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Box Contents



AVA10M30RF

Manual



Adapter

2 AA Batteries

FCC and Industry Canada Statements

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC and Industry Canada RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the antenna and all persons.

Cet appareil est conforme aux limites d'exposition au rayonnement FR du FCC et d'Industrie Canada pour un environnement non contrôlé. Cet appareil devrait être installé et devrait fonctionner de sorte qu'il se trouve à une distance d'au moins 20 cm entre l'antenne et toute personne.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

System Overview

To achieve the best control from the unit and thermostat, we recommend adding boiler control to the system with the SALUS Wireless Receiver Unit (AX10RF) configured to RX1. The receiver will turn the boiler on or off when requested by the thermostat. See the Wireless Receiver Unit manual for more information about the RX1 configuration.

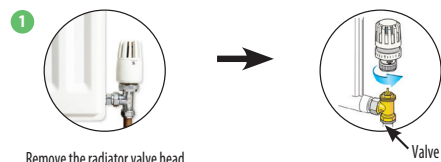
i The unit is modulating, which means it opens or closes partially or fully depending on the relationship between the actual room temperature and the required room temperature measured by the AS20RF.



i Up to 6 units can be connected to a AS20RF

Checking the compatibility of your heating system

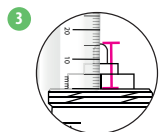
The SALUS AVA10M30RF is compatible with the majority of thermostatic radiator valves. Before installing, please check if your valve is suitable for use with the SALUS AVA.



Remove the radiator valve head



Measure the thread diameter (must measure 30mm or 1.18in)



Measure the pin length of the valve when it is in the open position. (must measure between 13-16mm or 0.51-0.62in)

Checking the compatibility of your heating system

The AVA fits 30 x 1.5 mm (1.18 x 0.05 in) threads.

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



Our RA adapter also fits this valve.



Once fitted, the RA adapter should look like this.



Installing the Unit



Remove the battery door on the side of the unit.



Insert the batteries, ensuring correct orientation.



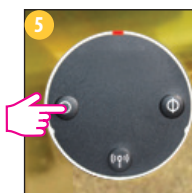
The LED on the unit flashes green and red before changing to solid red. When it is solid red, place the unit over the radiator valve using the adapter if needed.



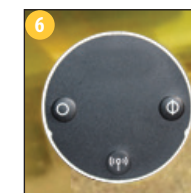
Attach the unit to the valve by finger tightening the mounting ring on the valve threads and check that the LED remains solid red.

AVA10M30RF Installation

If you are connecting to a standard valve then the AVA10M30RF will screw directly to it, as shown below.



Press any button on the unit to start the adaptation sequence to adjust to the radiator valve. This may take 2-3 minutes.



Once all adaptation noise and LED activity has stopped, the unit is ready to pair with a SALUS thermostat.

Product Compliance & Safety Information

INTRODUCTION

The AVA10M30RF (AVA) is a battery-powered, mini-size thermostatic radiator valve actuator using ZigBee wireless communication. Simply replace the existing, passive head on the standard radiator valve with the AVA10M30RF (referred to from now on as the unit). Use the unit with the AS20RF series of wireless thermostats and a Basic Gateway.



AS20RF
Thermostat
(Required)



SG88ZBWH
(Required)



AX10RF
(Optional)



Wiring Centre
AKL08RF



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.

Preparing to Pair the Unit

1
Press and hold the button on the Coordinator or Basic Gateway for five seconds. This puts the device in pairing mode. See your Coordinator or Basic Gateway manual for more information.

2
Ensure the wireless thermostat is powered up and ready for pairing in radiator (r-Flt) mode. See your thermostat manual for more information.



Pairing the Unit

Press and hold the pairing button for 10 seconds to start the pairing process.



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

You can pair up to 6 units with one thermostat. Pair the units one at a time.

Leaving the Network

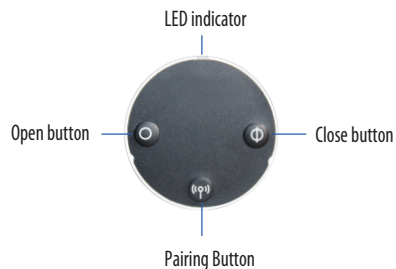
Once paired to a thermostat, press and hold the pairing button on the unit for 10 seconds.

The red and green LEDs come on together (appears orange) for one second once it leaves the network, followed by flashing red as it looks for a network.

Note: After you have deleted the unit from the wireless network, you must reinstall it.



User Interface



Using the Unit

Check Valve Status
Press the open or close button briefly. The LED flashes red twice if fully closed or green twice if open by any amount.

Unlock Buttons - (Auto Lock Function)
The Auto Lock function is disabled until you have gone through the pairing process. After pairing, the AVA will auto lock the buttons after 5 minutes if no buttons have been pressed. To unlock the buttons, press the pairing and close buttons together for 3 seconds.

Open the Valve Manually
When unlocked, press the open button for 3 seconds. The LED flashes green once and the valve opens.

Close the Valve Manually
When unlocked, press the close button for 3 seconds. The LED flashes red once and the valve closes.

Fail Safe Mode
In fail safe mode, the unit opens the valve to 25% 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

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

Automatic Features

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.

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 or 32-104°F.

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.

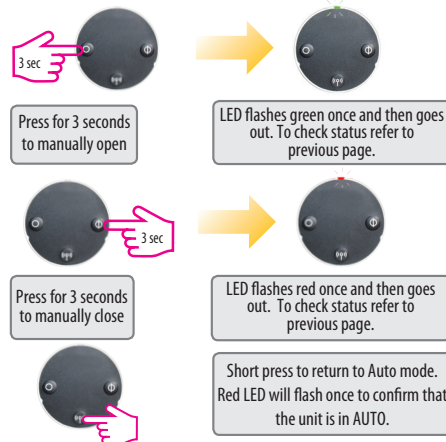
Auto Adaptation
Once the batteries are inserted into the unit, the red light will appear. If no keys are pressed it will auto adapt to the valve.

Button Usage

To do this...	Press the...
Leave the network	Pairing button for 10 seconds (if unit already in network)
Pair with thermostat	Pairing button for 10 seconds (if not part of a network)
Check valve status	Short press Open or Close button
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
Lock and unlock the buttons	Pairing and Close buttons together for 3 seconds
Restore factory default settings	Open, Pairing, and Close buttons together for 3 seconds

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.



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 flashes on 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
	Manual open	Green flashes twice after short press on open or close button
	Manual close	Red flashes twice after short press on open or close button
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
	Manual close	Red flashes twice after short press on open or close button
Normal operation	Auto mode	Green flashes once after short press on open or close button
	Auto mode	Red flashes once after short press on open or close button
	Manual open	Green flashes twice after short press on open or close button
	Manual close	Red flashes twice after short press on open or close button
Window open mode active	Green and red flash twice every 10 seconds	0% open
	Green and red flash twice every 10 seconds (less if the battery is very low)	1 or 25% open
Battery low	Green and red flash alternately	
Error installing	Green and red flash alternately	

Technical Detail

Model	AVA10M3ORF
Type	Radiator Valve Actuator DC Motor M30 x 1.5
Input	Three push buttons: <ul style="list-style-type: none"> • Open • Close • 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
Ambient Operating Temp.	0 to 45 °C or 32 to 113 °F
Storage Temperature	-20 to 60 °C or -4 to 140 °F
Operating Humidity	5 to 95 %RH
Protection	IP30
Size (mm / in)	H 88.6 x DIA 51.0 mm / H 3.5 x DIA 2.0 in

Warranty

SALUS North America, Inc. ("Salus") warrants that for a period of five (5) years ("Warranty Period") from the date of purchase by the consumer ("Customer"), this device, excluding batteries ("Product"), shall be free of defects in materials and workmanship under normal use and service in accordance with all supplied instructions. During the warranty period, Salus shall, at its option, repair or replace any defective Products, at no charge for the device. Any replacement and/or repaired devices are warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer. This warranty does not cover removal or reinstallation costs. This warranty does not apply to any Product (i) which has been modified, repaired, or altered, except by Salus or an authorized Salus representative, (ii) which has not been maintained in accordance with any handling or operating instructions supplied by Salus, or (iii) which has been subjected to unusual physical or electrical stress, misuses, abuse, negligence or accidents. This warranty is the only express warranty Salus makes for the Product. Any implied warranties, including warranties of merchantability or fitness for a particular purpose, are limited to the Warranty Period or the shortest period allowed by law. SALUS SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, or limitation on the duration of implied warranties of merchantability or fitness, so these exclusions or limitations may not apply to you. No oral or written information or advice given by Salus or a Salus-authorized representative shall modify or extend this warranty. If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired. Customer's sole and exclusive remedy under this limited warranty is product repair or replacement as provided herein. If a Product under warranty is defective, the Customer may:

- contact the party ("Seller") from which the Customer purchased the Product to obtain an equivalent replacement product after the Seller has determined that the Product is defective and the Customer is eligible for a replacement, or
- contact Salus Service at support@salusinc.com, to determine whether the device qualifies for a replacement. If a replacement is warranted and is shipped prior to the return of the device under warranty, a credit card is required and a hold may be placed on the Customer's credit card for the value of the replacement until the returned device is verified as eligible for replacement, in which case, the Customer's credit card will not be charged.

This warranty gives you specific legal rights, and you may also have other rights that vary from jurisdiction to jurisdiction. If you have any questions regarding this warranty, please write Salus at:

SALUS North America, Inc.
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Redwood City, CA 94063

SALUS
Wireless Valve Actuator
Model: AVA10M3ORF



INSTRUCTION MANUAL

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