



Speed Controls

NALSC 3A, 6A & 10A for single phase motors

Installation Guide

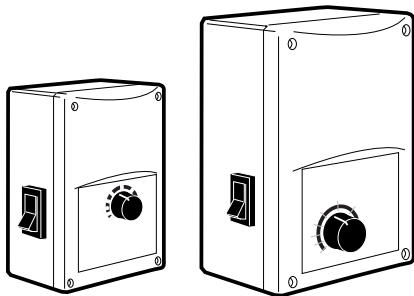


Figure 1. NALSCI-3A, 6A & 10A controls.

Important

The installation must be carried out by qualified personnel in accordance with the appropriate authority and conforming to all statutory and governing regulations eg. IEE, CIBSE, COHSE etc.

Isolation

Before commencing work ensure the electrical supply is disconnected.

Electrical information

Voltage: 230V ac 1 ph 50/60Hz

Model	Current range	Fuse
NALSCI-3A	0.3 - 3.0 A	F5 A
NALSCI-6A	0.5 - 6.0 A	F8 A
NALSCI-10A	1.0 - 10.0A	F16A

Installation

Mounting the control

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.

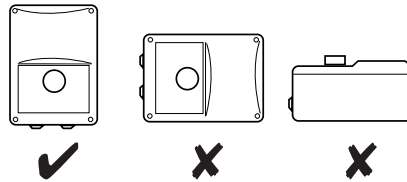
Turn the front knob to the OFF position. Remove the front cover (4 screws). Note that the potentiometer is connected to the internal PCB by two wires. Select a suitable flat surface. Note the unit must be mounted vertically with the cable entry at the bottom (see figure 2). Mark through the casing rear fixing holes (cable access at bottom). Drill and plug the mounting surface as necessary. Mount the case using suitable fixing screws (not supplied). Bring the motor and mains cables (these must be of a correct diameter size for the purpose) through the case glands or grommets and connect to the controls terminal block as shown. Restore mains supply and switch control on.

Adjusting the minimum speed

See fig. 6. 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.

Correct mounting

Figure 2.



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

Control application

This control is only for use with single phase fans suitable for speed control. The fan motor used should be internally protected from overheating.

In case of faulty operation

Check that the correct voltage is applied and that all connections are correct. Check the fan to be regulated is functional. Check the fuse at the fusebox. Check the fuse in the control.

Connection Diagram

Figure 3. Control terminals

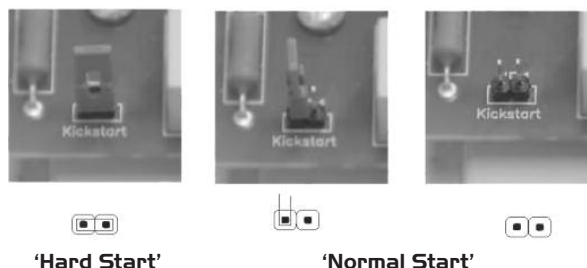


- L = Mains LIVE connection.
- N = Mains NEUTRAL connection
- X = Unregulated 230V output (or switch live to eg. damper)
- N = Motor NEUTRAL
- LI = Regulated output to motor
- ⊕ Earth
- ⊖ Earth

There are two working modes, internally selectable by placing or removing the red jumper on the PCB (see Figure 4).

1. **'Hard' 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.
2. **'Normal' start:** the motor starts according to the position of the potentiometer.

Figure 4.

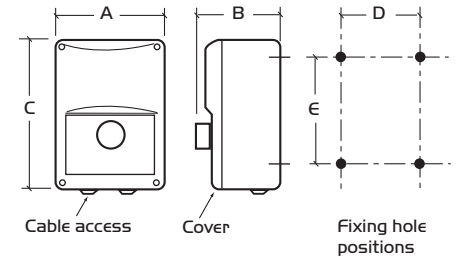


'Hard Start'

'Normal Start'

Dimensions (mm)

Figure 5.

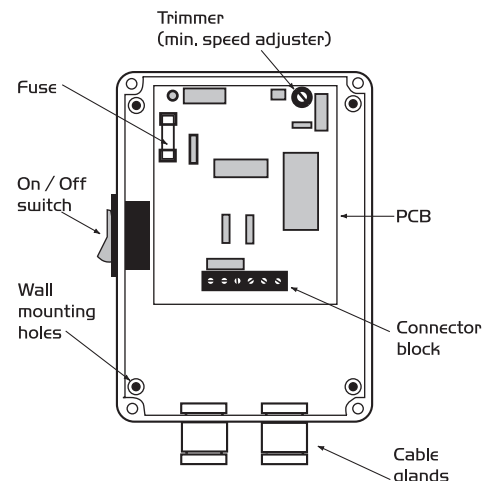


Dim	3A	6A & 10A
A	83	115
B	73	95
C	160	195
D	71	98
E	108	138

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.

Figure 6. Inside controller (10A model shown).



Maintenance

The control requires no maintenance other than cleaning. Disconnect supply and clean with a damp cloth. Do not spray any cleaning fluids onto the control.