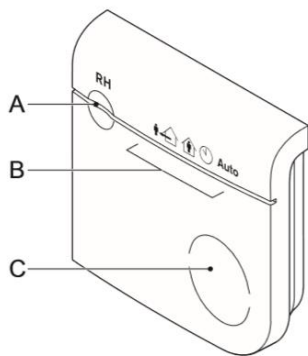


Installation and operation instructions

VMS-47HB54 - RF-RH sensor



A: Status led B: Mode leds C: Touch button

1. How to use this manual

This manual is intended as a reference book by which qualified installers can install the VMS-47HB54 (henceforth called “device”) and users can use the device for its intended purpose. Make sure you have read and understood the manual before you install and/or use the device.

1.2 Intended use

The device is designed for following purposes:

- To set the speed level of ventilation through the fan speed, based on user input or measured humidity level.
 - To set parameters for the ventilation control.
- Every other or further use is not in conformance with the intended use.

1.3 Working principle

The device communicates with the ventilation system using wireless communications, in order to control the ventilation. Via the button and leds you can read and set the mode of control that the ventilation system currently is in. When in Auto mode, the device requests the level of ventilation based on the relative humidity (RH).

1.3.1 Ventilation speeds and modes

The ventilation system runs in one of the following modes.

Mode		Fan Speed
Away		Low fan speed
Home		Medium fan speed
Timer		High fan speed, for a restricted duration
Auto	Auto	Between Low fan speed and High fan speed, based on measured values

The control device drives the fan based on the highest of values sent by the bound wireless sensor(s).

When you start the timer mode from this device, the ventilation will be active for 30 minutes.

1.3.2 RV meting

The device continuously measures the relative humidity (RH) in the air. When in Auto mode, the device controls the ventilation based on the course of the measured values: the ventilation starts when the humidity gets above a certain level, or for some time when the humidity suddenly increases.

The device stores the configured fan speed values in the control device and requests them from there.

The device stores the RH setpoint itself and does not communicate this with any other device.

1.4 Admonitions



'Warning' identifies a hazard that could lead to personal injury, including death.



'Note' is used to highlight additional information.

2. Content delivery

- RF-Sensor (VMS-47HB54) 1
- Battery 1
- Mounting screws 2
- Mounting plugs 2
- Manual 1

3. Safety

The device meets the following EC directives:

- EMC directive: 2014/30/EC
- Low voltage directive: 2014/35/EU
- RTTE directive: 2014/53/EU
- RoHS directive: 2011/65/EU
- WEEE directive: 2012/19/EU

4. Signs on the device



CE marking of conformity.



Dispose according to European Community Directive 2012/19/EU (WEEE)).

General safety instructions

The device is designed for indoor use only. Do not expose the device to rain or moisture, to avoid short circuit. Short circuit may cause fire or electric shock hazard. Operate the device between 0°C and 40°C. For cleaning of the device use a soft damp cloth only. Never use any abrasive or chemical cleaner. Do not paint the device.

5. Visual signals

		Status led	
Start up			
	White	Continuous	
System status			
	Green	Continuous	Status OK
	Red	1 flash	Com. Error
		3 flashes	Fan error
		4 flashes	RH sensor error
		5 flashes	Low battery
Mode selection			
		Off	
Mode leds			
			Auto
Start up			
	On	On	On
Mode selection			
Away	*		
Home		*	
Timer			*
Auto			*



The device stores the configured fan speed values in the control device and requests them from there.

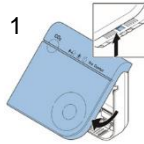
The device stores the RH setpoint itself and does not communicate this with any other device.

6. Installation

6.1 Preparation

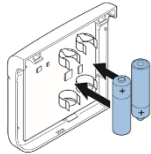
i Do not place the device in a metal casing.

1. Press the clip and pull the top section from the bottom section.
2. When using screws: Use the mounting plate as a template.
3. When using tape:
 - a. Make sure the surface is smooth, clean, and degreased.
 - b. Remove the foil from the double-sided tape.



6.2 Commissioning

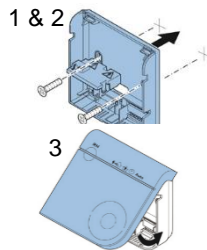
1. Place the batteries. All leds are ON for 3 seconds.
2. Wait until the status led shows the binding mode. If the device shows another indication, the device is already bound. See 8.2 on how to bind the device again.
3. Make sure that the RF-control device is in binding mode.
4. Tap the button. The device will try to bind to the control device and shows the result on the status led. When the communication failed, make sure that the RF-control device is in binding mode and retry.



6.3 Installation procedure

i Recommended position: We advise to place the sensor at 1 to 1.5 m from the ground, not directly above a wet zone.

1. Place the bottom section of the device.
2. Fasten the bottom section using the screws or tape.
3. Place the top section of the device onto the bottom section. Close and press until it clicks.



7. Operation

7.1 Show Status

Tap the button. The Status led and Mode leds show the status of the system

7.2 Set mode

From the status screen (see 7.1)

1. Tap the button. The mode leds show the next selection.
2. If needed, tap the button within 2 seconds, until the selection shows the required mode.
3. Wait 2 seconds. The device applies the requested mode. The Status led and Mode leds show the status of the system.

8. Configuration

		Status led		mode leds					
Step 1	Configuration								
	Low fan speed			*					
	Medium fan speed				*				
	High fan speed					*			
	Binding						*		
Step 2	Value	Blue/red	Low fan speed	Off	10%	20%	30%	40%	
		Blue/green	Medium fan speed	30%	40%	50%	60%	70%	
		Red/green/blue	High fan speed	60%	70%	80%	90%	100%	
		Red/green	Binding						

8.1 Configuration setpoints

From the status screen (see 7.1), use table above.

1. Tap the button. The mode leds show the next selection.
2. If needed, tap the button within 2 seconds, until the selection shows the item.
3. Press and hold the button until the Status led starts flashing white.
4. Release the button. The status led shows the item selected, and the Mode leds show its current value.
5. If needed, tap the button within 10 seconds, until the Mode leds show the value to set.

i When setting the fan speed, make sure that the medium fan speed is between the low and high fan speed.

6. Wait 10 seconds. The device applies the configured value. The Status led and Mode leds show the status of the system.

8.2 Bind the device again

From the status screen (see 7.1).

1. Tap the button. The mode leds show the next selection.
2. If needed, tap the button within 2 seconds, until the selection shows the Auto (4th) led.
3. Press and hold the button until the Status led starts flashing white.
4. Release the button. The status led shows the binding mode.
5. Tap the button. The device will try to bind to the control device. It shows the result on the status led.

8.3 Perform a factory reset

From the status screen (see 7.1)

1. See 8.2 step 1 t/m 4
2. Press and hold the button for 10 seconds. The status led shows white.
3. Release the button. The device releases its binding, resets the configured RH-value to the default value and restarts. The device will return to the binding mode.

9. Technical data

9.1	Dimensions	
	Overall dimensions (h x b x d)	100 x 100 x 25 mm
	Weight	+/- 125g
9.2	Ambient conditions	
	Operation temperature range	0 tot 40 °C
	Shippen & storage temperature range	-20 tot 55 °C
	Relative humidity	0-90%, non-condensing
	Ingress protection (IEC60529)	IP30
9.3	Battery specifications	
	Type	AA-battery 2x
	Battery lifetime	2 years
9.4	Wireless connections specs.	
	Communication frequency	868.3 MHz
	Output power	At least 0dBm
		You are not allowed to use the device outside of Europe
9.5	RH measurements specs	
	Measurement range	0-100% RH
	Measurement accuracy	3% RV 7% RV
	Measurement resolution	1% RV
	Measurement stability	1.5% RH over 5 years