Introduction
The TRV thermostatic head is controlled through wireless ZigBee communication protocol. It can replace classic, manual thermostatic head in a very quick and easy way. For proper operation of the TRV head it is necessary to synchronize it correctly with wireless thermostat using the CO10RF coordinator or UGE600 Internet gateway (all devices are sold separately). TRV head paired with the TX60RF series digital thermostats (e.g. VS10RF / VS25RF / HT6RF-RF / HTB1RF-RF / HTBRF-RF / HTSP-RF / TS600) provides comfort within the whole room, not just in the radiator area.

Product Compliance
This product complies with the essential requirements and other relevant provisions of Directives: 2014/35/EU, 2014/30/EU, 2011/65/EU. The full text of the EU Declaration of Conformity is available at the following internet address: www.saluslegal.com.

Safety Information
Use in accordance to national and EU regulations. Use the device as intended, keeping it in dry condition. Product for indoor use only. Installation must be carried out by a qualified person in accordance to national and EU regulations.

Box Content
Each box additionally contains:

- Manual for models: TRV10RFM, TRV10RAM i TRV28RFM

- Wireless, thermostatic TRV head

- TRV10RFM adapter
- TRV28RFM adapter
- TRV10RAM adapter
- Metal washer
- Allen Wrench key
- 2 x AA batteries

General informations
The TRV head is a modulating device. This means that the valve can be gradually closed or opened, depending on the current room temperature measured by thermostat and the setpoint temperature.

To achieve the best possible results in cooperation between the thermostat and the heating source, it is recommended to use the RX10RF receiver. RX10RF turns on the heat source depending on the demand signal sent by thermostat. More informations about RX10RF receiver is included in its user manual.

Checking compatibility with the heating system
TRV head is compatible with most of the thermostatic valves available on the market, however, before installation, please check whether the valve is suitable for use with the TRV head.

TRV28RFM head installation
For MMA or Herz M28x1,5 thermostatic valves make sure you have a metal washer as shown in the picture.

NOTE: For the Comap valve with M28 thread you do not need to mount a metal washer.

TRV10RFM head installation
For a standard thermostatic valve with M30x1,5 thread (e.g. Oventrop, Honeywell, TA, Heineer) TRV10RFM head installation looks like as shown in the picture.

TRV head installation on the Danfoss RA valve
When mounting the TRV10RFM head on the Danfoss RA valve (see picture), please use the RA adapter included with the head. However, to install the TRV10RAM head it is necessary to use the Allen Wrench key.

User interface

Buttons function
Note: Buttons lock itself automatically after 5 minutes from the last one keystroke.

To do this... Press the...
...pair with thermostat ...pairing button for 10 seconds.
...lock/unlock the buttons ...pairing and close buttons together for 5 seconds.
...manually open the valve ...opening button for 5 seconds.
...manually close the valve ...closing button for 5 seconds.
...enter the automatic mode ...shortly pairing button.
...remove the head from the Zigbee network ...pairing button for 10 seconds.
...restore factory default settings ...Open, pairing, and close buttons together for 5 seconds.

Note: If all valve dimensions are consistent with those given below, then the TRV head will be compatible. There are dimension differences, contact us or the installer to find replacement for the valve.

<table>
<thead>
<tr>
<th>Valve Diameter [mm]</th>
<th>TRV10RFM</th>
<th>TRV28RFM</th>
<th>TRV10RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2 out of 4</td>
<td>2 out of 4</td>
<td>-</td>
</tr>
<tr>
<td>20</td>
<td>2 out of 4</td>
<td>2 out of 4</td>
<td>-</td>
</tr>
<tr>
<td>30</td>
<td>2 out of 4</td>
<td>2 out of 4</td>
<td>-</td>
</tr>
</tbody>
</table>

Note:

- Measure the thread diameter. Thread for the TRV10RFM must have a diameter of 30 mm, and for the TRV28RFM - 28 mm.
- Measure the height of the valve’s pin when it is in the open position. For TRV10RFM valve’s pin height should be 13-15 mm, while for TRV28RFM 10-11 mm.
- For M30x1.5 thermostatic valve. The process takes up to 5 minutes.
- The LED will start blinking green / red informing about the software version.
- Press any button to start the adaptation process of TRV head with thermostatic valve. The process takes up to 5 minutes.
- When the LED goes out and TRV head does not make any sounds, adaptation process is finished. Equipment is ready for pairing with thermostat.
- LED diode (indicates device status)
- Opening the head / indication of the device status
- Closing the head / indication of the device status
- Pairing button
Thermostat pairing with the TRV head in Offline mode

**WARNING!** You can connect up to 6 TRV heads to one regulator.

1. Install the TRV head on the valve according to the instructions on the previous page.
2. Press and hold the pairing button for 10 seconds. The toe on the TRV head should start flashing in red.

**Note:** Do not use the CT10RF coordinator together with UGE600.

3. Choose the device type: TRV head.
4. Open the ZigBee network.

**WARNING!** Do not use the CT10RF coordinator together with UGE600.

5. Choose the device type: TRV head.
6. Device is paired with the coordinator, TRV head will start blinking in orange.
7. Diode on the TRV head lights up once green, then stops flashing. TRV head has been added.

LED diode indications

<table>
<thead>
<tr>
<th>When...</th>
<th>TRV Status</th>
<th>LED diode...</th>
<th>Value</th>
</tr>
</thead>
</table>
| power supplied | TRV head indicates the software version | ...flashes red | open mode
| TRV head indicates the software version | ...flashes red | open mode
| TRV head indicates the software version | ...flashes red | open mode
| TRV head indicates the software version | ...flashes red | open mode
| TRV head indicates the software version | ...flashes red | open mode
| TRV head indicates the software version | ...flashes red | open mode
| TRV head indicates the software version | ...flashes red | open mode
| TRV head indicates the software version | ...flashes red | open mode
| TRV head indicates the software version | ...flashes red | open mode

**Manual mode**

To open close the TRV head in manual mode, follow the procedure described below. If the steps described below do not bring any results it means that probably the TRV head buttons are locked and they should be unlocked first.

1. Press and hold the opening button. The red LED diode flashes once and the TRV head will start to open.
2. To close the valve manually, press and hold the closing button. The red LED diode flashes once and the TRV head will start to close.

Additional functions:

**Frost protection mode**

When valve is manually closed, the TRV head automatically activates frost protection mode. Setpoint temperature of the frost protection mode is set on the thermostat. This function is activated when the room temperature drops below the frost protection setpoint temperature set on the thermostat. TRV head automatically maintains setpoint temperature if there is communication between TRV head and thermostat.

**Open window function**

TRV head checks the speed of temperature drop in the room. If the temperature drop is fast, it is assumed that in the room has been opened window. The function is active when the TRV head communicates with thermostat, in automatic mode and the batteries are not discharged.

**Protection against scale deposits**

Do not leave the valve open for a long time because it can cause scale deposits on it. TRV head has a protection function against scale deposits. It starts to opening automatically once every 14 days if no valve movement is detected. Protection will also work no matter if TRV head is in auto mode or manual mode.

**Technical Information**

- **Model:** TRV10RFM / TRV28RFM / TRV10RAM
- **Type:** Wireless, thermostatic TRV head
- **MDE 1.5 / MDE 1.5
- **LED signaling:** Tri-color LED (red/green/orange)
- **Adaptation with a valve:** Automatic
- **Power supply:** 2 x AA batteries
- **Control method:** Modulation
- **Communication:** Wireless, ZigBee 2.4 GHz
- **Operating temperature:** 0 to 65°C
- **Storage temperature:** -20 to 60°C
- **Ambient humidity:** 5 to 95% RH
- **IP protection level:** IP50
- **Dimensions [mm]:** H=88.6, D=51

**Warranty**

SALUS Controls warrants that this product will be free from any defects in materials or workmanship, and shall perform in accordance with its specification, for a period of two years from the date of installation. SALUS Controls shall be liable for breach of this warranty will be (at its option) to repair or replace the defective product.

Customer Name: ..................................................
Customer Address: ..................................................
Tel No: ..........................................................
Post Code: ..........................................................
Email: ..........................................................

Engineers Company: ..................................................
Tel No: ..........................................................
Email: ..........................................................
Installation Date: ..................................................
Engineers Name: ..................................................
Engineers Signature: ..................................................