

# VA100

## SELV 12 RANGE

### Installation and Wiring Instructions



#### Stock Ref. N°

|              |           |
|--------------|-----------|
| VA100SVL12   | 25 81 10D |
| VA100SVX12   | 25 83 10D |
| VA100SVXT12  | 25 84 10D |
| VA100SVLH12  | 25 81 12E |
| VA100SVXH12  | 25 83 12E |
| VA100SVXHT12 | 25 85 12B |

FAN UNITS 12V 50Hz SELV (CLASS III)  
CONTROLLERS 220-240V 50Hz MAINS SUPPLY (CLASS II)  
WITH 12V 50Hz SELV OUTPUT

# **Vent-Axia®**

PLEASE READ INSTRUCTIONS IN CONJUNCTION WITH ILLUSTRATIONS.  
PLEASE SAVE THESE INSTRUCTION

IPX7



## Installation and Wiring Instructions for the VA100 SELV 12 Fan & Controller.



**IMPORTANT:  
READ THESE INSTRUCTIONS  
BEFORE COMMENCING THE  
INSTALLATION**

DO NOT install this product 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 higher than 40°C or less than –5°C.
- Possible obstructions which would hinder the access or removal of the Fan.

### SAFETY AND GUIDANCE NOTES

- A. All wiring to be in accordance with the current I.E.E. Regulations, or the appropriate standards of your country and **MUST** be installed by a suitably qualified person.
- B. The fan should be provided with a local isolator switch capable of disconnecting all poles, having a contact separation of at least 3mm.
- C. Ensure that the mains supply (Voltage, Frequency, and Phase) complies with the rating label.
- D. The fan should only be used in conjunction with the appropriate Vent-Axia products.
- E. It is recommended that the connection to the fan connector terminals is made with flexible cable.
- F. The transformer/controller should be sited away from direct sources of heat. The transformer requires free air circulation and should be mounted securely to a joist in the roof void.
- G. Do not cover the transformer/controller with insulation or other materials.
- H. When the fan is used to remove air from a room containing a fuel-burning appliance, ensure that the air replacement is adequate for both the fan and the fuel-burning appliance.
- I. The fan should not be used where it is liable to be subject to direct water spray for prolonged periods of time.
- J. Where ducted fans are used to handle moisture-laden air, a condensation trap should be fitted. Horizontal ducts should be arranged to slope slightly downwards away from the fan.
- K. This appliance is not intended for use by young children or infirm persons without supervision.
- L. Young children should be supervised to ensure that they do not play with the appliance.

**IMPORTANT:- ONLY CONNECT TOGETHER PRODUCTS FROM THE VA100 SELV 12 RANGE SINCE THE FANS ARE SPECIALLY DESIGNED TO WORK ON 12V AC AND ARE NOT COMPATIBLE WITH OTHER VENT-AXIA CONTROLLERS. DO NOT CONNECT MORE THAN ONE FAN TO THE CONTROLLER.**

### DESCRIPTION

The VA100 SELV 12 range from Vent-Axia is a 100mm extract fan for domestic bathrooms and WC's available as window, wall or panel mounted models. Model options with shutter, timer and auto humidity control.

### ACCESSORIES (not supplied)

A range of 100mm wall and window kits are available for installing into most walls/windows using telescopic liners/spacers supplied.

|                                     | Stock Reference |        |
|-------------------------------------|-----------------|--------|
|                                     | White           | Brown  |
| Window kit (hole in window >Ø105mm) | 254101A         | N/A    |
| Window kit (hole in window >Ø115mm) | 443234          | N/A    |
| Wall kit                            | 254102          | 254100 |

### A. INSTALLATION

#### SITING THE CONTROLLER

1. The controller must not be installed in a shower cubicle or enclosure. It must be sited away from direct sources of water spray and out of reach (1.5m) of a person using a fixed bath or shower.
2. Site away from direct sources of heat. Ambient temperature range 0 to 40°C. Do not site in an area containing excessive levels of grease.
3. Decide where to site the controller and fan (see section siting the fan), and work out the required cable runs.

## **SITING THE FAN**

1. The electrical supply to this fan is 12V AC SELV from the mains controller. This means that the fan may be installed within reach of a person using a fixed bath or shower, i.e. in a nearby wall or window. However, the fan must not be placed where it could be submerged in water or regularly exposed to direct water spray, e.g. from a shower head whether permanently fixed or movable.
2. Site away from direct sources of heat. Ambient temperature range 0 to 40°C. Do not site in an area containing excessive levels of grease.
3. If the fan is installed in a room containing a fuel burning appliance the installer must ensure that air replacement is adequate for both the fan and the fuel burning appliance. If the fan is used to supply air into the room the installer must ensure that the fan intake is located at least 600mm away from any flue outlet.
4. Ducted Applications. These fans can be used with short lengths of rigid ducting, but check details first with your Vent-Axia sales centre. Where an excessive amount of moisture is present in the air, a condensation trap will need to be installed in the exhaust duct. Horizontal ducts should slope away from the fan unit. Ducts passing through an unheated roof void should be insulated.
5. A short circuit of the airflow should always be avoided by siting the fan as far away as possible from and opposite to the main source of air replacement. FIG.1
6. VA100SVLH, VA100SVXH and VA100SVXHT. These models are fitted with automatic electronic humidity sensing. The humidity sensor needs free air circulation so do not site close to cupboards, etc. Do not site above a radiator or other heat source.

## **PANEL/CEILING MOUNTING**

**IMPORTANT:** The fan should be installed into a closed duct system or protected by an exterior air grille.

1. Cut a 105mm diameter hole in the fixing surface.
2. Remove the grille by loosening the screw at the bottom of the grille.
3. Mark the screw centres through the holes in the fan back plate. Drill, plug and screw into position.
4. Replace grille and tighten the screw.

## **WINDOW MOUNTING (Window kit not supplied – see Accessories above)**

1. For new installations cut a 115mm diameter hole in the glass. (use window kit 443234)  
(Note:- If using an existing 105mm diameter hole in the glass, use window kit 254101A)
2. Refer to the instructions supplied with the window kit 443234. Or if using kit 254101A read the following instructions below.
3. Fit spacers as required behind the fan back plate, engaging the locating pips in the corner holes.
4. Place the fan spigot through the hole in the glass from the inside, with a gasket on each side of the glass.
5. From the outside, place on the remaining spacer, with the locating pips facing outwards. For double-glazing and materials up to 40mm thick, one or more spacers may be discarded.
6. Draw the assembly together with the threaded fixing ring. Do not over-tighten.
7. Fix the exterior grille in position, using the screws provided, with the louvres pointing downwards.

## **WALL MOUNTING (Wall kit not supplied – see Accessories above)**

1. Cut a 115mm diameter hole through the wall and insert the wall sleeve with the large diameter sleeve on the room side. Slope the sleeve slightly downwards away from the fan. Cement both ends into position flush with the wall faces.
2. Remove the grille by loosening the screw at the bottom of the grille.
3. Mark the screw centres on the wall through the holes of the fan back plate. Drill plug and screw into position.
4. Repeat for the external grille sub-frame. Fix exterior grille into position with the louvres positioned downwards.

## **AFTER INSTALLATION ENSURE IMPELLER ROTATES FREELY**

## B. WIRING.



**WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION / OR MAINTENANCE.**

### **IMPORTANT:**

There are two methods of cable entry to the fan. If the side cable entry option is used, ensure the supplied grommet is used and maintains a good seal to prevent water ingress.

The controller is only suitable for connection to a 220-240V 50Hz AC single phase mains electrical supply. It is double insulated (CLASS II) and therefore must not be earthed. It provides a 12V 50Hz AC Safety Extra Low Voltage for the VA100 SELV 12 range of fans. Note that only one fan must be connected to the controller.

**1.5mm<sup>2</sup> wire is recommended for cable runs up to 8m.**

1. Select and follow the appropriate wiring diagram. (Fig. 2, 3,4 or 5)
2. Check all connections have been made correctly and ensure all terminal connections and cable clamps are securely fastened.
3. Ensure the impeller rotates and is free from obstructions.

## C. SETUP



**WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION / OR MAINTENANCE.**

### **TIMER ADJUSTMENT (VA100SVXT12/ VA100SVXHT12)**

*BEFORE ADJUSTING THE TIMER, SWITCH OFF THE MAINS SUPPLY. TIMER SHOULD ONLY BE ADJUSTED BEFORE OR DURING INSTALLATION.*

#### **External Timer: VA100SVXT12**

Unscrew the fixing screws holding the controller to the mounting box. The fan overrun period can be adjusted up or down using the adjuster located on the internal PCB.

#### **Internal Timer: VA100SVXHT12**

The fan contains an adjustable overrun timer. Activated by LS.

1. Remove the fan grille. The controller is factory set at 15 minutes approx. The overrun time period can be adjusted from 3-25 minutes by altering the adjuster on the control PCB.
2. To REDUCE the operating time, use a small screwdriver to turn the adjuster **ANTI-CLOCKWISE**.
3. To INCREASE the operating time, use a small screwdriver to turn the adjuster **CLOCKWISE**.
4. Replace the fan grille.

### **Humidity Set-Point adjustment (VA100SVLH12 / VA100SVXH12 / VA100SVXHT12)**

*BEFORE ADJUSTING THE HUMIDISTAT, SWITCH OFF THE MAINS SUPPLY. HUMIDISTAT SHOULD ONLY BE ADJUSTED BEFORE OR DURING INSTALLATION.*

1. Remove the fan grille. The controller is factory set to switch on at about 70% RH. The humidity set point can be adjusted from 40-95%RH by altering the adjuster on the control PCB.
2. To LOWER the set-point use a small screwdriver to turn the adjuster **ANTI-CLOCKWISE**. This makes the controller MORE sensitive.
3. To RAISE the set-point use a small screwdriver to turn the adjuster **CLOCKWISE**. This makes the controller LESS sensitive.
4. Replace the fan grille.

**IMPORTANT:** Upon installation it is possible that the humidity controller will make the fan run continuously until it has acclimatised to the environment. As part of the installation process it is important to set/adjust the humidity sensitivity to the desired position. The controller is already factory set to switch on at about 70% R.H.

## SHUTTER OPERATION

The shutter mechanism in all VA100'X' model fans will open approximately one minute after the fan is turned on. The shutter will close about a minute after the fan is switched off.

## NEON OPERATION

The Neon will activate whenever the LS or PULLCORD is activated. The Neon will switch off if the fan is running in Timer overrun or humidity mode (if applicable).

## PULLCORD OPERATION (VA100SVLH12, VA100SVXH12)

The PULLCORD will activate the fan when switched. When the PULLCORD is switched into the off position, After which the fan will return to the Auto sensing mode. The Neon will only activate if the PULLCORD is in the ON position.

## D. SERVICING AND MAINTENANCE.

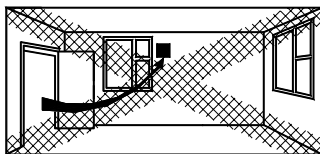


**WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING MAINTENANCE.**

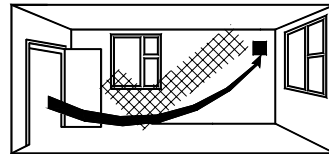
1. At intervals appropriate to the installation, the fan should be inspected and cleaned to ensure there is no build up of dirt or other deposits.
2. Wipe the inlets and front face with a damp cloth until clean.

**The fan has sealed for life bearings, which do not require lubrication.**

Fig. 1



X



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Fig. 2 (VA100SVLH12 AND VA100SVXH12).

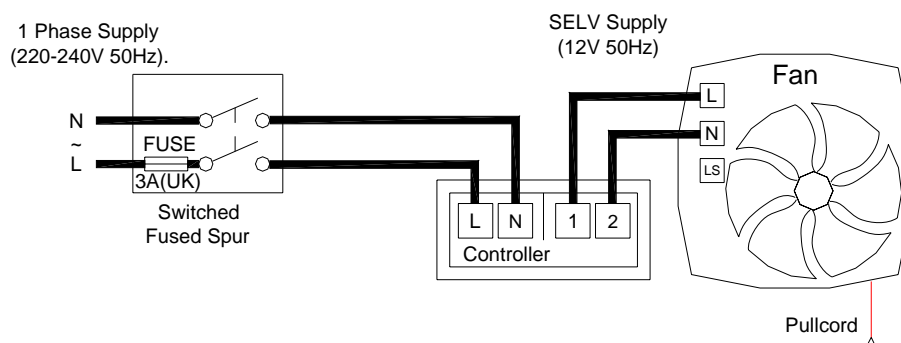
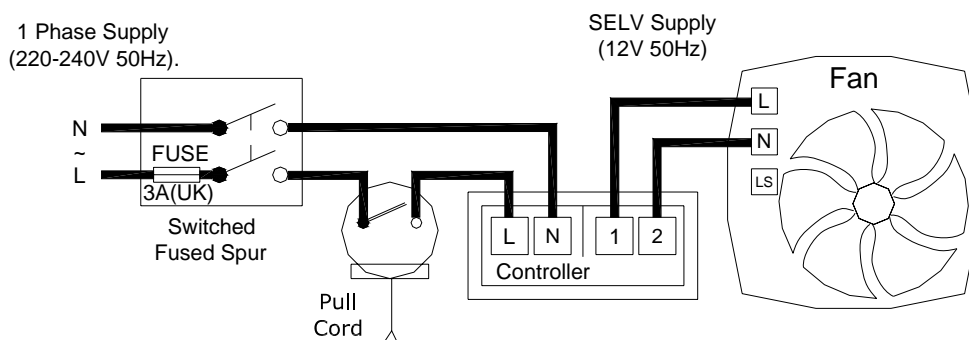
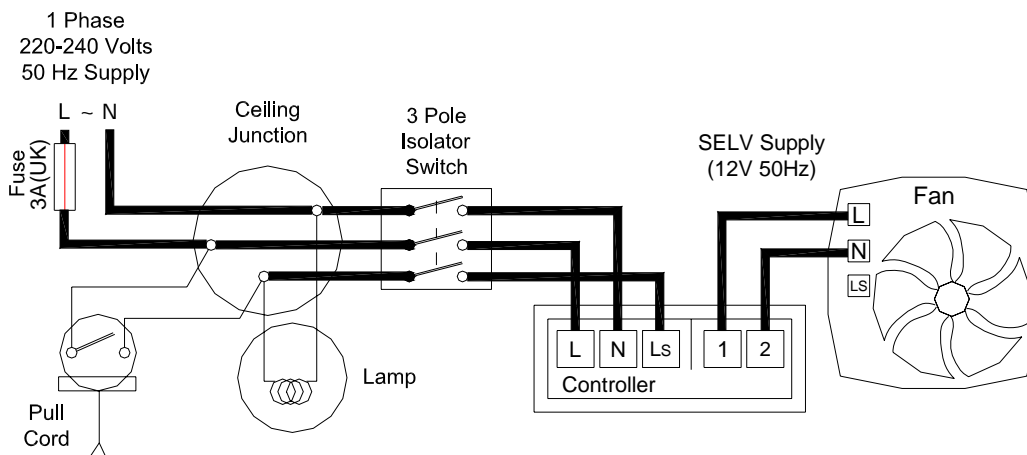


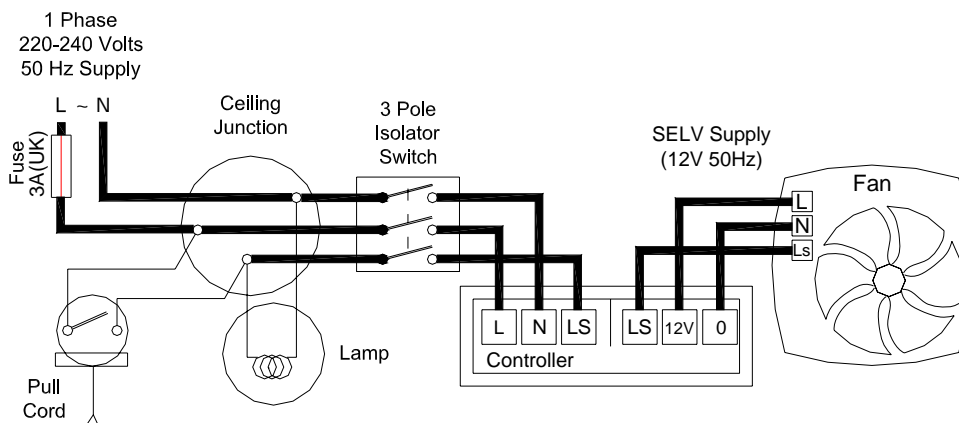
Fig. 3 (VA100SVL12 AND VA100SVX12).



**Fig. 4 (VA100SVXT12)**



**Fig. 5 (VA100SVXHT)**



## The **Vent-Axia** Guarantee

Applicable only to products installed and used in the United Kingdom. For details of guarantee outside the United Kingdom contact your local supplier.

Vent-Axia guarantees its products for two years from date of purchase against faulty material or workmanship. In the event of any part being found to be defective, the product will be repaired, or at the Company's option replaced, without charge, provided that the product:-

- Has been installed and used in accordance with the instructions given with each unit.
- Has not been connected to an unsuitable electricity supply. (The correct electricity supply voltage is shown on the product rating label attached to the unit).
- Has not been subjected to misuse, neglect or damage.
- Has not been modified or repaired by any person not authorised by the company.

### IF CLAIMING UNDER TERMS OF GUARANTEE

Please return the complete product, carriage paid to your original supplier or nearest Vent-Axia Centre, by post or personal visit. Please ensure that it is adequately packed and accompanied by a letter clearly marked "Guarantee Claim" stating the nature of the fault and providing evidence of date and source of purchase.

The guarantee is offered to you as an extra benefit, and does not effect your legal rights

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For details of the warranty and returns procedure please refer to [www.vent-axia.com](http://www.vent-axia.com) or write to Vent-Axia Ltd, Fleming Way, Crawley, RH10 9YX