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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 Limited guarantees its products for one year from the 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:

1. has been installed and used in accordance with the instructions given with each unit.
2. 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.)
3. has not been subjected to misuse, neglect or damage.
4. 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.

This guarantee is offered to you as an extra benefit, and does not affect your legal rights.

As part of the policy of continuous product improvement Vent-Axia reserves the right to alter specifications without notice.

Vent-Axia®



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Vent-Axia Ltd

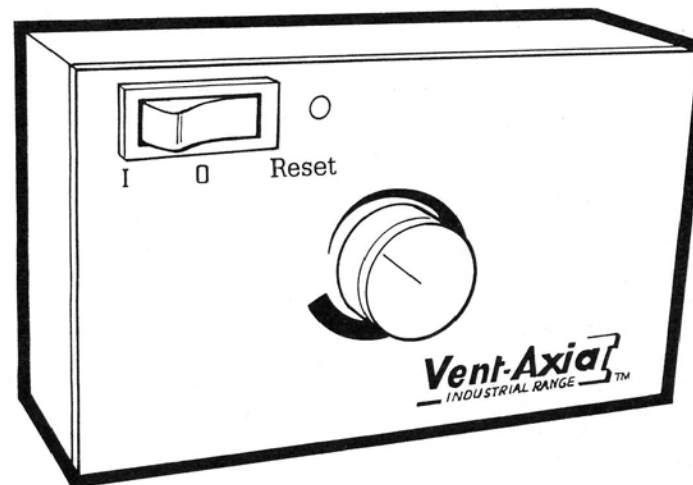
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Vent-Axia®

Single Phase Electronic Speed Controllers

Installation and Wiring Instructions



Models: 103 03 103A
103 03 106A



89/336/EEC
73/23/EEC

Rating: 220-240V ~ 50Hz

103 03 103A running current: 3A starting current: 6A

103 03 106A running current: 6A starting current: 12A

**IMPORTANT –
READ THESE INSTRUCTIONS FULLY BEFORE COMMENCING INSTALLATION.**

1. Ensure that the mains supply voltage, frequency, number of phases and power rating comply with the details on the rating label. Check that the controller can cope with the load (including starting current).
2. All wiring must be in accordance with current I.E.E. wiring regulations (BS7671), or the appropriate standards in your country. The equipment should be provided with a local double pole isolator switch having a contact separation of at least 3mm. We recommend that wiring to the equipment to be made in conduit for added protection.
3. This equipment must be earthed.
4. Ensure safety regulations and practices are adhered to when installing and using this equipment.
5. The controller must not be used where it is liable to be subjected to water spray from hoses, etc., or where the ambient air temperatures may exceed 30°C. Operation up to 40°C is permissible if the controller is derated according to the ambient temperature (see 'Temperature Effect' below).
6. When the fan motor thermal protector terminals (TK or TP) are brought out externally, they **MUST** be connected to the relevant speed controller terminals.

MOUNTING

1. Install the controller in a ventilated area. Suitable for surface mounting only – do not recess mount.
2. If the controller is mounted on metal or other conductive surface; that surface **MUST** be earthed.
3. Remove the lid and keep it in a safe place. Route the supply and outlet cables through 'knock-out' holes in the base. Securely mount the base to the surface using appropriate fasteners.

GENERAL WIRING

WARNING

– ISOLATE MAINS SUPPLY BEFORE MAKING CONNECTIONS
– THIS EQUIPMENT MUST BE EARTHED

When the fan motor thermal protector terminals (TK or TP) are brought out externally, they **MUST** be connected to the relevant speed controller terminals.

1. All electrical connections should be made by a properly qualified electrician.
2. Wire the supply and outlet cables as shown in the wiring diagrams.
3. After making wiring connections, replace the lid onto the base and ensure the cable glands; gasket; etc. are securely located.

NOTES ON RUNNING

Before switching on **CHECK**:

1. All mountings are secure.
2. Circuit protection devices are fitted.
3. Earth connections have been made and are secure.
4. The fan is installed properly and the impeller is free to rotate.
5. All relevant guards are fitted.
6. The controller is in the off position.

Switch on the mains supply and switch the controller on. The neon indicator will glow continuously. Turn the control to maximum and then to minimum to ensure the fan/motor operates accordingly.

Please note the control has a **HARD START** facility which applies the maximum voltage to the motor during the first few seconds at start up.

In the event of a fault condition; i.e. the motor thermal protector has operated, the neon indicator will flash continuously.

When the fault has been cleared, press the 3-position switch to 'RESET' and then to the ON (I) position. The motor will restart and the neon will glow continuously.

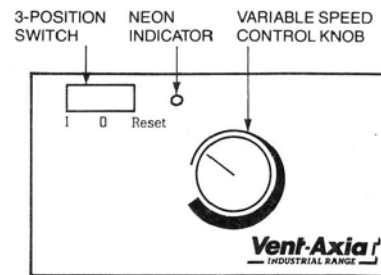
MINIMUM SPEED

The controller has been preset to our recommended value and normally would not require any adjustment.

WARNING – ISOLATE THE MAINS SUPPLY BEFORE CARRYING OUT THE FOLLOWING.

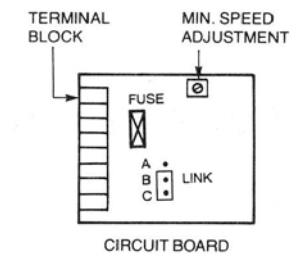
If adjustment is needed; detach the lid from the base to gain access to the potentiometer. Select a new minimum speed by adjusting the position of the potentiometer. Replace the lid and check that the controller operates satisfactorily.

Ensure the fan/motor is NOT stationary at the minimum setting, otherwise the motor will be damaged.



TEMPERATURE EFFECT

If the controller is operating in an ambient temperature of greater than 30°C, the rating of the triac is adversely affected. To compensate for this; the current ratings of the controller must be derated by 2% for every 1°C above 30°C (up to 40°C). E.G. the 103 03 103A should be derated to 2.7A running current and 5.4A starting current at 35°C.



MANUAL RESET

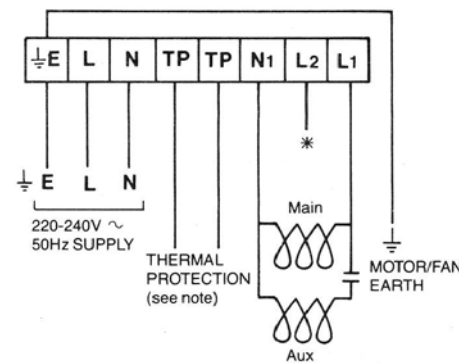
When a fault occurs or when the mains supply is interrupted, it is necessary to manually reset the controller via the 3 way switch before the controller will operate normally. It is possible to disable this feature if desired.

NOTE - MANUAL RESET is a safety feature. It is the installer's responsibility to ensure that its removal does not affect the safe operation of the equipment.

Move the link from position B-C to position A-B to disable manual reset.

WIRING DIAGRAMS

The general wiring diagram using 2 wire control is given below:-



Notes:-

- If the fan motor has no external thermal protector terminals (ie they are internally connected), a link must be connected across the TP terminals on the speed controller.
- * L2 is used **ONLY** when a 3 wire control configuration is used
- A 3 wire control configuration could be used with appropriate motors to obtain a better control characteristic. The motor winding is wired into the L1, L2 and N1 terminals of the controller as illustrated below.

