

# NUAIRE

## Genie / tops 12Volt

### Toilet & Bathroom Extract Fan

#### surface & recessed mounting\*

# Installation and Maintenance

## NUAIRE

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Leaflet No. 670612

NOVEMBER 2001

\* A optional window mounting kit is available for this unit, code ref: **WIN-KIT**. When installing the unit in a window, use the instructions supplied with the kit.

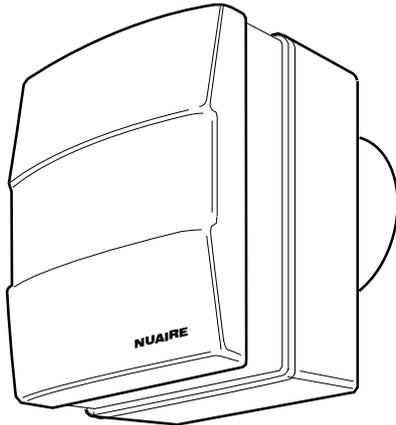


Fig. 1. General View

### Introduction

The Genie / TOPS 12 volt range of toilet and bathroom units has been designed not only to meet the requirements of the building regulations, document F1 1990, but also that of the 16th edition IEE Wiring Regulations On Site Guide.

The units are designed to ventilate bathrooms / shower rooms etc where the unit is to be installed in the "splash zone" (See installation section).

Measuring a compact 200mm x 173mm x 120mm the units deliver 25 l/s via a 100mm dia. outlet fitted in the back panel.

Air entering the unit 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.

The motor has sealed, self lubricating bearings and "heat-seeker" thermal overload protection.

The fan/ motor assembly is retained by spring clips to simplify maintenance.

Interchangeable plug - in electronic control modules can incorporate :-

- Run - on timer
- Humidistat
- Continuous low duty with boost.

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

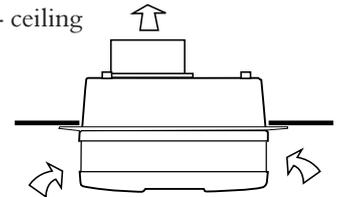
The remote safety isolating transformer, manufactured to BS3535, is mounted in a robust enclosure to prevent damage to the transformer and switched live circuit board. The cover is vented to provide effective heat distribution and prevent condensation.

### WARNING

**WHEN INSTALLING GENIE UNITS FOR REMOTE SWITCHING IT IS IMPORTANT THAT THE PULLCORD (IF FITTED) IS REMOVED. IT IS RECOMMENDED THAT THE UNIT IS SWITCHED OFF (BY MEANS OF THE PULLCORD) BEFORE CUTTING. CUT THE PULLCORD INSIDE THE UNIT A LITTLE WAY BEYOND THE CONTROL MODULE.**

### Typical Installations

Semi - recessed mounted - ceiling



Surface mounted - wall

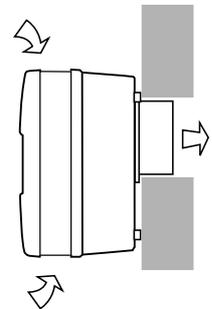


Fig.2 Typical Installations

### Installation notes:

#### 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 2 m.....	0.75mm sq.
----------------	------------

Up to 4 m.....	1.00mm sq.
----------------	------------

Up to 6 m.....	1.50mm sq.
----------------	------------

Up to 10 m.....	2.50mm sq.
-----------------	------------

### Installation Notes (continued)

#### '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.

See page 5 'Installation of Transformer'....

### Installation

*(To be carried out by qualified personnel only).*

#### Surface Mounting

Note. It is assumed that a solid non reverberant mounting position has been selected and the necessary passages for ductwork from the outlet spigot, as well as the electrical connection prepared. It is also assumed that compatible ductwork has been installed.

#### Isolate the electrical supply by switching it off at the mains and removing fuses.

1. Remove cover/grille assembly by depressing the top & bottom retaining tabs.(fig. 3)
2. Remove the plug-in electronic control module (fig.4).
3. Remove the fan/motor assembly by pulling aside the two springclips.
4. Place the unit in the desired mounting position, connect the ductwork and feed the cable through the cable entry.
5. Secure the unit in position, using three wood screws (No. 6).  
Note! It may be necessary to drill and plug the mounting surface; it is the responsibility of the installer to select the correct wall plug for the particular application.
6. Fit the fan assembly to the case, securing it with the two spring clips. Install the electronic control module ensuring that it is fully engaged in the internal socket. If the pull-cord option is required it should be fed through the aperture on the impeller housing before sliding the control module into place. Fig. 5. (If the pullcord option is not required it must be removed, see the warning note on page 1).
7. Replace the front cover and secure using the two screws provided loose with the filter and instructions. Ensure pull cord (if fitted) passes through the slot in the base. Fig. 5.
8. Fit the filter which is a push fit between the front cover and the body of the unit (fig. 3).
9. Test run the unit noting that if a timer/humidistat option is fitted, the unit may run-on for the duration of the control sequence.

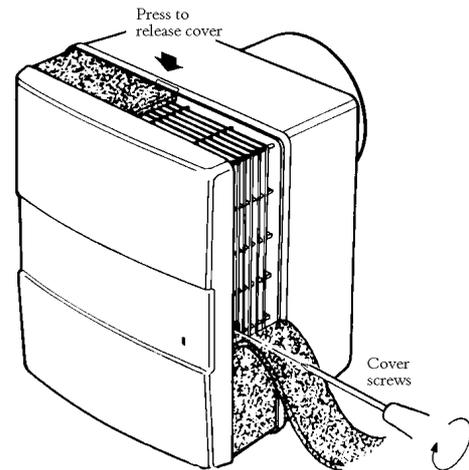


Fig. 3. Removing/replacing the front cover.

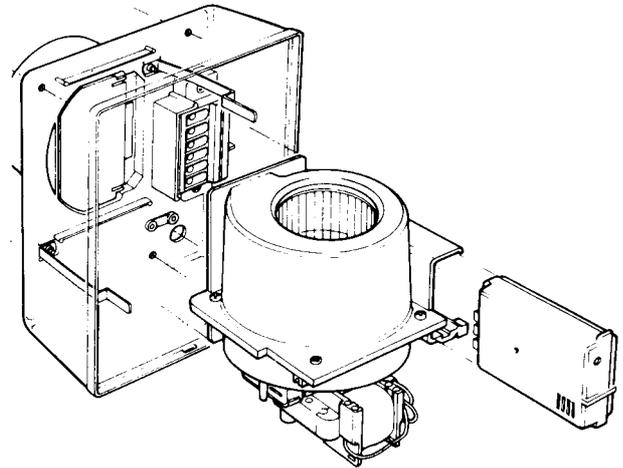


Fig. 4. Electronic control module and Fan/Motor assembly

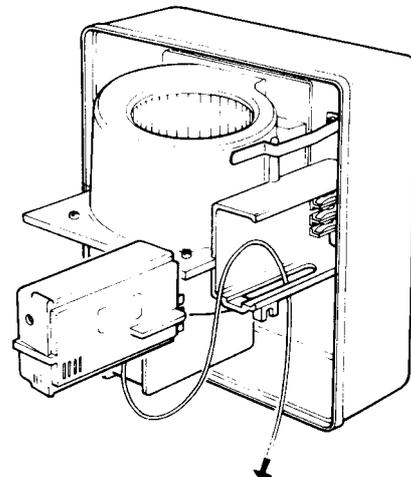


Fig. 5. Feeding the pull-cord through the housing.

### Semi - recessed mounting

#### IMPORTANT NOTE

**Remove the shutters from the spigot if you are mounting the Genie/ Tops unit in the ceiling.**

1. Prepare an opening 184mm x 213mm. This will allow sufficient clearance (approx. 5 to 10mm) all around the unit to accept the fixing bracket (optional). Note. Do not exceed the quoted dimensions, as an aperture larger than 208mm x 238mm will not be covered by the finishing plate. Again it is assumed that a solid, non-reverberant mounting position has been selected and the necessary passages for ductwork from the outlet spigot as well as the electrical connection prepared. It is also assumed that compatible ductwork is already installed.

2. Position the mounting bracket (Fig. 7.) in the previously prepared aperture so that the ends of the bracket are flush with the surface of the wall. Secure the bracket with suitable fixings (by others) see Fig.8.

3. Remove the front cover /grille assembly (Refer to surface mounted version for details).

4. Position the finishing plate (fig. 8) on the base of the unit. Place unit base and finishing plate in the mounting bracket and feed the supply cable through the casing aperture. Engage the outlet spigot in the ductwork and fix the casing to the bracket using the screws supplied.

5. Connect the wiring to the internal terminal block / socket.

6. Fit fan module to the base

7. Fit the electronic control module, ensuring that it engages with the internal socket. Note: If pullcord option is required, the cord should now be fed through the aperture and into the small slot in the base. see Fig.5. (If pullcord is not required it must be removed, see warning note on page 1).

8. Replace and secure the front cover (two screws provided) and refit the filter.

9. Test run the unit. Note! If a timer / humidistat option is fitted, the unit may run on for the duration of the timer control sequence when power is initially switched on..

### Maintenance

**(General notes for the 'End User'/ Maintenance Engineer).**

#### 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 if allowed will 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.

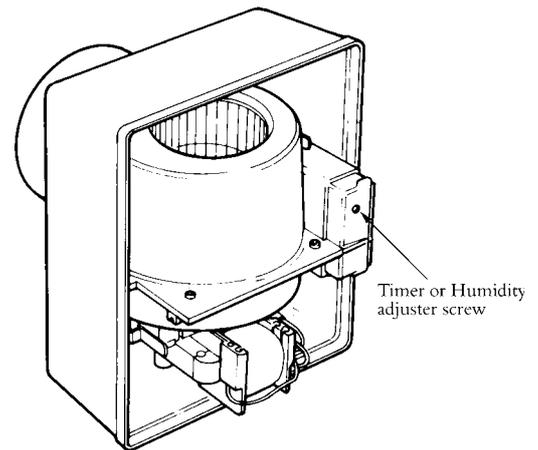


Fig. 6. Internal view. Note the adjusting screw for both timer (S) and humidistat (H) modules is located in the position shown.

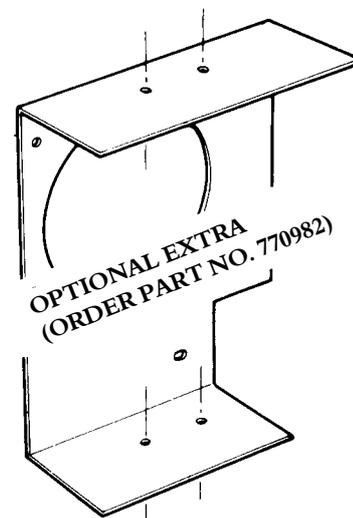


Fig. 7. Mounting bracket for semi-recessed application.

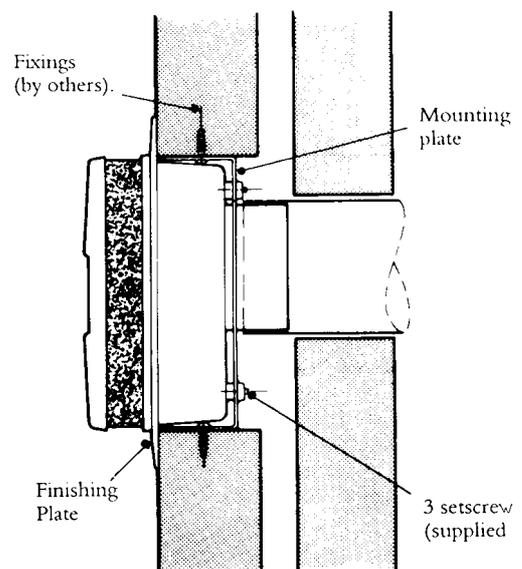


Fig. 8. Mounting details (semi-recessed).

## **Isolation**

**BEFORE CARRYING OUT ANY WORK ON THE UNIT IT IS ESSENTIAL TO ISOLATE IT FROM THE MAINS SUPPLY.**

## **Procedure**

At all times take care not to damage, distort or disturb the balance of the impeller. Remove the filter and front cover as previously described. Remove the electronic control module. Spring aside the two clips and remove the fan module. Visually inspect all parts, replace any damaged items. Using a soft brush or dry cloth remove any dust and dirt from the fan module. Stubborn dirt may be removed by careful use of a soft scraper. 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. Refit the retaining screws (fig 3). Test run the unit.

## **Run - on timer and humidity set point**

### **Run - on timer**

When installing a unit with run-on timer the adjuster should initially be turned fully anti-clockwise. (This equates to a run-on of approximately 5 minutes).

Isolate unit from supply and remove front cover. Locate the electronic control module situated to the right of the fan / motor assembly. Using small screwdriver, turn the adjuster to the fully anti-clockwise position. Adjustment to the timer can be made subsequently to suit individual preferences. Turn timer clockwise to increase run on time - maximum run on time is 30 minutes.

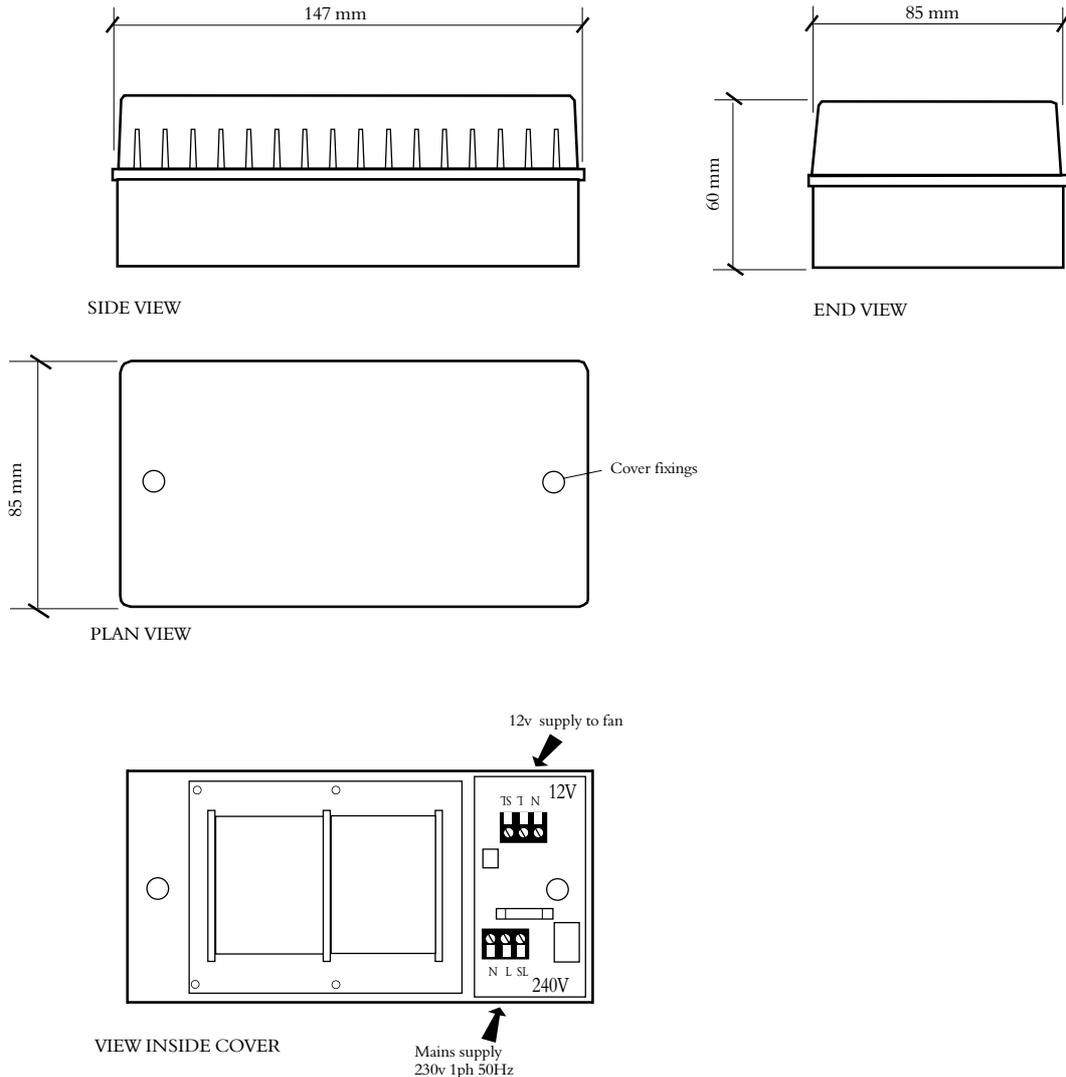
### **Humidistat**

By adjusting the humidity set point it is possible to adjust the humidity level at which the fan operates. NOTE: The set point is adjusted to maximum at the factory prior to delivery. Isolate the unit from the supply and remove the front cover, locate the electronic control module situated to the right of the fan / motor assembly. Use a small screwdriver to turn the adjuster, clockwise to sense a higher humidity level or anti-clockwise to sense a lower level.

When initially running a Genie / TOPS unit with the humidistat option the humidity adjustment control will be adjusted to maximum (fully clockwise). Start the fan and after approx. 30 minutes the fan will switch off. Adjust the humidity set point downward (by turning the control anti-clockwise) until the desired level is achieved.

The fan will cut in when the humidity level in the room is reached.

Fig.7  
12v Transformer  
dimension details.



### Installation of Transformer enclosure (12 Volt units only)

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 on page 1, 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 0.6metres 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. Mark 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.

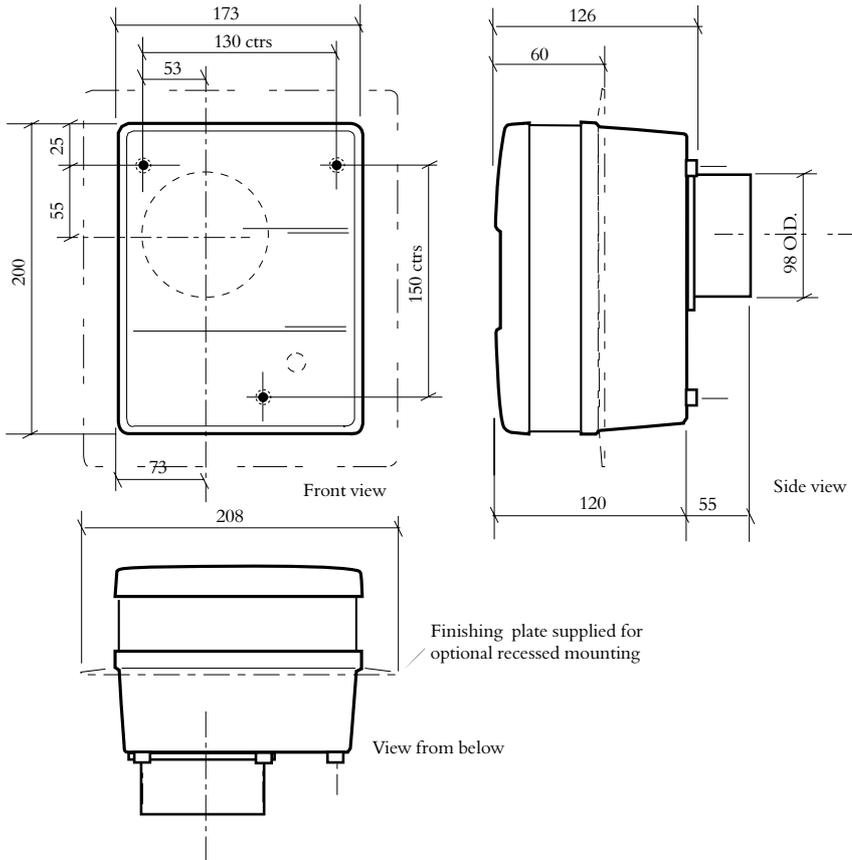
#### NOTE:

**NO EARTH IS TO BE CONNECTED BETWEEN TRANSFORMER AND FAN**

# Installation and Maintenance

## GENIE/TOPS 12V EXTRACT FANS

### Dimensions



### Coding

#### GENIE / TOPS-12

ON/OFF control, operated by pull cord or alternatively by remote switch\* (lightswitch or similar).

#### GENIE/ TOPS - S12

With integral run-on timer, operated by remote switch \* only.

#### GENIE/ TOPS - H12

With integral humidistat, operated by pull cord or remote switch\*

#### GENIE/ TOPS - X12

Continuous low duty with boost facility operated by remote switch\*

**Note:** Genie / TOPS units are supplied with a finishing frame for use in semi-recessed applications.

\* Remote switch by others

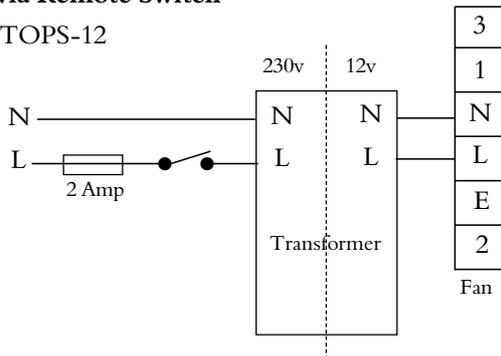
#### WINKIT

Optional window mounting kit.

### Electrical information

#### Wiring via Remote Switch

GENIE/TOPS-12



#### Power Consumption:

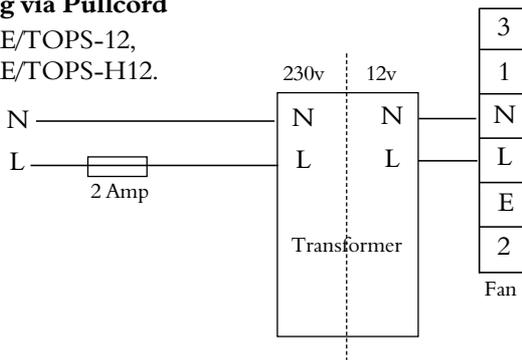
Unit input power (watts) ..... 42  
 Full load current (amps) ..... 4.2  
 Starting Current (amps) .... 4.4

#### Transformer input power:

Input power (watts) ..... 67.0  
 Full load current (amps) ..... 0.34  
 Starting Current (amps) .... 0.35

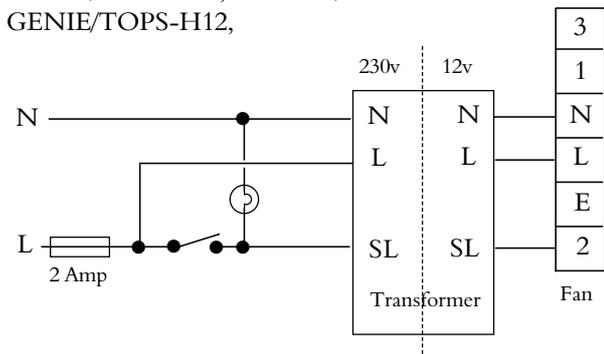
#### Wiring via Pullcord

GENIE/TOPS-12,  
 GENIE/TOPS-H12.



#### Wiring via Remote Switch

GENIE/TOPS-S12, GENIE/TOPS-X12  
 GENIE/TOPS-H12,



**NUAIRE**



**DECLARATION  
OF CONFORMITY**

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Caerphilly, Mid Glamorgan,  
CF83 1XH. United Kingdom.  
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DECEMBER 1999

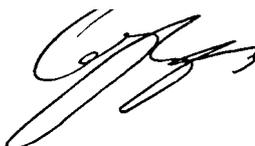
*We declare that the unit named below  
conforms to the requirements of EC Council Directives  
relating to Electromagnetic Compatibility and  
Safety of Electrical Equipment.*

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<b>Designation of machinery :-</b>	GENIE / TOPS
<b>Machinery Types :-</b>	12v EXTRACT FAN
<b>Relevant EC Council Directives :-</b>	89/336/EEC, 92/31/EEC (EMC) 73/23/EEC, 93/68/EEC (Low Voltage Directive)
<b>Applied Harmonised Standards :-</b>	E50081-1, EN50082-1, EN60204-1 EN60335-2-80
<b>Basis of Self Attestation :-</b>	Quality Assurance to BS EN ISO 9001 BSI Registered Firm Certificate No. FM 149

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**Signature of manufacture representatives :-**

	<b>Name:</b>	<b>Position:</b>	<b>Date:</b>
1)	 C. Biggs	Technical Director	3. 2. 00
2)	 W. Glover	Manufacturing Director	3. 2. 00

### Service

As a manufacturer NuAire provides you with factory trained Service Engineers.

Our Engineers are supported by a comprehensive range of spare parts 'off the shelf.'

If you are an industrial or commercial user, you may be interested in details of NuAire's regular maintenance Service Contracts. This is a worthwhile service that helps you get the most from our products.

Our Service Department will be happy to give you more information.

Telephone: **029 2085 8585**

### Controls Application Service (CAS)

A team of Engineers and technicians is available to provide pre and post order support.

We are on hand to provide help and advice from the most basic use of any NuAire equipment to the more complex applications, maximising on the versatility of our control products.

Telephone: **029 2085 8585**

Facsimile: **029 2085 8586**

### 3 Year Warranty

The three year warranty starts from the date of delivery and includes parts and labour for the first year.

The labour element is subject to full, free and safe access to the equipment as recommended by the CDM regulations.

The remaining two years covers replacement parts only.

#### NOTE:

**Installation & Maintenance of the equipment must be as directed in the instructions provided with the unit.**

*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.*

# NUAIRE

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NB

If you have any comments or queries on any of our products or services please write to the Product Information Manager at the main address opposite