

# “AMF” - MIXED FLOW DUCT FANS

## Installation Instructions



- for toilets, bathrooms and utility rooms
- suitable for installation in
  - wall
  - window
  - ceiling
- 3 models
  - pull cord/remote
  - timer
  - humidity control
- 3 Low Voltage (SELV) models
  - pull cord/remote
  - timer
  - humidity control

## **PLEASE READ THE FOLLOWING INSTRUCTIONS VERY CAREFULLY BEFORE INSTALLING THE PRODUCT.**

### **THE RANGE**

AMF100C, AMF100CLV - pull cord operated/or remote switching after cutting off cord

AMF100T, AMF100TLV - with adjustable overrun timer - these fans should be operated by a remote switch which can also be used to control the room light. After the light/fan is switched off the fan will continue to run for the pre-set length of time.

AMF100HCT, AMF100HCTLV - with humidistat and timer - the adjustable, electronic humidistat is pre-set so that the fan will operate automatically when the moisture content in the room reaches 70% R.H. The fan will continue to operate until the Relative Humidity falls below the pre-set level and the timer has completed the over-run period. The fan can be operated by the pull cord (or by a remote switch) independently of the humidistat (a neon light indicates that the fan is operating in this mode). NOTE: the fan will continue to operate for a short period after the cord is pulled a second time, i.e. until the humidistat senses that the relative humidity in the room has fallen beneath the pre-set level and the timer has completed its overrun period.

All versions with "LV" are LOW VOLTAGE (SELV). They MUST be installed with the transformer provided.

All versions with Timer or Humidistat incorporate adjustable trimmers. The overrun period on timer can be adjusted upwards by turning the RED trimmer on the PC Board in a clockwise direction (from a minimum of 3 to a maximum of 15 minutes). The Humidistat can be adjusted so that it starts to operate at a higher level of relative humidity by turning the BLUE trimmer in a clockwise direction (from a minimum of 40% to a maximum of 100%).

All versions with Humidistat incorporate a controlled temperature set-back allowing the humidistat to take into account variations in the ambient temperature and to avoid the fan switching on unnecessarily. This reduces fan operation at night.

All the fans (with the exception of the "LV" models) are splash proof to standard IPX4. The "LV" fans are rated IP57 enabling them to be safely installed in areas where a splash proof fan does not provide sufficient protection against water ingress (the transformer must **not** be installed where it could be splashed)

All the fans are extremely quiet in operation.

### **IMPORTANT - SITING INFORMATION**

1. For optimum use your fan should be installed at a minimum height of 2.3 m.
2. The fan must not be used in an ambient temperature higher than 40°C.
3. Your fan should not be exhausted into a duct which is already used for any other purpose.
4. An adequate supply of fresh air must be provided if the fan is to be fitted in a room containing a fuel burning appliance which is not of the balanced flue type.
5. Installation must be carried out by qualified personnel. Incorrect installation can cause damage to people, animals or property for which the manufacturer cannot be held liable.
6. If you have any doubts concerning this product, please contact your supplier.

### **IMPORTANT - ELECTRICAL INFORMATION**

1. All electrical connections must comply with current BS7671 wiring regulations.
2. The fan is a fixed appliance, and the electrical supply must therefore be by a fixed wired and fused (3 amp) spur incorporating a double pole switch with contact openings of at least 3 mm. Use twin conductor cable of at least 1 mm in section.
3. Your fan is double insulated and does not require earthing.
4. The fans comply with BSEN60335; with the Low Voltage Directive; with EC Directive EMC 89/336 for the Suppression of Radio Interference.

## Electrical Information cont

5. It is recommended that the installation be carried out by a qualified electrician.
6. The printed circuit board in these fans has been protected to make it compatible with the majority of fluorescent fittings available on the market today. However, it is impossible to be aware of all the new products introduced. We suggest therefore that you contact your supplier to establish the compatibility of the fluorescent fitting you intend to use.

## INSTALLATION INSTRUCTIONS

### Preparation

1. Remove all packing material and check that your fan has not been damaged in transit.
2. Check that your electrical voltage and frequency correspond with those marked on the rating label.
3. Check the location of existing wiring for ease of connection.
4. Cut a 4"/10 cm hole (plus thickness of ducting to be used, when necessary) on the wall, ceiling or window.
5. Make the electrical connections as in the following instructions.

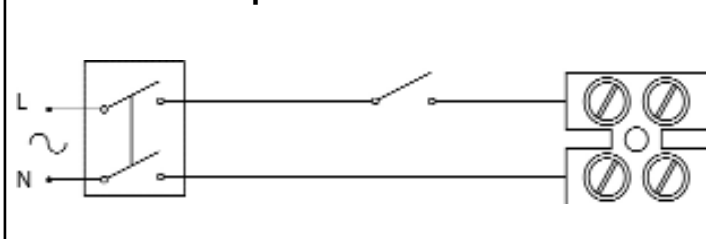
### Fixing Instructions

1. Loosen the single screw located in the lower edge of the casing, and remove the front cover by pulling forward and upward.
2. **How to install in a wall** - using the template provided, mark 4 holes in the wall, drill and fit wall plugs. Fix the main body of the fan to the wall using 4 screws locating them through the holes at each corner. Ensure that the fixing surface is flat in order to avoid distortion of the casing when the fixing screws are tightened. If using Wall Vent Kit, secure flexi-duct to spigot of fan and spigot of grille. Fix grille to outside wall through 4 holes located in corners.
3. **How to install in a ceiling** - if installing fan into plasterboard ceiling put spigot of fan through hole and secure using Ceiling Ring. If the ceiling is of thicker construction follow wall installation instructions above.
4. **How to install in a window** - separate the locking ring by unclipping it from the grille section of the Window Kit. Remove backdraught shutter from the fan. Put the fan through the hole already cut in window and screw the locking ring on to fan spigot securing it firmly. Clip back on the central flange/outer grille to the locking ring ensuring it lines up with the inside part of the fan. N.B.: By following the above instructions, the fan can be installed with the Double Glazing Window Kit after the hole has been cut and sealed by the manufacturer.
5. Connect the incoming wiring supply as indicated in "Wiring Instructions" below.
6. Replace the front cover by first locating the top edge of the cover over the top edge of the main body and then hinge the cover downwards.
7. Lock the cover in place by tightening the screw on the lower edge.

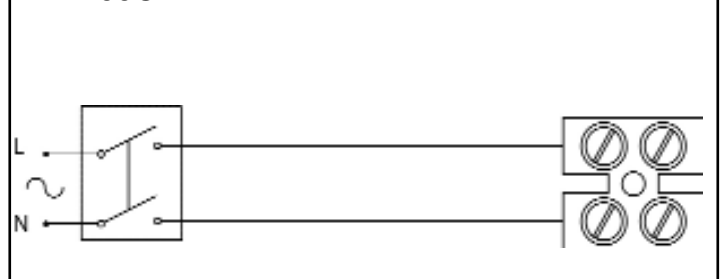
## WIRING INSTRUCTIONS

1. Ensure that the mains electrical supply is switched off during the installation of the fixed wiring spur.
2. Read carefully "Important-Electrical Information" above.
3. Connect as shown in the Wiring Diagrams below.

**AMF100C with Remote Switch**  
Pull cord to ON position and cut off

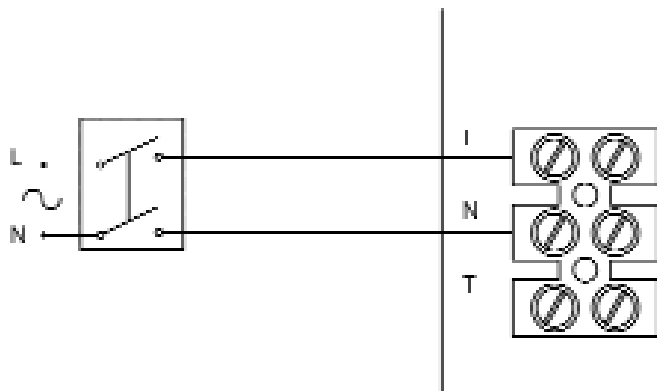


**AMF100C**

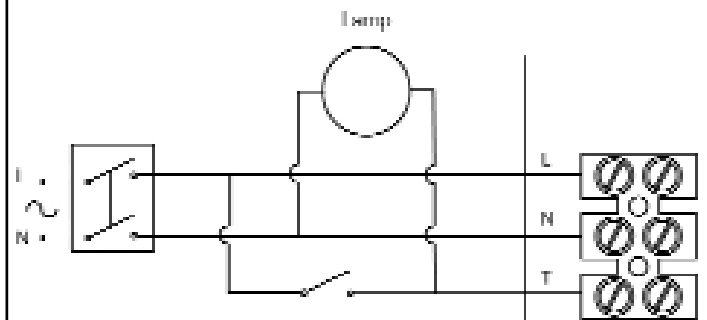


## Wiring Instructions cont

## AMF100HCT (cord operated)

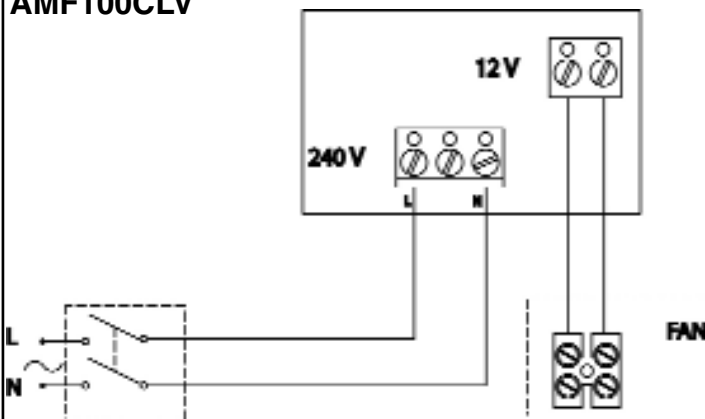


## AMF100T &amp; \*AMF100HCT

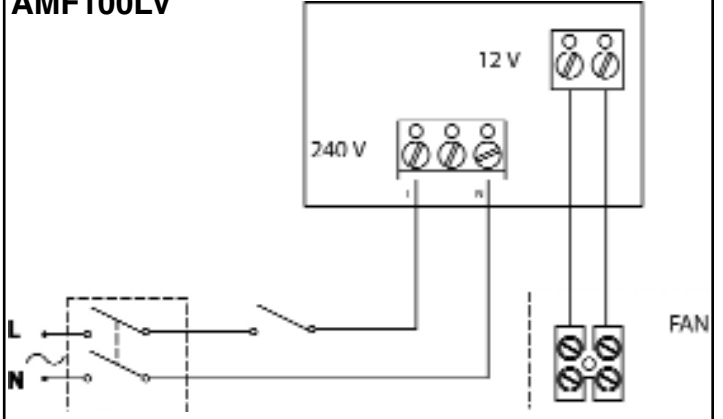


\*AMF100HCT can be wired for remote switching - ensure pull cord switch is in **OFF** position and remove cord

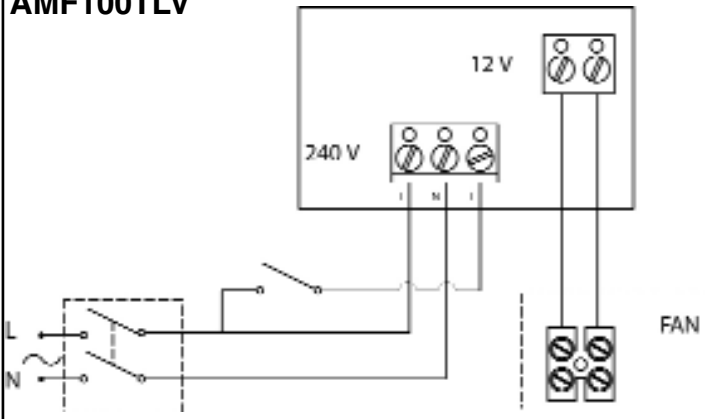
## AMF100CLV



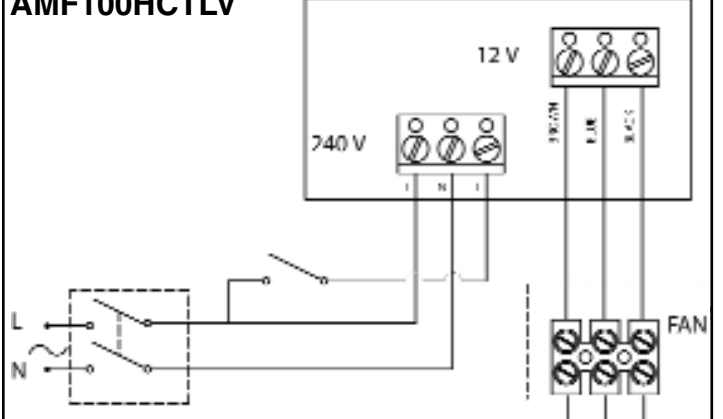
## AMF100LV



## AMF100TLV



## AMF100HCTLV



## CLEANING &amp; MAINTENANCE

1. Disconnect mains electrical supply by means of double pole switch.
2. Remove front grille (A) as described above and wash with mild detergent.
3. To clean the inner part of the fan, use a soft brush taking care not to cause any damage or disturb the electrical wiring.

## ACCESSORIES

**Ceiling Ring** - for ceiling installation

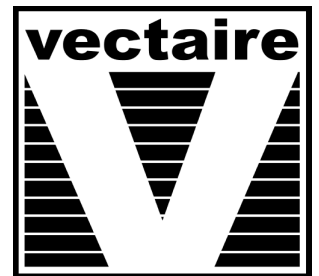
**Wall Vent Kit** - comprises 14" length of flexible duct and gravity grille for outside wall.

**Window Kit** - necessary for installation of fans into single or double glazed windows up to 20 mm.

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## “MF” RANGE

### INSTRUCTION MANUAL

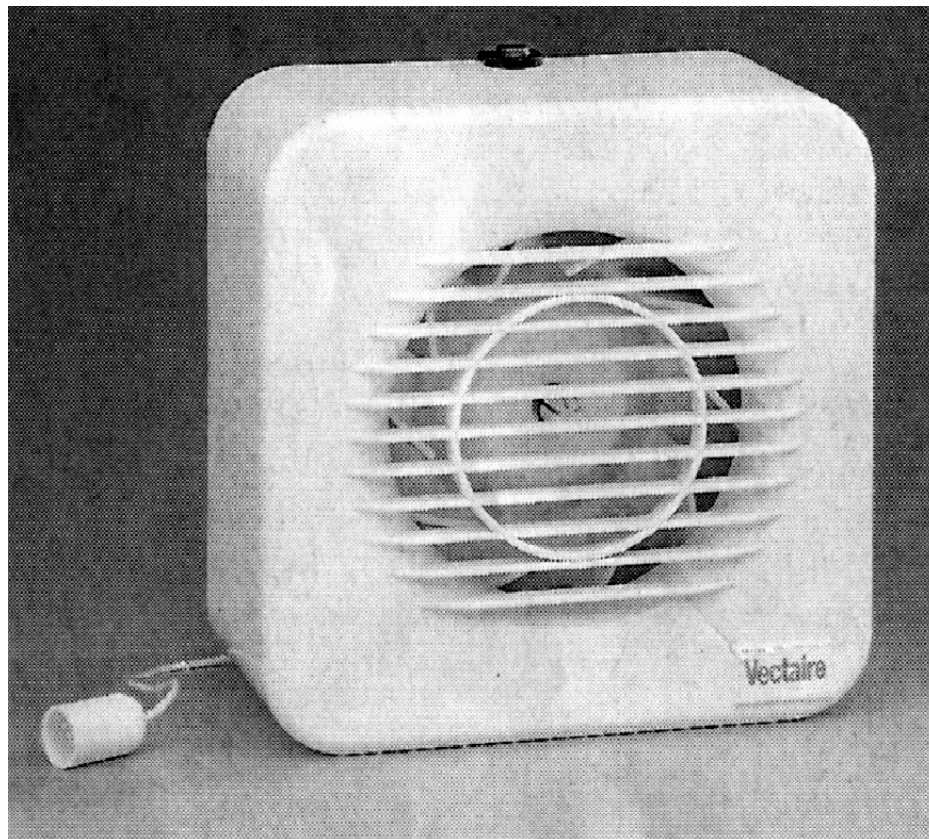
MF100  
MF100C  
MF100T  
MF1002C  
MF100HCT  
MF100H2C

MF100 LV  
MF100T LV  
MF100HCT LV  
MF 100 2C LV  
MF 100 2R LV

MF250  
MF250T  
MF2502C  
MF250HCT  
MF250H2C  
MF250H2R

**Mixed Flow High Pressure Duct Fans  
for Toilets, Bathrooms and Shower rooms**

**NOTE FOR INSTALLER:  
THIS MANUAL MUST ALWAYS BE READILY AVAILABLE**



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## GENERAL PRECAUTIONS

IT IS RECOMMENDED THAT YOU READ THE FOLLOWING INSTRUCTIONS VERY CAREFULLY BEFORE USING THE PRODUCT. THE MANUFACTURER WILL NOT BE HELD RESPONSIBLE AND DECLINES ANY AND ALL LIABILITY FOR DAMAGE CAUSED TO PERSONS OR PROPERTY DUE TO IMPROPER USE WITH REFERENCE TO THE PRECAUTIONS OUTLINED IN THIS MANUAL.

The manual explains how to install correctly, use and carry out maintenance on the product. Following these instructions will ensure that the product will be electrically and mechanically reliable and will extend its working life.

- Do not use this product for any purpose other than that for which it was designed and as illustrated herein.
- When removing the product from its packaging, make sure that it has not been damaged. If in doubt, contact immediately your supplier.
- Do not leave packing material within the reach of children or unskilled people. Do not dump any hazardous parts into the environment (polystyrene, plastic, polypropylene, etc.).
- If the product is dropped or badly knocked, contact immediately qualified personnel (authorised dealer, service centre or manufacturer) to check that the product operates correctly.
- The use of any electrical device requires compliance with some basic rules which are listed below:
  - do not touch the device with moist or wet parts of the body (hands, feet).
  - do not allow the product to be operated by children or unskilled people.
- Connect the product to the mains electricity supply or electrical outlet only if:
  - your electrical voltage and frequency corresponds to those shown on the rating label.
  - the capacity of your electricity supply is sufficiently powerful to operate the product at its maximum power.If not, contact a professional electrician.
- It is recommended that the product is switched off when not in use.
- Before carrying out any maintenance or cleaning, switch off the product and disconnect it from the mains electricity supply.
- If a fault, malfunction or anomaly of any type occurs, make the fan inoperative (by turning off the switch and by disconnecting it from the mains electricity supply) and immediately contact qualified personnel.  
Always request original spare parts to effect any repairs.
- If the product needs to be removed, turn off the mains supply circuit-breaker and then disconnect the fan.  
Place the device in a safe location away from children and/or unskilled people.
- All electrical connections must comply with current IEE wiring regulations.

## SPECIAL PRECAUTIONS

- The product is professionally manufactured and complies with the current standards regarding electrical equipment.
- The fans comply with BSEN60335; with the Low Voltage Directive; with EC Directive EMC 89/336 for the Suppression of Radio Interference.
- Do not use the product at an ambient temperature higher than 40 °C (104 °F).
- Do not allow the product to be exposed to atmospheric agents (rain, sun, snow, etc.).
- Possible product applications are indicated in the attached illustrations.
- Do not place the fan or relative parts in water or liquids, except where indicated in the cleaning and maintenance section.
- When cleaning or performing routine maintenance, check the condition of the fan.
- To avoid the risk of fire, do not use the product in the presence of inflammable substances or vapours such as alcohol, insecticides, gasoline, etc.
- The air or fumes being extracted must be clean and free from greasy particles, soot, chemical and corrosive agents, inflammable or explosive mixes (If these substances are treated, contact an authorised dealer for specific range of explosion-proof products).
- The product must be installed by professionally qualified personnel. Incorrect installation can cause damage to people, animals or property, for which the manufacturer cannot be held liable.**
- The product must be connected to the electricity supply via a fixed wired and fused (3 amp) spur incorporating a double pole switch with contact openings of at least 3 mm.
- To ensure optimum operation, do not block the air intake and exit vents.
- Ensure that any ducting used is free of blockages.
- For optimum operation, ensure that the product is installed at a minimum height of 2.30 m above the ground.
- The room where the fan is located must be adequately ventilated to ensure correct operation.
- If the product is sited in a room containing a fuel burning appliance which is not of the balanced flue type, the installer must ensure that air replacement is adequate both for the fan and the fuel burning appliance.
- The fan should not be used as an activator for water heaters, stoves, etc.
- The fan must not exhaust into ducts designed to evacuate fumes from the combustion in stoves or other combustion-powered devices.
- The fan must have a single duct (for its exclusive use) or exhaust directly outside.

## RANGE

**MF100 / MF100 LV / MF 250** : standard model, normally operated by means of a control switch.

**MF 100C / MF 250C** : incorporate a pull-cord for turning the fan on and off.

**MF100T / MF 100 T-LV / MF 250T**: with adjustable Overrun Timer. Can either be wired via a light switch or via a remote (illuminated) switch. When the light is switched on, the fan will operate, and when the light is switched off, the fan will continue to run for the pre-set length of time.

**MF100HCT / MF 100 HCT-LV / MF 250 HCT**: with Humidistat, Cord and Overrun Timer. This fan has an integral, adjustable, electronic humidistat, which is sensitive to the level of moisture (relative humidity) in the air. The fan starts and continues to operate until the humidity has fallen beneath the pre-set level and the timer has completed the over-run period. The pull-cord override allows the fan to be operated manually regardless of the humidity level (a neon light indicates that the fan is operating in this mode). Pulling the cord again will make the fan revert to being operated automatically by the humidistat and/or the over-run Timer. The fan can also be operated by a remote (light) switch.

**MF100H2C / MF 250 H2C**: with Humidistat, 2 speed, Cord and Overrun Timer. 2 speed models with integral, adjustable, electronic humidistat, which is sensitive to the level of moisture (relative humidity) in the air. The fan starts and continues to operate at low speed until the humidity has fallen beneath the pre-set level and the timer has completed the over-run period. Pulling the pull-cord override will boost the fan to its maximum speed. The neon indicator will come on showing that the fan is being operated manually. Pulling the cord again will make the fan revert to its low speed and to being operated automatically by the humidistat and/or the over-run Timer (the neon indicator will switch off).

**MF 250 H2R**: 2 speed model, with Humidistat, Remote Switch and Overrun Timer. Same as H2C, but using a remote dedicated 2 poles switch instead of the pull cord, to boost the fan to maximum speed.

**MF 100 2C / MF 250 2C**: 2 speed models with Cord. These fans operate permanently at the lower speed and can be boosted to a maximum speed by means of the pull-cord. Pulling the cord again reverts the fan to its lower speed. Can be wired also with a dedicated switch or a light switch (OPTIONAL), giving OFF and 2 speed.

**MF 100 2C LV / MF 100 2R LV**: 2 speed, Low Voltage models. These fans operate permanently at the lower speed and can be boosted to a maximum speed by means of the pull-cord (2C) or remote dedicated switch (2R). Pulling the cord again reverts the fan to its lower speed.

**N.B.** Both the humidistat and timer on all fans may be adjusted by following the instructions on the front of the printed circuit board (Fig 4). Always disconnect the fan from the power supply before carrying out any operation.

The humidistat is pre-set at the factory to operate the fan when the humidity level reaches 70%.

All versions with Humidistat incorporate a controlled temperature set-back allowing the humidistat to take into account variations in the ambient temperature and to avoid the fan switching on unnecessarily. This reduces fan operation at night.

# INSTALLATION

Read carefully "General and Special Precautions" above.

The fans are suitable for installation into walls or ceilings in internal rooms where rigid, flexible or flat ducting to the outside wall is required.

Ensure that the fixing surface is flat in order to avoid distortion of the casing when the fixing screws are tightened.

Check the location of existing wiring for ease of connection, and make the electrical connections as in the following instructions.

## MF100

Cut a 4"/10 cm hole (plus thickness of ducting to be used).

Loosen the single screw located in the lower edge of the casing and remove the front cover by pulling forwards and upwards.

Using the body of the fan as a template mark where the 4 holes need to be drilled . Drill 4 x 5 mm dia holes and fit wall plugs.

Fix the main body of the fan to the wall using 4 screws locating them through the holes at each corner.

## MF250

Cut a 4"/10 cm or a 5"/12 cm hole (plus thickness of ducting to be used).

Choose and fit the backdraught shutter according to the size of the hole (Fig 2).

Loosen the two screws located in the front of the fan and remove the front cover.

Using the body of the fan as a template mark where the 3 holes need to be drilled . Drill 3 x 5 mm dia holes and fit wall plugs.

Fix the main body of the fan to the wall using 3 screws locating them through the holes at the corners.

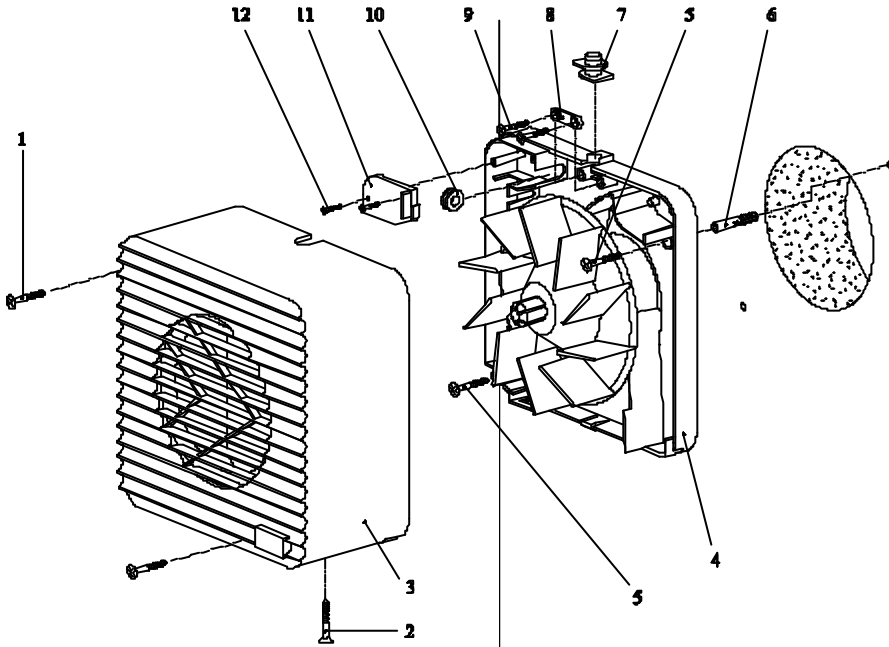
Ensure that the mains electrical supply is switched off during the installation of the fixed wiring spur.

The installation must conform to current Building Regulations and IEE Wiring Regulations.

The fans are double insulated and do not require earthing .

The fan is a fixed appliance , and the electrical supply must therefore be by a fixed , wired and fused (3 amp) spur contact incorporating a double pole switch with contact opening of at least 3 mm.The type of cable to be used is shown in Fig. 3.

The printed circuit board in these fans has been protected to make it compatible with the majority of fluorescent fittings available on the market today. However, it is impossible to be aware of all the new products introduced. We suggest therefore that you contact your supplier to establish the compatibility of the fluorescent fitting you intend to use.



### Legend:

- 1 Front fixing screw (model 250)
- 2 Front fixing screw (model 100)
- 3 Front
- 4 Motor-holder
- 5 Wall fixing screw
- 6 Wall plug
- 7 Cable grommet
- 8 Cable clamp
- 9 Cable clamp screws
- 10 Cable grommet
- 11 Terminal cover
- 12 Fixing screws for terminal cover

Fig.3

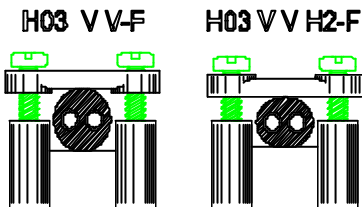
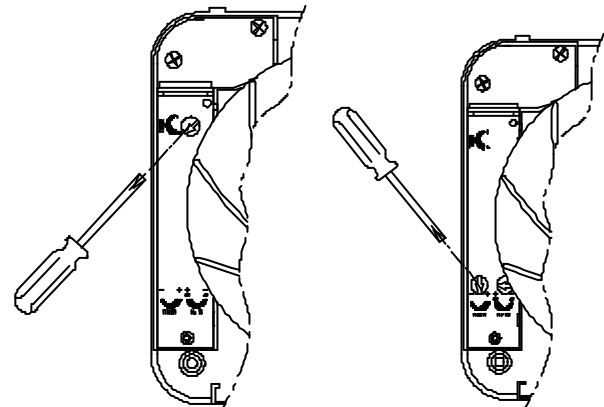
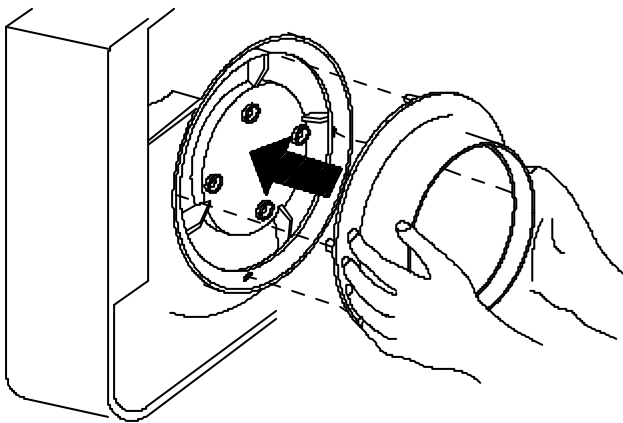


Fig.4a

Fig.4b

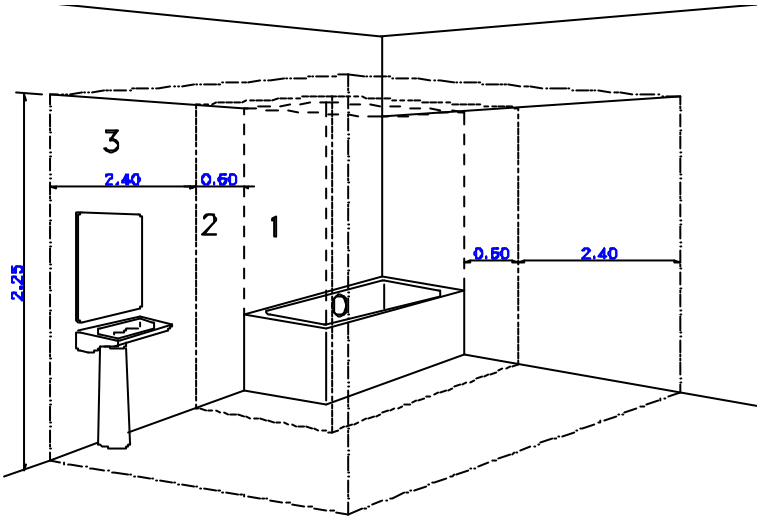
Fig.2



## LOW VOLTAGE MODELS

The SELV (Safety Extra Low Voltage) models work at low voltage (12 volts); due to this feature, the SELV models may be installed in zones 1 as well as zone 2 of the bathroom (see enclosed drawing).

For the installation and assembly, please refer to the warnings listed below.

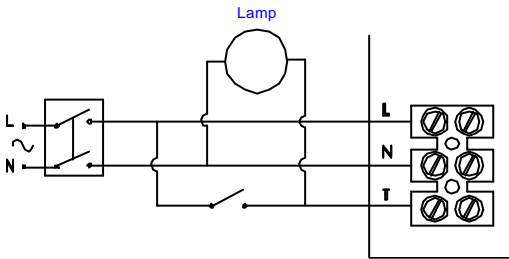


- ?? The connection between the fan and the mains supply must be carried out by means of a safety and insulating transformer with the appropriate power.
- ?? The transformer should be connected to the mains supply via a double pole safety switch with at least 3mm contact opening.
- ?? The fan **MUST** be used with transformer provided.
- ?? The transformer must be installed outside zone 1 and 2; if it is installed in zone 3, it should be mounted with the cable entrance turned downwards.
- ?? The transformer must be installed as close as possible to the fan.
- ?? The cable to be used to connect the transformer with the fan must be class II, with a section area of at least 1,5 mm and a maximum length not longer than 10 m.

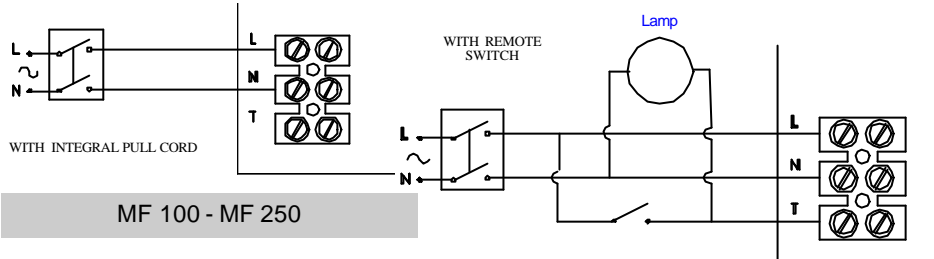
N.B. Fans with timer or humidistat **MUST** be connected only with the transformers provided for these versions.  
For the connections to be carried out between the main supply, the transformer and the fan, please refer to the following diagrams.

## WIRING INSTRUCTIONS

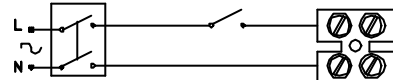
MF 100 T - MF 250 T



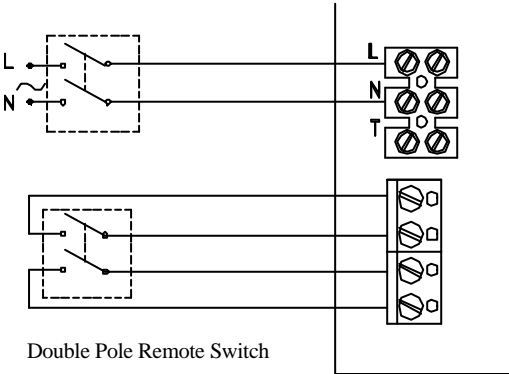
MF 100 HCT - MF 250 HCT



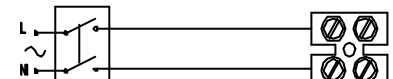
MF 100 - MF 250



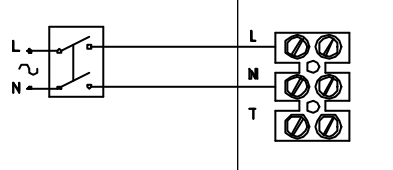
MF 250 H2R



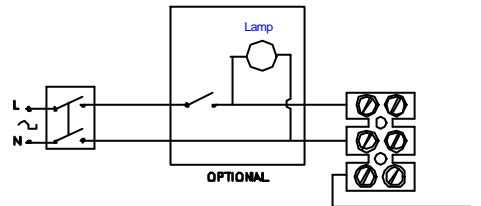
MF 100 C



MF 100 H2C - MF 250 H2C

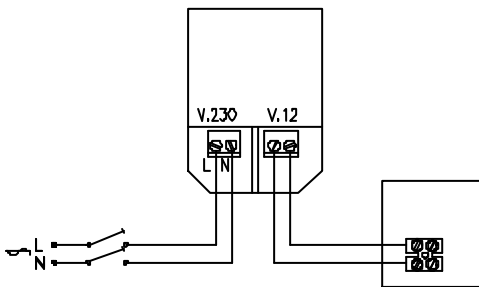


MF 100 2C - MF 250 2C

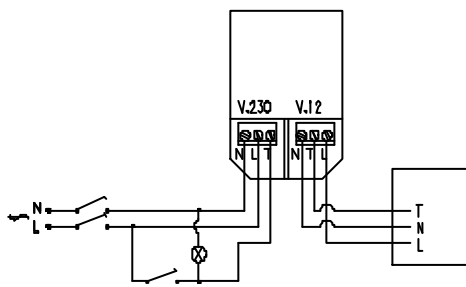


↑  
**ATTENTION**  
To wire the HCT version with a remote switch  
make sure the pull cord switch is OFF  
and cut off the pull cord.

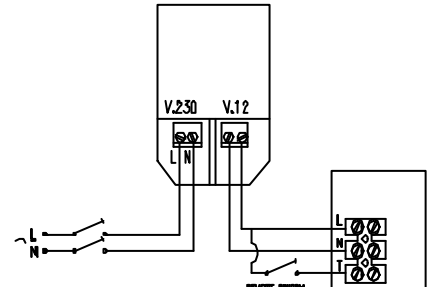
MF100LV - MF100CLV - MF1002CLV



MF 100 T LV - MF 100 HCT LV



MF 100 2R LV



## MAINTENANCE AND CLEANING

Disconnect the mains electrical supply by means of the double pole switch.  
Remove the front grille as described above and wash with a mild detergent.  
To clean the inside of the fan, use a soft brush taking care not to cause any damage to the electrical wiring.

A FULL RANGE OF ACCESSORIES ARE AVAILABLE WITH THIS RANGE, INCLUDING