XS Fans Switches & Sensors

Remote Switch Control: XS-MFC
Integral Sensors: XS-PIR, XS-H, XS-AQ, XS-TH, XS-TA
Remote Sensors: XS-PIRR, XS-HR, XS-AQR

Installation Guide

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XS-MFC Remote Switch Control

Designed to work in conjunction with the XS range of fans and associated integral and remote sensors, the XS-MFC Remote Switch Control offers the user the following:

a) On/Off.
b) Maximum or Economy performance.
c) Variable Speed Control.
d) Forward/Reverse airflow.
e) Auto/Manual operation.

Refer to the unit lift up lid for switch operating instructions.

The Remote Switch can control one fan or multiple fans,

depending on the fan and type of sensor being used.

Up to 5 fans (6 inch/9 inch) can be controlled by one XS-MFC.

Up to 2 fans (size 12 inch) can be controlled by one XS-MFC.

Note: Do not mix fans of different sizes on the same control.

Siting position

Mount in a vertical plane with the grille at the bottom.

Mount the switch 1.5 metres from the floor (minimum).

Do not expose to excessive amounts of oil, grease or direct

water spray.

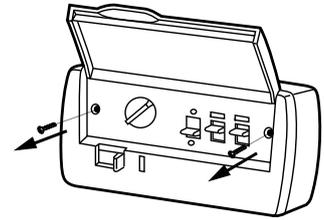Do not subject switches to a direct heat source in excess of 25°C.

Installation

Follow the pictorial sequence on this page.

IMPORTANT

Isolation - Before commencing work make sure that the unit is electrically isolated from the mains supply.
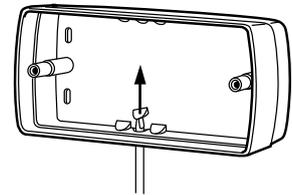
1

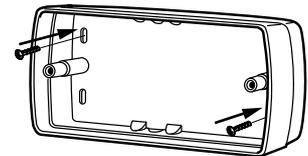Lift up panel and remove two screws to dismantle unit.

2

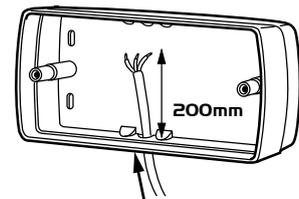Push out backplate box cable entry using a screwdriver.

3

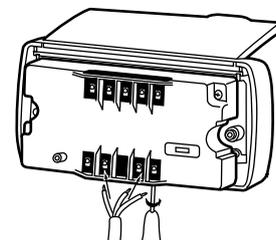Spot through backplate box and drill and plug the wall. Fix backplate box to the prepared wall.

4

Feed approx. 200mm of supply cable into the box.
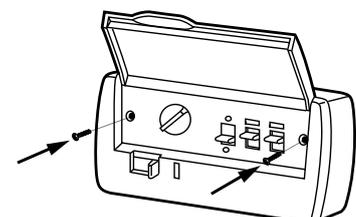
200mm

5

Connect the end of the cable into the control block. Connect wires as shown in the appropriate wiring diagram.

6

Hook lip of security strap (if fitted) in hinge socket. Fit the control into the backplate box & secure.
Test the installation.

XS Integral Sensors

Designed to work in conjunction with and fit inside the XS range of fans, the range of XS Integral Sensors offer the user the following functions:-

XS-PIR

Passive Infra Red movement detector - senses body movement, Run on Timer is adjustable between 2 and 40 minutes.

XS-H

Humidity Sensor - senses relative humidity. Adjustable between 30% and 90% RH. Run on Timer is adjustable between 2 and 40 minutes.

XS-AQ

Air Quality Sensor - detects odours and tobacco smoke. Adjustable to suit size requirements. Run on Timer is adjustable between 2 and 40 minutes.

XS-TH

Temperature Sensor - suitable for temperatures up to 25°C (occasionally 35°C)

XS-TA

Run on Timer - adjustable between 2 and 40 minutes.

Siting

Mounted inside a fan.

Grille section adjacent to sensor must be changed to suit the sensor being used (see fig 1).

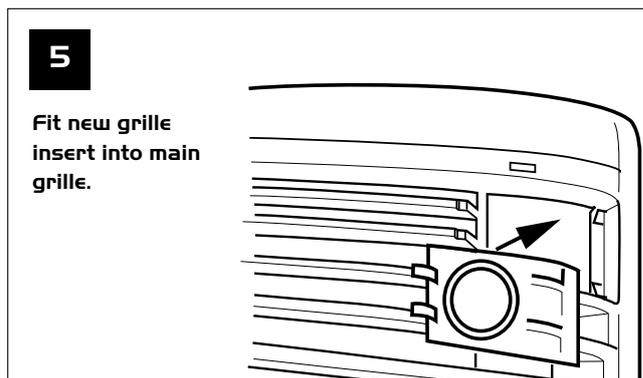Do not expose to excessive amounts of oil, grease or direct water spray.

Do not subject sensors to a direct heat source in excess of 25°C.

Installation

Follow the pictorial sequence on this page.

IMPORTANT

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

1

Push out the sensor area cover from the grille.

2

Remove the module plate.

3

Connect sensor to fan using pre-wired plug.

4

Screw the sensor module into position on the fan.

5

Fit new grille insert into main grille.

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XS Remote Sensors

Designed to work in conjunction with the XS range of fans, the range of XS Remote Sensors offer the user the following functions:-

XS-PIRR

Passive Infra Red movement detector - senses body movement, Run on Timer is adjustable between 2 and 40 minutes.

XS-HR

Humidity Sensor– senses relative humidity. Adjustable between 30% and 90% RH. Run on Timer is adjustable between 2 and 40 minutes.

XS-AQR

Air Quality Sensor– detects odours and tobacco smoke. Adjustable to suit size requirements. Run on Timer is adjustable between 2 and 40 minutes.

Note: Refer to the lift up lid for sensor operating instructions.

Siting

Mount in a vertical plane.

The grille in sensor box should be at the bottom.

Mount the sensor 1.5 metres from the floor.

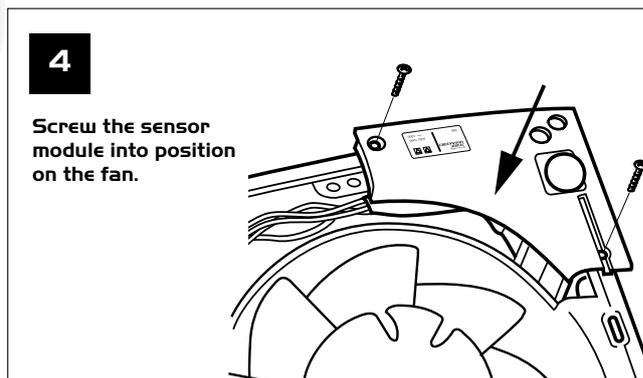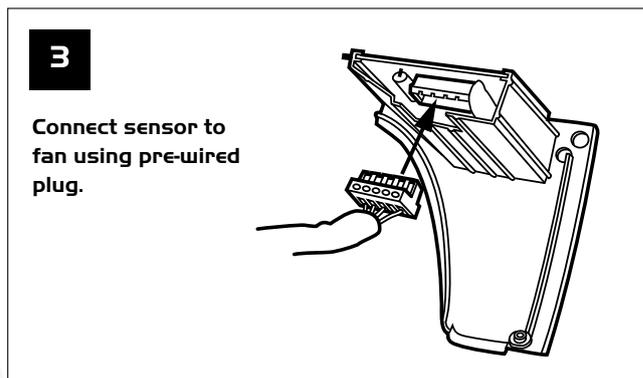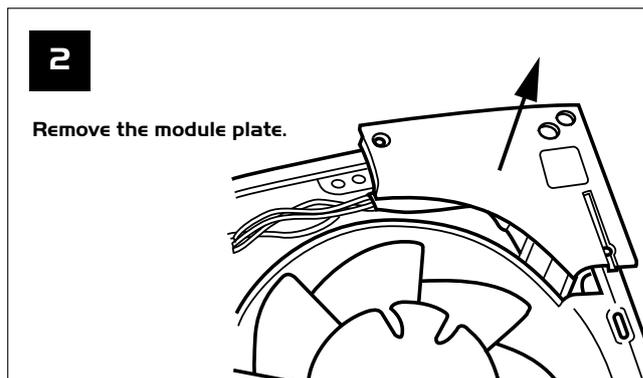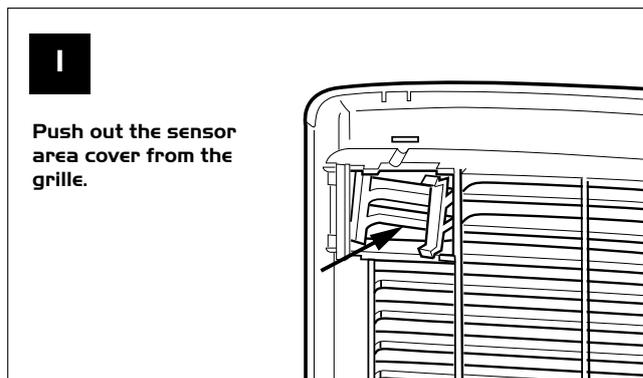Do not expose to excessive amounts of oil, grease or direct water spray.

Do not subject switches to a direct heat source in excess of 25°C.

Installation

Follow the pictorial sequence on this page.

IMPORTANT

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

1

Remove screws securing cover to box.
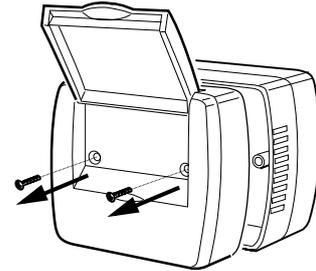
2

Knock out cable entry point and feed the supply cable through allowing approx. 200mm of cable to protrude into box.

200mm of cable inside box
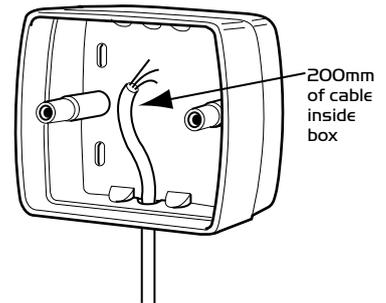
3

Drill & plug the surface and fix the back box to the wall. If security strap XS-SS is to be fitted: Locate boss centrally in slots.

1.5m
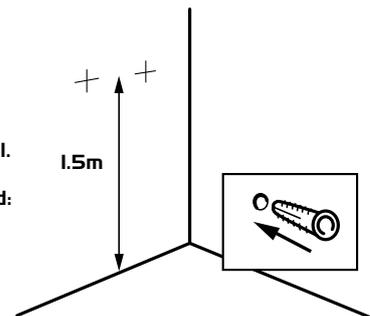
4

Wire in the sensor (see various wiring options in the wiring section),

5

Screw the sensor module into position on the wall. Hook lip of security strap (if fitted) in hinge socket and secure the boss using the screw.

Electrical Wiring for One Fan

Supply / Extract fan operated via remote XS-MFC control

Remote switch may be set: On / Off, Forward / Reverse,
Economy / Std. (variable speed), Auto / Manual.

Supply / Extract fan operated via remote XS-MFC control & Remote Sensor(s)
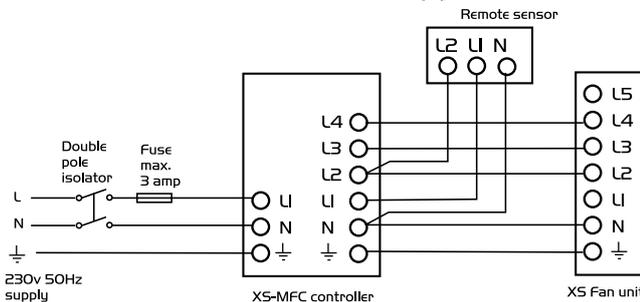
Remote switch may be set: On / Off, Forward / Reverse,
Economy / Std.(variable speed), Auto / Manual.

One or more Remote Sensors may be wired in parallel to one
XS-MFC Control.
Humidity Sensor: XS-HR, Air Quality Sensor: X S-AQR
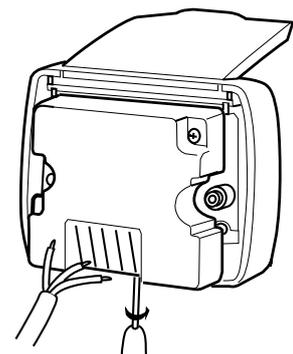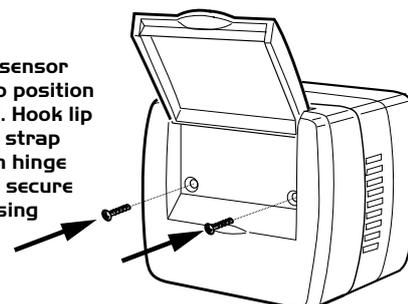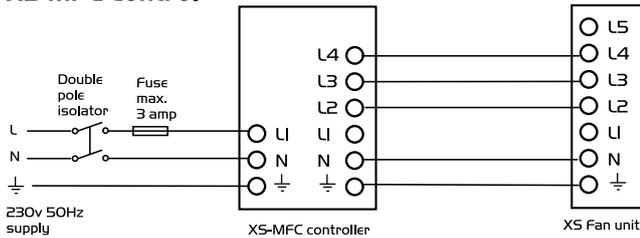Passive Infra Red Sensor: XS-PIRR,

Supply / Extract fan operated via remote XS-MFC control and Integral Sensor
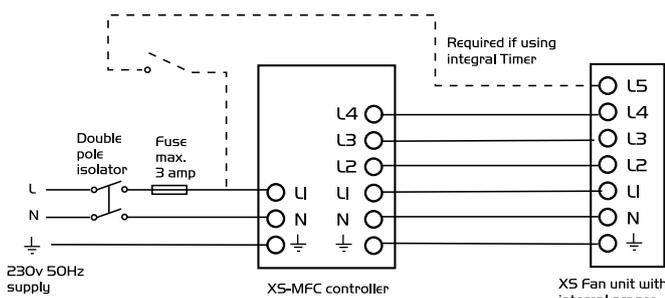
Remote switch may be set: On / Off, Forward / Reverse,
Ecnomy / Std. (variable speed), Auto / Manual.

Maximum one Integral Sensor per fan 6/9/12 denotes unit size identity
Humidity Sensor: XS-H6/9/12,   Air Quality Sensor: XS-AQ6/9/12
Passive Infra Red Sensor: XS-PIR6/9/12, Temperature Sensor: XS-TH6/9/12
Run on Timer: XS-TA6/9/12

A single sensor will switch all fans if more than one fan is being
operated by a single XS-MFC controller.

NOTE:
Multi-fan options:
Up to 5 fans (size 6" / 9") can be controlled by one XS-MFC.
Up to 2 fans (size 12") can be controlled by one XS-MFC.
Do not mix different fan sizes on the same controller.

Wiring - Multiple Fans

Multiple fans operated via remote XS-MFC control

Double pole isolator
Fuse max. 3 amp
L
N
230v 50Hz supply
XS-MFC controller
L4 L3 L2 L1 N
L5 L4 L3 L2 L1 N
XS Fan unit

Remote switch may be set
On / Off, Forward / Reverse,
Economy / Std. (variable speed),
Auto / Manual.

L5 L4 L3 L2 L1 N
XS Fan unit

Additional fans may be added
up to limit of control:
Up to 5 fans (size 6" / 9") can be
controlled by one XS-MFC.

Up to 2 fans (size 12") can be
controlled by one XS-MFC.

Do not mix different fan sizes
on the same controller

L5 L4 L3 L2 L1 N
XS Fan unit

Multiple fans operated via remote XS-MFC control and a Remote Sensor

L2 L1 N SENSOR

Double pole isolator
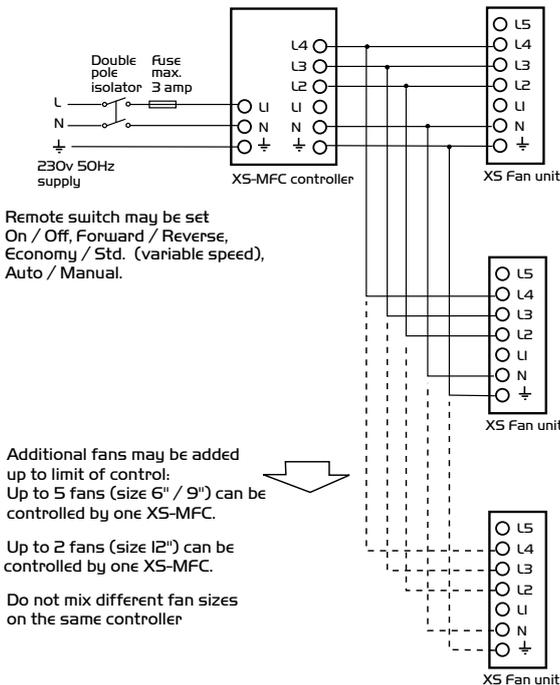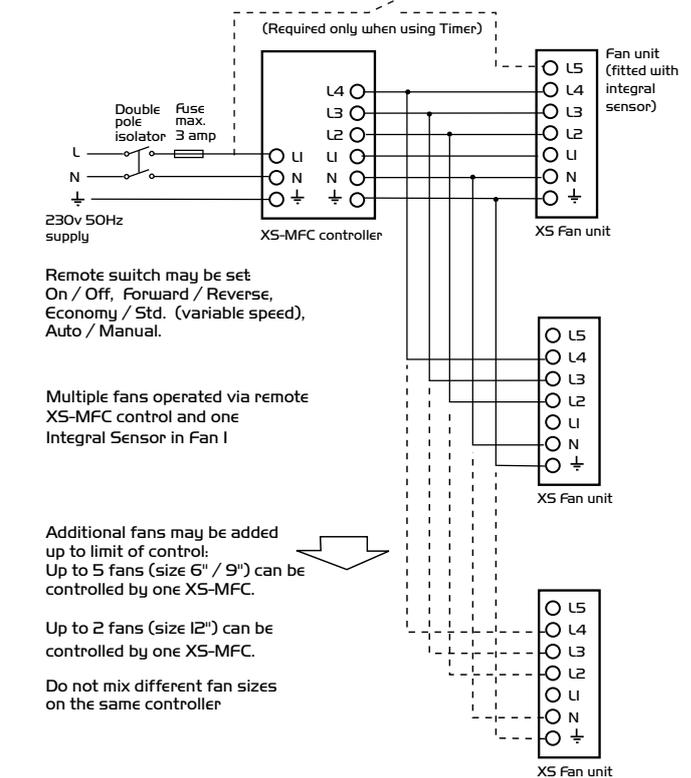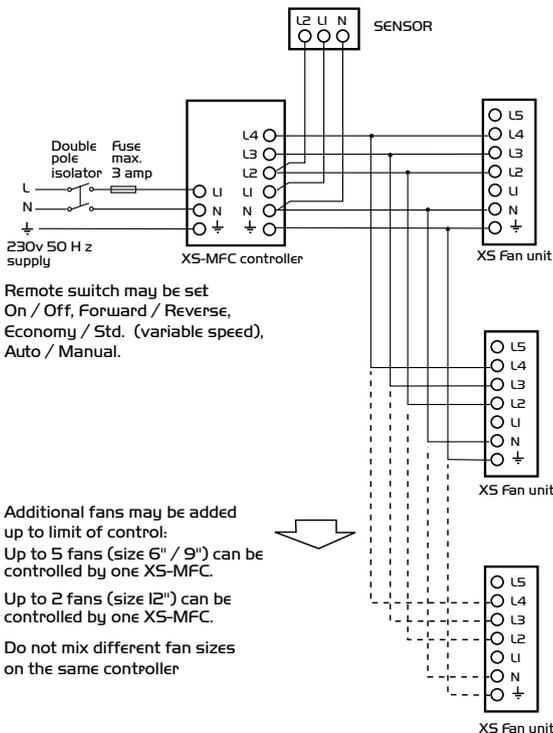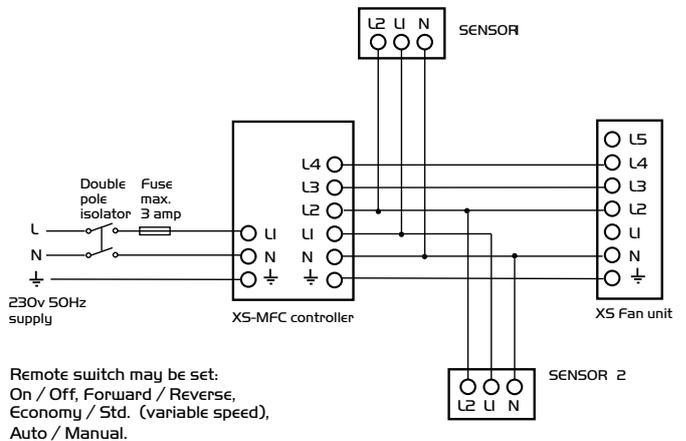Fuse max. 3 amp
L
N
230v 50Hz supply
XS-MFC controller
L4 L3 L2 L1 N
L5 L4 L3 L2 L1 N
XS Fan unit

Remote switch may be set
On / Off, Forward / Reverse,
Economy / Std. (variable speed),
Auto / Manual.

L5 L4 L3 L2 L1 N
XS Fan unit

Additional fans may be added
up to limit of control:
Up to 5 fans (size 6" / 9") can be
controlled by one XS-MFC.

Up to 2 fans (size 12") can be
controlled by one XS-MFC.

Do not mix different fan sizes
on the same controller

L5 L4 L3 L2 L1 N
XS Fan unit

IMPORTANT

(Shutter Operation XS fans)
There will be a short delay on startup and shutdown of
approximately 40 seconds. This is normal.

Multiple fans operated via remote XS-MFC control and one Integral Sensor in Fan 1

(Required only when using Timer)

Double pole isolator
Fuse max. 3 amp
L
N
230v 50Hz supply
XS-MFC controller
L4 L3 L2 L1 N
L5 L4 L3 L2 L1 N
Fan unit (fitted with integral sensor)
XS Fan unit

Remote switch may be set
On / Off, Forward / Reverse,
Economy / Std. (variable speed),
Auto / Manual.

Multiple fans operated via remote
XS-MFC control and one
Integral Sensor in Fan 1

L5 L4 L3 L2 L1 N
XS Fan unit

Additional fans may be added
up to limit of control:
Up to 5 fans (size 6" / 9") can be
controlled by one XS-MFC.

Up to 2 fans (size 12") can be
controlled by one XS-MFC.

Do not mix different fan sizes
on the same controller

L5 L4 L3 L2 L1 N
XS Fan unit

Fan operated using remote XS-MFC control and a Multiple Remote Sensor

L2 L1 N SENSOR

Double pole isolator
Fuse max. 3 amp
L
N
230v 50Hz supply
XS-MFC controller
L4 L3 L2 L1 N
L5 L4 L3 L2 L1 N
XS Fan unit

Remote switch may be set:
On / Off, Forward / Reverse,
Economy / Std. (variable speed),
Auto / Manual.

L2 L1 N SENSOR 2

Note:

Note: If 2 x 12 inch fans or 3 x 6 or 9 inch fans are used in the
same operating mode in the same room they should all be
controlled from the same MFC speed control. This avoids the
possibility of one fan (if speed controlled at a lower flow rate)
being stalled by the other fan(s).

Adequate make-up air provision sufficient to provide ventilation in
accordance with building regulations is required in all rooms. This
should be checked during commissioning with all fans in the same
room running together in all possible configurations.

The automatic shutters, motor bearings should be frequently
inspected and maintained to ensure they open fully/operate
satisfactorily. Use of an RCD and fused spur with 1A, Bussmann
TDC180, BS1362, fuse (Farnell order no: 1123029) for 1 fan or 2A,
Bussmann TDC180, BS1362 fuse (Farnell order no: 1123032) for 2
or 3 fans is recommended.

Always confirm airflow direction before commissioning.

Maintenance

Periodically, at least once a year, or more frequently in case of heavy use, remove the dirt and encrustation from the casing.

Replacement of Parts

As a manufacturer Nuaire is aware that time is important. In the event of a breakdown of this equipment, it should be adequately packaged and returned to Nuaire.

IMPORTANT!
Please telephone Nuaire before posting your unit. We will give you a returns number to identify your package.
We will endeavour to repair or replace it within five working days of receipt. See our warranty terms.

Warranty

The 3 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 Nuaire International Sales office for further details.

A unit returned to Nuaire should be suitably protectively packaged and clearly marked with the 'returns number' obtained from Nuaire prior to posting.

After Sales Enquiries

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

Telephone 02920 858 400

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.

Notes

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