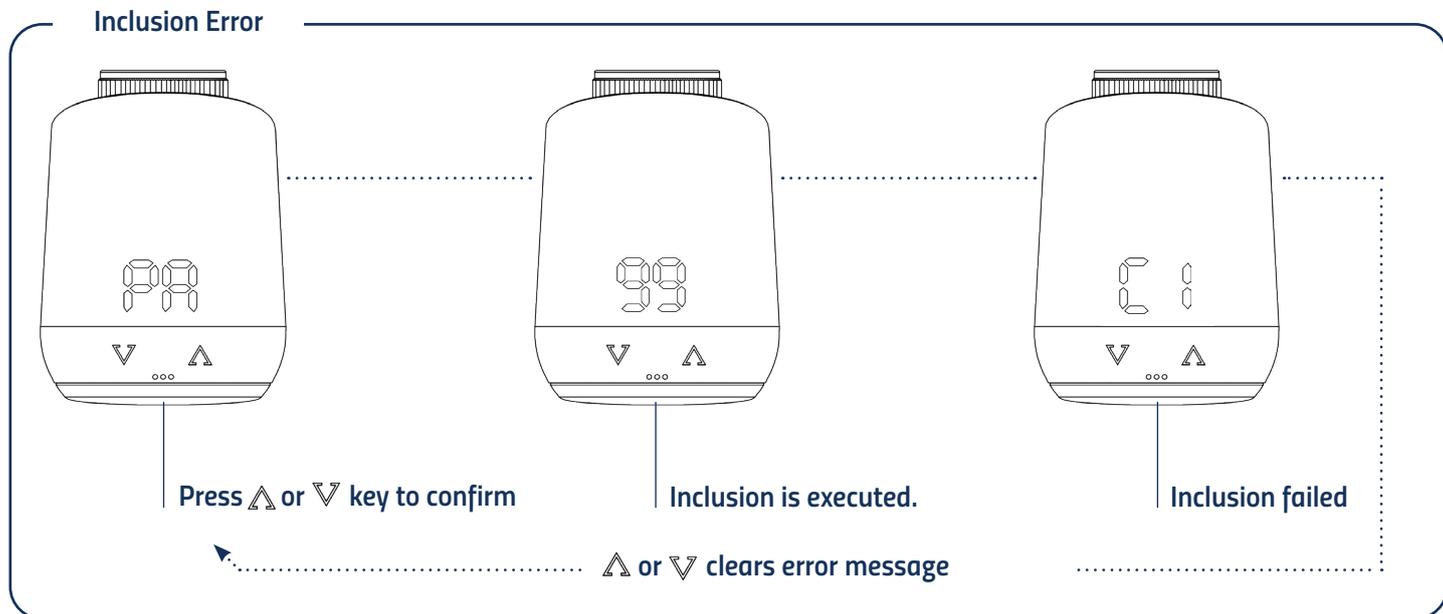
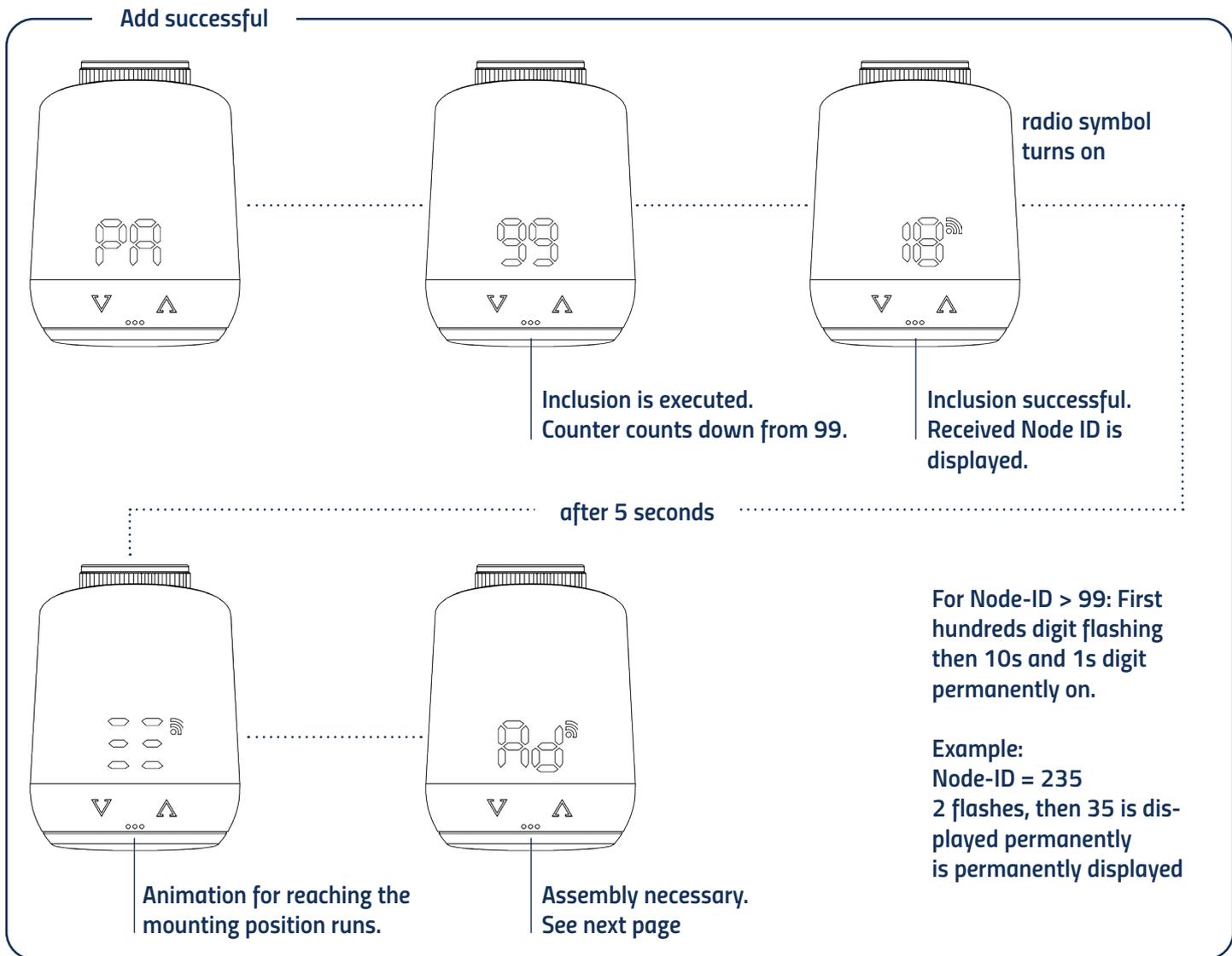
5.1 INSERT BATTERIES

Remove the battery cover by pulling it upwards by the notch (Fig. 1).
Now insert the batteries. Pay attention to the correct polarity! Do not use rechargeable batteries!
Reattach the battery cover to the Comet Zigbee (Fig.2) by pressing it on until it clicks.
In case of a later battery change, the configuration of your Comet Zigbee will be preserved.



5.2 SET UP INTO A ZIGBEE NETWORK

Put your primary Zigbee controller into include mode.
 If Comet Zigbee was successfully added, the LED display will show the received node ID.



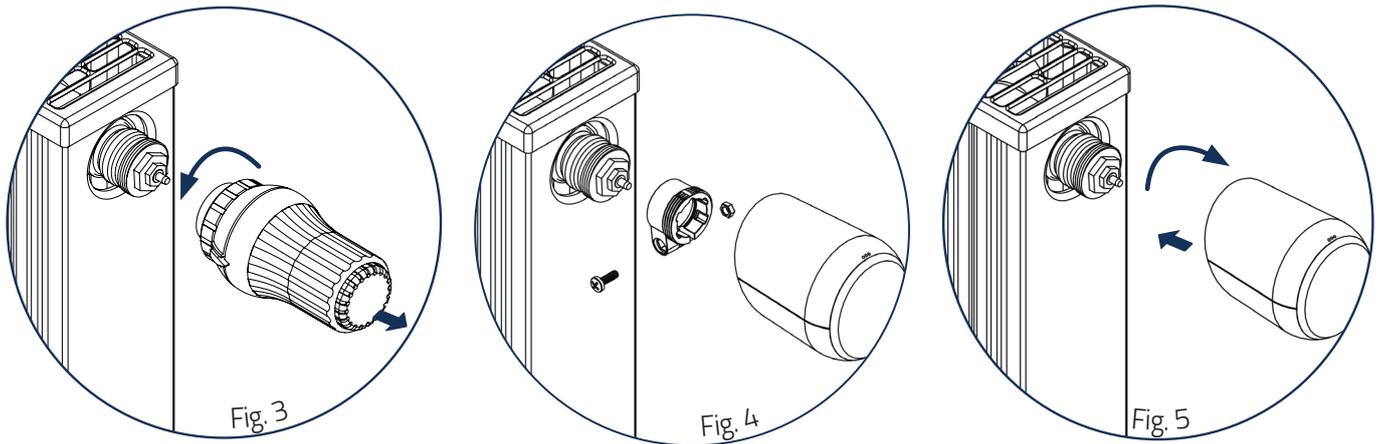
5.3 MOUNTING AT A RADIATOR

After adding (inclusion), the LED display shows an animation and the thermostat moves to the mounting position. Subsequently, the LED display shows "Ad".

Follow the mounting steps below:

1. Unscrew old thermostatic head completely, loosen fastening and pull it off the valve (fig.3).
2. If necessary, select a suitable adapter and mount it on the valve (Fig.4).
3. Screw the thermostat onto the valve or adapter by turning the union nut clockwise (Fig.5).

When you have mounted the Comet Zigbee on the valve, continue with 5.4 Adaptation.



5.4. ADAPTERS

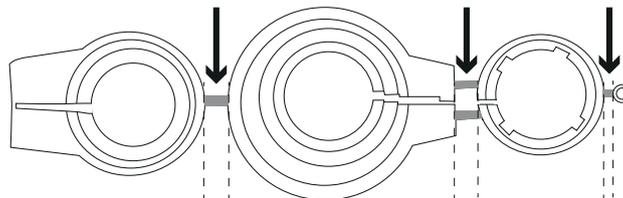


Fig. 6

NOTE:

Remove the connecting pieces of the plastic adapters completely (Fig.6) before using one of the enclosed adapters! For Danfoss RA/RAV use the enclosed screw and nut.

No adapter is required for the following valves:

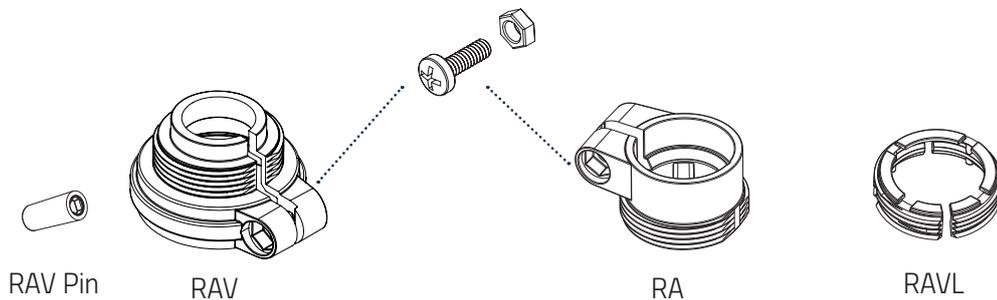
Heimeier; Junkers Landys+Gyr; MNG; Honeywell; Braukmann, as these have a thread dimension of M30 x 1.5 mm. The adapters for Danfoss RAV (pin must be plugged on valve tappet), Danfoss RA and Danfoss RAVL are enclosed.

You will need an adapter for the following valves:

Herz M28 x 1,5 mm; Comap M28 x 1,5 mm; Vaillant 30,5 mm; Oventrop M30 x 1,0 mm; Meges M38 x 1,5 mm; Ondal M38 x 1,5 mm; Giacomini 22,6 mm; Rossweiner M33 x 2,0 mm; Markaryd M28 x 1,0 mm; Ista M32 x 1,0 mm; Vama M28 x 1,0 mm; Pettinaroli M28 x 1,5 mm; T+A M28 x 1,5 mm; Gampper 1/2/6; Danfoss RA/RAV/RAVL.

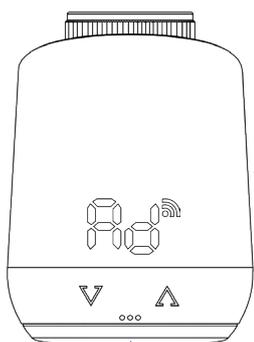
You can purchase further metal adapters for a fee from our partners. An overview of the metal adapters and corresponding ordering options can be found under the following link:
<https://eurotronic.org/produkte/zubehoer/metalladapter/>

If you are not sure which valve you have, see: <https://eurotronic.org/service/faq> In chapter „Adapterliste“.

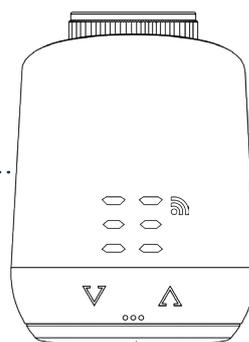


5.5 ADAPTATION

Adaptation

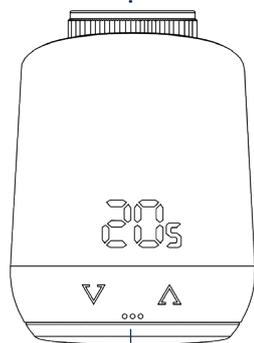


Press and hold Δ and ∇ key together for 3 seconds, to start adaptation.



Adaptation is executed.
Animation is displayed.

Adaptation successful

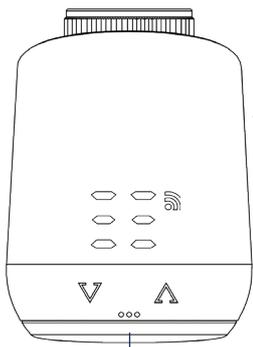


Target temperature of 21° is displayed.

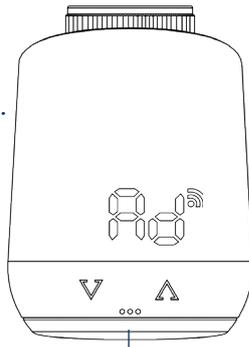
NOTE:

If a new adaptation is required later, remove the batteries from the device and reinsert the batteries. Ad" then appears on the LED display. Now start the adaptation by simultaneously holding down both keys Δ and ∇ for 3 seconds.

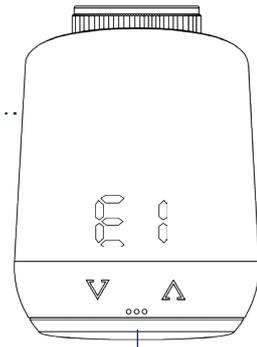
Adaptation error



Mounting position is prepared.
Animation is displayed.



Press and hold Δ and V key
together for 3 seconds.



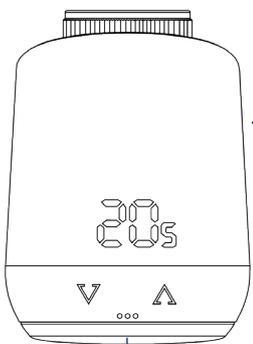
Adaptation failed.
Repeat the process.

← Δ or V key clears error message. →

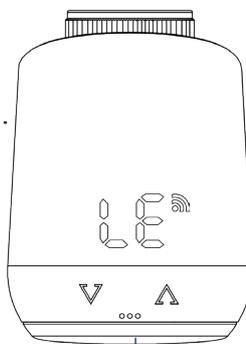
5.6 DELETE A DEVICE OUT OF A ZIGBEE NETWORK

Please put your Zigbee controller into the exclusion mode. Then press and hold the button in the battery compartment for 5 seconds until "LE" appears in the display.

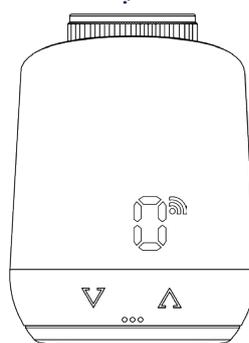
Exclusion



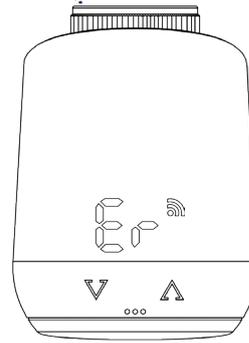
Press key in battery compartment
for 5 seconds.



Exclusion is executed.
Countdown starts from 99 to 0



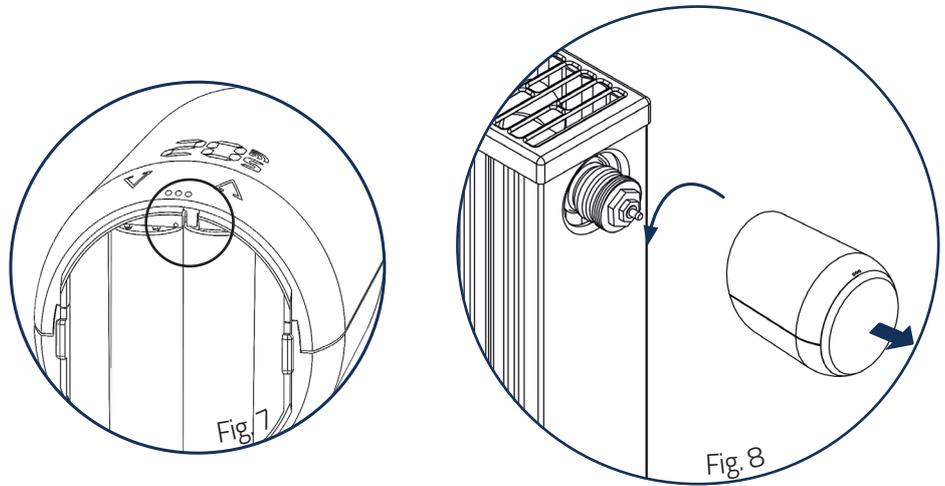
Exclusion successful



Exclusion failed

5.7 DISMOUNTING COMET ZIGBEE

Remove the Comet Zigbee from the network before disassembling the device. To do this, please put your Zigbee controller in the removal mode (Exclusion). Then press and hold the button in the battery compartment for 5 seconds (Fig.7). The LED display shows Node ID 0 if the removal was successful and the valve tappet moves into mounting position. Wait until the display shows "PA". Now unscrew the union nut counterclockwise and remove it from the Comet Zigbee valve (Fig.8).



5.8 FACTORY RESET

Press and hold the button in the battery compartment of your Comet Zigbee for at least 10 seconds. From the 5th second on, a counter will run on the thermostat's display. Keep the button pressed until the 10 appears on your Comet Zigbee. Then "Ad" will be shown again on the display and the controller will be in pairing mode.

NOTE: Use the factory reset only if your primary Zigbee controller is no longer available or is inoperable for other reasons.

Counter counts up from 5 to 10. After reaching 10, the display shows "PA" again.
The pairing mode is active again.



6 OPERATING THE DEVICE

The LED display shows the set setpoint temperature or the set valve opening degree when the Comet Zigbee is operated in the actuator mode.

6.1 SETTING THE TARGET TEMPERATURE

The set temperature is changed via the ∇ and \triangle button.

The local change of the setpoint temperature puts the Comet Zigbee in heating mode.

The setpoint temperature of the setback mode can only be adjusted by radio.

The input range of the set temperature is 8° - 28°C.

If the temperature is increased or decreased beyond this, the Comet Zigbee will switch to boost or off mode.

6.2 CHILD PROTECTION / KEY LOCK

The child protection/key lock can be switched on and also switched off again by simultaneously holding down the \triangle and ∇ button for 3 seconds, when the display is off.

If the Comet Zigbee is set to the highest protection level by radio, local operation is no longer possible. The child safety lock can then also no longer be removed locally.

6.3 CHANGING THE OPERATING MODE

OFF-Mode

Press the ∇ key as long as „--“ is displayed on your thermostat.

Heating-Mode

If the device is not in the heating-mode, change the temperature by using keys, between 8 to 28 degrees.

Boost-Mode

If your device is not in the Boost-mode, keep the \triangle key pressed, until the device displays “ON”

6.4 WINDOW OPEN DETECTION

If the temperature drops abruptly, the window open mode is activated. The Comet Zigbee will switch to off mode for 10 minutes. The window-open mode is automatically exited after 10 minutes and the previously active mode is restored.

In Manufacturer Specific Mode, the window-open detection is not executed.

The sensitivity of the window open detection can be configured.

7 OPERATING ZIGBEE

Cluster	Endpoint	Cluster id	Server	Client
Basic	1	0x0000	▪	
Power configuration	1	0x0001	▪	
Thermostat	1	0x0201	▪	▪
OTA	1	0x0019		▪

7.1 BASIC

Cluster	Attribute	Attribute ID	Default Value	Data Type	Read/Write (R/W)	Manufacturer Specific (Y/N)	Reportable (Y/N)
Basic							
	ZCL Version	0x0000	0x02	0x20 (int8u)	R	N	N
	Application Version	0x0001	App Version	0x20 (int8u)	R	N	N
	Stack Version	0x0002	0x04	0x20 (int8u)	R	N	N
	Hardware Version	0x0003	0x22	0x20 (int8u)	R	N	N
	Manufacturer Name	0x0004	0x1010	0x42 (0-32 byte String)	R	N	N
	Model Identifier	0x0005	COZBXXX (XXXX=Application Version)	0x42 (0-32 byte String)	R	N	N
	Date Code	0x0006	YYYYMMDD	0x42 (0-16 byte String)	R	N	N
	Power Source	0x0007	0x03 (battery)	0x30 (8-bit enum)	R	N	N
	Product Code	0x000A	1002 = Eurotronic Comet Zigbee	0x42 (0-8 byte String)	R	N	N
	SW Build ID	0x4000	00000000	0x42 (0-16 byte String)	R	N	N

7.2 POWER CONFIGURATION

Cluster	Attribute	Attribute ID	Default Value	Data Type	Read/Write (R/W)	Manufacturer Specific (Y/N)	Reportable (Y/N)
Power Configuration							
	Battery Charge Remaining	0x0021	0x00	0x20 (int8u)	R	N	N
	Battery Size	0x0031	0x03 (AA)	0x20 (int8u)	R	N	N
	Battery Quantity	0x0033	0x02	0x20 (int8u)	R	N	N

7.3 THERMOSTAT

Cluster	Attribute	Attribute ID	Default Value	Data Type	Read/Write (R/W)	Manufacturer Specific (Y/N)	Reportable (Y/N)
Thermostat							
	Local Temperature	0x0000		0x29 (int16s)	R	N	Y
	Pi Heating Demand (valve position %)	0x0008	0x00	0x20 (int8u)	R	N	N
	Local Temperature Calibration	0x0010	0x00	0x28 (int8s)	RW	N	N
	Occupied Heating Set point	0x0012	0x7D0 (21°C)	0x29 (int16s)	RW	N	N
	Unoccupied heating	0x0014	0x7D0 (21°C)	0x29 (int16s)	RW	N	N
	Min Heat Setpoint Limit	0x0015	0x01F4 (7,5°C)	0x29 (int16s)	R	N	N
	Max Heat Setpoint Limit	0x0016	0x0BB8 (28,5°C)	0x29 (int16s)	R	N	N
	System Mode	0x001C	0x04 (Heat)	0x30 (8-bit enum)	RW	N	N
	TRV Mode	0x4000	0x02 (MANU Mode)	0x30 (0-8 bit enum)	RW	Y	N
	Set Valve Position	0x4001	0x00	0x20 (int8u)	RW	Y	N
	Errors	0x4002	0x00	0x20 (int8u)	R	Y	Y
	Current Temperature Set Point	0x4003	0x7D0 (21°C)	0x29 (int16s)	RW	Y	Y
	Host Flags	0x4008	0x000001	0x24 (int24u)	RW	Y	N

7.3.1 SW BUILD ID ATTRIBUTE

This attribute defines the firmware version of the device. With every release of new firmware the value of this attribute will be updated.

7.3.2 PI HEATING DEMAND ATTRIBUTE

The attribute can only be read. An unsigned integer is supplied when reading, this representing the current valve position.

0 = Valve closed

7.3.3 ERRORS

Bit	7	6	5	4	3	2	1	0
Error	reserved	reserved	Valve not moving (E3)	Valve Movement too slow (E2)	Valve Adaptatio failed (E1)	reserved	reserved	reserved

7.3.4 CURRENT TEMPERATURE SETPOINT

Any value written to Thermostat / Occupied / Unoccupied Heating Setpoint attribute (0x0012 or 0x0014) will automatically be copied to the Current Temperature Set point attribute (0x4003) to allow operating the TRV without the need to be aware of the customer specific attributes.

7.4 ATTRIBUTE REPORTING

Device Type	Pre-Configured Reporting Interval	Cluster	Attribute	Attribute ID
TRV	Report on change	Thermostat	Errors	0x4002
TRV	Report on change	Thermostat	Current Temperature Set point	0x4003
TRV	Report on change	Thermostat	Host Flags	0x4008

8 ERRORS AND MESSAGES HELP

Problem	Reason	Solution
	Batteries almost empty	Replace the batteries
Radiator does not heat up.	Boiler water temperature O.K? Valve does not open, is it calcified after the summer/heating break?	Adjust the temperature of the boiler water. Remove the Comet Zigbee. Move the valve pin back and forth manually/using tool.
Radiator does not cool down.	Valve does not close completely. It may be that the closing point of your valve seal has shifted.	Remove the Comet Zigbee. Move the valve pin back and forth manually - adaptation may not be possible because your valve may be calcified or the seal no longer fulfills its function.
Pressure piece falls out	Due to an endless thread, the pressure piece that is situated at the bottom can fall out if the device has not been mounted on the valve.	Remove the batteries from the device. Insert the pressure piece. Insert the batteries.
Er 1 - 3 and ER	The errors message can be cleared by pressing the ▲ or ▼ key.	
	Joining failed.	Zigbee controller not in pairing mode or out of range.
	Valve not mounted or no valve detected	Correctly mount the device on the radiator? Use the correct adapter
	No valve movement possible or valve stuck	Valve pin freely movable?

9. CLEANING AND STORAGE

INFORMATION: NOTE RISK OF DAMAGE!

An incorrect handling of the thermostat can cause damage.

- Do not submerge the thermostat in water or other fluids.
- Do not use abrasive cleaning agents, brushes with metal or nylon bristles or sharp or metallic cleaning implements such as knife, a hardspatula etc.
- Clean the thermostat with a soft and dry cloth. Do not apply any pressure to the display

10. TECHNICAL SPECIFICATION

Device name	Comet Zigbee	Method of operation	Type 1
EAN	4260012712438	Dimension (mm)	(B x H x T): 62x68x83
Article number	700227	Weight	230g (incl. batteries)
Power supply	2 x 1,5V LR6/Mignon/AA	Degree of protection	IP20
Radio frequency	2,4 GHz	Degree of pollution	2
Transmitting power	+8dBm	Connection	M30 x 1,5mm

Subject to technical changes at any time. Compatibility data without guarantee.

11. SUPPORT AND CONTACT

For technical support please contact us by email or phone.

Eurotronic Technology GmbH

Südweg 1
36396 Steinau - Ulmbach
Germany

Telefon: +49 (0) 6667 91847-0
Email: support@eurotronic.org
Internet: www.eurotronic.org

12. WARRENTY

The warranty period is 24 months and starts on the day of purchase. Please keep the receipt as proof of purchase. During the warranty period, defective energy-saving controllers can be sent to the service address below with sufficient postage. You will then receive a new or repaired device back free of charge. Repair or replacement of the device does not start a new warranty period. Please note that we only guarantee the functions of the device, not the functionality between the interaction of the thermostat and the valve base.

The application-related technical data are guaranteed only together with the valves Heimeier, Junkers Landys+Gyr, MNG, Honeywell Braukmann thread dimension (M30x1,5), Oventrop (M30x1,5) Danfoss RA, RAV and RAVL. The device combinations can be taken from our website (<https://eurotronic.org/service/faq>). When operating the thermostat with third-party valves/adapters that are not listed, the functionality must be ensured by the user. Eurotronic does not provide any warranty service in these cases. After the warranty period has expired, you also have the option of sending the defective device, with sufficient postage, to the address provided for the purpose of repair. Repairs carried out after the expiry of the warranty period are subject to a charge. Your statutory rights are not restricted by this warranty.

13. LEGAL INFORMATION

Dispose of thermostat:

 (Applicable in the European Union and other European countries with systems for separate collection of recyclable materials). Old devices must not be disposed of with household waste! If the thermostat can no longer be used, every consumer is required by law to dispose of old devices separately from household waste, e.g. at a collection point in his community/borough. This ensures that old appliances are recycled properly and that negative effects on the environment are avoided. This is why electrical appliances are marked with the symbol shown here.

Batteries and rechargeable batteries must not be disposed of with household waste!

 As a consumer, you are required by law to take all batteries and rechargeable batteries, whether they contain harmful substances* or not, to a collection point in your municipality/borough or to a retailer so that they can be disposed of in an environmentally friendly manner.

Dispose of packaging:

 Dispose of the packaging according to type. Put cardboard and carton in the waste paper collection, foils in the recyclables collection.

Konformitätserklärung:

 Eurotronic Technology GmbH hereby declares that the Comet Zigbee radiator thermostat is in compliance with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following internet address: <https://eurotronic.org/produkte/zigbee-heizkoerperthermostat>.

*marked with: Cd = Cadmium, Hg = Mercury, Pb = Lead