



# WL610

## Ventilation Unit for air extraction and recirculation

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**Technical specifications and installation instructions**



# 1. Description

The **Ventilation Unit WL610** is installed in the roof ridge area of conservatories instead of the normal glazing. The **WL610** can be operated in air extraction and recirculation modes. The recirculation mode may be used for heat gain and reduction of water condensation thanks to an integrated temperature sensor in the ventilation unit.

The **WL610** communicates wireless with the control systems WS1 Color, WS1000 Color and KNX WS1000 Color. The **Ventilation Unit WL610** may be operated directly with the Remo 8 Remote Control.

## Functions:

- **Air extraction mode.** Please pay attention to an adequate opening for supply air of approx. 12 240 mm<sup>2</sup> per WL610 (e. g. two Supply Air Units WFL or equal window opening)
- **Recirculation mode for heat gain:** Warm air from the ridge is spread in the whole room
- **Recirculation mode for reduction of condensation water:** The controls register critical conditions of temperature and dew point with the help of a special calculation method and start the ventilation unit in the mayor of cases even bevor humidity precipitates
- **Wireless control** without additional device, only the power supply has to be connected
- Quiet lateral blower
- Highly **heat insulating housing** consists of integral skin foam
- Extremely **tight closing flap** (spur gear, worm drive) with self-locking drive and load limit switch
- The **installation panel** is powder-coated on both sides and has an extremely **high compressive strength**
- May be installed together with self-cleaning panes because of the silicon-free manufacture
- The power and radio electronics are built inside, yet not in the way of the air current. Full maintenance from inside is possible
- Manual operation with Remo 8 Remote Control possible (available separately)

## 1.0.1. Scope of delivery

- Installation panel with ventilation unit and 10 m connection lead for voltage supply

## 1.1. Technical specifications

Mains voltage	230 VAC, 50 Hz
Length connectiong lead power supply	10 m
Power consumption	Maximum: approx. 40 VA Standby: approx. 2 VA

Radio frequency	868,2 MHz
Air volume blower	approx. 610 m <sup>3</sup> /h according to DIN 24 163
Net air rating	Extracted air max. approx. 446 m <sup>3</sup> /h, Recirculated air max. approx. 462 m <sup>3</sup> /h (Refer to Elsner Elektronik for the precise criteria)
Required opening for supply air	12.240 mm <sup>2</sup> per WL610 (e. g. two Supply Air Units WFL or equal window opening)
Sound pressure	at 2 m distance: max. approx. 58.6 dB(A) at full load
U-value	insulating panel: 1,03 W/m <sup>2</sup> K. ventilator total: approx. 1,8 W/m <sup>2</sup> K, calculated (presupposition: area ventilator = area panel)
Volumetric weight of insulating panel	60 kg
Compressive strength of panel	350 kPa
Minimum roof inclination	4° For roof inclinations between 4° and 15°, we recommend ordering the ventilation unit as version for small angles of inclination. In this case the device comes with an additional rain water barrier. Please notice that the air outlet port is reduced slightly by the barrier and thus the air volume is reduced.

The following standards have been considered for the evaluation of the product in terms of electro magnetic compatibility:

- EN 610000-3-2:2006 + A1:2009 + A2:2009
- EN 610000-3-3:2008
- EN 301 489-1 V1.8.1
- EN 300 220-2 V2.1.2

The product has been tested for the above mentioned standards by an accredited EMV laboratory.

### 1.1.1. Dimensions

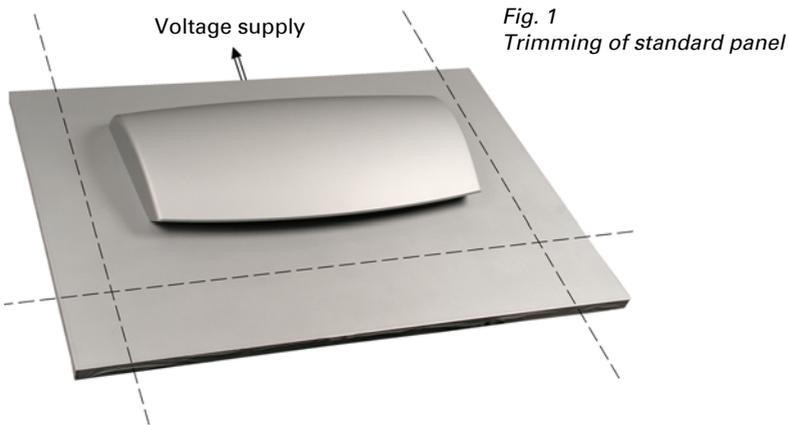
Installation height of ventilator	Outer: approx. 88 mm Inner: approx. 88 mm
Width of ventilator	approx. 698 mm
Depth of ventilator	approx. 360 mm
Standard panel	approx. 1050 mm x 700 mm (W x D), thickness approx. 30 mm. The standard panel can be trimmed on three sides (see Fig. 1, page 4)

For an additional charge, the panel can be delivered already in the dimensions you need. A different panel thickness is also possible upon request (panel thickness 24-40 mm).

**Minimal dimensions for panel:**

(shortening or special panel)

Minimum width	approx. 840 mm (Width of ventilator approx. 698 mm <i>plus</i> 50 mm on both sides <i>plus</i> the size required on both sides for installation)
Minimum depth for shortening	approx. 580 mm (Depth of ventilator approx. 360 mm <i>plus</i> 100 mm at the top (can not be trimmed) <i>plus</i> 100 mm at the bottom <i>plus</i> the size required at the bottom for installation)
Minimum depth special panel	approx. 550 mm (Depth of ventilator approx. 360 mm <i>plus</i> 50 mm at the top <i>plus</i> 100 mm at the bottom <i>plus</i> the size required at the top/bottom for installation)

**1.1.2. Colours**

Standard colours for ventilator and panel (included in price):

- RAL 9016 Traffic White
- RAL 9006 White Aluminium
- RAL 9007 Grey Aluminium

All other RAL colours are also available at an additional charge (also two-coloured inside – outside).

**Note:** The delivered colour tones are similar to the RAL colours specified. Deviations due to technical reasons are possible. Due to the different nature of the surface of the panel and ventilator housing, slightly different degrees of lustre can occur.

### 1.1.3. Ventilation levels

Order of the ventilation levels:

Level	Flap	Blower
Extraction 8	opened	runs, highest speed
Extraction 7	opened	runs
Extraction 6	opened	runs
Extraction 5	opened	runs
Extraction 4	opened	runs
Extraction 3	opened	runs
Extraction 2	opened	runs, lowest speed
Extraction 1	opened	stopped
Off	closed	stopped
Recirculation 1	closed	runs, lowest speed
Recirculation 2	closed	runs
Recirculation 3	closed	runs
Recirculation 4	closed	runs
Recirculation 5	closed	runs
Recirculation 6	closed	runs
Recirculation 7	closed	runs
Recirculation 8	closed	runs, highest speed

## 2. Installation and commissioning

### 2.1. Notes on installation



**Warning, mains voltage!**

**National legal regulations are to be observed.**

**Installation, inspection, commissioning and troubleshooting of the device must only be carried out by a competent electrician.**

Disconnect all lines to be assembled, and take safety precautions against accidental switch-on.

The device is exclusively intended for appropriate use. With each inappropriate change or non-observance of the instructions for use, any warranty or guarantee claim will be void.

After unpacking the device, check immediately for any mechanical damages. In case of transport damage, this must immediately notified to the supplier.



**If damaged, the device must not be put into operation.**

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If an operation without risk may supposedly not be guaranteed, the device must be put out of operation and be secured against accidental operation.

The device must only be operated as stationary system, i.e. only in a fitted state and after completion of all installation and start-up works, and only in the environment intended for this purpose.

Elsner Elektronik does not assume any liability for changes in standards after publication of this instruction manual.

## 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).
- 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. Notes on mounting

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The ventilator panel with the ventilator must be mounted such that the cover hood of the air intake opening faces inwards.

The inner cover hood is fastened by locks on the ventilator panel. To remove the hood, loosen the locks on both sides with a screwdriver. The electronic control of the ventilator is mounted under the cover hood.



**When mounting and before first use, make sure the cover hood is firmly fastened to the ventilator panel.**

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So that no water can penetrate through the air outlet on the outside when it is raining, or due to other weather influences, the panel must be mounted such that the outlet faces downwards.

## 2.4. Device construction

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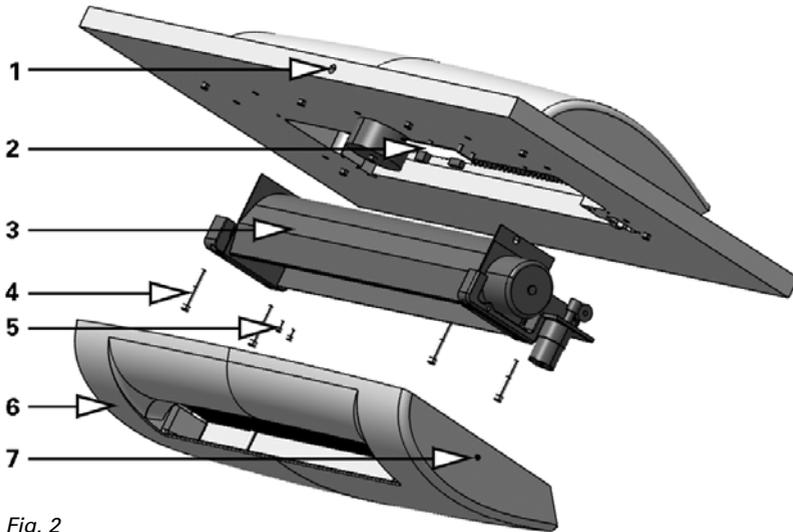


Fig. 2

- 1 Outlet cable voltage supply (not visible when mounted)
- 2 PCB
- 3 Ventilation unit with roll ventilator, flap and drives
- 4 Screws M5/Allen
- 5 Screws M3/Allen
- 6 Inside cover hood
- 7 Lock hole

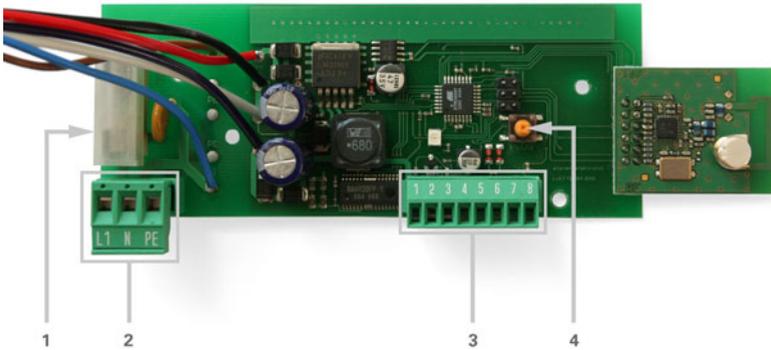


Fig. 3: Prited circuit board

- 1 Microfuse T 1,6 A
- 2 Terminals power supply L / N / PE
- 3 Terminals:
  - 1 Fan red
  - 2 Fan blue
  - 3 Fan black
  - 4 Not in use
  - 5 Flap drive +
  - 6 Flap drive -
  - 7, 8 Temperature sensor
- 4 Programming key for teaching in

### 3. Maintenance

The device must be checked for dirt and function annually by the retailer/installer and cleaned if necessary. For this purpose, the inner cover hood may be detached. No abrasive cleaning agents should be used for cleaning.



**Maintenance and cleaning inside the device must only be carried out by a competent electrician. The device must be separated from power supply then (e.g. deactivate or remove fuse).**