

REMOTE CONTROL AND SENSORS POSITIVE INPUT VENTILATION (PIV)



INSTALLATION AND USE OF THE REMOTE CONTROL AND SENSORS

Positive input ventilation systems can be equipped with a remote control and sensors to facilitate and optimise their operation. These devices communicate with the PIV to adjust the air renewal in the home. Depending on the model, they can measure humidity, temperature, VOC or CO₂ :



Remote control

The remote control allows you to control the air flow and preheating of the PIV. It also includes a humidity and temperature sensor and alerts you when the filter needs changing.



Humidity and temperature sensor

This sensor monitors humidity and ambient temperature. It regulates ventilation to maintain a comfortable indoor environment and limit the risks associated with humidity.



VOC, humidity and temperature sensor

This sensor measures air humidity and temperature, while detecting volatile organic compounds (VOC). It automatically controls ventilation to maintain healthy and pleasant indoor air.



CO₂, humidity and temperature sensor

In addition to humidity and temperature, this sensor analyses CO₂ concentration. It adjusts the air flow rate according to room occupancy and ensures healthy air and optimal comfort.

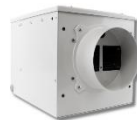
The remote control and sensors are compatible with the following PIV systems:



Urban Vision'R and Urban 2



Purevent



Cube Vision'R



PRO1000*

*Please note that for the PRO1000 model, some remote control functions (Mode 1, Mode 2, Mode 3, Boost) are disabled.

INSTALLATION PRECAUTIONS

In order for the sensors to take accurate measurements, they must be positioned inside the dwelling:

- On the wall, at a minimum height of 1.5 m and at least 30 cm from the ceiling.
- Away from draughts and dead zones,
- Away from heat sources and occupants
- With an operating ambient temperature between 0°C and 50°C
- With ambient humidity between 0% and 95%

Also ensure that the sensors are not painted, covered or obstructed. These installation precautions also apply to the remote control, which incorporates a humidity and temperature sensor.


After installing the sensors, be sure to remove the insulation tab from the battery **3** to activate them.

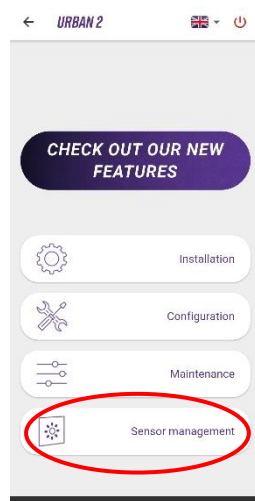


PAIRING THE REMOTE CONTROL AND SENSORS

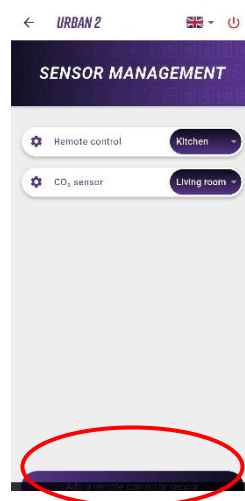
Connect to the VMI+ mobile app (available on [iOS](#) and [Android](#)), then follow the steps below to add or remove a remote control or sensor:



Open VMI+ and click on the  icon to access the menu



Click on 'Sensor management'



Click on "Add a remote control or sensor"









Scan the QR code on the back of the sensor, under the plastic cover.

Wait a few seconds for the blue flashing LED to turn solid blue. Your sensor is now paired!

USING THE REMOTE CONTROL AND SENSORS

The remote control allows you to easily control the ventilation. Press Mode 1 for 3 seconds to exit standby mode. The remote control will wake up and display the settings status. Then press the desired mode a second time to activate it.



Display	Function	Description
	Mode 1	Minimum air flow
	Mode 2	Intermediate air flow
	Mode 3	High air flow
	Boost mode	Maximum air flow. Press to switch to boost mode for 30 minutes.
	Preheating	Press to activate or deactivate preheating. A white LED indicates that preheating is active.
	Filter change	This button lights up orange when the filter is dirty. Once the filter has been changed, press for 5 seconds to reset the counter (the LED will turn off).

If you have activated the fixed or holiday modes via the VMI+ app, you will need to deactivate them in the app first in order to validate another mode on the remote control.




Please note that the VOC sensor needs approximately two hours after being switched on to provide meaningful data.

NOTIFICATIONS & INDICATOR LIGHTS


The remote control and sensors can display one or more indicator lights. The indicator light **1** shows the status of the PIV or device and the indicator light **2** alerts you when the filter needs to be replaced



In the event of a malfunction, when the remote control is in standby mode, a red light will flash for 3 seconds every 10 minutes. Once the remote control is activated, the indicator light ① will display the following messages:

LED colour	Notification	Description
	Pairing	A blue flashing LED indicates that the PIV is not paired or is not communicating with the remote control. It turns solid blue when the connection is established.
	Remote control and sensor failure	A flashing yellow LED indicates that the remote control or sensor battery is low. A solid yellow LED indicates a communication problem.
	PIV fault	A solid red LED indicates a fault with the PIV. Log in to the VMI+ mobile app for more information and contact your installer if necessary.

The indicator light ② is only present on the remote control and provides the following information:

LED colour	Notification	Description
	Filter	A solid yellow LED indicates that the filter is dirty and needs to be replaced. It is recommended that you replace your filter at least once a year.

REMOTE CONTROL AND SENSORS POWERED BY USB-C CABLE

The remote control and sensors can be powered using a USB-C cable via the side socket on the unit.



UNPAIRING THE REMOTE CONTROL AND SENSORS

Unpairing a remote control or sensor must be done in the following order:

- From the VMI+ app, remove the remote control or sensors from the list of devices paired with the PIV.
- On the remote control or sensors, press and hold the mechanical RESET button* for 10 seconds. If the RESET is successful, the device LED will flash in the following sequence: 3 blue flashes → 3 red flashes → 3 green flashes.

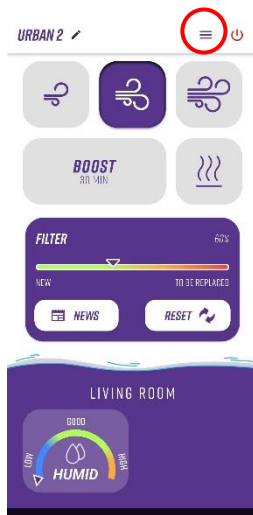
Once these operations have been performed, the remote control or sensor will restart and switch to unpaired mode, indicated by a solid blue flash.



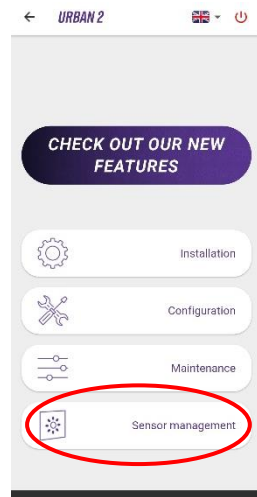
* The mechanical RESET button is located on the underside of the sensor and can be accessed with a pointed tool.

CONFIGURING THE MEASUREMENT PERIOD

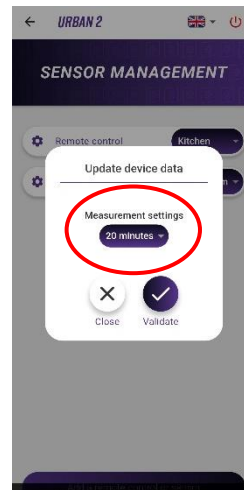
The remote control and sensors have a default measurement period. This period can be changed via the application:



Open VMI+ and click on the icon ≡ to access the menu



Click on "Sensor management"



Open the sensor or remote control settings, then select the desired measurement period from the drop-down list.

After confirmation, the remote control or sensor will display the following LED sequence: 3 blue flashes → 3 red flashes → 3 green flashes, then restart with the new measurement period.

REMOTE CONTROL AND SENSORS WITH A BUILT-IN WALL POWER SUPPLY

SAFETY INSTRUCTIONS AND REGULATORY INFORMATION



READ THESE INSTRUCTIONS BEFORE INSTALLING THIS PRODUCT
PLEASE KEEP THESE INSTRUCTIONS

PRECAUTIONS AND RESTRICTIONS ON USE

- The wiring must comply with the standards in force in your country and must be installed by a qualified person.
- The electrical connection must be made by a professional in accordance with standard NF C15-100 or the applicable local standard. In particular, a contact separation device with an opening distance of at least 3 mm on each pole and a protection device with a suitable rated current must be provided in fixed conduits (circuit breaker). The copper conductor cross-sections must be at least 1.5 mm².
- Ensure that the mains supply (voltage, frequency and phase) complies with the data on the fan's nameplate. Caution: some parts of this product may become very hot and cause burns.

PERSONAL PROTECTION

- This appliance can be used by children aged 8 years and above and by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children should not play with the appliance. Children should not clean or maintain the appliance without supervision. When children and vulnerable persons are present, you should pay particular attention to them.
- Children under 8 years of age should not connect, adjust, clean or maintain the appliance. They may only switch the unit on or off if it is installed normally, if they are supervised or if they have been instructed in the safe use of the appliance and understand the risks involved.
- Children under 3 years of age must be kept away unless they are under constant supervision.

END OF LIFE WEEE



This product must not be disposed of with household waste. Please recycle it if facilities for this purpose are available in your area. Contact your local authorities for advice on recycling procedures.



BEFORE ANY INTERVENTION, DISCONNECT THE ELECTRICAL NETWORK USED TO POWER THE PRODUCT

<p>1 The wall power supply must be connected to a constant voltage power supply 100-240 VAC 50 Hz, phase (L) and neutral (N) Cable type: 3 x 1.5 mm²</p>	<p>2 Drill an opening in the wall to make the electrical connection. Use a hole saw to drill a Ø 68 mm hole, 61 mm deep.</p>	<p>3 Connect the mains cable (230 V AC) to the opening provided for the wall power supply.</p>
<p>4 Use a flush-mounted box by drilling a hole for the power cable. (1) and, as an option, Modbus, for the connection cable (RS485 data cable) from the socket (2) to the device. Feed the cables through the holes, then insert a flush-mounted box into the wall opening. Fill the space between the inner wall and the socket with a suitable sealant.</p>	<p>5 Strip approximately 8.5 mm of the mains cable using the wire stripper. Connect this cable (blue/brown) to the screw terminal on the base plate of the control unit:</p> <ul style="list-style-type: none"> • Connect the phase to L line (brown). • Connect the neutral conductor to the N line (blue). 	<p>6 Modbus option: Strip approximately 8.5 mm of the RS485 data cable using the wire stripper. Connect the RS485 data cable (red/yellow) to the screw terminal on the base plate of the control unit:</p> <ul style="list-style-type: none"> • Signal line A (red) to 1. • Signal line B (yellow) to 2. • GND line (black) to 3.
<p>7 The jumper on the rear of the control unit is used to activate or disable the Modbus option. Upon delivery, the jumper is connected to the first two pins from the left (RS485 disabled). Modbus option: To enable the RS485 data cable, use the two pins indicated.</p>	<p>8 Turn the wall power supply unit over and insert it into the flush-mounting box. Use the built-in spirit level to ensure that the installation is straight. Then insert the 8-pin connector into its slot. Secure the unit to the wall using two screws.</p>	<p>9 Finally, to install the remote control or sensor, tilt it and hook the top hooks to the eyelets on the base plate. Rotate the control unit towards the base plate.</p>

Please note that in the event of a power failure (e.g. power cut), the battery **3** will keep the time up to date. For this purpose, it is recommended that you use a lithium battery to prevent corrosion.



CONFIGURING MODBUS PARAMETERS

The Modbus parameters for each remote control or sensor (baud rate, stop bit, parity, Modbus address) can be configured from the VMI+ application during installation or when adding a device.

Once the settings have been validated, the remote control or sensor performs the following LED sequence: 3 blue flashes → 3 red flashes → 3 green flashes, then restarts with the new Modbus settings.

MODBUS FEATURES

GENERAL PRINCIPLE

The product is equipped with an RS-485 interface compatible with Modbus RTU. It operates in slave mode: it only responds to requests sent by a Modbus master (PLC, GTB supervisor, gateway, etc.).

Important: RS-485 Modbus communication is only available when the product is powered by the mains via an external 5V power supply.

When the product is battery-powered, the RS-485 link is automatically disabled to save energy.

DEFAULT COMMUNICATION SETTINGS

	Description	Default value
Slave address	Modbus ID of the product	0xAA
Speed (baud rate)	Communication rate	9600 baud
Parity	Parity bit	None
Stop bits		1
Frame format	8 data bits	—

These settings can be changed via the mobile application.

AVAILABLE FUNCTIONS

Reading measurements (*Input Registers*)

Modbus allows you to read the environmental measurements collected by the product:

- Temperature (°C)
- Relative humidity (%)
- CO₂ (ppm)
- VOC (ppb)
- IAQ index
- Power supply voltage, battery level, statuses and errors

These measurements are automatically updated at each measurement cycle and can be read at any time.

Machine commands (*Holding Registers*)

Some variables are **read/write (R/W)**.

They allow the remote control or sensor to send **machine commands** via Modbus.

When a command is written, it is automatically transmitted to the machine via EnOcean RF.

BEST PRACTICES

- Read before writing: always check the current status before changing a parameter.
- Filter reset is only permitted if the filter reset is reported as active.
- If the mains power supply is cut off, RS-485 communication is disabled.

COMPLETE TABLE OF MODBUS REGISTERS

Holding Registers (read/write)

Address	Name	Size (byte)	Access	Possible values	Description / Behaviour
0x0102	Measurement period	1	R/W	10–60	Measurement sampling period (in minutes). Value automatically transmitted to the machine via RF
0x0110	Machine mode	1	R/W	0x00: None 0x01: Mode 1 0x02: Mode 2 0x03: Mode 3 0x04: Boost	Allows you to change the machine's operating mode. An RF frame is sent each time a write operation is performed. Read returns the mode applied by the machine.
0x0111	Preheating	1	R/W	0x00: OFF 0x01: ON	Enables or disables the preheating function. After writing, the command is transmitted to the machine via RF. Reading returns the actual status applied.
0x0112	Filter reset	1	R/W	0x00: OFF only	Disables the "Filter reset" status if it is active. Writing is only permitted when the filter is in active status. Any other value or condition: writing ignored.

Input Registers (read only)

Address	Name	Size (byte)	Unit	Description / Possible values
0x1000	TH sensor connected	1	bool	0: not connected 1: connected
0x1001	Temperature	2	°C	Temperature * 10: e.g. 0x00E7 = 231 = 23.1 °C 16 bits <i>little endian</i>
0x1002	Humidity	1	%	0 – 100
0x1003	5V power supply	2	mV	Measured USB or external voltage, 16 bits little endian
0x1008	CO ₂ sensor connected	1	bool	0: not connected 1: connected
0x1009	CO ₂	2	ppm	Measured value, 16 bits little endian
0x100C	VOC sensor connected	1	bool	0: not connected 1: connected
0x100D	ADC COV	2	–	Raw measured value, 16 bits little endian
0x100E	IAQ index	2	–	Overall air quality level, 0–500, 16 bits little endian
0x1110	Product error code	1	–	0x00: no local fault 0x01: RF communication fault
0x1111	Product type	1	–	0x00: undefined 0x01: remote control 0x02: TH sensor 0x03: CO ₂ sensor 0x04: VOC sensor
0x1112	Machine error code	1	–	0x00: heating fault 0x01: motor fault 0x02: filter saturated 0x03: IAQ sensor fault 0x04: assistant sensor fault 0x05: probe fault 0x09: multiple faults 0x0F: no machine fault

WARRANTY

General warranty terms and conditions

Please refer to the general terms and conditions of sale.

Warranty period

The PIV is guaranteed for 5 years for parts and labour (in our workshops). All peripherals (remote control and sensors) are guaranteed for 2 years for parts and labour (in our workshops). The warranty on our products is valid from the date of Ventilairsec's invoice.

Exclusions

Any installation failures resulting from failure to comply with the manufacturer's recommendations, failure to comply with applicable standards and regulations, or lack of maintenance are excluded from this warranty.

Ventilairsec cannot be held responsible for the Customer's use of filters and consumables not recommended by Ventilairsec. The customer undertakes to use only filters and consumables referenced by Ventilairsec.



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