



GENIE

Universal Surface Mounted Fans Installation Manual



1.0 SAFETY INFORMATION

- The provision of the electrical supply and the connection of the unit to the electrical supply must be carried out by a qualified electrician in accordance with latest edition of the wiring regulations.
- Isolate from power supply before removing any covers. During installation / maintenance ensure all covers are fitted before switching on the mains supply.
- All-pole disconnection from the mains as shown in the wiring diagram must be incorporated within the fixed wiring and shall have a minimum contact separation of 3mm in accordance with latest edition of the wiring regulations.
- 230V Genie units must be earthed.
- Ducting must be securely fixed to the spigot to prevent access to live parts. Duct runs terminating close to the fan must be adequately protected by suitable guards.
- Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.
- This appliance should not be used by children or persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning the safe use of the appliance by a person responsible for their safety. Children shall not play with the appliance. Cleaning and user maintenance shall not be carried out by children.

1.1 Hazard Symbols



GENERAL WARNING

Signifies a general warning regarding hazard specified by supplementary information.



ELECTRIC SHOCK

This unit must be completely electrically isolated before any panels are removed. Check mains supply and control connections.



ROTATING PARTS

This unit contains fast moving rotational parts which may start automatically. It is the sole responsibility of the installer to adequately guard these components.



REFER TO INSTRUCTION MANUAL

Read and understand the installation and maintenance manual before installing, operating or maintaining this product.

1.2 Important Information

This manual contains important information on the safe and appropriate assembly, transport, commissioning, operation, maintenance, disassembly and simple troubleshooting of the product.

While the product has been manufactured according to the accepted rules of current technology, there is still a danger of personal injury or damage to equipment if the following general safety instructions and the warnings contained in these instructions are not complied with.

- **Read these instructions completely and thoroughly before working with the product.**
- **Keep these instructions in a location where they are accessible to all users at all times.**
- **Always include the operating instructions when you pass the product on to third parties.**

1.3 Personal Protective Equipment

The following minimum Personal Protective Equipment (PPE) is recommended when interacting with Nuaire product:

- **Protective Steel Toed Shoes** - when handling heavy objects.
- **Full Finger Gloves (Marigold PU800 or equivalent)** - when handling sheet metal components.
- **Semi Fingerless Gloves (Marigold PU3000 3DO or equivalent)** - when conducting light work on the unit requiring tactile dexterity.
- **Safety Glasses** - when conducting any cleaning/cutting operation or exchanging filters.
- **Reusable Half Mask Respirators** - when replacing filters which have been in contact with normal room or environmental air.

Nuaire would always recommend a site specific risk assessment by a competent person to determine if any additional PPE is required.

2.0 INTRODUCTION

The Genie range of fans has been specifically designed to ventilate small rooms such as toilets, bathrooms, cloakrooms etc. and can be surface and recessed mounting. An optional window mounting kit is available for this unit, **code ref: WINKIT**.

Air entering the unit passes through a washable filter fitted to the front cover. 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.

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.

When installing Genie units for remote switching it is important that the pull cord (if fitted) is removed.

It is recommended that the unit is switched off (by the pull cord) before cutting. Cut the pull cord inside the unit a little way beyond the control module.

2.1 Code Description:

GENIE	-	H	12
1	-	2	3

1. Range: **GENIE:** Universal Surface Mounted Fans
2. HX Type: **No Affix:** On/Off Control Via Pull Cord / Remote Switch*
PIR: On/Off Control Via Pir (230 V Only)
S: On/Off Control With Integral Run-On Timer Via Remote Switch* Only
H: On/Off Control With Integral Humidistat Via Pull Cord / Remote Switch*
X: Continuous Trickle With Boost Via Pull Cord / Remote Switch*
XH: Continuous Trickle With Boost Via Pull Cord / Remote Switch*
3. Supply Voltage: **No Affix:** 230 V
12: 12 V

*Light switch or similar (not supplied).

Genie units are supplied with a finishing frame for use in semi-recessed applications.

WINKIT: Optional window mounting kit.

3.0 MECHANICAL 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, etc.

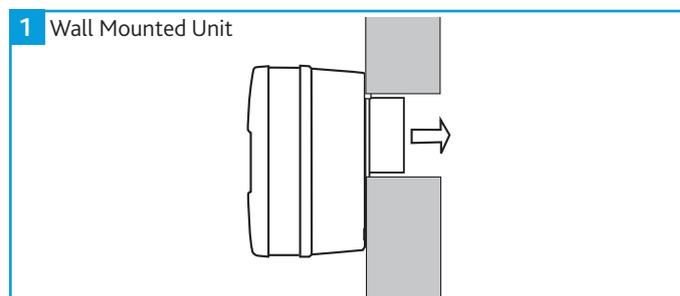
Before commencing work make sure that the unit is electrically isolated from the mains and switched live supply.

3.1 Surface Mounting

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

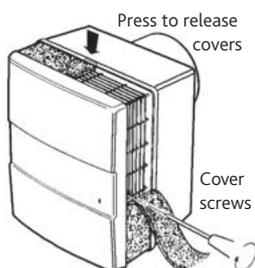
The discharge spigot is 98mm Ø OD. The hole in the structure should therefore be of a dimension to accommodate any ducting or cavity lining used.

Base drill pattern superimposed in Section 10.0 on page 8.

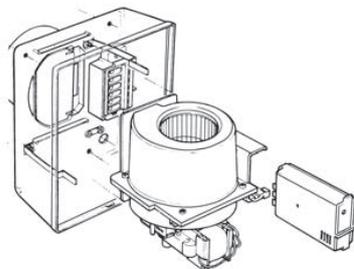


- Remove cover/grille assembly by removing cover screws. Depress the top/bottom retaining tabs (Figure 2).
- Remove the plug-in electronic control module (Figure 3).
- Remove the fan/motor assembly by pulling aside the two spring clips.
- Place the unit in the mounting position, connect the ductwork and feed the cable through the cable entry. Connect the wiring to the terminal block (it may be easier to temporarily remove the block to facilitate wiring).
- Drill and plug the mounting surface if necessary and secure the unit in position, using three No. 6 wood screws.
- 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 (Figure 6). If the pull cord option is not required it must be removed. Replace the front cover.
- Fit the filter which is a push fit between the front cover and the body of the unit (Figure 2).
- 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.

2 Cover Removal



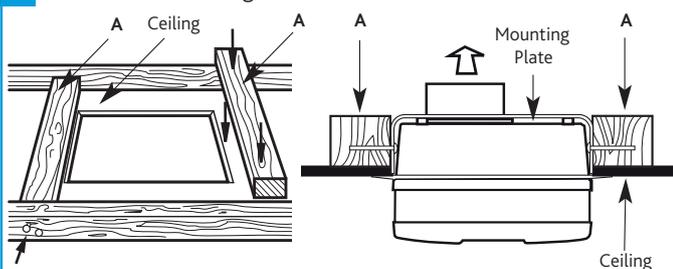
3 Electronic Control Module



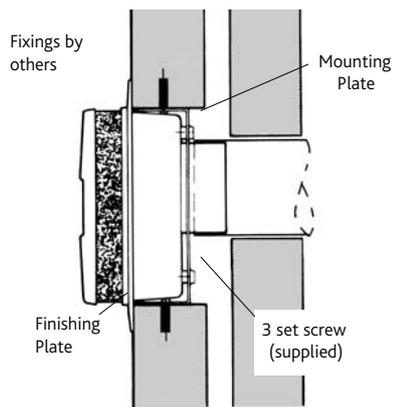
3.2 Semi-Recessed Ceiling Mounting

Remove the shutters from the spigot if you are mounting the Genie in the ceiling.

4 Semi-Recessed Ceiling Mounted Unit

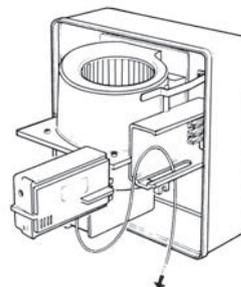


5 Semi-Recessed Wall Mounted Unit



- Prepare an opening 184mm x 213mm for the fan in the ceiling, cut and fit (A) timber supports (not supplied) and fit fan as shown. This will allow sufficient clearance (approximately 5 to 10mm) all around the unit to accept the fixing bracket (optional). **Do not exceed these dimensions, as an aperture larger than 208mm x 238mm will not be covered by the finishing plate.**
- It is assumed that a solid, non-reverberant mounting position has been selected and the necessary compatible ductwork is already installed.
- Position the mounting bracket (Figure 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) (Figure 5). **Fit finishing plate to fan before securing to bracket.**
- The remaining installation procedures for Semi-Recessed Ceiling Mounting are as Surface Mounting description.

6 Pull Cord



7 Optional Semi-Recess Mounting Bracket

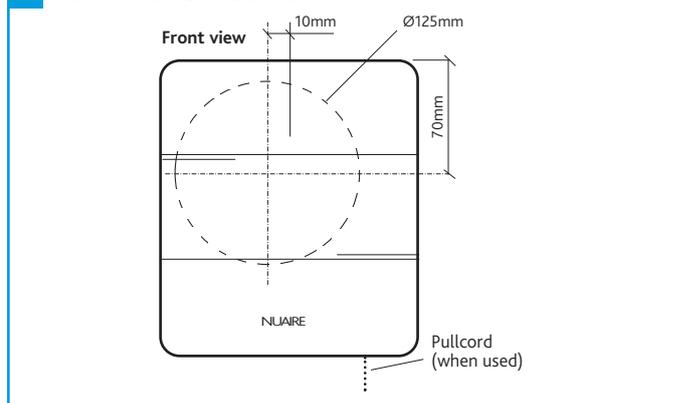


3.3 Window Mounting

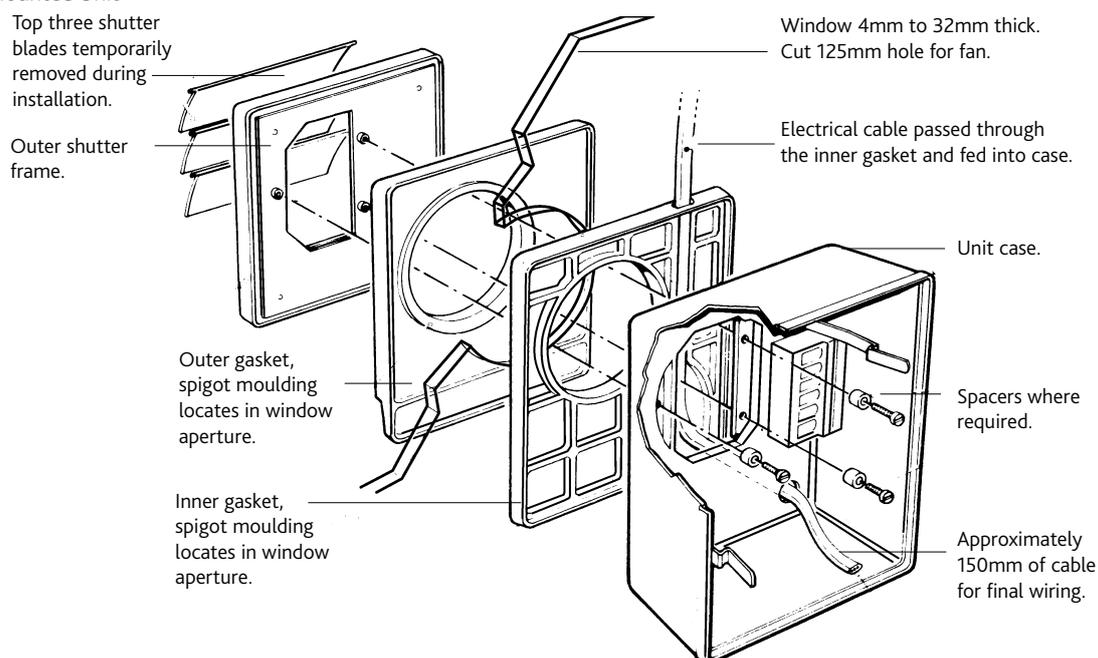
The WINKIT contains the following parts. Make sure you have all the parts present before commencing installation.

- 1x Outer Shutter frame assembly (011372 and 040547).
- 1x Outer gasket (540846).
- 1x Inner gasket (540845).
- 3x 5mm spacers (050149).
- 3x M4 x 12 Screws (680268).
- 3x M4 x 20 Screws (680087).
- 3x M4 x 30 Screws (680264).
- 3x M4 x 40 Screws (680265).

8 Window Hole Dimensions



9 Window Mounted Unit



The window mounting kit (WINKIT) is designed for mounting the unit into windows 4 mm to 32 mm thick using a 125 mm Ø hole (Figure 9).

- Employ a qualified glazier to cut a hole 125 mm Ø in the glass or, alternatively, replace your window with new glass incorporating a precut hole (Figure 9).
- The outer assembly consists of a four-bladed outlet shutter complete with clamping plate and an outer rubber gasket moulding. The gasket incorporates a moulded spigot which is designed to locate inside the 125mm Ø hole in the glass.
- Pop-out the top three plastic shutter blades from the frame and retain for replacement later. Position the assembly on the outside of the glass. If only one person is installing the fan, it may be helpful to tape the assembly to the outside glass at this stage during installation as all fixings and assembly are completed from inside.
- Working from inside the room with the inner gasket and unit casing. Run suitable cable through the inner gasket (holes are provided top and bottom). Feed the cable through the access hole in the back of the case. Allow approximately 150 mm of cable to protrude into the case (Figure 9). Position this inner gasket and case assembly over the hole in the glass and locate the inner gasket moulded spigot in the aperture.
- Select appropriate screws and spacers from the four sets of screws and three spacers supplied for mounting into different thicknesses of glass, see table.

Window Thickness	Screw Size
4 - 6 mm	M4 x 12
7 - 11 mm	M4 x 20
12 - 16 mm	M4 x 30 + spacer
17 - 21 mm	M4 x 30
22 - 26 mm	M4 x 40 + spacer
27 - 32 mm	M4 x 40

- Using the three screws (and spacers fitting under the screw heads if required) locating with the threaded inserts in the outer assembly, draw the inner and outer assemblies together. Remove any tape supporting the outer assembly and continue to draw the units together until the rubber gaskets positively locate the unit on the window. **Do not overtighten the fixing screws as this may distort the assembly.** Replace the shutters in the outer frame assembly.
- Wire unit in accordance with the appropriate wiring diagram. A cable clamp is provided inside the case.
- The remaining installation procedures for Window Mounting are as Surface Mounting description.

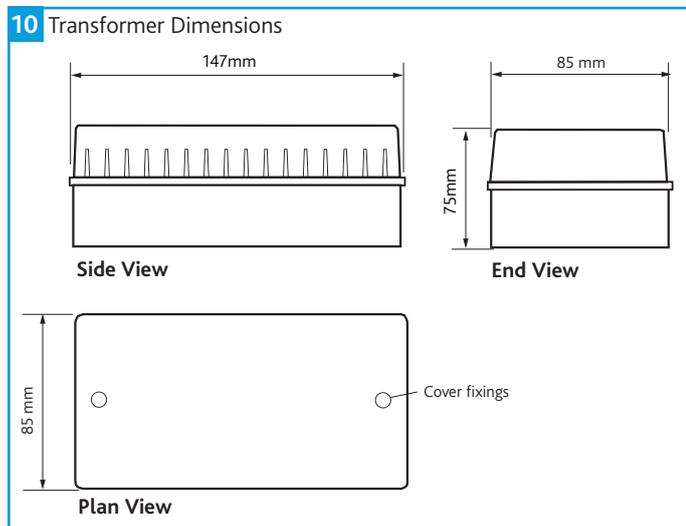
3.4 Transformer Enclosure (12 V Units Only)

To avoid cable insulation contact with hot transformer, always use the knockout at PCB end.

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.

- Remove two screws securing the cover and remove the cover.
- 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).
- Connect wiring as shown.
- Replace cover. Keep vents clear of obstruction.

No earth is to be connected between transformer and fan.



3.4.1 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.

3.4.2 Transformer 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: 230 V

Cable Size: 0.5 mm²

Cable Run (max. 10 m)	Cable Size
Up to 2 m	0.75 mm ²
Up to 4 m	1.00 mm ²
Up to 6 m	1.50 mm ²
Up to 10 m	2.50 mm ²

4.0 ELECTRICAL INSTALLATION

Before commencing work make sure that the unit is electrically isolated from the mains and switched live supply.

12V fan units must be installed in accordance with these instructions and the latest IEE Wiring Regulations for SELV installations.

Means for double pole disconnection must be incorporated in the fixed wiring in accordance with the wiring regulations.

For EMC compliance the 12V cable should not be fitted within 50mm of 230V or other cables or on the same tray/trunking if made of metal. The earth connection in the transformer enclosure should not be used. No earth connection should be made to the 12V fan unit.

4.1 Electrical Information

4.1.1 Power Consumption

Power Consumption	230 V Units	12 V Units
Input Power (W)	23	28
Full Load Current (A)	0.170	3.5
Starting Current (A)	0.215	4.4

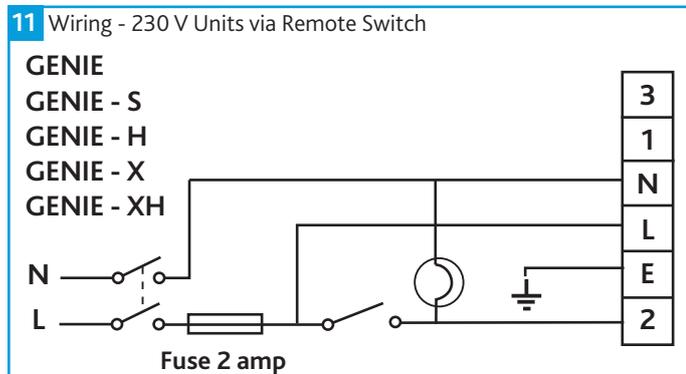
4.1.2 Transformer Power Consumption

Transformer Power Consumption	
Input Power (W)	35
Full Load Current (A)	0.24
Starting Current (A)	0.35

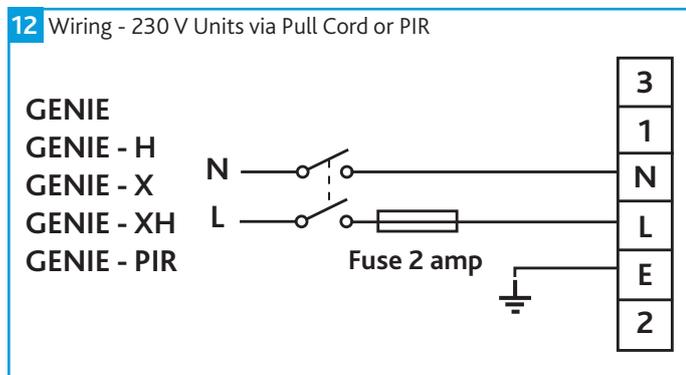
4.2 Wiring Details

4.2.1 230 V Units via Remote Switch

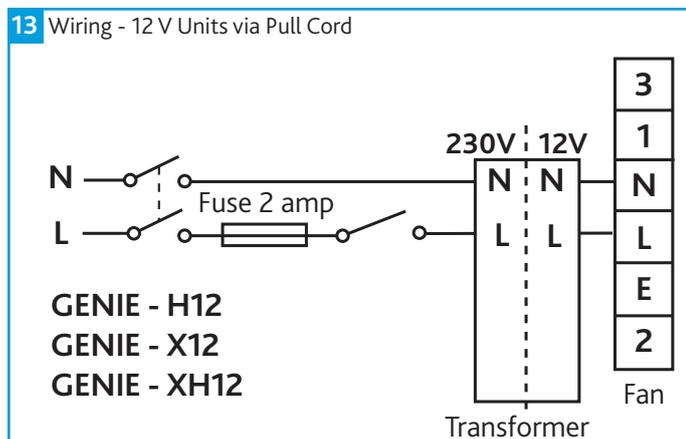
The switched Live signal to terminal 2 must be at 230 V to enable the fan and at 0 V to stop the fan after the adjustable timed overrun period. Induced voltages in the switched live field wiring can keep the unit running.



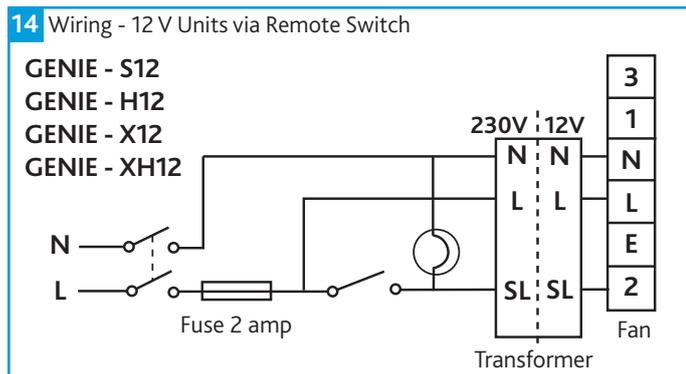
4.2.2 230 V Units via Pull Cord or PIR



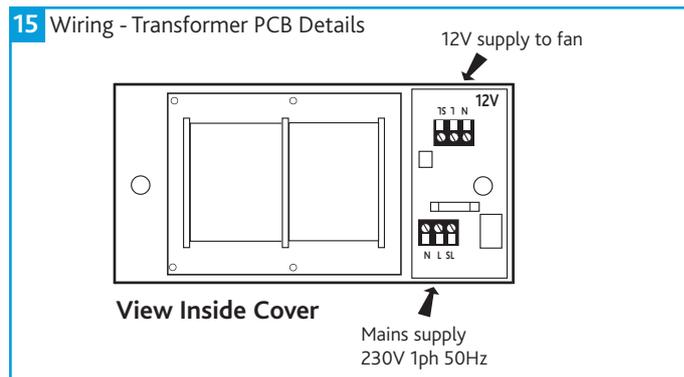
4.2.3 12 V Units via Pull Cord



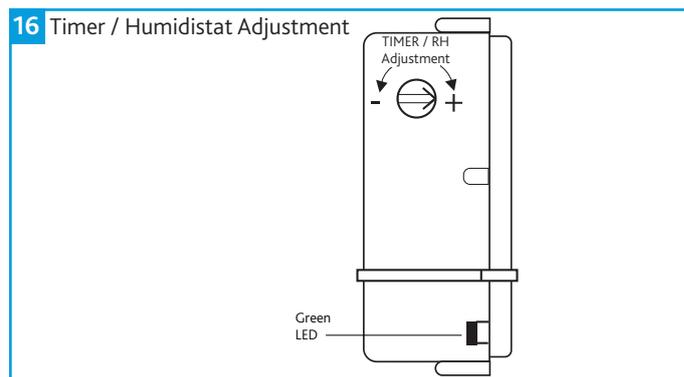
4.2.4 12 V Units via Remote Switch



4.2.5 Transformer PCB



5.0 CONTROLS



5.1 Run-On Timer

When installing a unit with run-on timer the adjuster should initially be turned fully anti-clockwise (**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 a small screwdriver, turn the adjuster to the fully anti-clockwise position. Adjustment to the timer can subsequently be made to suit individual preferences.

Turn timer clockwise to increase run on time (**maximum run on time is 30 minutes**).

5.2 Humidity Set Point

Adjust humidistat anti-clockwise to decrease RH set point and clockwise to increase RH set point.

Switch mains power ON (note, switched live e.g. light switch, should be off and the pull cord should not be pulled).

Under normal conditions the fan should be OFF. If the fan is ON and the green LED is on, turn adjustment clockwise until the light goes out.

The green light is ON when humidity is being sensed or the switched live/pullcord is activated. If the fan is running and the green light is OFF the fan is in its run-on period.

GENIE-H run on timer is fixed to 15 minutes.

6.0 MAINTENANCE

It is important that maintenance checks are recorded and that the schedule is always adhered to, in all cases, the previous report should be referred to.

6.1 Routine Maintenance (Every 6 Months)

- Clean all areas of unit.
- Check filters and change/clean if required, failure to do so may impair the performance and energy efficiency of this unit.

6.2 Cleaning 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.
- Refit the retaining screws (Figure 2). Test run the unit.

7.0 WARRANTY

The 5 year warranty starts from the day of delivery and includes parts and labour for the first year. The remaining period covers replacement parts only.

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.

Failure to maintain the unit as recommended will invalidate the warranty.

8.0 END-OF-LIFE AND RECYCLING

Where possible Nuair use components which can be largely recycled when the product reaches its end-of-life:

- Fans, motors, controls, actuators, cabling and other electrical components can be segregated into WEEE recycling streams.
- Sheet metal parts, aluminium extrusion, heating/cooling coils and other metallic items can be segregated and fully recycled.
- EPP, plastic ducting, nylon corner pieces, plastic heat exchangers, packaging material and other plastic components can be segregated into mixed plastic and widely recycled.
- Cardboard packaging, wood, used filters and other paper components can be largely recycled or fully processed in energy from waste centres.
- Remaining Items can be further segregated and processed in accordance with the zero waste hierarchy. Please call After Sales Support for further information on items not listed above.

Ensure that Nuair product is made safe from any electrical / water / refrigerant supplies before dismantling commences. This work should only be undertaken by a qualified person in accordance with local authority regulations and guidelines, taking into account all site based risks.

9.0 AFTER SALES AND REPLACEMENT PARTS

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

If ordering spares please quote the serial number of the unit together with the part number, if the part number is not known please give a full description of the part required. The serial number will be found on the identification plate attached to the unit casing.

Telephone 02920 858 400
aftersales@nuair.co.uk

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.

10.0 Base Drill Pattern

17 Base Drill Pattern

