

Xpelair Simply Silent™ LVCV Constant Volume SELV Fan Range

Installation and Maintenance Instructions

LVCV4S / LVCV4R

Humidistat, Timer.



- Do read the entire instruction leaflet before commencing installation.
- Do install each fan with a means for disconnection in all poles in the fixed wiring.
- Do make sure the mains supply is switched off before attempting to make electrical connections or carry out any maintenance or cleaning.

Please leave this leaflet with the fan for the benefit of the user.

UK customers:

If you have any queries before or after installing this product call the Xpelair Technical Hotline+44 (0) 344 879 3588 or email customer.services@glendimplex.com Our engineers are there to help you during normal office hours.

Customers outside the UK should contact your local Xpelair distributor.



This appliance is intended for connection to fixed wiring.
Check that the electrical rating shown on each fan matches the mains supply.
THE APPLIANCE IS DOUBLE INSULATED AND DOES NOT REQUIRE AN EARTH CONNECTION.
All installations must be supervised by a qualified electrician. Installations and wiring must conform to current IEE Regulations (UK), local or appropriate regulations (other countries).

This appliance is only to be used with the power supply unit provided with the appliance

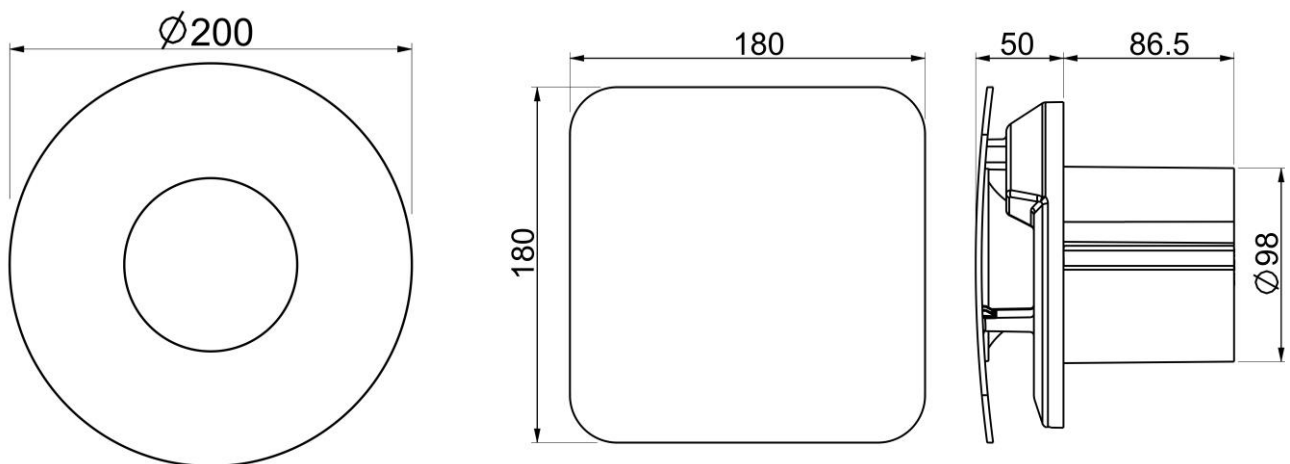
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance.

Cleaning and maintenance of the appliance shall not be made by children.



All Xpelair Simply Silent™LVCV Constant Volume SELV fans have the following features:

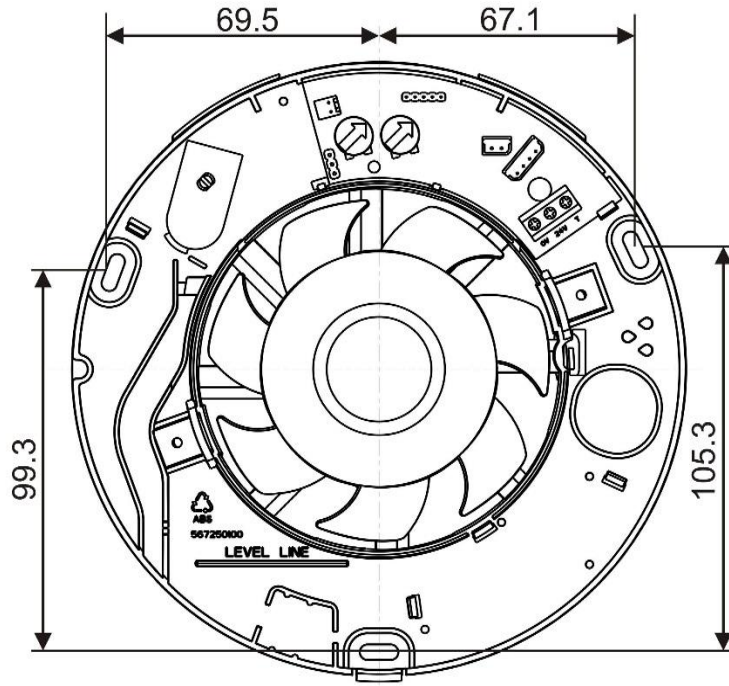
- Constant Volume fan that automatically adjusts itself to maintain installed air flow rates.
- Continuous running design, suitable for bathroom or kitchen applications.
- Two speed extraction (Selectable at installation)
- Operates when triggered automatically by the integral humidity sensor, or by using an external on/off switch (not supplied).
- **In automatic mode:** The built-in timer automatically operates the fan for a pre-set time from 30 seconds to 30 minutes once humidity drops below the pre-set Relative Humidity (RH) value.
- **External operation:** When switched off using the external on/off switch the fan continues to run for the pre-set delay from 30 seconds to 30 minutes.
* **Factory settings:** Timer 15 minutes, RH 75%
- Hour run indicator



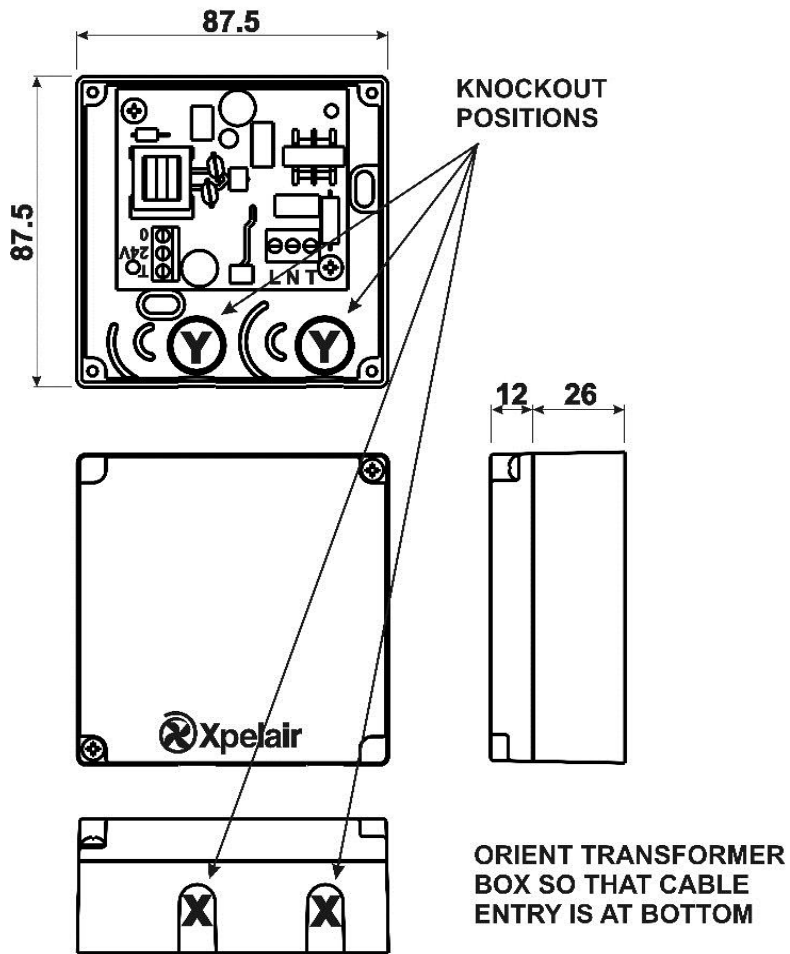
Overall Dimensions (mm)

Back plate fixing positions

A



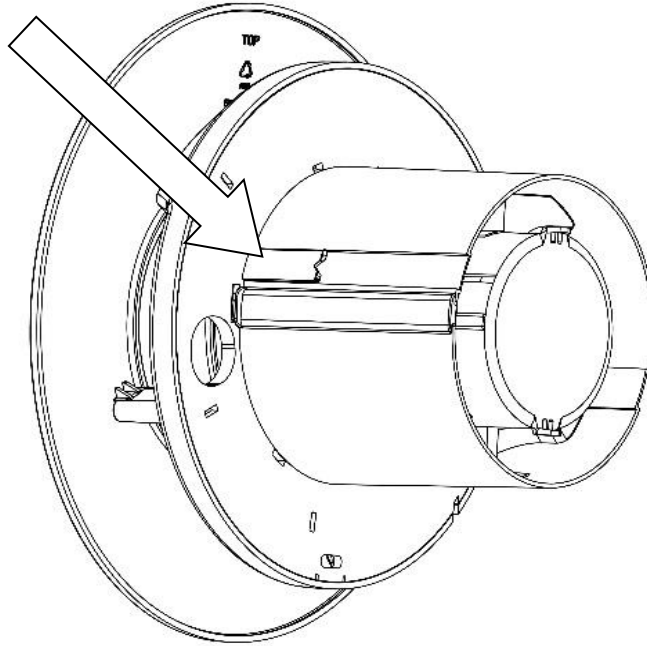
B



Transformer Overall Dimensions and knockouts

Wall tube quickfix clamps

C



Front Cover Removal

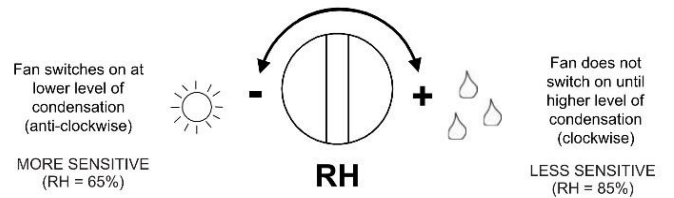
D



Depress Cover Latch with tool & remove Cover and Baffle Complete

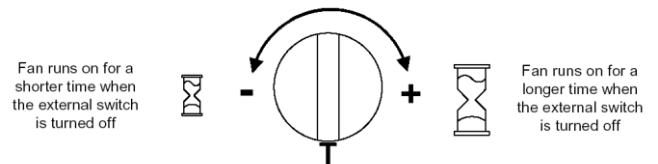
IMPORTANT - PLEASE READ

Adjusting the humidity setting



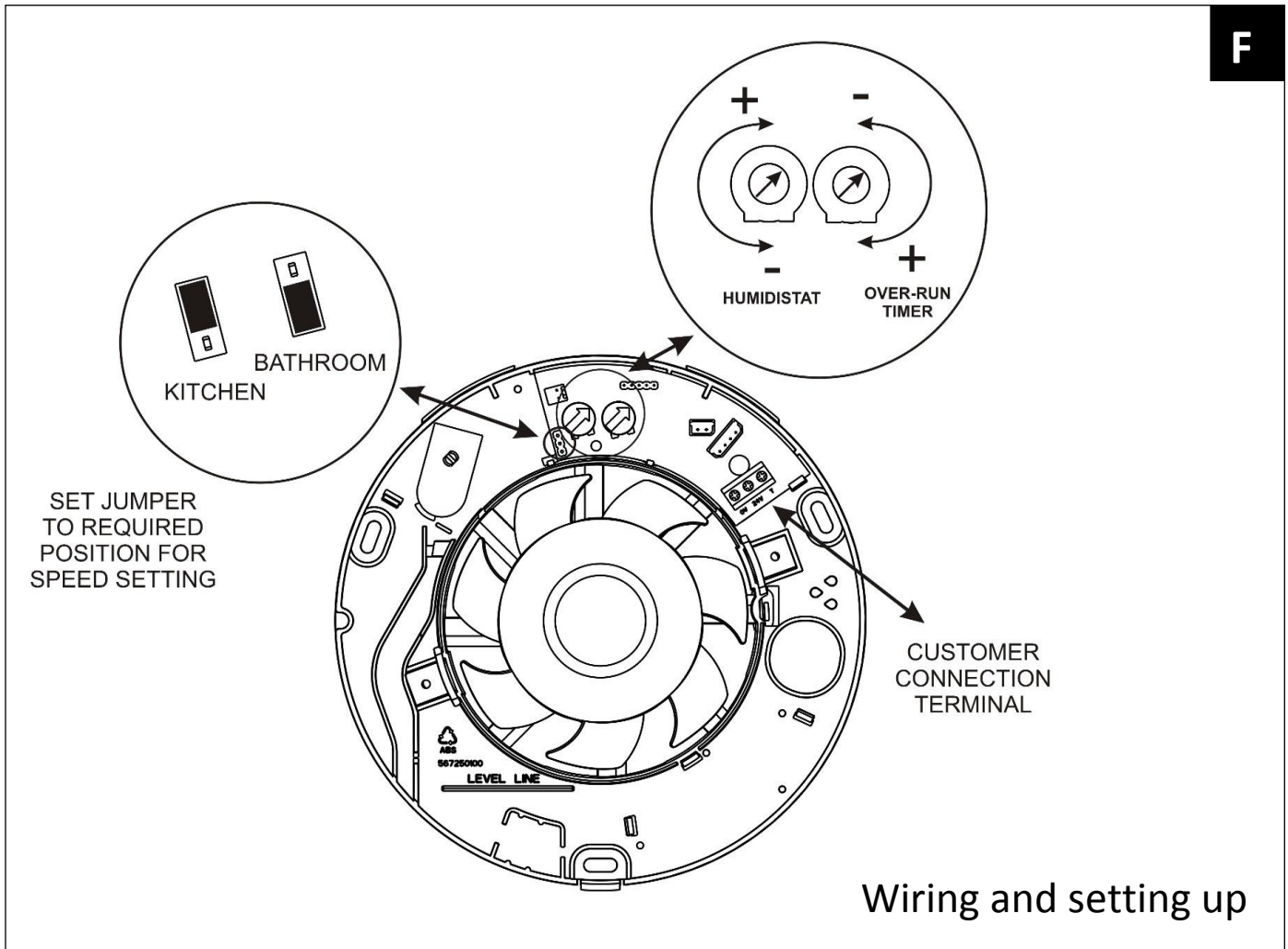
Factory settings: Timer 15 minutes, RH 75%

Adjusting the run on timer setting



Minimum 30 seconds

Maximum 30 minutes



Where to locate the fan.



- Locate it as high as possible.
- At least 110mm from the edges of the mounting surface to the centre of the hole.
- As far away as possible from and opposite to the main source of air replacement to ensure airflow across the room (e.g. opposite the internal doorway).
- Near the source of steam or odours.



- **Not where ambient temperatures are likely to exceed 50°C.**
- **If installed in a kitchen fans must NOT be mounted immediately above a cooker hob, or eye level grill.**
- **If installing in a room containing a fuel burning device which has a non-balanced flue, it is the installer's responsibility to ensure that there is enough replacement air to prevent fumes being drawn down the flue when the fan is operating up to maximum extract. Refer to Building Regulations for specific requirements. Exhaust air must not be discharged into a flue used for exhausting of fumes from appliances supplied with energy other than electric. Requirements of all authorities concerned must be observed for exhaust air discharge and intake flow rates.**
- **Not suitable for use in possible chemical corrosive atmospheres.**

Where to locate the Transformer.



- The transformer can be fixed directly to the wall
- The transformer can be sited in a loft or in a convenient position on a wall (**not ceiling**). **The transformer must not be covered by loft insulation. For wall mounting the transformer must be orientated as shown in figure B to fulfil ingress protection requirements.**
- **The transformer must not be mounted where ambient temperatures are likely to exceed 40°C.**



What the installer will need.

- 3mm electrician's screwdriver and No.1 or 2 Pozidrive screwdrivers.

Installation

If wall mounting the fan, you will also need:

- A 100mm diameter prepared hole.
- An appropriate external Wall Grille and Ø100mm wall sleeve duct. Kit Ref 91232AW.

If ceiling mounting the fan, you will also need:

- A 100mm diameter prepared hole.
- Appropriate ancillaries for termination. These items are available from Xpelair:
 1. 3m flexible ducting Ref: 89663AA. If the duct passes through a cold space use insulated duct ref: 89847AA.
 2. Soffit Grille Ref: 89742AW
 3. XCT100 – Condensation Trap. Ref: 89749AA. Fitted immediately above the fan, this prevents water ingress due to condensation forming in the duct above the fan and running down.

Installing the isolating switch and cables.



A means for disconnection in all poles must be incorporated in the fixed wiring in accordance with wiring regulations

- **If metal switch boxes are used, earthing regulations must be followed.**
- The cross-sectional area of the supply cord used should be ranged from 0.5 – 1.0mm².
- Suitably rated 3-core cable (supply to transformer)
- Suitably rated 3-core cable (wiring from transformer to fan).
- A wall or ceiling On/Off switch (with indicator light) is recommended

1. **Check that the electrical rating shown inside the back-plate matches your mains supply.**
2. **Check there are no buried pipes or cables e.g. electricity, gas, water behind the switch location (in the wall or above the ceiling). If in doubt, seek professional advice.**
3. **Isolate the mains supply.**
4. Lay in the cable from the isolating switch to the fan location via the on/off switch (if required).
5. Lay in the cable from the isolating switch to the point of connection to the mains supply.



Warning: Do not make any connections to the electrical supply at this stage.

6. Install the isolating switch and on/off switch (if required).
7. Make all connections within the isolating switch and the on/off switch (if required).



Wet Rooms: On/Off switch must be situated so that it cannot be touched by persons making use of the bath or shower.

For Australia Only –LVCV4S / LVCV4R

These models are permanently connected to the supply and operation is controlled by a remote switch. They should be directly wired to the supply through an approved 10A wall mounted surface switch with at least 3mm clearance between contacts.

Preparing the Fan for installation.

1. Remove the front cover/baffle assembly by depressing the latch on the underside of the cover and pulling off the front cover / baffle from the bottom (See Figure D).



If working above ground floor level, safety precautions must be observed.

Mark the position of the back-plate

2. Hold the back-plate so that the level line marked on it is orientated horizontally.
3. Carefully insert the fan tube into the wall duct.
4. Mark on the wall the positions of the fixing holes in the back-plate.
5. Remove the back plate from the ducting.
6. Drill screw holes in these positions if necessary, and fit wall plugs and screws as required. The fan may also be fixed to a wall tube using the clamping brackets. See 10 below.



If installing in a ceiling, appropriate termination ancillaries are required. Follow instructions provided.

Mount the back-plate.

7. Feed the mains cable through the cable entry hole in the back plate to the terminals.
8. Insert the fan tube of the back-plate into the wall duct/ceiling as before.
9. Fasten the back-plate to the wall/ceiling using appropriate fasteners. See figure A.
10. If using screws, do not over tighten. The fan may also be fixed to a wall tube using the clamping brackets. Tighten the screws until the fan is firmly secured to the tube – see figure C.

Fixing the transformer directly – see figure B

11. Remove top cover from transformer
 12. Position on the wall and mark the fixing holes
 13. Drill and plug the two holes and fix the transformer
- For loft mounting:** The transformer can be fixed to a wooden surface
For concealed wiring: Use the knockouts (Y)

Wire the fan electrical connections.

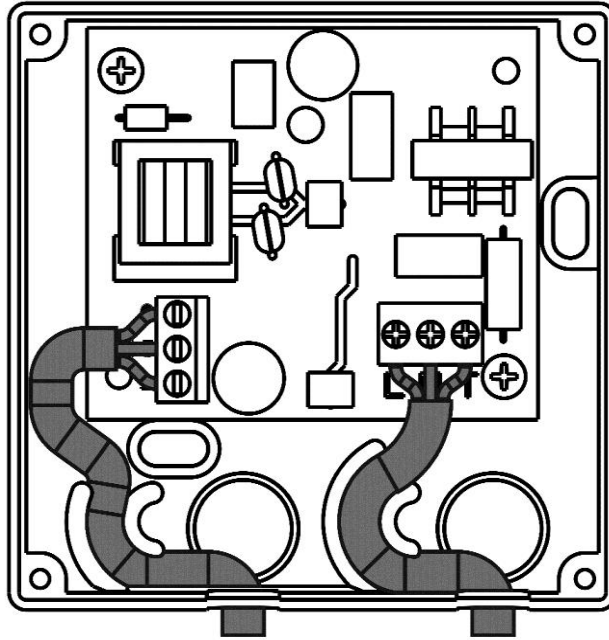
14. Make sure the mains supply is isolated. Switch off the mains electrical supply and remove fuses.
15. Feed the cable to the terminal block. Wire the fan as shown in Figure G.

Wiring the transformer.

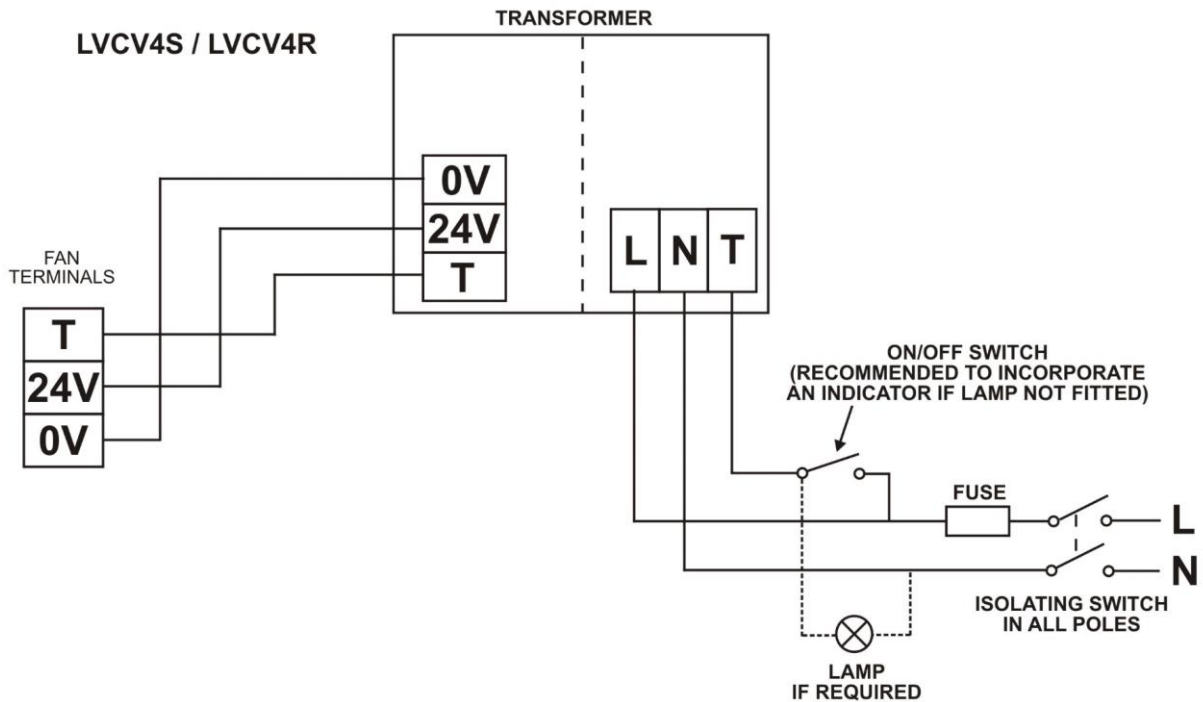
Always use the cable labyrinth to restrain the cable.

16. Wire the transformer as shown in figure G. Ensure all connections are tight.
17. Route the cable through the labyrinth as shown. Ensure the cable is firmly retained.
18. Fit the cover and retain with the screws.
19. **Make sure the mains supply is isolated, switch off the mains electrical supply and remove fuses.**
20. Connect the cable from the isolating switch to the electrical supply wiring.
21. **For fixed wiring circuits the protective fuse for the appliance must not exceed 5A.**

Pictorial view
inside
transformer
box detailing
terminal block
positions



For fixed wiring circuits the protective fuse for the appliance must not exceed 5A.



Electrical Connections

Fan Settings.

SPEED SETTING

The fans are factory set to bathroom speed, but have two speed settings for different applications. Select either kitchen or bathroom speed by connecting the jumper between the centre and kitchen or bathroom speed pin on the jumper (see Figure F)

LVCV4S /LVCV4R– see figures E and F.

- The pre-set humidity operation is factory set at approximately 75% Relative Humidity (RH), but can be adjusted between 65% and 85% RH by control HUM.
- The over-run timer is factory set at 15 minutes but can be adjusted from 30 seconds to 30 minutes by control TIME.
- The over-run timer also sets the length of time the fan runs when activated by a 'fast' increase in humidity.
- Turn the controls clockwise to increase RH or time and anti-clockwise to decrease.

Using the fan.

The fan will run continuously at its trickle speed setting as set during the installation procedure.

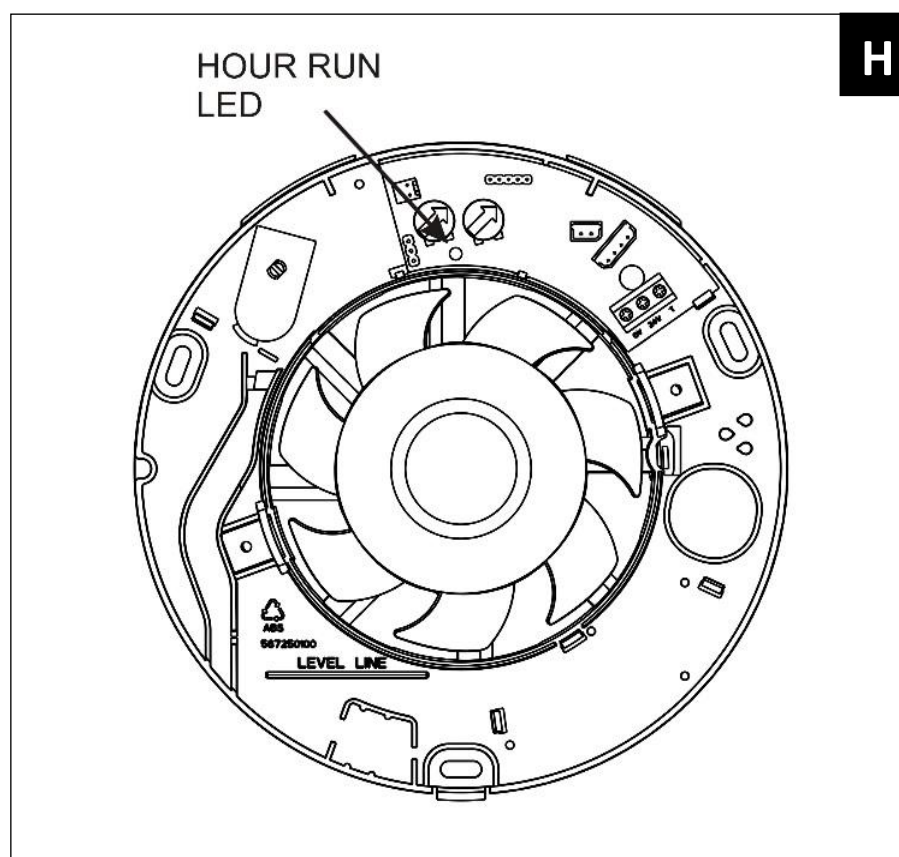
- **Automatic mode-** The fan automatically adjusts to slow changes in natural humidity levels without operating the fan. If the humidity levels increase at a rate slower than 5% RH in 5 minutes, up to the pre-set humidity level, the fan will not be triggered by humidity. This is to prevent nuisance triggering of the fan. If humidity levels increase quicker than 5% RH in 5 minutes the fan will increase in speed to an interim boost speed setting. When relative humidity drops the fan continues to operate for the adjustable time delay. When the humidity is above the pre-set humidity level the fan will run at a higher speed until the humidity drops below the pre-set value. If humidity levels do not drop within 5 minutes the fan will further boost to its maximum speed setting until humidity drops.
- **External operation-** Use the external boost switch (if fitted). When the fan is switched off, the fan continues to operate for the adjustable time delay then goes into automatic mode.

All Fans

Re-fit the front cover/baffle assembly by hooking in the top first, and then swing the cover down to clip into place.

Hour run meter

All fans incorporate an hour run meter that allows the installer to measure the actual running time of the fan after installation. The meter records continuous power supply on time and displays this via an on-board red LED that always flashes to indicate the total number of hours the supply has been on (see fig. H).



LED flash sequence to indicate hour run:

- LED off for 2 seconds to indicate the start of the count, then :
- 0 to 2000 hours : LED on for 1 short flash (0.5s on / 0.5s off)
- 2000 to 3000 hours : LED on for 2 short flashes
- 3000 to 4000 hours : LED on for 3 short flashes
- 4000 to 5000 hours : LED on for 4 short flashes
- 5000 to 6000 hours : LED on for 5 short flashes
- 6000 to 7000 hours : LED on for 6 short flashes
- 7000 to 8000 hours : LED on for 7 short flashes
- 8000 to 9000 hours : LED on for 8 short flashes
- 9000 to 10000 hours : LED on for 9 short flashes
- Each 10000 hours is indicated by 1 long flash (2.0s on / 0.5s off)

Examples:

542 hours total on time:
(2s off), (0.5s on/0.5s off). Repeat.

1921 hours total on time:
(2s off), (0.5s on/0.5s off). Repeat.

2780 hours total on time:
(2s off), (0.5s on/0.5s off), (0.5s on/0.5s off). Repeat.

24355 hours total on time:
(2s off), (2s on/0.5s off), (2s on/0.5s off), (0.5s on/0.5s off), (0.5s on/0.5s off), (0.5s on/0.5s off), (0.5s on/0.5s off). Repeat.



Cleaning (recommended once a month).

1. Before cleaning, isolate the fan completely from the mains supply.
2. Remove the front cover baffle plate by rotating the baffle anti-clockwise and pulling away from the fan and duct.
3. To clean the front cover baffle plate, either wipe it with a damp, lint free cloth or wash it with warm soapy water. Thoroughly dry the baffle and refit by locating over the cover lugs and rotating clockwise.
4. Do not immerse the fan in water or other liquids to clean any other parts of the fan.
5. Do not use strong detergents, solvents or chemical cleaners
6. Allow fan to dry thoroughly before use.
7. Apart from cleaning, no other maintenance is required.



Disposal

This product should not be disposed of with household waste.
Please recycle where facilities exist.
Check with your local authority for recycling advice.

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