

NALTM3A-TB

Fan Speed Controller via Remote Signal Installation and Maintenance

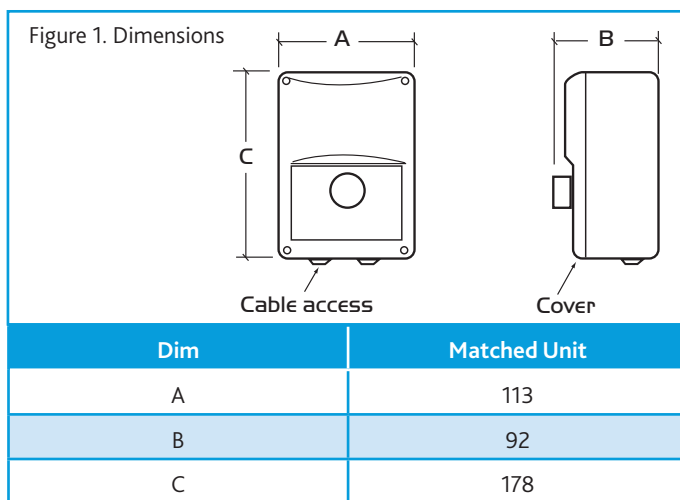


1.0 INTRODUCTION

The NALTM3A-TB electronic speed controller provides an economic means of regulation for voltage controllable single phase AC fan motors. All fan motors used should be internally protected from overheating.

Fan speed is controlled via a remote 0-10Vdc or 0-20mA signal, suitable for BMS connection.

This controller is equipped with Modbus RTU communication and provides a wide range of functionalities, including remote control options, adjustable off level, min. and max. output voltage settings and time-limited motor operation by a logic or switch signal.

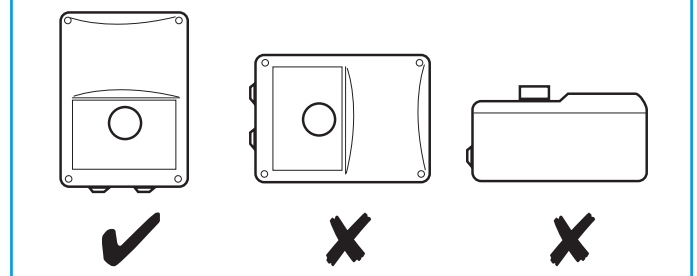


*All dimensions in mm.

IMPORTANT

The installation must be carried out by qualified personnel in accordance with the appropriate authority and conforming to all statutory and governing regulations e.g. IEE, CIBSE, etc. Before commencing work ensure the electrical supply is disconnected.

Figure 2. Mounting Orientation



2.0 INSTALLATION

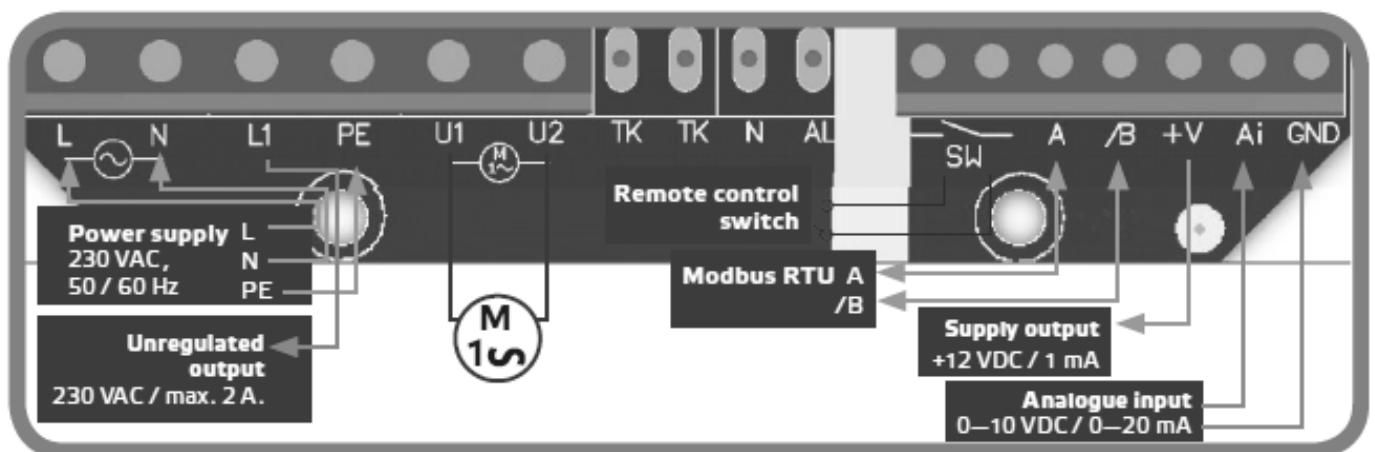
2.1 Mounting the Control

- Turn the front knob to the OFF position.
- Undo the four lid housing retaining screws and remove the lid. Note that the potentiometer is connected to the internal PCB by two wires.
- Select a suitable flat surface. Note the unit must be mounted vertically with the cable entry at the bottom (see Figure 2). Fix the housing to a suitable flat surface, using the four fixing screws and raw plugs provided. Note: the unit must be mounted on a secure, vibration free vertical surface away from direct heat sources or water spray. The maximum permissible ambient temperature is 40°C.
- Feed the cable through the waterproof glands and terminate the cores at the terminal blocks, leaving some slack inside the unit, tighten the cable gland onto the bale to ensure water tightness.
- Set positions of DIP switches and potentiometers for the application.
- Replace lid and tighten lid retaining screws.

2.2 Electrical Information

Voltage: 230Vac 1ph 50Hz
Current Range: 0.3 - 3.0 A
Fuse Rating: 5A

2.3 Wiring - Figure 3. PCB Wiring



3.0 OPERATION

3.1 Adjusting the Minimum Speed

With the potentiometer at minimum, adjust the trimmer screw so that the motor will continue to run and also restart smoothly in the event of a power fault.

Note: the minimum speed is factory set at 100V (We recommend a minimum voltage of 70V). Refit cover and check operation.

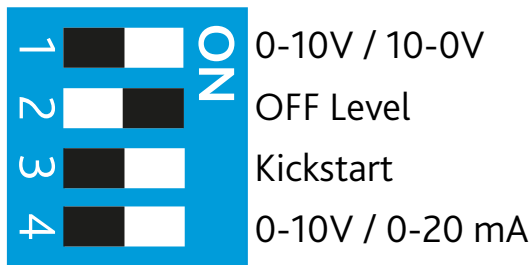
Figure 4. Potentiometers



3.2 DIP Switch settings

The default DIP switch settings of this controller are as per Figure 5

Figure 5. DIP Switch Setting



Criteria	DIP Switch	Setting
Ascending / Descending mode selection	1	ON – Descending mode (10-0 Vdc / 20-0 mA)
		OFF – Ascending mode (0-10Vdc / 0-20 mA)
OFF level selection	2	ON – Enabled
		OFF - Disabled
Kick / soft start selection	3	ON – Kick start
		OFF – Soft start
Input mode selection	4	ON – Current mode
		OFF – Voltage mode

There are two working modes, internally selectable on the PCB by switching DIP switch number 3 ON or OFF (see Figure 5).

Kick Start: The motor will always start (or restart) at max. speed for 8-10 seconds, after that the motor speed automatically follows the position of the potentiometer.

Soft Start: The motor starts according to the position of the potentiometer.

3.3 LED Indication

When the green LED on the front cover gives out a continuous light, the controller operates in normal mode. When it blinks the controller either operates in remote control mode or OFF level is enabled and the analogue signal is below the OFF level value.

3.4 Changing the Fuse

The fuse is located on the internal control plate (see drawing below). Remove knob and cover, lift out the fuse holder with a screwdriver. Use only the correct value fuse, fast ceramic with a high breaking capacity. Use of incorrect fuse will void warranty.

4.0 MAINTENANCE

4.1 Cleaning the Unit

The control requires no maintenance other than cleaning. For light dirt or grime disconnect supply and clean with a dry or slightly damp cloth. For heavy dirt or grime disconnect supply and use a proprietary non-aggressive cleaning agent. Ensure that the unit is completely dry prior to reconnecting the power supply.

4.2 Warranty

The unit has a three year warranty and includes parts and labour for the first year, the remaining 2 years warranty covers replacement parts only. The warranty starts from the date of delivery and covers faulty materials or workmanship and includes parts and labour.

This warranty is void if the equipment is modified without authorisation, is incorrectly applied, misused, disassembled, or not installed, commissioned and maintained in accordance with the details contained in this manual and general good practice.

The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuair International Sales office for further details.

4.3 After Sales Enquiries

For technical assistance or further product information, including spare parts and replacement components, please contact the After Sales Department.

Telephone 02920 858 400
aftersales@nuaire.co.uk