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Box Contents

TRV10RFM

2 AA Batteries

Adapter

Manual

For the latest PFD Instruction Manual, go to www.salus-controls.com

Product Compliance & Safety Information

INTRODUCTION

The TRV10RFM is a battery-powered, mini-size thermostatic radiator valve (TRV) controller using ZigBee wireless communication. Simply replace the existing, passive head on the standard radiator valve with the TRV10RFM (referred to from now on as the unit). Use the unit with the VS10RF or VS20RF series of wireless thermostats and a Universal Gateway.

VS10RF / VS20RF Thermostat (Required)

UG600 (Required)

RX10RF (Optional)

SALUS Wiring Centre KL08RF

Product Compliance

This product is CE compliant and meets the following EC Directives: Electro-Magnetic Compatibility directive 2014/30/EU; 2014/53/EU and 2011/65/EU.

Safety Information

Use in accordance with the regulations. The unit is to be used for the control of room temperature inside the house.

Installation

This accessory must be fitted by a competent person, and installation must comply with the guidance, standards and regulations applicable to the country or state where the product is installed. Failure to comply with the relevant standards could lead to prosecution.

System Overview

To achieve the best control from the unit and thermostat, we recommend they are used with the SALUS system receiver configured to RX1. The system receiver will turn the boiler on or off when requested by the thermostat. See your boiler receiver manual for more information about the RX1 configuration.

The unit is modulating, which means it opens or closes partially or 100% depending on the relationship between the actual room temperature and the required room temperature measured by the VS10/20RF.

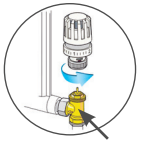
Up to 6 units can be connected to a VS10RF/VS20RF

Checking the compatibility of your heating system

The SALUS TRV10RFM is compatible with the majority of thermostatic radiator valves. Before fitting, please check your valve is suitable for use with the SALUS TRV.

1

Remove the TRV head



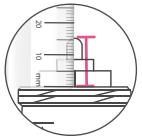
Valve

Note: If all the measurements are as stated on this page then the TRV will fit directly to your valve. Also if your valve is not suitable please consider changing your existing valves, contact your installer.

2

Measure the thread diameter (must measure 30mm)

3



Measure the pin length of the valve when it is in the open position. (must measure between 13-16mm)

Checking the compatibility of your heating system

If you can not see any thread on the valve and it looks like this picture, you may be able to use the RA adapter supplied.

TRV10 fits 30x1,5 mm thread.

Our RA adapter also fits this valve.

Once fitted the RA adapter should look like this.

Installing the Unit

1

Remove the battery door on the side of the unit.

2

Insert the batteries, ensuring correct orientation.

3

The LED on the unit flashes green then flashes red before changing to solid red. When it is solid red, place the unit over the radiator valve using the mounting ring if needed:

4

Screw the units nut (finger tight) to the radiator valve and check that the LED is solid red.

5

Press any button on the unit to adapt it to the radiator valve. Once all adaptation noise and LED activity has stopped, the unit is ready to pair with your wireless thermostat.

6

The unit is now ready for pairing to the SALUS thermostat. You may now start the pairing process.

Preparing to Pair the Unit

1. Press and hold the button on the Universal Gateway for five seconds. This puts the Universal Gateway in pairing mode. See your Universal Gateway manual for more information.
2. Ensure the wireless thermostat is powered up and ready for pairing. See your thermostat manual for more information.
3. If you are using the optional RX10RF wireless boiler receiver configured for remote boiler switching, ensure this has been powered up and the red LED has gone from flashing to steady. See your boiler receiver manual for more information.

Pairing the Unit

Press and hold the pairing button for 10 seconds. You can pair up to 6 units with one thermostat. Pair the units room by room.

You have paired the unit to the thermostat when the unit LED goes off. Once paired, the unit operates in automatic mode and receives room temperatures from the thermostat.

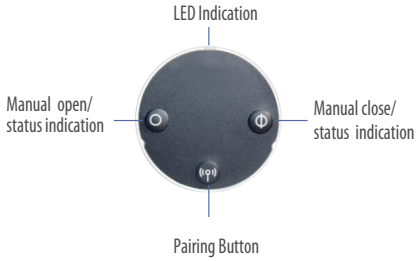
Leaving the Network

Once paired to a thermostat, press and hold the pairing button on the unit for 10 seconds.

The red LED come on together for one second.

Note: After you have deleted the unit from the wireless network, you must reinstall the TRV see Installing the unit.

Using the Unit



Using the Unit

Auto Lock Function
Auto lock function is disabled until you have gone through the pairing process. After pairing, the TRV will auto lock after 5 minute if no buttons have been pressed.

Unlocking the Buttons
To unlock the buttons, press the pairing and close buttons together for 3 seconds.

Opening the Valve Manually
Press the open button for 3 seconds. The LED flashes green once and the valve opens.

Closing the Valve Manually
Press the close button for 3 seconds. The LED flashes red once and the valve closes.

Entering Fail Safe Mode
In fail safe mode, the unit opens the valve 25% for water flow to maintain room temperature.

To enter fail safe mode, press and hold the open and close buttons together for 3 seconds.

To exit fail safe mode, press the:

- Pairing button to put the unit in automatic mode
- Open button for 3 seconds to open the valve
- Close button for 3 seconds to close the valve

Restoring Factory Default Settings
Press the pairing, open, and close buttons together for 10 seconds.

Protecting against Frost
When you have manually closed the valve, the unit automatically enables frost protection. Frost protection starts only when the temperature in the room drops below the frost temperature setpoint. The unit does all this automatically when connected to a thermostat and you don't have to do anything.

Using the Unit

Detecting Open Windows
The unit checks the rate of temperature drop in the room in which it is located. If the drop is rapid, it assumes a window in the room has been opened. This only works if the unit is paired to the thermostat and is in automatic mode and the battery in the unit is not low. The unit does all this automatically when connected to a thermostat and you don't have to do anything. It works between 0 and 40°C.

Protecting against Lime Scale
Do not leave a valve open for a long time because this could cause a build up of lime scale. The unit has a lime-scale protection feature to prevent against this. The valve motor automatically starts once a week if no valve movement has been detected within a 14-day period. Lime-scale protection will continue to operate in automatic, manual open, and manual close modes and you don't have to do anything.

Auto Adaptation
Once the batteries are inserted into the unit, the red light will appear. If no keys are pressed it will auto adapt to the valve.

Button Usage

To do this…	Press the…
Leave the network	Pairing button for 10 seconds (when unit already in network)
Pair with thermostat	Pairing button for 10 seconds
Put unit in automatic mode	Short press Pairing button
Fully open the valve	Open button for 3 seconds
Fully close the valve	Close button for 3 seconds
Restore factory default settings	Open, pairing, and close buttons together for 3 seconds
Lock and unlock the buttons	Pairing and close buttons together for 3 seconds

LED Indications

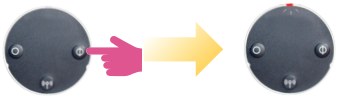
When…		The LEDs…	Valve
Power switched on or after reset	Software Version indication	A sequence of red and green LEDs flashing displayed indicates the software version	
Unit adapting to valve		Red flashes then goes steady. Green flashes (or red flasheson failure to adapt). Green steady. Green and red flash (or red flashes on failure to adapt)	
Unit has not joined network or has not paired to thermostat	Auto mode	Green and red flash alternately after short press on open or close button	25% open
	Manual open	Green flashes twice after short press on open or close button	100% open
	Manual close	Red flashes twice after short press on open or close button	0% open
Unit paired to thermostat and in auto mode		No LED	
Leaving network		Red and green on together for one second	
Identifying the network		Green flashes for up to 10 minutes	
Wireless link to thermostat lost	Auto mode	Green and red flash alternately after short press on open or close button	
	Manual open	Green flashes twice after short press on open or close button	100% open
	Manual close	Red flashes twice after short press on open or close button	0% open
Normal operation	Auto mode	Green flashes once after short press on open or close button	1 to 100% open
	Auto mode	Red flashes once after short press on open or close button	0% open
	Manual open	Green flashes twice after short press on open or close button	100% open
	Manual close	Red flashes twice after short press on open or close button	0% open
	Window open mode active	Green and red flash twice every 10 seconds	100% open
Battery low		Red flashes three times every 10 seconds (less if the battery is low)	25% open
Error installing		Green and red flash alternately	

Manual Override

To remove the unit from auto mode, follow the steps below. If the buttons are locked, unlock them by pressing the pairing and close buttons together for 3 seconds.

Press for 3 seconds to manually open

LED flashes green once and then goes out. To check status refer to table above.



Press for 3 seconds to manually close

LED flashes red once and then goes out. To check status refer to refer to table above.

Short press to return to Auto mode. Red LED will flash once to confirm that the unit is in AUTO.

Technical Detail

Model	TRV10RFM
Type	Hydraulic Radiator Valve DC Motor M30 x 1.5
Input	Three push buttons: • Manual open/status indication • Manual close/status indication • Pairing
LED Indicator	Bi-Colour, Red/Green
Valve Adaptation	Automatic
Power Source	2x AA Batteries
Battery Life	14 Months (low battery indication)
Control Method	Modulating
Communication	2.4GHz ZigBee wireless
Operating Temperature	0 to 45°C
Storage Temperature	-20 to 60°C
Operating Humidity	5 to 95"RH
Protection	IP30
Size (mm)	H 88.6, W 51

Warranty

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

Customer Name: .....

Customer Address: .....

..... Post Code: .....

Tel No: .....

Email: .....

Engineers Company: .....

Tel No: .....

Email: .....

Instalation Date: .....

Engineers Name: .....

Engineers Signature: .....

SALUS Controls plc
SALUS House
Dodworth Business Park South,
Whinby Road,
Dodworth, Barnsley S75 3SP, UK.

SALES: T: +44 (0) 1226 323961
E: sales@salus-tech.com

TECHNICAL: T: +44 (0) 1226 323961
E: tech@salus-tech.com

www.salus-controls.com

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For PDF Instruction Manual go to
www.salus-controls.com

SALUS CONTROLS

Wireless Radiator Controller

Model: TRV10RFM

INSTRUCTION MANUAL