

# Thermostatic Radiator Valve

TL10-Zigbee

Thermostatic Radiator Valves (TRVs) sense the air temperature around them and regulate the flow of water through the radiator which they are fitted to. They do not control the boiler.

They should be set at a level that gives you the room temperature you want. These settings may have to be different in each room, and you should set the TRVs to suit each room and then leave them to do their job.

Turning a TRV to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the boiler size and setting, and the radiator size. Turning a TRV to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

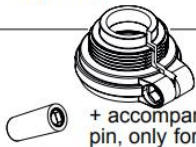


TRVs need a free flow of air to sense the temperature so they must not be covered by curtains or blocked by furniture.



## Functions

- ✓ **M30 x 1.5 Universal Type Head to body connection**
- ✓ **LCD display can be clearly read with the background lighting.**
- ✓ **Easy for installation**
- ✓ **Five buttons make it easy to use.**
- ✓ **PID control**
- ✓ **7 days program(4 periods/day)**
- ✓ **The display shows the set temperature or measured temperature, time.**
- ✓ **Temperature display in degrees Celsius**

## Adapters

Heimeier, Junkers Landys+Gyr, MNG, Honeywell, Braukmann thread-measure dimension of M 30x1,5	no adapter required
Danfoss RAV (accompanying pin must be plugged on the valve tapped)	 + accompanying pin, only for RAV!
Danfoss RA	
Danfoss RAVL	

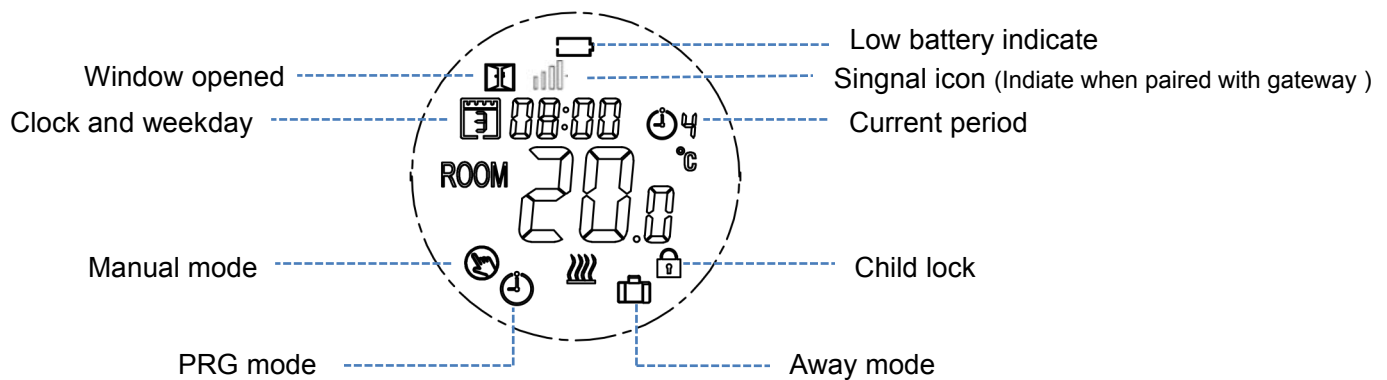
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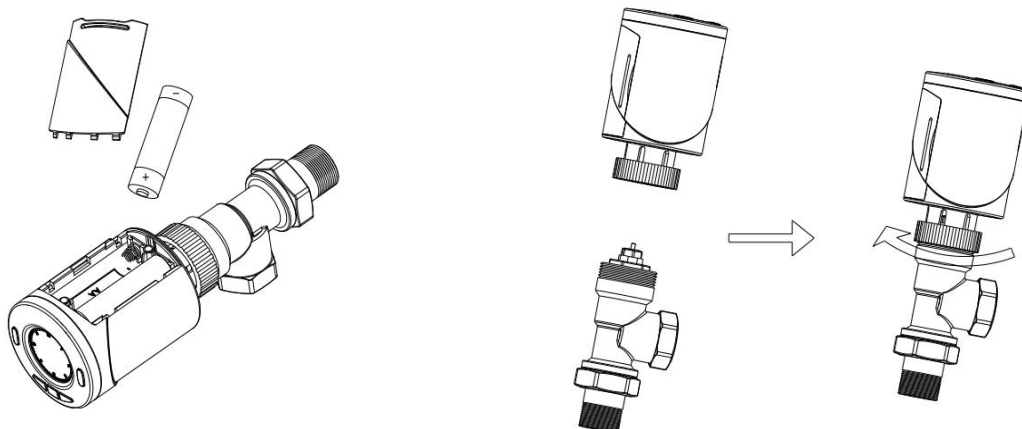
## Technical data

Thermostat operating voltage:	2 x AA1.5 V, alkaline batteries.
Backup storage:	EEPROM
Switching options:	7 days programming (4 periods/day)
Frequency:	2.4Ghz
Temperature settings:	5°C ~ 35°C, in 0.5°C
Accuracy:	± 1°C
Control:	PID
Thermostat dimensions:	φ 55*69mm
Max Extention	5.0mm
Color:	White
IP protection rating:	20.
Certification:	CE, ROHS,RED

## Display and buttons



## Battery Installation and valve installation( Take M30 adaptor as an example)





## Initialization and Adaption

- 1) Once the battery installed, the TRV display **INIL**, which means initialization.
- 2) Install the TRV onto your radiator.
- 3) Then the TRV display **AdAP**, then press **UP** button (change 0 to 1), which means the TRV will adapt itself to the stroke of your valve body. To do this, the TRV will now be opened and closed twice to store the end points.



## Mode setting

Press **M** button to choose Manual mode/Away mode/PRG mode.



## Clock & Weekday setting

Press and hold **P** button for 5s, set the clock (Min-Hour-Weekday) by pressing **UP** and **DOWN** button, each press of **P** button will go to next item setting.



## 7 days programmable setting

After finish the clock setting, press **P** to go to PRG schedule setting.

Set the schedule (Weekday-Period-Start time-Temp.) by pressing **UP** and **DOWN** button, each press of **P** button will go to next item setting.

### Default Setting:

Period	1		2		3		4	
	Time	Temp	Time	Temp	Time	Temp	Time	Temp
12345(Mon.~Fri.)	7:00	22℃	8:30	19℃	17:00	22℃	22:00	19℃
6(Sat.)	8:00	22℃	8:30	22℃	17:00	22℃	22:00	19℃
7(Sun.)	8:00	22℃	8:30	22℃	17:00	22℃	22:00	19℃



## Open window detect function (OWD function)

When the Open Window mode is enabled in the parameter setting, the system will automatically stop heating when it detects a sudden drop of room temperature (2℃ in 15 minutes as default). This is normally caused when a window or door is opened without turning off the heating device.

The device will return to the previous mode of operation after 30mins, then **OP** disappear. Press any button will exit OWD function during the heating off period.



## Pair with Host device

**Note:** Before adding TRV TL10 to the app, please make sure you have add the smart gateway.

- 1) Make the host device (eg.gateway) is on the status waiting for adding slave thermostats.  
(Please pair the gateway with mobile app first)
- 2) Enter gateway page on the mobile app, and press the button for adding sub-device, find thermostat and click to add.

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- 3) Turn TL10 off by pressing ON/OFF button, then long press **M** button until it show a “0 and signal icon”, then press **UP** button, when HT-10R display **3** or **signal icon stop moving**, means code pairing done. Press ON/OFF button to return, and press again to turn it on.

## Parameter setting

Turn off the thermostat, Press and hold **M** and **UP** button for 3s, until it shows the item 01, each press of **M** button will go to next item setting, adjust the range by using **UP** and **DOWN** button.

Menu	Description	Range	Default Value
01	Temp. calibration for internal sensor	-8 °C ~8 °C	0 °C
02	Set Point Max.	5 °C ~35 °C	35 °C
03	Set Point Min.	5 °C ~35 °C	5 °C
05	Frost Protection Temp.	5 °C ~15 °C	5 °C
10	Display	0: Room temp. 1: SET temp.	0
12	Open window detect function	1: ON 0: OFF	0
13	OWD Detect Time	2~30mins	15mins
14	OWD Drop temp. select (within detect time)	2.3.4 °C	2 °C
15	OWD Delay time select (Return to previous working status)	10~60min	30mins
17	Factory reset	0: No 1: Yes, and then press On/off button for 5s, wait until thermostat restart	0
18	Software version		
19	Software version		
31	Battery voltage	Unit: 10mv	
32	PID P-band select	2 °C ~10 °C	7 °C
33	PID I-time select	30~90min	30min

## Mounting

