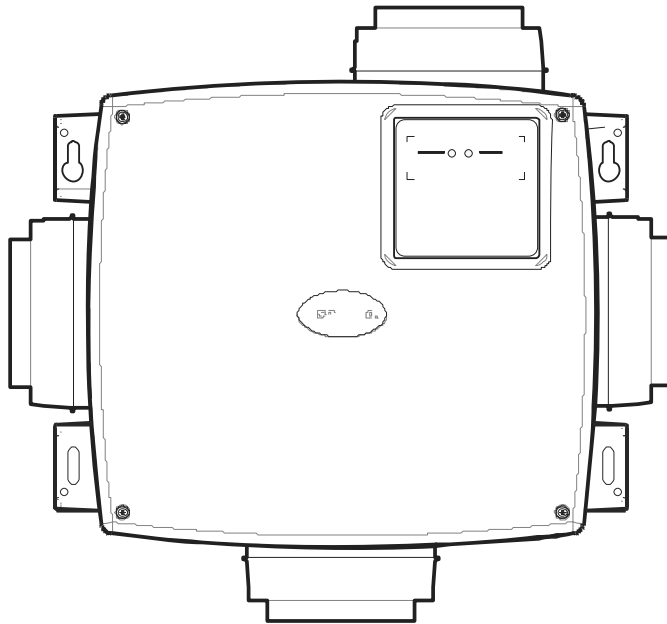


MANROSE®

Lo-Watt Manivent AC

Whole-house extract system
Installation and Wiring Instructions

MANI3000N



PLEASE READ INSTRUCTIONS IN CONJUNCTION WITH THE ILLUSTRATIONS.
PLEASE SAVE THESE INSTRUCTIONS

IP22



Installation and Wiring Instructions for the ManiVent MANI3000N.

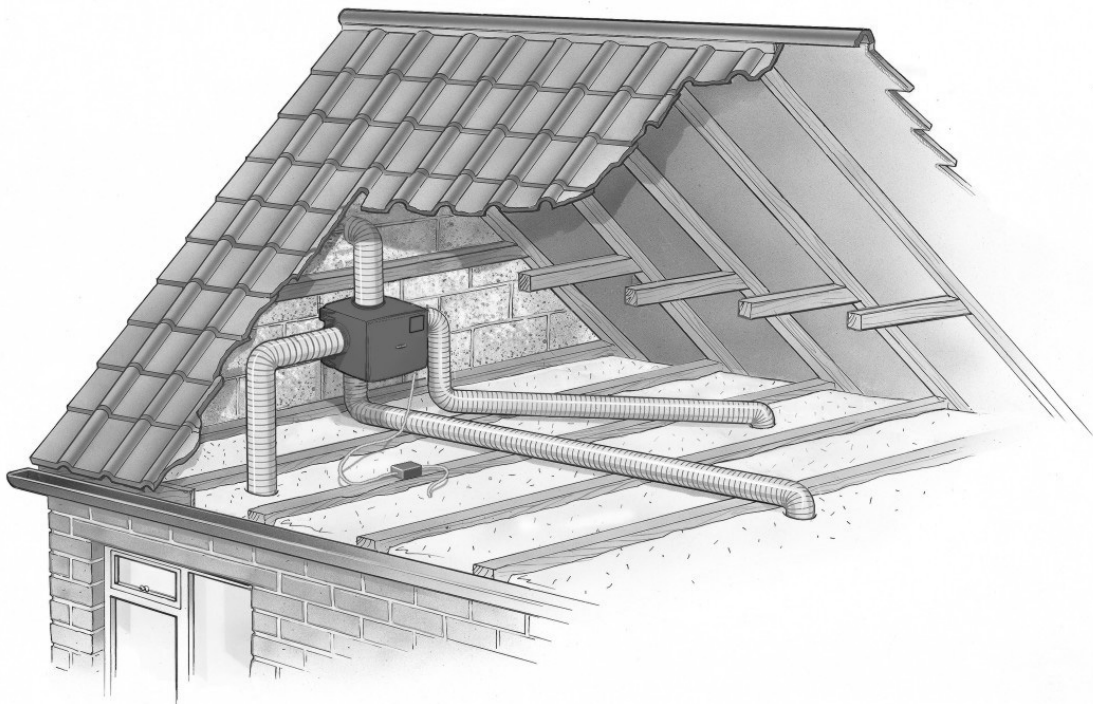


**IMPORTANT:
READ THESE INSTRUCTIONS BEFORE COMMENCING THE INSTALLATION**

SAFETY AND GUIDANCE NOTES

1. DO NOT install this product in areas where the following may be present or occur:
 - 1.1. Excessive oil or a grease laden atmosphere.
 - 1.2. Corrosive or flammable gases, liquids or vapours.
 - 1.3. Ambient temperatures higher than 40°C or less than -5°C.
 - 1.4. Possible obstructions which would hinder access or removal of the Fan.
2. All wiring to be in accordance with the current I.E.E. Regulations, or the appropriate standards of your country and MUST be installed by a suitably qualified person.
3. The fan should be provided with a 3A fused, isolator switch capable of disconnecting all poles, having a contact separation of at least 3mm.
4. Ensure that the mains supply (voltage, frequency, and phase) complies with the fan's rating label.
6. When the fan extracts air from a room containing an open flue of a gas or fuel burning appliance, precautions must be taken to avoid the back-flow of gases into the room.
7. The fan should not be used where it is liable to be subjected to direct water spray.
8. The fan should be mounted at the highest point in the system to protect it from condensation build up.
9. This fan should be vented to the outdoors.
10. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
11. Children should be supervised to ensure that they do not play with the appliance.
12. PLEASE NOTE: Some older fluorescent and low energy lighting products can interfere with other electronic/timing circuits. For reliable operation of timers use post 2000 low energy bulbs or tungsten filament bulbs in the room lighting circuit.

TYPICAL INSTALLATION



A. INTRODUCTORY NOTES

The **MANI3000N** is an M.E.V (Mechanical Extract Ventilation) unit designed for simultaneous extract ventilation of multiple areas such as bathrooms, kitchens and toilets. The **MANI3000N** employs a highly efficient backward curved centrifugal motor impeller set and is designed for continuous 24-hour use.

The **MANI3000N** has 3 speed settings, High, Medium and Low, these are not adjustable. The speeds are selectable via the 2 LS inputs.

The product will run at Normal speed unless the input from an accessory calls for a change to Boost or Purge speed.

For the **MANI3000N** the Boost setting is activated using a switched live supply (LS input). The other remaining LS input can be used to switch the unit to Purge speed.

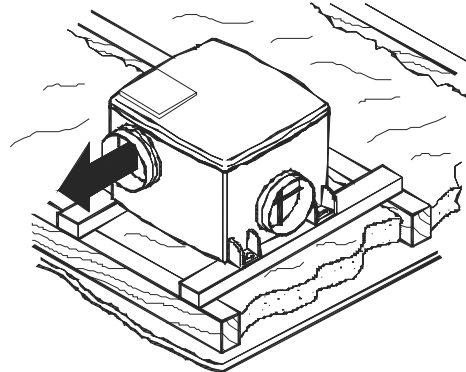
B. SITING

DO NOT install this product in areas where the following may be present or occur:

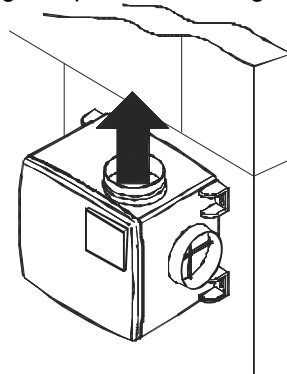
- Excessive oil or a grease laden atmosphere.
- Corrosive or flammable gases, liquids or vapours.
- Ambient exhaust air temperatures higher than 40°C or less than -5°C.
- Relative humidity above 90%
- Possible obstructions which would hinder the access or removal of the Unit.
- Sudden ductwork bends or transformations close to the Unit.

The **MANI3000N** can be mounted in 3 orientations for convenient installation in roof voids with a height $\geq 250\text{mm}$.

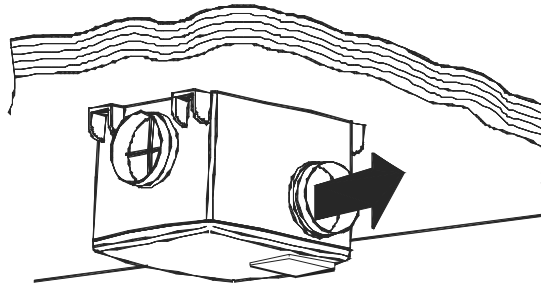
a). **Base mounted Installation** with ducting radiating out horizontally.



b). **Vertically mounted Installation** with the exhaust spigot at top. The electrical connections must come out of the bottom of the unit in order to maintain the water ingress protection rating.

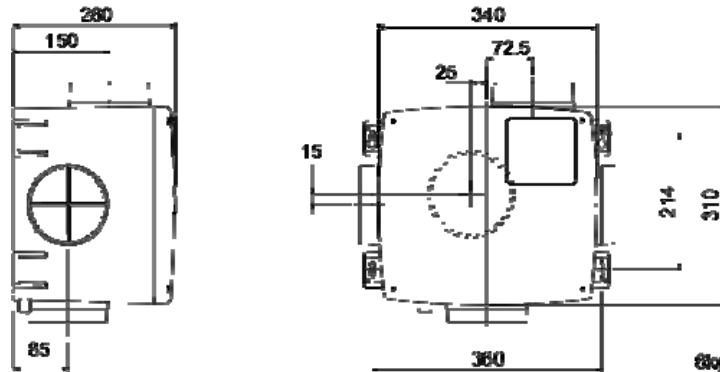


c). Ceiling mounted Installation.



See the dimensional details below for the mounting hole positions.

-Spigot diameters are 125mm



C. INSTALLATION

To reduce the system resistance in your duct system, and therefore lower the speed, power consumption and noise of the fan, please follow these instructions:

- Keep the length of duct runs to a minimum, particularly the exhaust duct run.
 - Use larger diameter ducting rather than smaller.
 - If you need to use flexible ducting, make sure that it is fully extended and not crushed, sagging or torn.
 - Try to minimise the use of dampers by having similar length duct runs to the inlets.
 - The bend radius, (measured to the inside of the bend), should be at least 1x the duct diameter. The larger, the better.
 - Avoid having any bends, filters or other obstructions within 250mm of the fan inlets and outlet.
1. Position the **MANI3000N**, taking into consideration the position of the rooms to be ventilated, the exhaust position, the drainage position and the electrical services. Ensure there is adequate access for installation and maintenance. Securely mount the **MANI3000N** through the mounting brackets on the casing using the appropriate anti-vibration mounts, screws, washers, rubber bushes etc.
 2. Ducting passing through an unheated space should be insulated.
The **MANI3000N** can be connected to either Ø125mm or Ø100mm ducting. Remove the blanking caps to connect Ø125mm ducting. To connect Ø100mm ducting, peel out the centre of the cap with a screwdriver as indicated on the cap and leave the cap surround in position.
Please note that the exhaust duct must always be Ø125mm ducting.

D. WIRING



WARNING: THE MANI3000N AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION / OR MAINTENANCE.

THE MANI3000N UNIT MUST BE EARTHED.

Access to the MANI3000N connection terminals is under the top cover which is retained by four screws. Ensure that the mains supply voltage, frequency, number of phases and power rating comply with the details on the rating label positioned under the top cover.

All wiring must be in accordance with local and/or national electrical codes as applicable or the appropriate standard in your country (BS7671 in the UK). The MANI3000N must be supplied through a double-pole isolating switch, having a contact separation of not less than 3mm. Cable clamps are provided for use with the cable or flex on entry into the MANI3000N. The MANI3000N has three speed settings.

To meet the stated energy efficiency rating, the MANI3000N range should be connected so that it can run at all three speeds, with at least two sensor inputs. A possible wiring arrangement is shown in Figure 2.

1. Connect mains supply as (Fig. 1 and 2 below)
2. Check that all connections have been made correctly. Ensure that all terminal screws and cable clamps are securely fastened.
3. The cable entry must be made using a suitable grommet or cable gland.
4. Replace cover using the 4 screws provided. Switch the mains supply on and check the system is operating correctly.

Fig.1.
Wiring for speed selection.

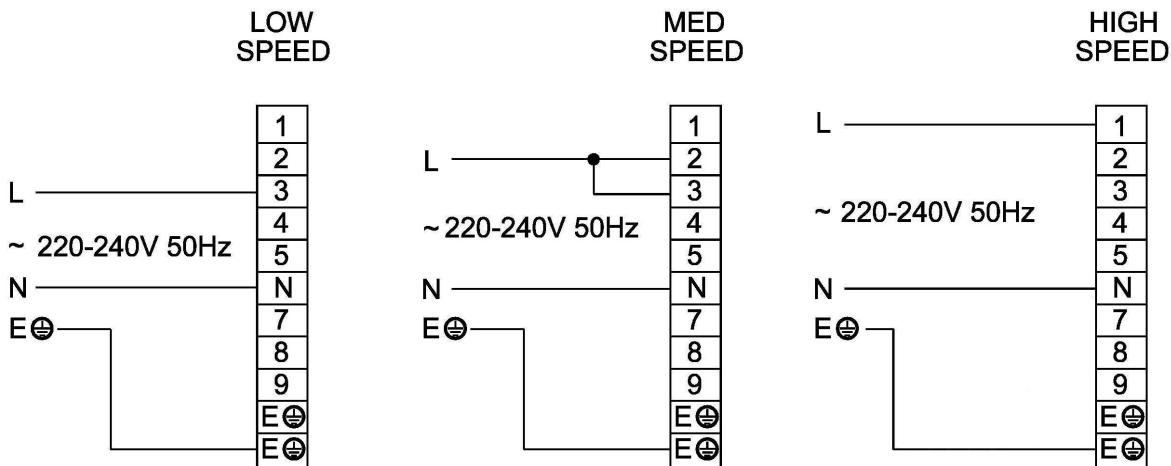
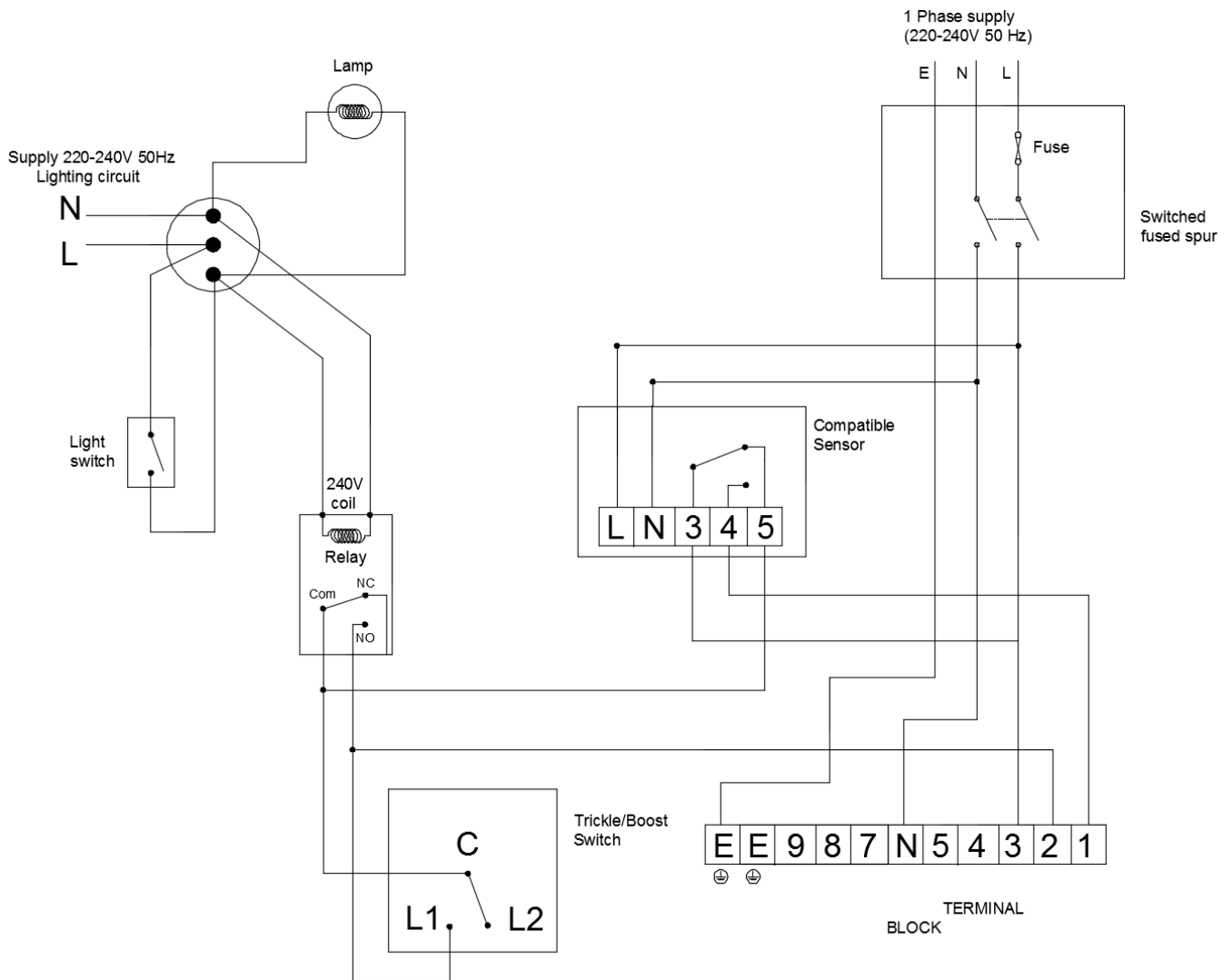


Fig.2.
Example wiring for 3 speeds with three external sensors



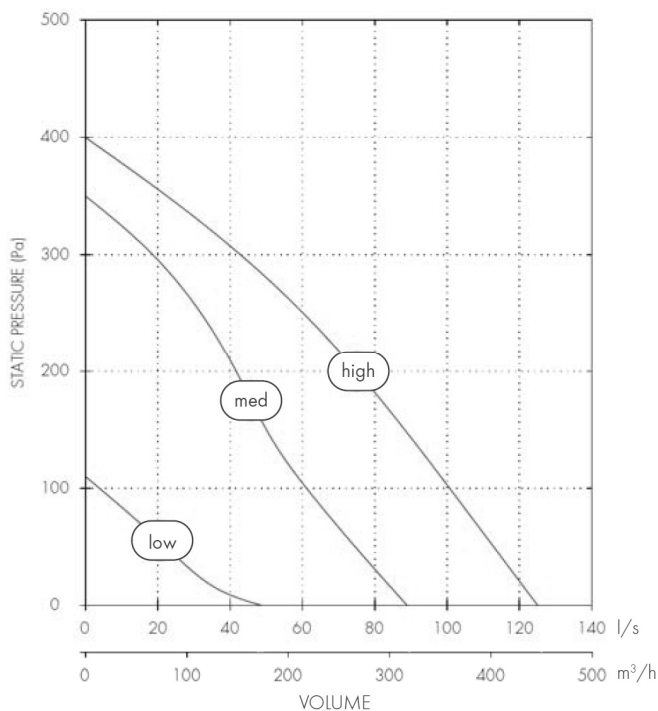
E. OVER-HEATING PROTECTION

The MANI3000N motor is fitted with Standard Thermal Overload Protection. This will automatically switch the fan Off in the event of a fault condition.

If this occurs isolate the MANI3000N, check for and remove any obstruction, leave for a short time for the motor to cool before reconnecting. If this recurs, Isolate the MANI3000N and call a service engineer.

F. COMMISSIONING

Select the speed needed based on the size and ventilation requirements of the dwelling.



G. SERVICING AND MAINTENANCE.

This product contains a self-cleaning backward curved impeller that requires no servicing.

The fan has sealed for life bearings, which do not require lubrication.

H. PRODUCT FICHE

This product contains a self-cleaning backward curved impeller that requires no servicing.

Name:	Manrose
Model ID (Stock Ref.) :	MANI3000N - LDC
SEC Class	C
SEC Value ('Average')	-25.71
SEC Value ('Warm')	-10.21
SEC Value ('Cold')	-52.78
Label Required? (Yes/No=Out of scope)	Yes
Declared as: RVU or NRVU/UVU or BVU	RVU/UVU
Speed Drive	Multi-Speed
Type HRS (Recuperative, Regenerative, None)	None
Thermal Eff: [(%), NA(if none)]	N/A
Max. Flow Rate (m3/h)	489.6
Max. Power Input (W): (@Max.Flow Rate)	63.3
LWA: Sound Power Level (dB)	51.53
Ref. Flow Rate (m3/s)	0.10
Ref. Pressure Diff. (Pa)	185
SPI [W/(m3/h)]	0.16
Control Factor & Control Typology: (CTRL/ Typology)	
Control Factor; CTRL	0.65
Control Typology	Local Demand Control
Declared: -Max Internal & External Leakage Rates(%) for BVUs or carry over (for regenerative heat exchangers only), -&Ext. Leakage Rates (%) for Ducted UVUs;	<5% Internal, <5% External
Mixing Rate of Non-Ducted BVUs not intended to be equipped with one duct connection on either supply or extract air side;	N/A
Position and description of visual filter warning for RVUs intended for use with filters, including text pointing out the importance of regular filter changes for performance and energy efficiency of the unit	N/A
For UVUs (Instructions Install Regulated Supply/Extract Grilles Façade)	In F&W
Internet Address (for Disassembly Instructions)	www.manrose.co.uk
Sensitivity p. Variation@+20/-20 Pa: (for Non-Ducted VUs)	N/A
Air Tightness-ID/OD-(m3/h) (for Non-Ducted VUs)	N/A
Annual Electricity Consumption: AEC (kWh/a)	1.03
Annual Heating Saved: AHS (kWh/a)	
AHS: Average	28.30
AHS: Warm	12.80
AHS: Cold	55.36