

**Sabre Short Case Sickle Fans (VSC)  
Sabre Sickle Plate Fans (VSP)**

**Euroseries Short Cased Axial Fans (ESC)  
Euroseries Axial Plate Fans (ESP)**

Installation and Wiring Instructions



***Vent-Axia***<sup>®</sup>

**ROOF UNITS**  
*from Vent-Axia*

**PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION.  
THESE INSTRUCTIONS SHOULD BE LEFT WITH THE END USER.**



## **READ AND SAVE THESE INSTRUCTIONS**

*PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION. INSTALLATION AND WIRING INSTRUCTIONS SHOULD BE LEFT WITH END USER.*

Air moving equipment may present mechanical, electrical or noise hazards. To minimise risks associated with these potential hazards, it is essential that safety, installation, operation and maintenance instructions are followed. Implementation of these instructions should always be undertaken by technically competent personnel.

Potential mechanical hazards must be eliminated by guarding against access to the rotating parts whilst the air moving equipment is operating. A range of guards are available for this purpose from Vent-Axia.

Installation work, both mechanical and electrical, must be undertaken in accordance with the safety and installation instructions before switching on the unit.

Maintenance work should not be attempted before first switching Off and isolating the fan and its control from the electrical supply and ensuring that it cannot be accidentally turned back on again. It is essential to ensure that rotating parts have come completely to rest before maintenance work commences.

Air moving equipment may generate unacceptable noise levels when in operation. It may be necessary to take appropriate action to reduce sound levels. A range of products are available for this purpose from Vent-Axia.

### **IMPORTANT**

1. All electrical connections should be made by a properly qualified electrician. The fan must be sited and connected in accordance with current IEE Wiring Regulations, BS7671 (U.K.), or the appropriate standards in your country.
2. DO NOT use this appliance when the following are generated or present: Excessive grease or oil laden air, corrosive or flammable atmospheres.
3. When the fan is installed in a room containing a fuel burning appliance, the installer must ensure that the air replacement is adequate for both the fan and the fuel burning appliance.
4. If a fan is used to supply air into a room, the installer must ensure that the fan intake is located at least 600mm away from any flue outlet.
5. site away from direct sources of heat, ambient temperature range -40°C to +70°C.
6. When installing unit, take care not to damage electrical or other hidden utilities.
7. Check the details on the rating label for correct voltage, frequency, speed, phase insulation class and IP rating.
8. Select the correct direction of rotation for the fan.
9. It is the responsibility of the installer to ensure that all aspects of system design are taken into consideration.
10. Due to the weight of larger units it is recommended that two people are involved in the installation.

### **FAN MOUNTING**

#### **CASED AXIAL FANS**

1. A duct mounted in-line fan. Short duct runs terminating close to the fan (i.e. within 1.5m) require suitable guards.
2. The fan can be mounted in a variety of ways and at any angle to suit the application.
3. Plan the installation carefully, taking into consideration the safety points noted above, before securely fixing the fan using appropriate screws, bolts, rubber bushes, etc.
4. A range of accessories are available from Vent-Axia to assist installation including coupling flanges, flexible connectors, mounting feet, anti-vibration mounts and a wire inlet guard.

#### **FORM OF RUNNING**

*Cased fans have arrows showing the direction of impeller rotation and airflow.*

*For reverse running the unit can be turned through 180°.*

*Alternatively, the airflow direction may be reversed by changing over the electrical connections in the fan, but a drop in performance will result.*

## **PANEL MOUNTED AXIAL**

1. The fan is designed to be positioned in a panel or wall aperture.
2. The fan is suitable for mounting at any angle using the corner holes.
3. Ensure the fan impeller rotates freely before and after installation.
4. Plan the installation carefully, taking into consideration the safety points noted above, before securely fixing the fan using appropriate screws, bolts, rubber bushes, etc.
5. If the fan is mounted less than 2.3m high, an external guard must be fitted. A range of Discharge Guards or Louvre Shutters are available from the Vent-Axia accessory list.

## **FORM OF RUNNING**

Panel mounted fans (ex-stock) are supplied for extract use (Form 'A' running). When used for intake, the fan can be wired for reverse running, although performance will be reduced.

## **GENERAL WIRING INSTRUCTIONS**

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

1. All electrical connections should be made by a properly qualified electrician.
2. All wiring and connections must be carried out in accordance with current regulations.
3. It is recommended that an all pole isolator switch is fitted adjacent to the fan for safety during maintenance/servicing.
4. Remove the cover from the terminal box to expose the main terminal block and the thermal protection block (TB). The thermal protection device fitted is an automatic resetting type which must always be included in the circuit. For ducted applications a manual reset is required, an ancillary circuit will be required with the TB switch connected into the circuit.
5. Connect the power supply from the local isolator (via any appropriate controls if fitted) to the terminal box via an appropriate cable gland. Refer to the wiring diagrams and select the appropriate connections for the fan, controller or other devices as being installed. If in doubt please ask.
6. Ensure that all earth connections have been made.
7. After making connections inside the terminal box, replace the cover ensuring that the sealing gasket is in place. Also ensure that all cable gland nuts, grommets etc. have been used correctly to prevent the ingress of water.

## **NOTES ON RUNNING**

### **Before Connecting the power supply and running the Fan Check...**

Are all links and wiring complete as per wiring diagram?.

Are all fixings secure?.

Are all relevant guards fitted?.

Are all Circuit protection devices fitted?.

Are all Terminal box covers and sealing glands secure?

Are all Earth connections secured?

Check that no hazard exists for persons in the locality of the fan. Switch on the fan and check that the fan rotation is correct as per the direction arrows on the fan plate/casing. If not isolate power supply and check wiring. For three phase fans interchange of any two phase leads on the supply will change rotation. Check that the current (amps) taken by the fan does not exceed the current shown on the rating plate.

## **INSTALLER AND ELECTRICAL CONTRACTOR RESPONSIBILITY**

Vent-Axia Ltd, as suppliers of the equipment cannot be responsible for the final installation and electrical connection of the product on site. We have made reasonable effort to offer guidance and assistance but the installer and electrical contractor on site have a responsibility for ensuring the equipment is safely and securely installed and electrically/mechanically safe in accordance with statutory requirements.

The fans are supplied as a component to be incorporated into a ventilation system. The final complete system installation that includes the fans MUST meet the requirements of:-

Low voltage Directive 72/23/CEE

Machinery Directive 89/392/CE

Electromagnetic Compatibility Directive 89/336/CE

If the fan is installed in an area where there is possible danger to safety or health then guards MUST be fitted.

Guards suitable for many applications are available from Vent-Axia Ltd.

Please remember that fans need maintenance, cleaning and inspection. Allow for reasonable access for these operations to be carried out safely.

If in doubt please ask.

## ROUTINE INSPECTION/MAINTENANCE

**THIS MUST BE UNDERTAKEN BY A COMPETENT PERSON.**

**ISOLATE UNIT FROM ELECTRICAL SUPPLY AND ENSURE THAT IT CANNOT BE ACCIDENTALLY TURNED BACK ON.**

1. We recommend that after three months the fan should be inspected and cleaned to remove deposits on the impeller or motor. Thereafter, it should be checked and cleaned periodically as experience dictates, or at least twice a year.
2. If a build up of dirt/deposits is evident then this should be carefully cleaned off. Please take care not to damage the fan or affect the balance of the impeller motor assembly (balance weights may be fitted to the impeller).
3. The fan motors are fitted with 'sealed for life' bearings and should not require maintenance under normal circumstances.

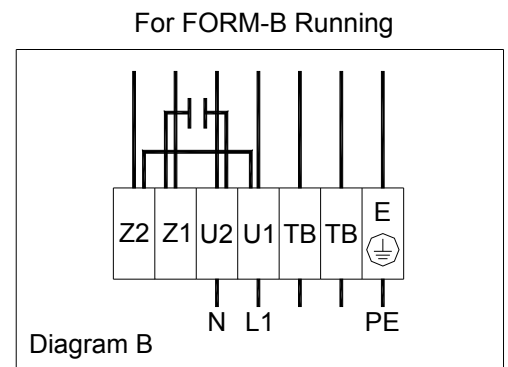
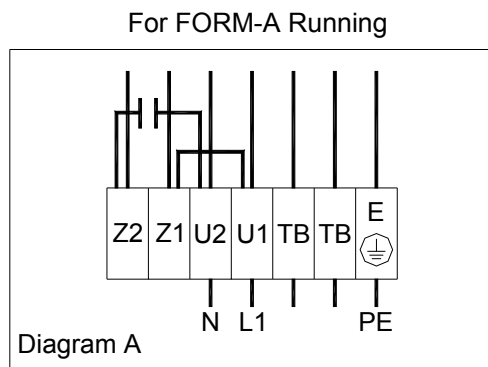
### Wiring Diagrams:

**Important Notes:-** The electrical circuit must be protected with an all pole isolator having a minimum of 3mm contact separation with suitable fuses or circuit breaker.

For ducted applications the Thermal Protector (TB) must be connected into a control circuit in order to ensure that the fan cannot restart before the fault condition is cleared and the circuit manually reset.

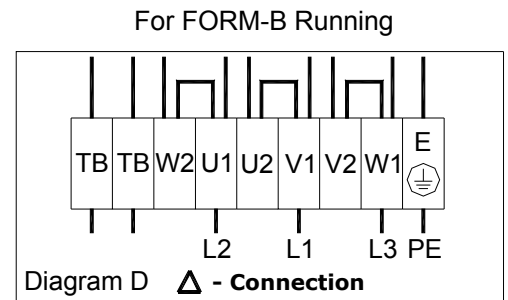
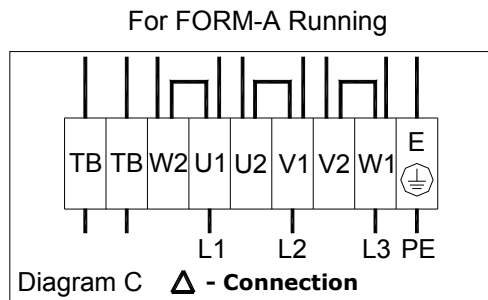
1 ~ Motor with capacitor and Thermal contacts  
Diagrams A & B

	Colours
U1	Brown
U2	Blue
Z1	Black
Z2	Orange
TB	White

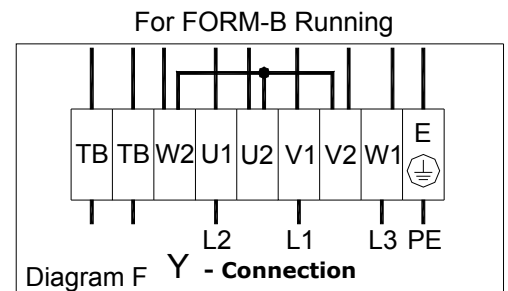
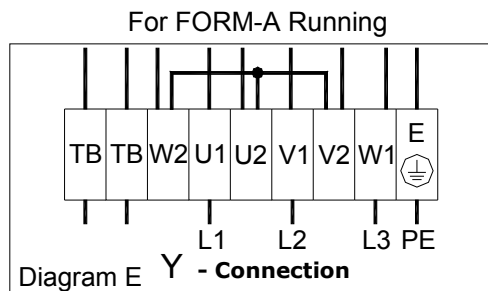


3~Motor with single speed  
And thermal contacts  
Diagrams C,D,E & F.

3~Motor with two speeds by  
Changing Δ/Y and thermal  
Contacts  
Δ = high speed  
Y = Reduced speed  
Diagrams C,D,E & F.



	Colours
U1	Brown
U2	Red
V1	Blue
V2	Grey
W1	Black
W2	Orange
TB	White



Take note of name plate data!

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# Vent-Axia®

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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