



Opus 30, 12V

Surface & Recessed Domestic Extract Fans

Installation and Maintenance

Opus Fans

The Nuaire range of Opus 12V fans have been specifically designed to ventilate bathroom, shower rooms, where the unit is to be mounted in the 'splash zone'. Mounting options include Surface/Semi-recessed and Recessed.

The units discharge air through a 100mm diameter outlet spigot and have provision for adding a 50mm dia. subsidiary inlet to extract air from a second room.

Air entering the units passes through a washable filter fitted to the front cover. Anti-backdraught shutters, retained in the closed position when fan is not running, are fitted to the base plate.

Motor has sealed, self lubricating bearings and "heatseeker" thermal overload protection. The fan/motor assembly is retained by spring clips to simplify maintenance.

As a safety feature the fan/motor assembly is automatically disconnected when the electronic control module is removed.

I.O Fan Installation

Installation must be completed by competent persons, in accordance with good industry practice and should conform to all governing and statutory bodies i.e. IEE, CIBSE, COHSE etc.

I.1 Surface Mounting

Wall or ceiling (B range)

It is assumed that a solid non reverberant mounting position has been selected and passages for ductwork from the outlet spigot, to subsidiary inlet spigot (if a second room is to be ventilated) as well as electrical connection prepared. In addition compatible ductwork has already been installed.

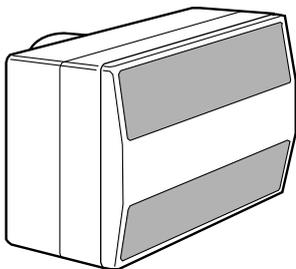


Figure 1. General view of unit

NB. Base drill pattern superimposed on page 2.

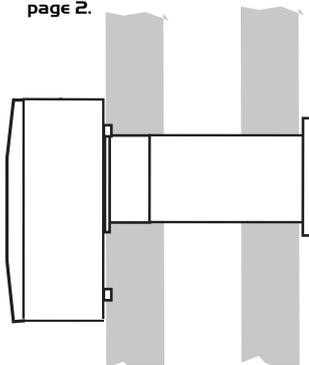
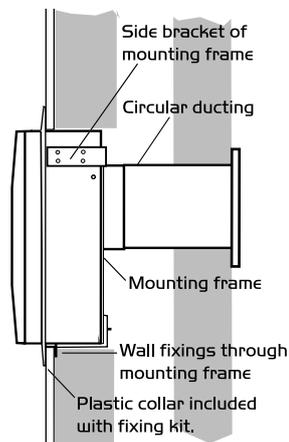


Figure 2A. Surface mounted in wall.

Figure 2B. Semi-recessed using fixing kit No.770984. (See figure 9. for installation of kit).



IMPORTANT

Isolation - Before commencing work make sure that the unit is electrically isolated from the mains supply.

1. Unpack the fan and separate the two halves of the unit by releasing the two clips on either side of the case. Release the two internal clips and remove the fan unit. (Figure 3). Remove the cover and filters which are packed separately and retain for

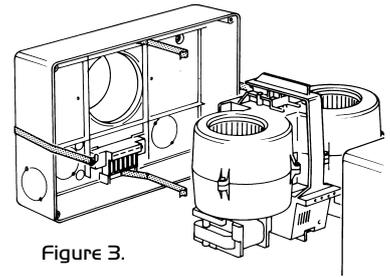


Figure 3.

later use. Use the base as a template and mark the discharge spigot and mounting holes onto the mounting surface.

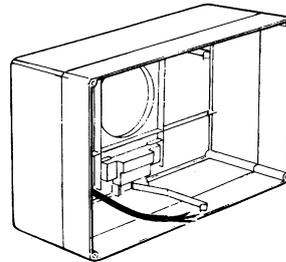


Figure 4. Cable entry.

2. Prepare the area and connect the base spigot to compatible ductwork. Secure to the surface taking care not to twist or distort the case by over tensioning whilst offering the appropriate supply cable through the selected cable entry.

3. Remove the electrical socket/terminal block from the case, then connect wiring to the internal terminal block socket.

4. If a second room is to be served, remove the circular weakened area in the case side, and pass the subsidiary inlet spigot through the hole from inside the case. Turn the spigot one quarter of a turn to lock. (Figure 5).

Note: Two room ventilation requires an optional subsidiary spigot kit- code OPUS-D-KIT. The kit incorporates a subsidiary spigot, inlet grille, flexible ducting and balancing plates.

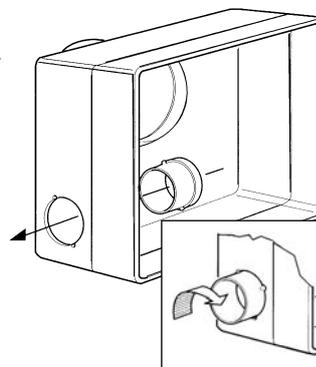
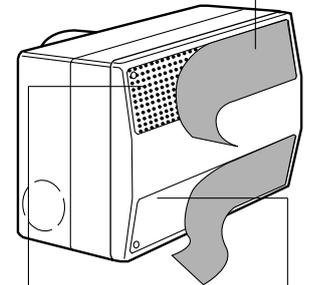


Figure 5.

5. Fit the fan module to the base, matching the plug to the internal socket. Ensure that the pull cord is passed through the case, (Figure 4) then secure via spring clips.

6. Complete the installation by securing the cover and fit filters into front cover recesses. Test run.

Washable filters.



Perforated airflow balancing plate. Blank plate fitted to the bottom grille.

Figure 6. Fitting balancing plates.

1.2 Recessed Mounting

Wall or ceiling (R range)

With optional fixing kit No. 770984

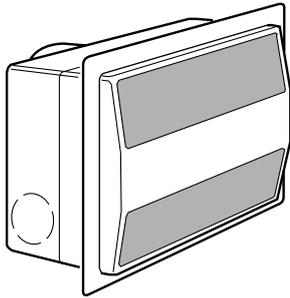


Figure 7. General view of Recessed unit.

1. An opening of 327mm wide x 245mm deep should be prepared in the surface mounting position to accept the fan case and fixing kit brackets.

2. The depth of the recess should be at least 25mm more than the dimension from the back of the unit to the rear face of the skirt.

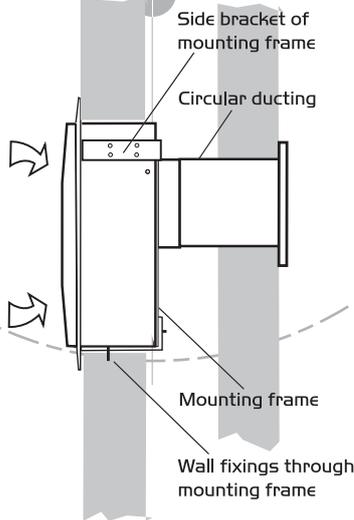
3. Assemble the fixing kit mounting frame by attaching the three legs to the 'Y' shaped frame.

4. Position the assembled mounting frame into the prepared aperture, then trim the ends of the brackets so that they are flush with the wall. (See figure 5). Secure the brackets with suitable fixings (by others).

5. Offer up the casing of the fan to the mounting frame, inserting the fan outlet spigot through the hole in the frame into the end of the compatible ductwork and fix using tape (by others). Figure 9. Fix the fan case to the frame using the three screws supplied.

Note: Remaining installation procedures for recessed mounting are contained in points 1 - 6 for surface mounting installation.

Figure 8. Recessed mounted in wall.



IMPORTANT

Isolation - Before commencing work make sure that the unit is electrically isolated from the mains supply.

Figure 9. Recessed/Semi-recessed frame kit mounted in wall aperture.

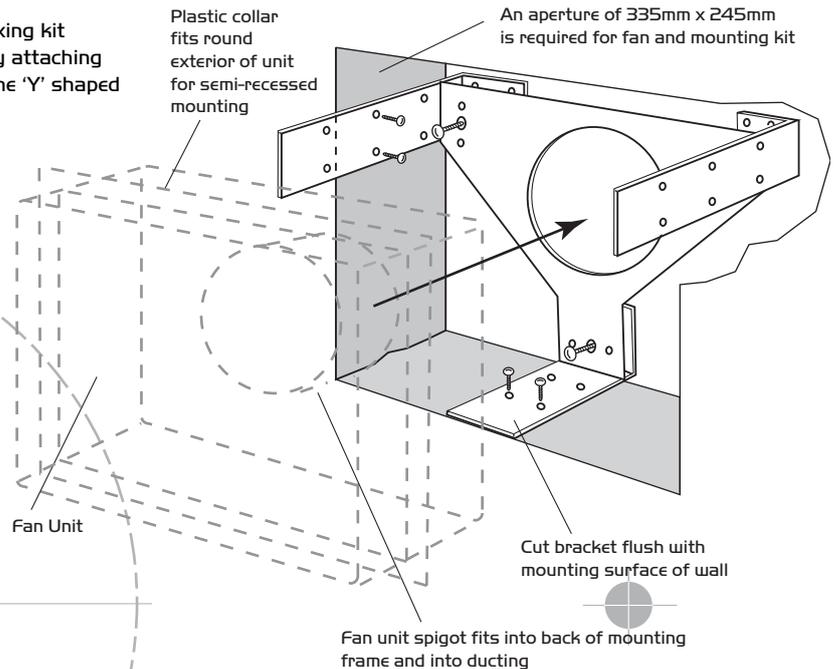
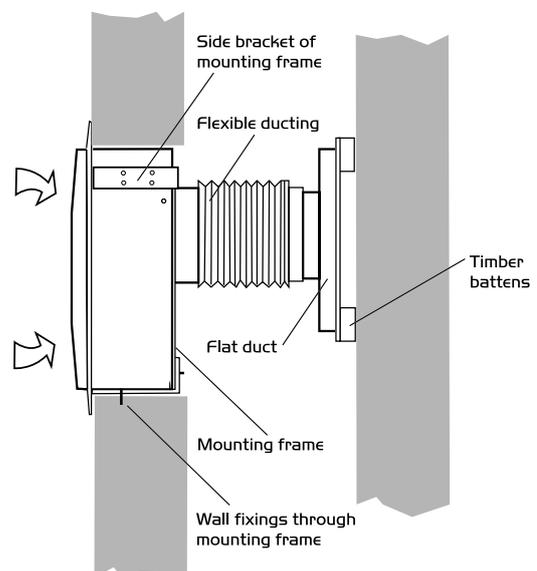


Figure 10. Flat duct installation.



1.3 Installing into flat ducting

With optional fixing kit No. 770984

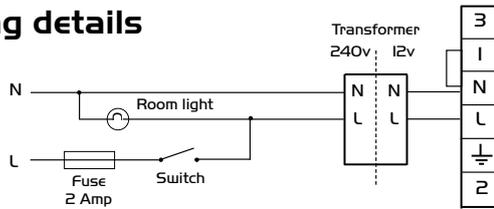
Note. It is assumed that the flat duct is already fitted with a plenum section incorporating a 100mm dia. spigot.

1. First proceed with installation procedures as recessed mounting description on fixing kit.

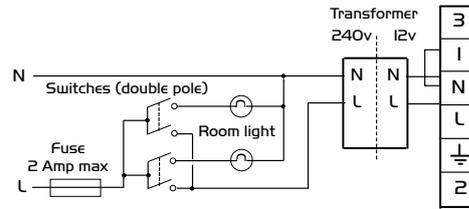
2. Feed the 100mm flexible ducting (supplied) through the rear of the mounting frame and fit to the spigot on the flat duct plenum.

3. **Note:** the remaining installation procedures for flat ducting mounting are as points 1 - 6 for surface mounting installation.

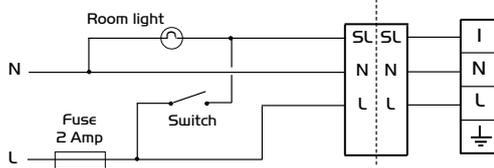
2.0 Wiring details



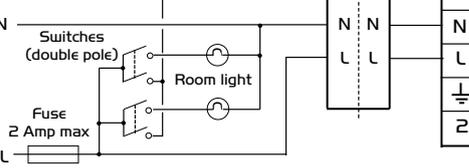
RS12/BS12 Unit ventilating one room.



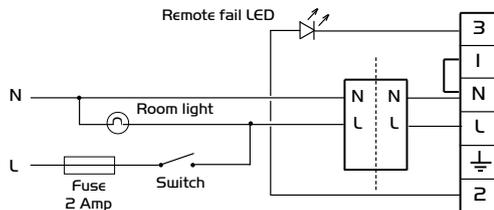
RS12/BS12 Unit ventilating two rooms.



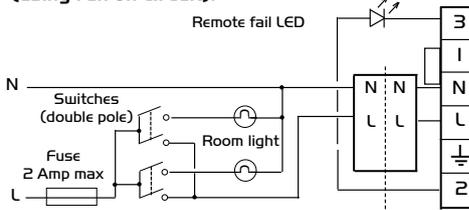
RS12/BS12 (using run on circuit).



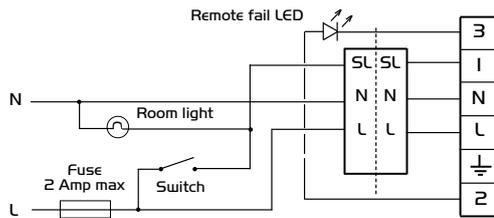
RS12/BS12 Unit ventilating two rooms (using run on circuit).



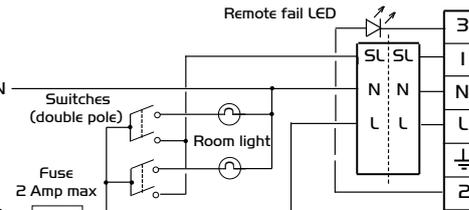
2RAS12/2BAS12 (no run on timer).



2RAS12/2BAS12 Unit ventilating two rooms (no run on timer).



2RAS12/2BAS12 Unit ventilating one room (using run on circuit).

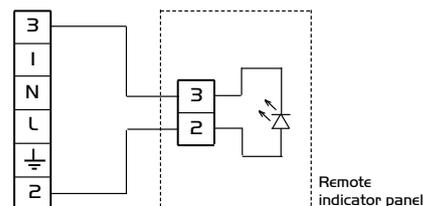


2RAS12/2BAS12 Unit ventilating two rooms (using run on circuit).

IMPORTANT

Isolation - Before commencing work make sure the unit is electrically isolated from the mains supply. Means for double pole disconnection must be incorporated in the fixed wiring in accordance with the wiring regulations.

Fan terminal block



Wiring details for remote indicator.

Installation notes for wiring sizes

It is important to note that the size of wire used between the transformer and the fan unit can have an adverse effect on the units performance if the following table is not adhered to.

Mains Supply: (230v)	0.5mm sq.
----------------------	-----------

Transformer to fan

Cable run (max. 10 metres)	Cable size
Up to 2m	0.75mm sq.
Up to 4m	1.00mm sq.
Up to 6m	1.50mm sq.
Up to 10m	2.50mm sq.

Power Consumption

Unit input power (watts)	28.0
Full load running current (amps)	3.5
Starting Current (amps)	4.4
Transformer input power (watts)	35.0
Full load running current (amps)	.24
Starting Current (amps)	.35

IMPORTANT

12V fan units are rated IPX4 and must be installed in accordance with these instructions and IEE Wiring Regulations BS7671 for SELV installations.

3.0 Coding

Surface Mounted (B) range

BS12	Single fan unit incorporating a run-on circuit.
2BAS12	Twin unit incorporating both run-on and fan failure detection/change over circuits.

Recessed Mounted (R) range

RS12	Single fan unit incorporating a run-on circuit.
2RAS12	Twin unit incorporating both run-on and fan failure detection/change over circuits.
No. 770984	Recessed frame kit.

Isolation - Before commencing work make sure that the unit and Nuairé control are electrically isolated from the mains supply.

Installation of Transformer Enclosure

The enclosure containing the transformer is intended to be mounted out of sight (e.g. in a loft, cupboard, under floorboards etc.). However, if this is not possible the transformer enclosure should be mounted as close to the ceiling, or as far from the "splash zone" as possible (see below for definition of the splash zone). As can be seen from the table of wiring sizes, it is advisable to place the enclosure as close to the fan as possible to reduce the costs of wiring and assist in installation.

'Splash zone'

The 'Splash Zone' can be considered to be an area within a bathroom or shower room where a person using the bath or shower can effectively reach. An arms reach is defined as 0.6 metres from the edge of the bath or shower up to a height of 2.25 metres.

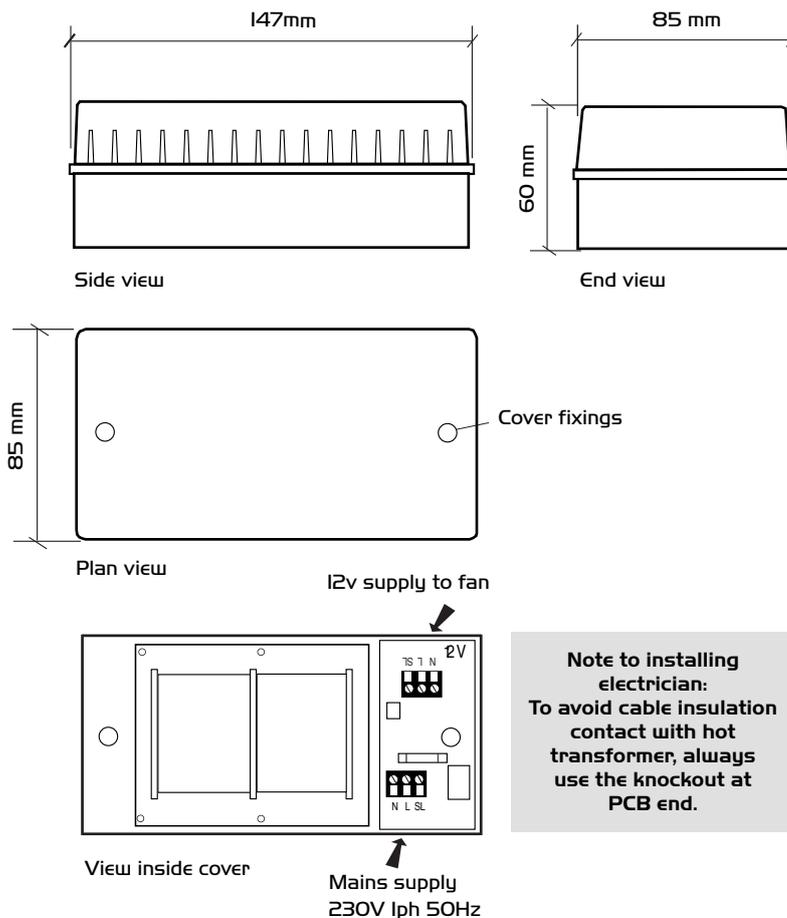
Procedure

1. Remove two screws securing the cover and remove the cover.
2. Position the base enclosure on mounting surface and route cables through knockouts, the fixing points on the mounting surface and secure using suitable fixings (by others).
3. Connect wiring as shown.
4. Replace cover.

Keep vents clear of obstruction.

Note: No earth is to be connected between transformer and fan.

Figure I2. 12V Transformer details.



Note to installing electrician:
To avoid cable insulation contact with hot transformer, always use the knockout at PCB end.

IMPORTANT
12V fan units are rated IPX4 and must be installed in accordance with these instructions and IEE Wiring Regulations BS7671 for SELV installations.

4.0 Maintenance

General

A washable filter is fitted to protect the fan/motor assembly from towel lint, talc etc. and to prolong the life of the unit. However, some fine dust may find its way through the filter and could build up on the motor and/or impeller. It is therefore strongly recommended that all units are inspected and cleaned at least every six months.

Procedure

At all times take care not to damage, distort or disturb the balance of the impeller. Remove the filter and the electronic control module. Spring aside the two clips and remove the fan module. Inspect and replace any damaged items.

Using a soft brush or dry cloth remove dust and dirt from the fan module. Wash front cover in warm soapy water and dry thoroughly. Re-fit fan and electronic control module, replace front cover and secure with screws. Wash filter on tepid water to which a little mild detergent has been added. Shake out excess water and allow to dry naturally. Replace filter and refit the retaining screws. Test run the unit.

Replacement of Parts

Should any component need replacing Nuairé keep extensive stocks for quick delivery. When ordering spare parts, please quote the serial number of the unit and the ARC number of the purchase if possible. **(This information will be available on the fan label).**

3 Year Warranty

The 3 year warranty starts from the day of delivery and includes parts and labour for the first year.

The remaining 2 years covers replacement parts only. This warranty is conditional on planned maintenance being undertaken.

Service Enquiries

Nuairé can assist you in all aspects of service. Our service department will be happy to provide any assistance required, initially by telephone and if necessary arrange for an engineer to call.

Telephone 029 2085 8585
Fax 029 2085 8586

Technical or commercial considerations may, from time to time, make it necessary to alter the design, performance and dimensions of equipment and the right is reserved to make such changes without prior notice.