

AIROVENT RF MEV WH4H CONTROLLER WITH CO2 SENSOR

Installation and Operating Guide



AIROVENT RF Controllers with CO2 require a 240V 50/60 Hz single phase supply. Electric circuit to be used should be isolated before any work is carried out.

To enable access for wiring the controller, first remove the front cover from its mounting base. Care should be taken when this is done to not damage the front cover fixing clips. This is done by pushing the release tab on the mounting base and simultaneously lifting the bottom of the front cover away from the mounting base (Fig. 1). The front cover can now be removed from the base. The electrical connection block for the controller can be found behind the connection block cover plate (Fig. 2). Mains power supply should be connected to the controller using the electrical connection block.

When the electrical connection is complete the power connection cover plate should then be reattached. The front cover can now be fitted to the mounting base.

Introduction

The AIROVENT RF MEV WH4H CONTROLLER WITH CO2 SENSOR was especially developed for the AIROVENT RF MEV WH4H Central Extract Unit. Radio Frequency (RF) control means that the central extract unit can be switched remotely and wirelessly by one or several remote controls, up to a maximum of 20. The RF control signal is received by a receiver on the printed circuit board (PCB) inside the central extract unit. The controller has 1 button that is used to operate it and select the desired mode/function.

The remote control is intended for exclusive use with Airflow AIROVENT RF MEV WH4H Central Extract Units. If bought separately, the remote control must be connected for the first time to the Airflow ventilation unit by the installer.

Technical Data	
Power Supply	230V - 50Hz
Max. Power Consumption	1.2 Watt
CO2 Measuring Range	300 - 2000 PPM
Dimensions (mm) (W x H x D)	92 x 92 x 23
Weight	125g
RF Frequency	868.3 MHz
Min/Max Ambient Temp.	0 - 40°C
RH Level	0 - 90% non-condensing
IP Rating	IP30

Mounting

The controller should ideally be mounted on a vertical, flat surface. To ensure the controller is correctly orientated, the front cover needs to firstly be separated from the mounting base. To do this follow the initial instructions in the electrical installation section above and as shown in Fig. 1. The mounting base should be securely fixed in position using the two screws and plastic wall plugs provided or can be stuck in place with a suitable adhesive. If these two options of fixing are not suitable, a suitable fixing method should be selected. Recommended height from the floor to the controller is 1.5 to 2.0 meters.

Suitable room must be left to push the mounting base release tab for maintenance purposes.

The front cover can now be fitted to the mounting base. If there is any doubt, contact Airflow Developments Ltd. For advice at info@airflow.com or Tel +44 (0)1494 525 252.

Safety Information and Guidance



IMPORTANT!

Read these instructions carefully before installing this controller.

This manual covers the operation of the AIROVENT RF MEV WH4H CONTROLLER WITH CO2 SENSOR only. It must therefore be read in conjunction with the relevant AIROVENT RF MEV WH4H Central Extract Unit Control Manual.

Installation of this controller must be carried out by a qualified and suitable competent person and carried out in clean, dry conditions where dust and humidity levels are at minimum.

All wiring must conform to current I.E.E Wiring regulations – see **Electrical Installation** on page 3 for more information. Do not install this controller in areas where the following may be present or occur; Excessive oil or a grease laden atmosphere, corrosive or flammable gases, liquids or vapours, ambient temperatures above 40°C or below 0°C, humidity levels over 90% or a wet environment. Not suitable for installation to the exterior of a dwelling.

Pairing RF Controllers to Unit

Two RF remote controllers are available, a basic controller (Part No: 90001489) and a controller with built in CO2 sensor (Part No: 90001490). Each MEV WH4H unit must have at least one RF Controller. Each unit can be paired with up to 20 controllers. A mixture of controllers can be used to suit application.

Before pairing the unit should be isolated from the electric supply for a minimum of 5 seconds. The LED on the controller will flash red then green.

When electric power to the unit is re-installed the LED red / green on the PCB (See Fig. 3) will flash red and green then remain green for 3 minutes. In this is the time RF controllers can be paired to the unit.

AIROVENT RF Controller with CO2 Sensor (90001490) Pairing.

NOTE: Ensure controller has power connected to it.

Storage and Transportation

Controllers should be stored in their original packaging in a dry environment, protected from the weather, and are suitable for storage temperatures of between 0°C and +40°C.

Care should be taken when re-packaging any controllers to ensure the packaging is suitable for the required form of transport. Damage due to improper transportation, storage or installation is not covered under warranty. Dropping or sharp blows to the controller can cause damage. Any damage to the controller or packaging should be inspected by a suitably qualified person or returned to Airflow Developments Ltd for inspection before use.

Electrical Installation

All electrical installations must be carried out by an approved electrician in accordance with the latest IET BS7671 Requirements for Electrical Installation, Low Voltage Directive 2014/35/EU, Machinery Directive 89/392/CE, or the appropriate regulations in the country of installation.

Pairing the controller(s) to one unit. Restart the controller by removing the front cover with PCB from the mounting base, then place it back. Press the control button (See Fig. 4) briefly once, a red LED will flash on the controller. Next press the control button again for approximately three seconds until one LED on the right-hand side of the controller lights up and the status LED flashes alternatively red / green.

If the controller has successfully paired to the unit, the green LED on the controller will flash ten times. To register additional controllers with CO2 sensor, repeat the above procedure.

Pairing controller(s) to several units. To do this the controller should follow the previous procedure but the control button must be pressed for eight seconds until two LED's on the controller light up on the right.

To replace a controller, all controllers must be un-paired to the units PCB, then any controller(s) needed must be re-paired to the units PCB.

Un-Pairing Controllers to a unit. Remove the white top cover from the unit. Press the push button on the units PCB for 15 seconds until the LED is orange. Release the push button, the LED will flash red, green, red. All connections to controllers are now cut.

Resetting Remote Control. The CO2 controller can be reset to the factory settings by pressing its control button for approximately fifteen seconds, until the red and green LED are simultaneously lit. The CO2 will restart and will be reset.

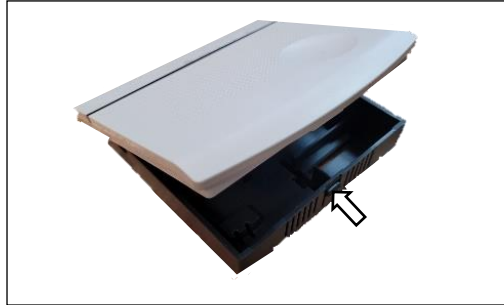


Fig. 1 - AIROVENT RF CONTROLLER with CO2 Sensor – Release Button

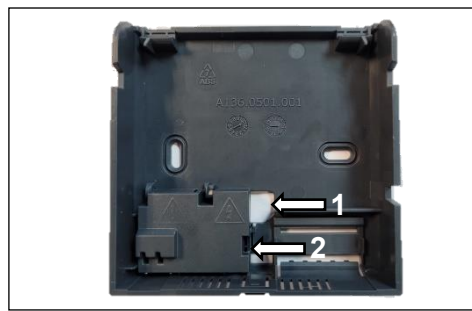


Fig.2 – 1 = Cable entry hole, 2 = Connection block cover release tab

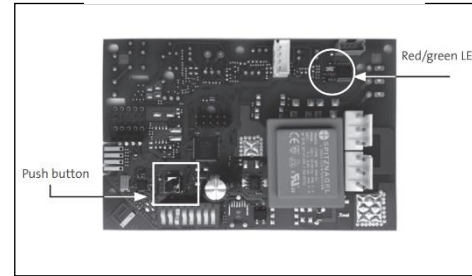


Fig. 3 - Receiver PCB located inside the AIROVENT RF MEV WH4H central extract unit.

LED Indicator Explanation

By touching the control button once, the status of the controller can be seen on the LED's. These will stay lit for thirty seconds. If the control button is pressed again the next function will be selected. See Fig. 4 below:

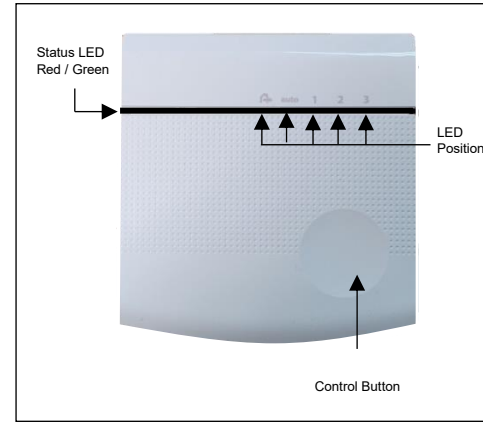


Fig. 4 – RF Controller button layout

Automatic LED lit. In this mode the unit will run on the low setting until humidity or CO2 levels rise. When they do the unit will automatically increase the ventilation rate to suit.

Absence LED lit. When this LED is lit the unit will run in the low speed. Any humidity or CO2 sensors will be inoperable. The unit will remain in this status for twelve hours. This can be overridden at any time by activating another function.

1, 2 or 3 LED lit. Positions 1 (low unit speed) and 3 (high unit speed) when selected will override any CO2 or humidity sensors. The unit will run in the selected speed for sixty minutes. During this time the relevant LED will remain lit.

Should position 2 (medium unit speed) be selected, the unit will remain in this function for thirteen hours. The position 2 LED will remain lit for the full duration. When the timers on the above functions have run out, the unit will return to the automatic mode.

Automatic Notifications. When the status LED is lit green, this signifies that the controller is connected to the unit and working. If the status LED flashes red three times, the controller is no longer connected to the unit. The unit and controller should be checked to ensure power is still being supplied. If the power supply is connected the controller needs to be reconnected to the unit. If a fault occurs within the controller the status LED will repeatedly flash red.

If this happens contact a competent person to inspect the system or contact Airflow Developments Ltd at info@airflow.com or Tel +44 (0)1494 525 252.

Service and Maintenance

Clean the exterior of the controller with a lightly damp cloth or soft brush. Delicate internal parts can be gently blown clean using clean compressed air. Note: when using compressed air, use of the correct personal protection is advised.

Unit Packaging & Disposal

The controllers front cover and mounting base are manufactured out of plastic. Inserted inside is a silicone-based PCB. Controllers and parts used in it that are at end of life due to wear and tear, corrosion, fatigue and or other effects that cannot be discerned, must be disposed of in the correct manner conforming to local and / or international guidelines and regulations. Intended or unintended further use of worn or used parts, can result in danger to persons, the environment and controller.



Important Environmental Information: This symbol indicates that disposal of this unit after its life cycle could harm the environment. The unit should be disposed of by a specialised company for recycling. If in doubt, contact your local authority about waste disposal guidelines and regulations.

Warranty

Airflow guarantees the AIROVENT RF MEV WH4H CONTROLLER WITH CO2 SENSOR in these instructions for 1 year from date of purchase against faulty material or workmanship. Applicable to units installed and used in the UNITED KINGDOM

Warranty covers the controller and not the reinstallation if required. In the event of any defective parts being found, Airflow Developments Ltd reserves the right to repair, or at our discretion replace without charge, provided the unit has been installed in accordance with the fitting and wiring instructions supplied with each unit and the below clauses:

- Has not been connected to an unsuitable electrical supply.
- Has not been subjected to misuse, neglect, or damage.
- Has not been modified or repaired by any person not authorised by Airflow Developments Ltd.
- Has been installed by a person who is recognised as a competent person.
- Has only been used with Airflow Developments approved accessories.

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Airflow Developments Ltd shall not be liable for any loss, injury, or other consequential damage, in the event of a failure of the equipment, arising from, or in connection with, the equipment excepting only that nothing in this condition shall be construed as to exclude or restrict liability for negligence. Full details at airflow.com/terms.

This warranty does not in any way affect any statutory or other consumer rights.



UK Head-Office
AIRFLOW DEVELOPMENTS LTD
Adelle House, Lancaster Road
Cresser Business Park
High Wycombe
Buckinghamshire
HP12 3QP
United Kingdom

Tel: +44 (0) 1494 525252
Fax: +44 (0) 1494 461073
Email: info@airflow.com
Web: airflow.com

Germany
AIRFLOW LUFTECHNIK GMBH
Wolfsacker 16
53559 Rheinbach
Germany

Tel: +49 (0) 222 69205 0
Fax: +49 (0) 222 69205 11
Email: info@airflow.de
Web: airflow.de



Czech Republic
AIRFLOW LUFTECHNIK GMBH
o.s. Praha Hosiřynskai 520
108 00 Praha 10
Malesice
Czech Republic.

Tel: +42 (0) 2 7477 2230
Fax: +42 (0) 2 7477 2370
Email: info@airflow.cz
Web: airflow.cz