



# RF-VM

## Wireless Ventilation Module

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### Technical specifications and installation instructions

Item number 60537



**Elsner Elektronik GmbH** Control and Automation Engineering

Sohlengrund 16  
75395 Ostelsheim  
Germany

Phone +49 (0) 70 33 / 30 945-0 info@elsner-elektronik.de  
Fax +49 (0) 70 33 / 30 945-20 www.elsner-elektronik.de

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Technical support: +49 (0) 70 33 / 30 945-250

# 1. Description

With the **RF-VM fan module** ventilation devices from other manufacturers can be driven by the WS1, WS1000 and KNX WS1000 (Colour or Style models) controllers. With the Remo 8 remote control or via the wireless switch interface, RF-B2 devices connected to the **RF-VM** can be switched directly.

**Hinweis:** No ventilation module is required for Elsner Elektronik wireless controlled ventilation units.

## Functions:

- Operation of **ventilation devices** (other manufacturers) on the conservatory/building controllers (starting with controller version 1.597)
- Direct operation of fans on the **RF-VM** with remote control Remo 8 (starting with remote control version 0.1) or via switch interface RF-B2-UP
- For air intake/exhaust devices or fresh air heating combinations (circulating air heating systems)
- **eight speed settings**, cover flap controllers
- **Wireless connection** with the controllers, fans connected by cable

## 1.1. Deliverables

- Mounting plate (cover) with device circuit board
- Concealed box, screws

## 1.2. Technical specifications

Housing	Aluminium cover
Assembly	Flush mounting
Protection category	IP 20
Dimensions	Cover approx. 220 x 140 (W x H, mm), Mounting depth approx. 3 mm. Concealed box approx. 200 x 120 x 64 (W x H x D, mm)
Total weight	approx. 2.1 kg
Ambient temperature	Operation 0...50°C, storage -20...85°C
Ambient humidity	max. 95% RH, avoid condensation
Operating voltage	230 V AC, 50 Hz
Fan current drain	max. 1.2 A
Motor output	8 settings, 80 V AC to 230 V AC
Wireless frequency	868.2 MHz

The product conforms with the provisions of EU directives.

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## 2. Installation and start-up

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### 2.1. Installation notes

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Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.

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#### **DANGER!**

#### **Risk to life from live voltage (mains voltage)!**

There are unprotected live components within the device.

- VDE regulations and national regulations are to be followed.
  - Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
  - Do not use the device if it is damaged.
  - Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.
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The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

### 2.2. Notes on wireless equipment

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When planning facilities with devices that communicate via radio, adequate radio reception must be guaranteed. The range of wireless control will be limited by legal regulation and structural circumstances. Avoid sources of interference and obstacles between receiver and transmitter, that could disturb the wireless communication. Those would be for example:

- Walls and ceilings (especially concrete and solar protection glazing).
- Metal surfaces next to the wireless participants (e. g. aluminium construction of a conservatory).
- Other wireless devices and powerful local transmitters (e.g. wireless headphones), which transmit on the same frequency (868,2 MHz). Please maintain a minimum distance of 30 cm between wireless transmitters for that reason.

## 2.3. Installation location

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**The device must only be installed and operated in dry, indoor spaces.**

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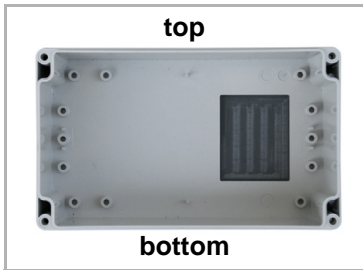


**Avoid condensation.**

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The device has a box and a cover for concealed installation. In the case of surface mounting installation suitable cable guides must be used.

Cut-out size for concealed box: approx. W=200 mm | H=120 mm | D=64 mm



*Fig. 1*

*Direction of installation for concealed box.*

## 2.4. Connecting and mounting the device

### 2.4.1. Connection overview (circuit board)

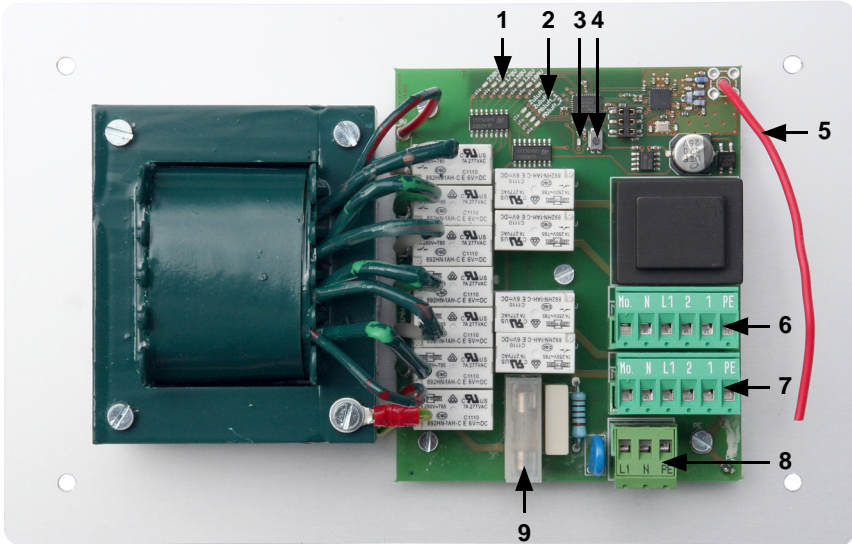


Fig. 2

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|-----------------------------------|--|
| 1 "Voltage" LEDs                  | 6 Connector air intake (heating)                       |
| 2 "Flap" LEDs                     | 7 Connector exhaust air (fresh air)                    |
| 3 Programming LED                 | 8 Connector operating voltage 230 V<br>AC, L / N 50 Hz |
| 4 Programming button for teaching | 9 Microfuse T 3.15A                                    |
| 5 Aerials                         |  |

#### **Fan terminals (nos. 6 and 7):**

Mo.:Regulating current for exhaust air level  
 N / L1 / PE:Power supply for fan and cover flap  
 1:CLOSED for cover flap  
 2:OPEN for cover flap



Fig. 3

Cover, screwed onto the concealed box

## 2.5. Establishing wireless connection

1. Put the control unit/remote control into the teaching mode (observe the corresponding manual/data sheet).
2. Press the Programming button on **RF-VM fan module**

Observe the response from the control system ("device taught").

## 3. Exhaust air levels

The currently active exhaust air level is displayed by the LEDs on the device circuit board (see also fig. 2, No. 1/2). The voltage specifications for the LEDs correspond to the outlet voltage at the "Mo" terminal.

### 3.0.1. Air intake/exhaust mode

Level	LED-field "flap"/terminal				LEDfield "Supply"
	Air intake 1	Air intake 2	Exhaust air 1	Exhaust air 2	
Exhaust air 8	ON	–	–	ON	230 V
Exhaust air 7	ON	–	–	ON	190 V
Exhaust air 6	ON	–	–	ON	170 V
Exhaust air 5	ON	–	–	ON	150 V
Exhaust air 4	ON	–	–	ON	125 V
Exhaust air 3	ON	–	–	ON	100 V
Exhaust air 2	ON	–	–	ON	80 V
Exhaust air 1	ON	–	–	ON	–
<b>Switched off</b>	ON	–	ON	–	–
Air intake/ Exhaust air 1	–	ON	–	ON	–
Air intake/ Exhaust air 2	–	ON	–	ON	80 V
Air intake/ Exhaust air 3	–	ON	–	ON	100 V
Air intake/ Exhaust air 4	–	ON	–	ON	125 V
Air intake/ Exhaust air 5	–	ON	–	ON	150 V
Air intake/ Exhaust air 6	–	ON	–	ON	170 V

Level	LED-field "flap"/terminal				LEDfield "Supply"
	Air intake 1	Air intake 2	Exhaust air 1	Exhaust air 2	
Air intake/ Exhaust air 7	–	ON	–	ON	190 V
Air intake/ Exhaust air 8	–	ON	–	ON	230 V

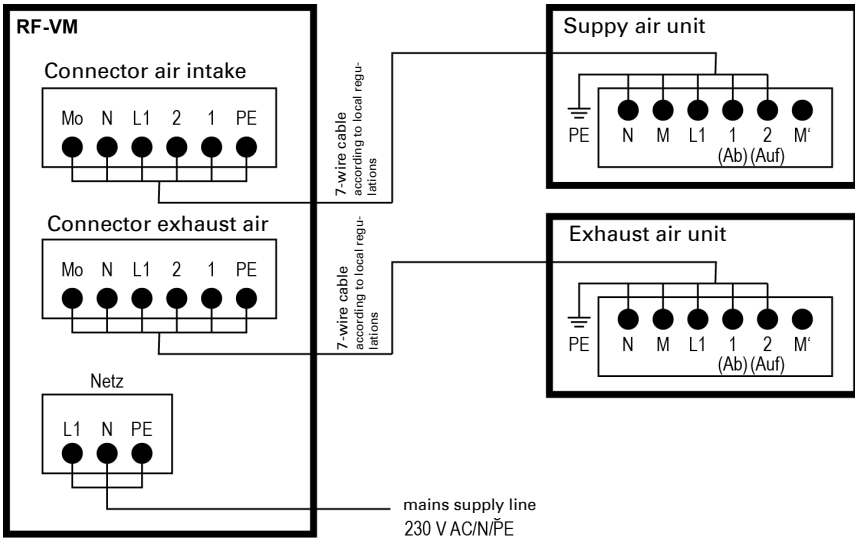
### 3.0.2. Fresh air/heating mode

Level	LED field "flap"/terminal				LED field "Supply"
	Air intake 1	Air intake 2	Exhaust air 1	Exhaust air 2	
Fresh air 8	–	–	ON	ON	230 V
Fresh air 7	–	–	ON	ON	190 V
Fresh air 6	–	–	ON	ON	170 V
Fresh air 5	–	–	ON	ON	150 V
Fresh air 4	–	–	ON	ON	125 V
Fresh air 3	–	–	ON	ON	100 V
Fresh air 2	–	–	ON	ON	80 V
Fresh air 1	–	–	ON	ON	–
<b>Switched off</b>	–	–	–	–	–
Heating 1	–	ON	–	ON	–
Heating 2	–	ON	–	ON	80 V
Heating 3	–	ON	–	ON	100 V
Heating 4	–	ON	–	ON	125 V
Heating 5	–	ON	–	ON	150 V
Heating 6	–	ON	–	ON	170 V
Heating 7	–	ON	–	ON	190 V
Heating 8	–	ON	–	ON	230 V

## 4. Connection examples

The fan current consumption may not exceed 1.2 A. Exit Mo.: 8 settings, 80 V AC to 230 V AC.

## 4.1. Air intake and exhaust



## 4.2. Fresh air and heating

