

**OPERATION AND  
MAINTENANCE  
INSTRUCTIONS**

**METCON  
SINGLE PHASE  
ELECTRONIC  
SPEED CONTROLLER**

**MANROSE®**

**Manrose Manufacturing Limited**

1 Albion close, Slough, Berkshire SL2 5DT

United Kingdom

**Email: [sales@manrose.com](mailto:sales@manrose.com)**

**[www.manrose.co.uk](http://www.manrose.co.uk)**

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

These instructions refer to the following model: -

**METCON: 230V a. c. 50Hz**

**Maximum Operating Current: 1.0A**

**• SAFETY**

All electrical installation must be undertaken by a suitably qualified and competent person and must be carried out in accordance with all relevant Statutory Requirements. Please check the details on the unit rating plate to ensure that the correct power supply (Voltage, Frequency, and Phase) is available. Do not use the speed controllers with an incorrect power supply, overheating and failure of the circuit board will occur.

The controller must not be used when the ambient air temperature may exceed 40°C and where it is liable to be subjected to water spray.

**• INSTALLATION**

The controller is suitable for surface mounting only. Remove front cover and ensure backbox is securely fixed to wall in a well-ventilated area. Route supply and load cables through 'Knock-out' holes provided. If the controller is mounted on a conductive (metal) surface, that surface must be earthed.

**• GENERAL WIRING**

**Warning:- The Control Equipment **Must** Be Isolated From The Power Supply During Installation And / Or Maintenance. The Equipment **Must** Be Earthed.**

Connect the power supply from the local isolator (via any appropriate controls if fitted) and the load supply to the backbox via an appropriate cable gland. Refer to the wiring diagram and select the appropriate connections for the controller and / or other devices as being installed. Ensure that all earth connections have been made.

After completing and checking the connections to the controller replace the front cover ensuring that it is correctly seated in place. Ensure that all cable gland / grommet fixings and lid fixings are tightened correctly to prevent water ingress.

## ● CHECK LIST

- 1) Are all links and wiring complete (refer to wiring diagram)?
- 2) Are all fixings secured?
- 3) Are all protective circuit devices fitted and wired correctly?
- 4) Are all covers and gland fittings secure?
- 5) Are all earth connections secured?
- 6) Check that no hazard exists for persons in the locality of the fan.
- 7) Check that the current (amps) taken by the fan does not exceed the current shown on the rating plate of both fan and controller.

## ● OPERATION

Switch on the mains supply and switch the controller on. The controller on switch will illuminate. Check required rotation of fan and turn the control knob from minimum to maximum to ensure the fan operates correctly.

The minimum speed is preset and does not normally need adjusting. If adjustment is necessary ensure control knob is set to minimum speed, and then remove the front cover to access the adjustment potentiometer (Labeled MIN).

**Warning:- When adjusting potentiometer mains voltage is present. It is the responsibility of the user to ensure compliance with all statutory safety regulations.**

Ensure that at selected minimum speed the fan is rotating otherwise overheating and damage to the fan may occur.

This controller is not fitted with a reset function. In the event of fan failure it is possible for the fan to restart without warning. It is the installer's responsibility to provide adequate safety devices to meet the requirements of all statutory safety regulations.

## ● RESPONSIBILITY

Manrose manufacturing Limited, 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 controller is supplied as a component to be incorporated into a ventilation system. The final complete system installation that includes the controller MUST meet all relevant directives.

## ● GUIDLIINES FOR EMC COMPATABLE INSTALLATIONS

Compliance with EMC directives is only ensured when the product has been correctly installed.

Safety Earthing must always take precedence over additional earthing required to maintain EMC compliance.

Care must be taken when installing cables; those used for inductive loads must be separated from more sensitive cables, e.g. Sensor Cables, Personal Computers and CCTV.

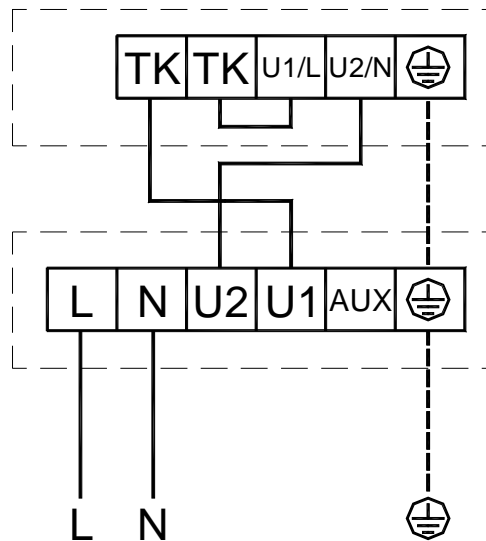
This controller has been designed to operate without the need to use shielded cables between the controller and fan. There may be instances where shielded cable is required, e.g. when sensor cables are in close proximity, and under these circumstances the shielding should be bonded at both ends.

Manrose Manufacturing Limited reserves the right to alter specification without notice.

## Speed Controller and fan (2 wire)

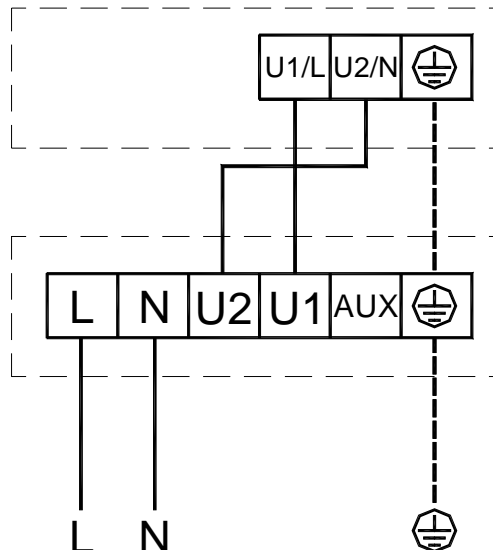
Fan (External Thermal Contacts)

SP Controller  
(U1 – Variable Output Live)  
(U2 – Output Neutral)



Fan (Internal Thermal Contacts)

SP Controller  
(U1 – Variable output Live)  
(U2 – Output Neutral)



Note:- Fan terminals may vary with model. Refer to instructions supplied with the fan for correct terminations.

The AUX connection provides a constant 230V output when the controller is switched on. It can be used to supply control circuits e.g Damper, run indication, or for use with fans requiring 3 wire control (Refer to instructions supplied with fan).

The Controller is fitted with an internal fuse to protect controller wiring and components. It is not designed to provide motor overload protection, additional control equipment is necessary.

**This controller and associated products must be installed by a suitably qualified and competent person in accordance with current applicable regulations.**

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