

RF RH SWITCH

Description

The Vasco ventilation unit can be expanded with an RF RH switch (relative humidity), except for the D150 Compact and D150 Energy Plus models, which are not compatible. This switch temporarily increases the ventilation flow rate when an increase in humidity is detected. The ventilation unit only responds to a paired RF switch.

Overview

- Lower right control zone for:
 - Manual selection of ventilation modes: speed 1, speed 2 and speed 3
 - Automatic, humidity-controlled operation: Eco and Comfort
- LED indicators:
 - **Status LED:** Lights up green, orange or red depending on operation, connection status or error messages
 - **Mode LEDs:** Shows the active operating mode (manual speeds 1-2-3 or automatic Eco/Comfort mode)

Connection options

- Support for connection up to 3 ventilation units to one or more controls
- Option to connect up to 20 RF switches (CO₂, RH or 3-position) to a single ventilation unit

Communication

- Wireless RF communication with the ventilation unit
- Radio frequency signal: 868.3 MHz

Power supply and consumption

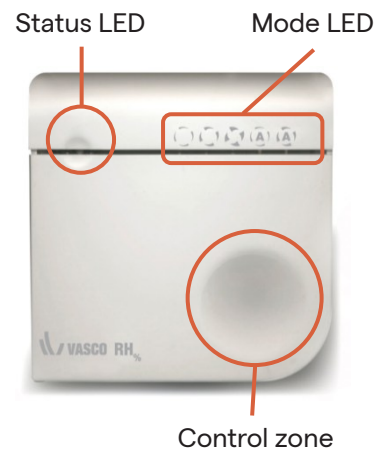
- Internal power supply: battery powered (via 2 AA batteries included)
- Expected battery life: 2 years

Measuring and operating temperature

- Operating temperature: 0 - 40°C
- Measuring range: 0 - 100% relative humidity (RH)
- Measurement accuracy:
 - 3% RH between 10 - 89% RH
 - 7% RH at 0 - 10% RH and 90 - 100% RH
- Measuring resolution: 1% RH
- Measurement stability: 1.5% RH for 5 years

Physical properties

- Dimensions (LxWxH): 92x23x92 mm
- Housing: plastic
- Protection class: IP30
- Mounting: surface-mounted wall mounting (screw fastening)



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Technical information

Automatic ventilation


When Eco or Comfort mode is selected, the ventilation unit always starts in ventilation speed 1 (25% of the maximum set air flow rate - Q_{max}).

When a rapid rise in relative humidity is detected ($\geq 5\%$ rise within 2 minutes), the ventilation unit temporarily increases the ventilation flow rate:

- **Eco mode**

 If the relative humidity rises rapidly, the ventilation unit switches to ventilation speed 2 (50% of Q_{max}) for 60 minutes, after which it automatically switches back to ventilation speed 1.

- **Comfort mode**

 If there is a rapid rise in relative humidity, the ventilation unit switches to ventilation speed 3 (100% of Q_{max}) for 30 minutes, after which it automatically switches back to ventilation mode 1.

In addition, an extra safety function is active in both Eco and Comfort modes. The ventilation unit automatically switches to ventilation speed 3 when:

- the relative humidity is higher than 70%, and
- the outside temperature is lower than 15°C, or the outside temperature is not available.






This function guarantees increased ventilation in case of high humidity, regardless of the selected automatic mode.

LED behaviour during inactivity

After 30 seconds, the LED indicators switch off automatically. When the control zone is pressed again, the switch displays the last setting again, regardless of which connected switch set it.

Behaviour when controlling multiple ventilation units

When a single RF CO₂ or RF RH switch is linked to multiple ventilation units, the same ventilation request (Eco, Comfort or manual mode) is sent to all units simultaneously. Anomalies such as error codes only affect the unit in question and may cause a red status LED to light up.

The mode LED displays the last mode selected locally ( ,  or ); when touched, it updates to the most recently sent manual or automatic ( or ) ventilation request.








Behaviour with multiple RF CO₂ and/or RF RH switches

When multiple RF CO₂ and/or RF RH switches are connected to the same ventilation unit, all switches synchronise transitions between manual and automatic operation. Each switch retains its own automatic mode setting (ECO or COMFORT) and, when returning from manual operation, reverts to its individually stored automatic mode.

The ventilation unit processes the sensor data it receives and always responds to the highest ventilation demand currently being signalled by one of the connected CO₂ or RH switches.

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Technical information

Symbol	Function	Description
	Speed 1	Ventilate at 25% of maximum set air flow rate
	Speed 2	Ventilate at 50% of maximum set air flow rate
	Speed 3	Ventilate at 100% of maximum set air flow rate
	Eco	When Eco mode is activated, the unit operates at speed 1 (25% of the maximum set flow rate). If the relative humidity rises, the unit switches to speed 2 (50%) for 60 minutes, then returns to speed 1.
	Comfort	When Comfort mode is activated, the unit operates at speed 1 (25% of the maximum set flow rate). If the relative humidity rises, the unit switches to speed 3 (100%) for 30 minutes, then returns to speed 1.
	Activating	Remove the batteries and briefly disconnect the ventilation unit from the power supply (min. 20 seconds), then press the control zone for at least 3 seconds within 10 minutes until all LEDs flash. Green (2 seconds) means successful, red (2 seconds) means unsuccessful. A maximum of three ventilation units can be connected per switch. Refer to the ventilation unit manual for additional information.
	Deactivating	Remove the batteries briefly (at least 20 seconds) and then press the control zone for at least 10 seconds within 10 minutes until all LEDs light up continuously for 3 seconds, then release. The status LED will then flash red 4 times, indicating that the switch is no longer connected. Refer to the ventilation unit manual for additional information.

Error codes + LED feedback

LED feedback	Description
Green	The requested communication has been correctly communicated
Orange	Battery life has been reached
Red	Communication issue
2x red	Issue with the ventilation unit
3x red	Issue with measuring relative humidity
4x red	Switch not connected to a ventilation unit

Installation

Always install the RF RH switch in an easily accessible location in so-called 'wet areas'.

Step 1: Disassemble the switch.



Step 2: Screw the base plate onto the wall.



Step 3: Put the cover back on the switch.

