Instruction Manual.

MINI

MINI600SE3; MINI800SE4-5 & MINI1000SE6

INSTALLATION AND OPERATING MANUAL

INDEX **Section**

WARNINGS

1 This appliance must only be installed by a competent person in accordance with the requirements of the Codes of Practice or the rules in force.
2 All external wiring MUST comply with the current IEE wiring regulations.
3 Warning this appliance must be earthed.

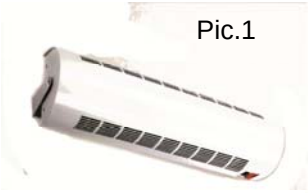
Part No. 702060

1. General Information.

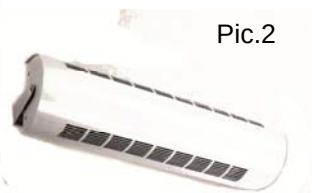
1.1 Introduction

This instruction manual describes the Airbloc Mini range of air curtains. Models range from 600mm in length rated at 3kW, 800mm rated at 4.5kW and 1000mm rated at 6kW. They are designed for mounting above doorways and similar entrances, and may be used as space heaters.

Pic.1



Pic.2



The MINI 600SE3 air curtain is supplied either with rocker switches attached to the underside of the front face (see Pic.1), giving ambient airflow, and 1kW, 2kW & 3kW heat control, or optional infra-red remote control.

Both the MINI 800SE4.5 AND MINI 1000SE6 air curtains can be supplied with either remote 3 way switch boxes giving ambient airflow, 1, 2 and 3kW heater control, or optional wireless remote control, (see Pic.2).

For further details please refer to section 6 - User instructions in this manual.

1.2 General

All installations must be in accordance with the regulations in force in the country of use.

These instructions must be handed to the user on completion of the installation.

Installers and service engineers must be able to demonstrate competence and be suitably qualified in accordance with the regulations in force in the country of use.

To ensure continued and safe operation it is recommended that the appliance is serviced annually.

The manufacturer, offers a maintenance service. Details are available on request.

1.3 Electrical

This unit is suitable for connection to 230V 50Hz supplies.

The MINI 600SE3 has full heating load of 3kW.
The MINI 800SE4-5 has full heating load of 4.5kW.
The MINI 1000SE6 has full heating load of 6kW.

The connection to be made between the heater and the 3 way switch box (MINI 800 and MINI 1000 only) are shown in figures 2 and 3. An earth terminal is adjacent to the terminal block and is clearly marked.

Warning
For safety reasons a good earth connection must ALWAYS be made to the heater and control box.

The unit must be wired in accordance with I.E.E regulations for the Electrical Equipment of Buildings and the installer should ensure that a suitable isolating switch is connected in the mains supply.

1.4 Location

The units should be installed horizontally directly over the door opening. It is recommended that the air curtain is installed on the inside of the building, within the open room space against a wall or ceiling. Care must be taken to allow complete free air movement into the inlet grilles of the unit to ensure correct operation. The discharge opening should be as close to the top of the door as possible and cover the entire door width.

When mounted over a standard shop doorway the unit should be less than 2.5 meters or from ground level.

A single unit MINI 600SE3 will provide reasonable coverage for an internal doorway, a single MINI 800SE4-5 unit will provide coverage for an invalid doorway width up to 800mm, and an MINI 1000SE6 unit is suitable for door widths up to 1m wide. Units can be interlinked across wider entrances.

The unit should be mounted so that the airflow is not obstructed by any part of the doorframe. The minimum clearance distance to the ceiling is 300mm.

These units are designed for surface mounting and should not be placed into a ceiling void, due

to possible obstruction of airflow and difficulty in routine cleaning and maintenance.

1.5 Health and Safety

Sole liability rests with the installer to ensure that all site safety procedures are adhered to during installation.

Sole liability rests with the installer to ensure that protective safety wear such as hand, eye, ear and head protection is used during installation of the product.

Do not rest anything, especially ladders, against the product.

1.6 Standards

Units conform to the European electrical standard BS EN 60335-2-30:1997 and to the following European CE directives. 73/23/EEC low voltage; 89/336/EEC and 98/68/EEC electromagnetic compatibility.

2. Dimensions.

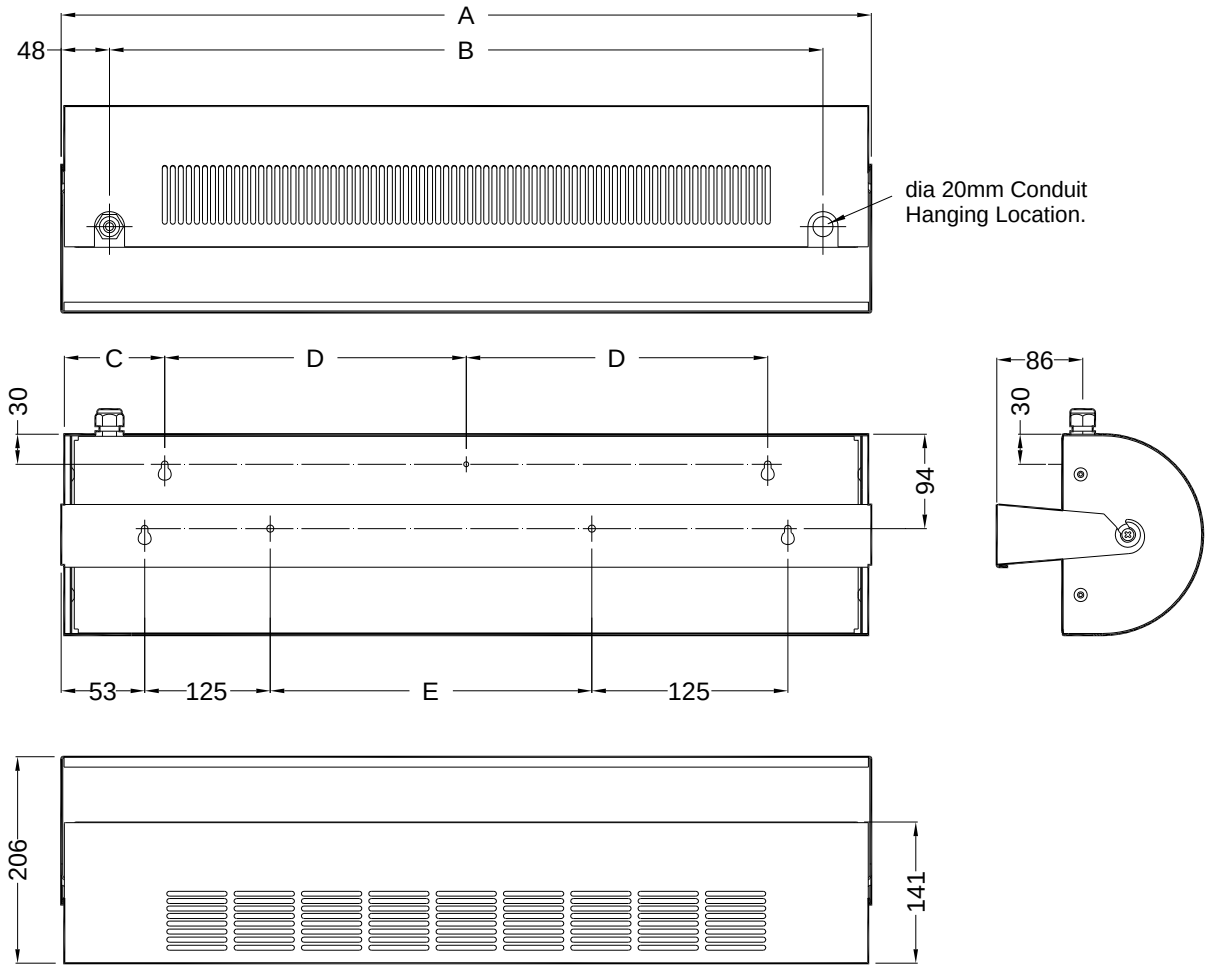


Figure 1. Mini (size 1000 shown)

Model	A	B	C	D	E
MINI 600SE3	606	510	70	230	250
MINI 800SE4-5	806	710	100	300	450
MINI 1000SE6	996	900	95	400	640

3. Technical Specification.

		MINI 600SE3	MINI 800SE4-5	MINI 1000SE6
General Data				
Maximum height	M	2.3	2.5	
Door width	mm	600	800	1000
Heat medium		Electric heated		
Maximum heat capacity	kW	3.0	4.5	6.0
Heat setting (switch box versions)		3	2	3
Heat setting power (switch box versions)	kW	1 / 2 / 3	2.25 / 4.5	2 / 4 / 6
Heat setting power (wireless versions)		Variable		
Fan type		Crossflow		
Fan dia	mm	60		
Fan settings		1		
Air outlet		Fixed vent		
Switching type		Front switches/ IR controller	Remote switchbox/ IR controller	
Weight	kg	6	8	10
Electrical Data				
Maximum heat capacity	kW	3.0	4.5	6.0
Supply voltage		230V 1ph 50Hz		
Total load	amps	13	20	26
Cable size		2.5mm²	4.0mm²	6.0mm²
External fuse size amps	amps	13.0	25.0	32.0
Switch box wiring		n/a	4 x 4.0mm² + E	4 x 6.0mm² + E
Mains terminal block position		On Switchbox		
Control terminal block position		Front right of centre		
Air Data				
Fan setting		2		
Air volume *High speed*	m³/h	273	382	
Delta T	°C	35		49
Noise level @ 3M *Free field*	dBA	42	48	44
Dims Data				
Length	mm	600	800	1000
Depth (width) including swivel bracket	mm	205		
Depth wall mounted	mm	140		
Height	mm	200		
Swivel bracket centres on length	mm	500	700	890
Wall mounting bottom to centres	mm	170		
Wall mounting centres on length	mm	460	600	800

4. Internal Wiring Diagrams.

Figure 2. **MINI 600SE3 3.0kW Wireless internal wiring.**

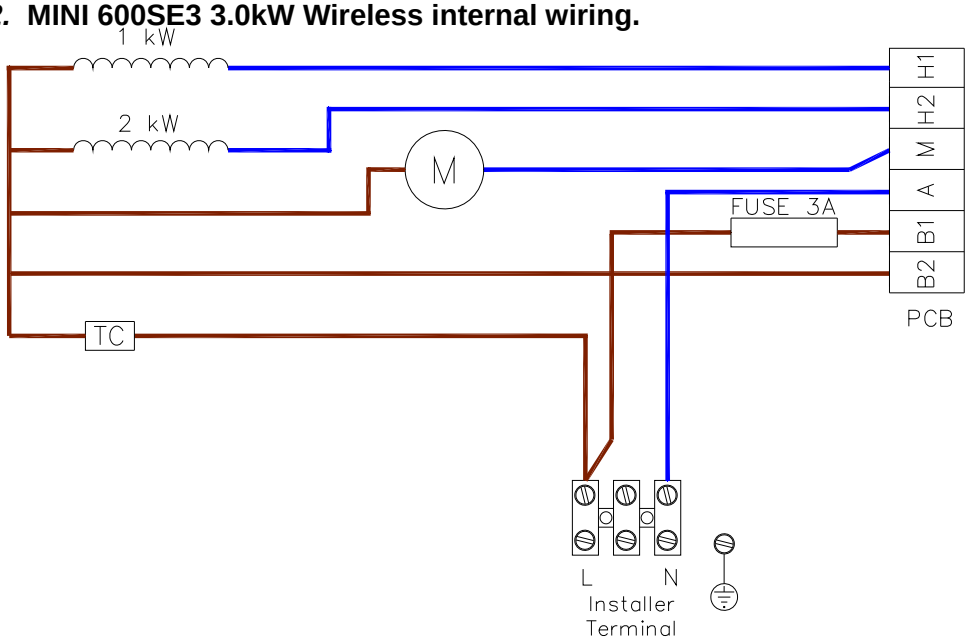


Figure 3. **MINI 800SE4-5 4.5kW Wireless internal wiring**

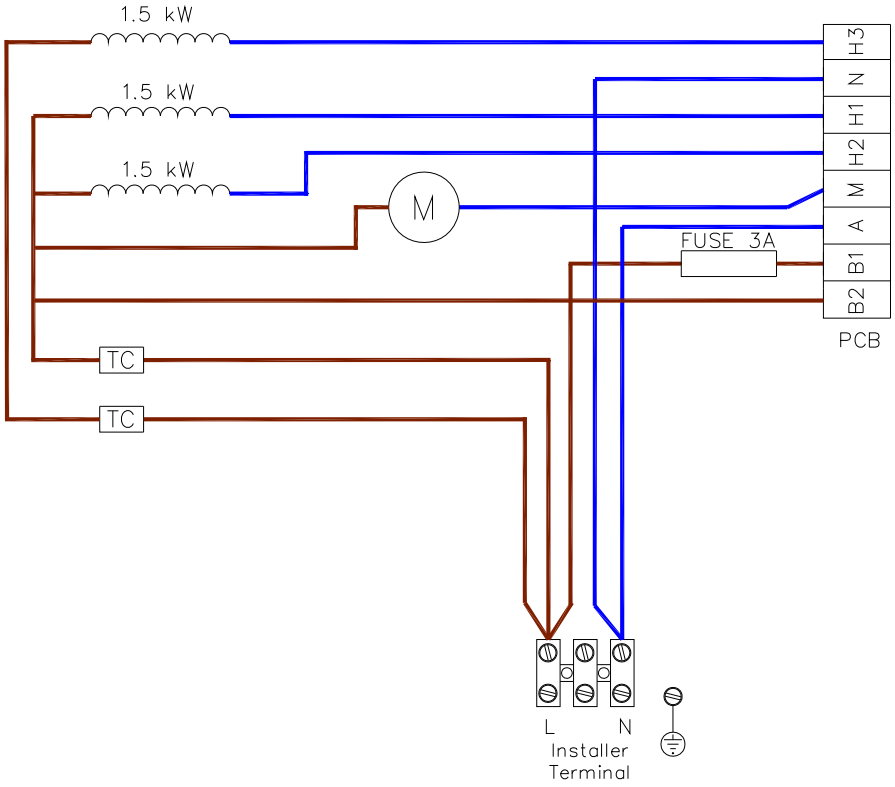


Figure 4. **MINI 1000SE6 6.0kW Wireless internal wiring**

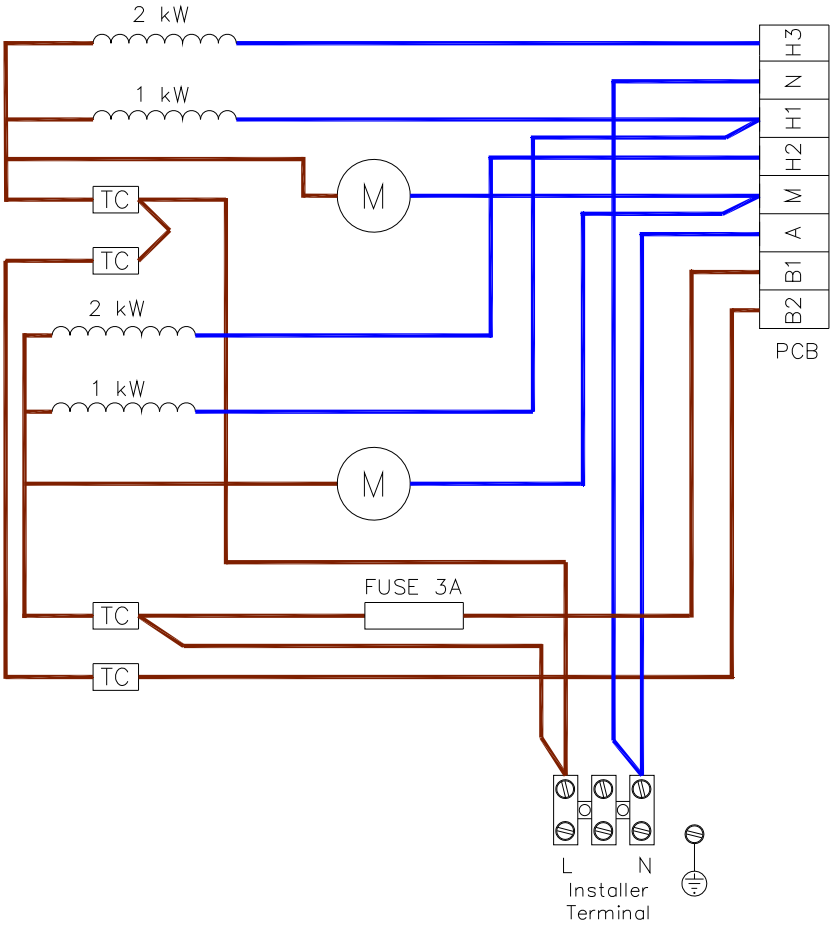
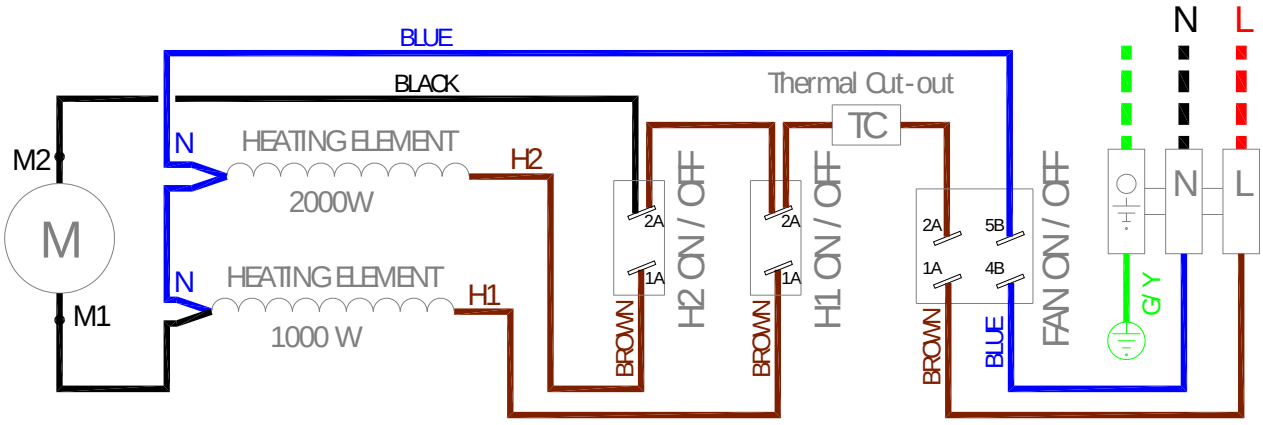


Figure 5. **MINI 600SE3 3.0kW internal wiring.**



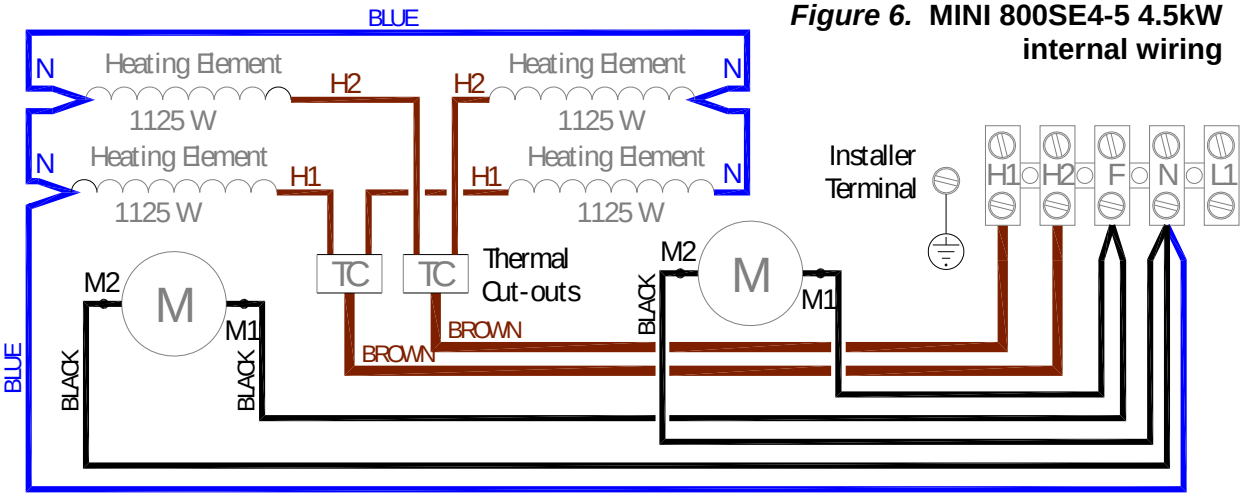


Figure 6. **MINI 800SE4-5 4.5kW internal wiring**

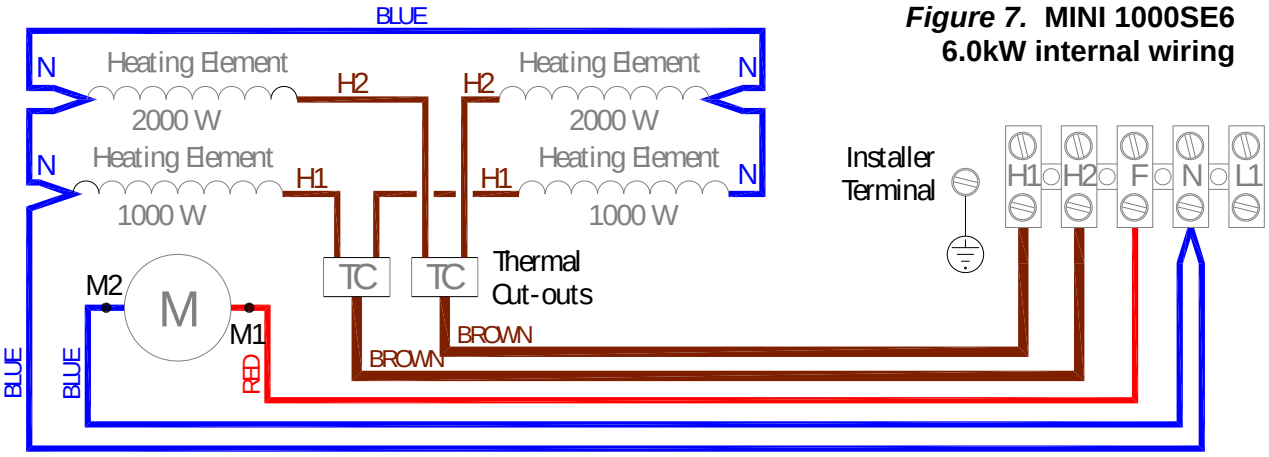
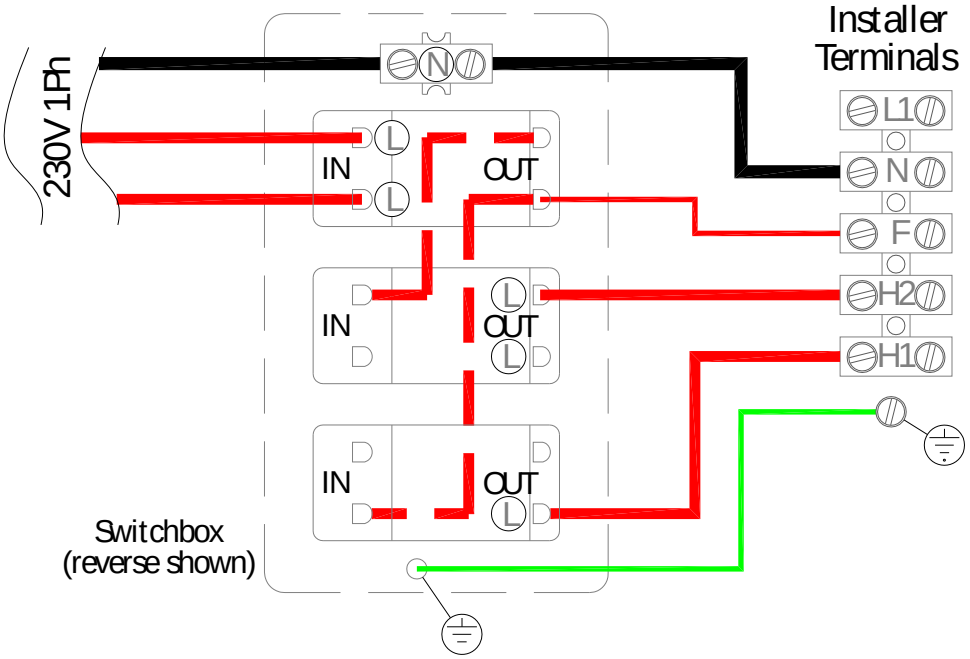


Figure 7. **MINI 1000SE6 6.0kW internal wiring**

5. Installer Wiring Details.

Figure 8. **MINI 800SE4-5 4.5kW & MINI 1000SE6 6kW Switchbox Interconnecting Wiring**



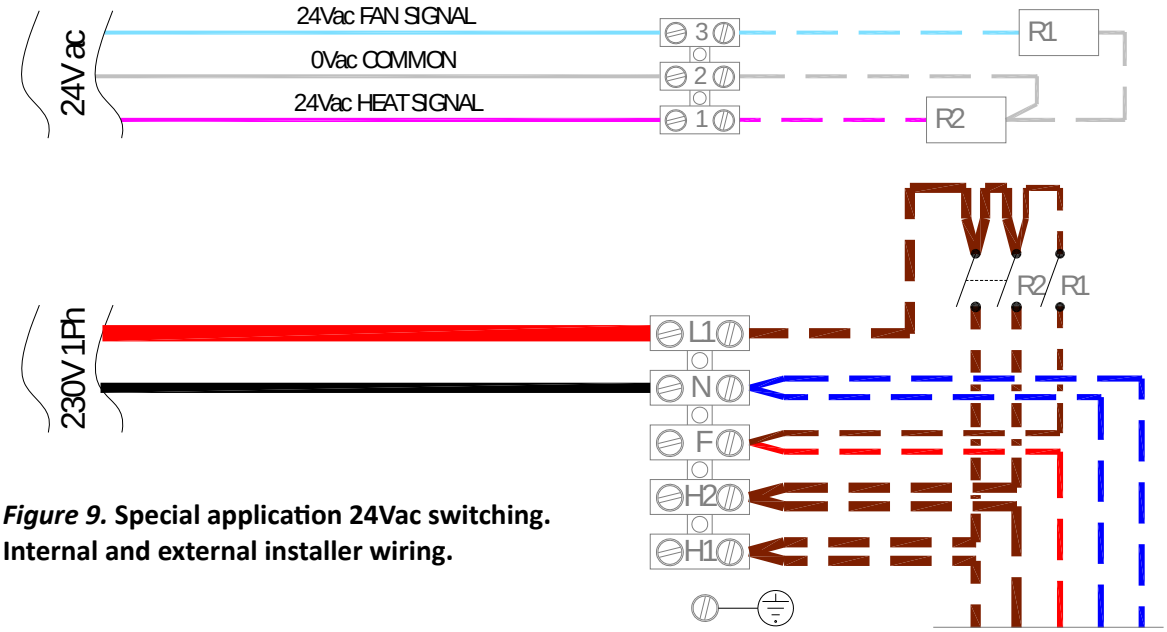


Figure 9. **Special application 24Vac switching. Internal and external installer wiring.**

6. Installation Details.

6.1 Mounting

The units should be installed horizontally directly over the door opening. It is recommended that the air curtain is installed on the inside of the building, within the open room space against a wall or ceiling.

Care must be taken to allow complete free air movement into the inlet grilles of the unit to ensure correct working operation of the air curtain.

The discharge opening should be as close to the top of the door as possible and to cover the entire door width.

When mounted over a standard shop doorway the unit should be fitted as low as possible and not more than 2.5 meters or from ground level.

A single unit MINI 600SE3 will provide reasonable coverage for an internal doorway, a single MINI 800SE4-5 unit will provide coverage for an invalid doorway width up to 800mm, and an MINI 1000SE6 unit is suitable for door widths up to 1m wide. Units can be interlinked across wider entrances.

The unit shall be mounted so that the airflow is not obstructed by any part of the doorframe. With a minimum clearance distance to ceiling of 300mm.

These units are designed for surface mounting and should not be placed into a ceiling void, due to possible obstruction of airflow and difficulty in routine cleaning and maintenance.

6.2 Installation

The heater may be mounted in three alternative ways:

- Direct to a suitable wall or bearer with appropriate fixings either using the holes in the swivel mounting bracket, or the key hole slots in the back plate of the product. See Figure 1 for mounting centres.
- Suspended by 10mm drop rods through the holes provided in the top of the swivel mounting bracket.
- For use as an air curtain, the air outlet should be directed towards the floor. For use as a heater the air outlet should point into the room.

Note: The air outlet is opposite the face where the cable entry holes are located.

6.3 Electrical Connections

These units are suitable for connection to a 230 V 50Hz single phase ac supply. The heaters consume 3.0kW, 4.5kW & 6kW respectively at 230V when switched to the full heat position.
The appliance should be connected to the supply via a 2 pole fused isolator.

For connection to the mains supply it will be necessary to remove the outer cover from the unit to reveal the mains terminal block. It will be necessary to connect the mains supply and the lead from the remote switch box prior to refitting the cover. Wire in accordance to the appropriate diagram from Figures 2 to 8 in the previous section.

For safety reasons, a sound earth connection must ALWAYS be made to the unit. The unit should be wired in accordance with IEE Regulations for the Electrical Equipment of Buildings. Refit the cover and test for correct operation.

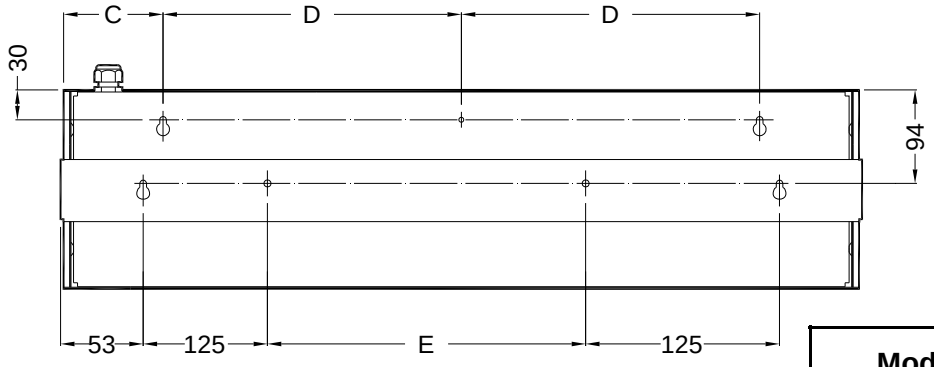


Figure 10. Fixing centres

Model	C	D	E
MINI 600SE3	70	230	250
MINI 800SE4-5	100	300	450
MINI 1000SE6	95	400	640

7. User Instructions.

7.1 MINI 600SE3 Operation

The MINI 600SE3 air curtain is supplied with rocker switches attached to the underside of the front face, or an optional wireless remote controller, (Fig.10).

Figure 11. MINI 600 switches

The red right hand switch switches the blower on to give ambient airflow.

With the right hand switch in the ON position the heat controls can be selected.

When the centre switch (marked with a single black line) is depressed the heat output is 1kW.

When the left hand switch (marked with two black lines) is depressed the heat output is 2kW.

When both switches are depressed the heat output is 3kW.

Both the MINI 800SE4.5 AND MINI 1000SE6 air curtains are supplied with 3 way switch boxes, or an optional wireless remote controller.

The switch box houses 3 switches, and gives the following functions:

- Switch 1 On: fan only to provide circulation of room air.
- Switch 2 on: half heat
- Switch 3 on: full heat.

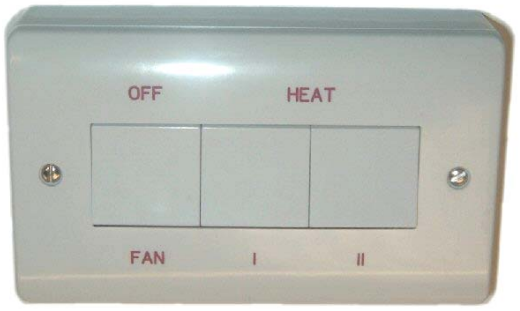


Fig.12 MINI 800/1000 3 way switch box

Fig.13 Wireless remote controller (option all models)

7.2 Wireless remote control

The controller is a wireless (433MHz) thermostat giving high precision room temperature control. It is also a seven day programmer with up to six temperature settings per day. Each controller can control any number of heaters.

7.3 Batteries

Remove the controller battery cover and insert 2 new high quality alkaline AA batteries.

WARNING
The manufacturer is not responsible for damage due to corrosion. Battery leakage will cause permanent damage. To help avoid this:

- Replace the batteries annually, even if there is not a low battery warning. Remove failing or flat batteries immediately.
- Always fit a pair of new high quality alkaline batteries from the same pack. Never mix new and old batteries, or batteries of different brands or types.
- Never attempt to revive alkaline batteries by heating, or recharging.

You must reset the clock after replacing the batteries, all other settings are unaffected.

7.4 Making wireless connection

This has to be done or the heater will not operate.

- Switch the heater's mains supply off.
- Switch it on for 3 seconds, then off again.
- Switch it back on. The green light on the heater should be flashing, if not repeat the procedure.
- You now have half a minute to press the button on the back of the controller. Once pressed the light on the heater will stop flashing and possibly change to yellow or red depending on the controller settings and the room temperature.

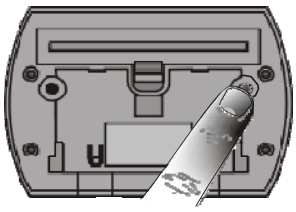


Fig.14 Button on rear of

This should not need to be repeated unless more heaters are added to the controller.

7.5 Choose position in the room

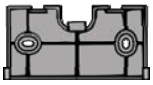
The controller should be positioned on a wall in the same room as the heater.
Avoid mounting in the following places:

- Draughty areas near windows, doors or vents.
- Near the heater itself or any other heat sources.
- In direct sunlight.
- Where it could be hit by a door.
- Where any moisture is present.

Before permanently fixing the controller in the chosen position then use to ▲ show power bars ≋ (see quick adjust for more details).

Ensure heater turns on, if not consider another position.

7.6 Fixing controller to wall



Remove the wall plate from the rear of the controller and mark through the screw holes (60mm centres). Drill and plug the wall to accept No. 6 or 8 screws and mount the wall plate. Clip the controller back on to the wall plate.

7.8 Cleaning the controller

Clean the controller with a soft lint-free cloth.
Avoid getting moisture on the buttons or openings. Do not use sprays, liquids or abrasives.

7.9 Heater control light

The control light can show 3 colours which are:

- Green when no heat is needed.
- Yellow when some heat is needed to maintain room temperature.
- Red when the heater is on full power.

The controller sends a radio signal every minute. When the heater receives the signal, the light turns off briefly and may change colour. When the heater is switched on, the light is always green until the first signal.

A slow flashing green light (every 1.6 seconds) means that, for 5 minutes no radio signals have been received. Follow the steps in 'Making wireless connection' to fix this.

A fast flashing red light (every 0.5 seconds) means the heater has overheated. Make sure the air flow is not restricted, switch heater off and allow to cool before switching on again.

7.10 Manual Control

(heater not operated from controller)
To set manual control:

- If the heater is on, switch it off.
- Switch it on for three seconds then off again.
- Do this 5 times and your heater will be in manual control.
- To re-enable the controller, make a new wireless connection as described earlier.

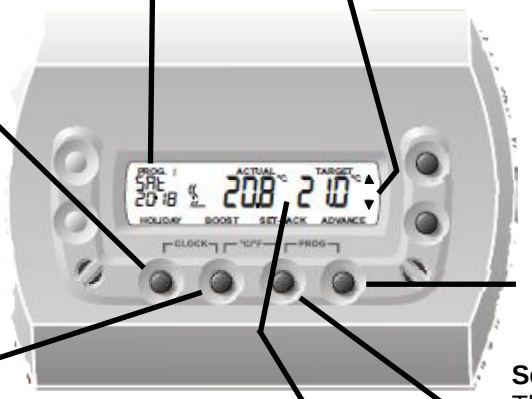
In manual control, simply switch the heater on and off at its mains supply.

7.11 Engineers settings

Time, Day and Program
Displays current time and day. Prog shows current program step.

Holiday (no program)
Switches the program off during holiday. Use ▲ ▼ to alter temperature. Choose - - - : no heating. 4°C : frost protection, or anything up to12°C. These are set until

Timed boost
Press boost once to turn on for 15 min. Press again to add 15 min (up to 4 hrs. max). Use ▲ ▼ to adjust temperature. Boost ends when time elapsed or CLEAR is pressed.



Power and transmit signals
As the room reaches target temperature, heating is reduced from 100% (4 bars) to 0% (no bars).

The radio transmit symbol appears when the controller transmits to the heater. This happens about once per minute.

Locking the controller
The controller can be locked to prevent tampering. When locked all buttons are disabled. HOLIDAY, BOOST, SET-BACK, ADVANCE, ▲ and ▼ are not displayed.
To lock press SET-BACK and ADVANCE together, then press button on rear for 2 seconds.
To unlock press SET-BACK and ADVANCE together, release them, then press button on rear within 2 seconds.

Quick adjust
Use ▲ ▼ to alter temperature. This reverts to set point in next program. If CLEAR is pressed it can be set to - - - : no heating, or anything between 4-30°C.

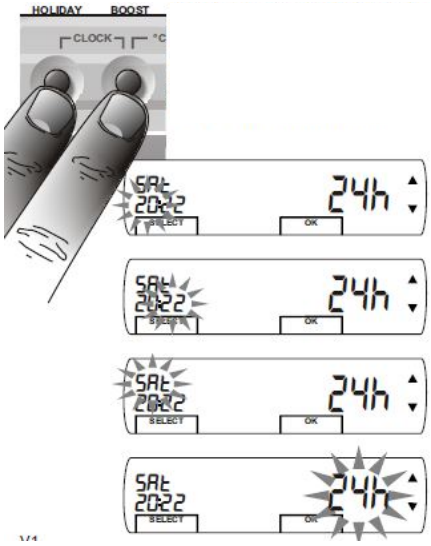
Continuous fan
If ▲ ▼ are pressed together the fan will operate regardless of the heat setting. This reverts to set point in next program or if CLEAR is pressed.

Advance
This brings forward the next program. Stays advanced until normal program time or CLEAR is pressed.

Set-back (economy)
The 7 day program continues to run, but temperatures, (except frost), are lowered by 5°C. Continues until CLEAR is pressed.

Actual and target temperatures
Actual is current room temperature, target is the desired temperature. Target is set manually or by the program and can be displayed as - - - when no heating required.

Setting the time and day
To set the clock press HOLIDAY and BOOST together. The hour will start to flash and can be adjusted with ▲ ▼ Using SELECT adjust minutes, day of the week or change between 24 and 12 hour clock. When finished press OK.



Factory set program

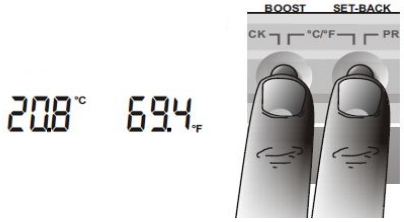
Program	Mon to Fri		Sat and Sun	
1	06:30	21.0°C	08:00	21.0°C
2	08:30	4.0°C	23:00	4.0°C
3	16:30	21.0°C	--:--	--:--
4	23:00	4.0°C	--:--	--:--
5	--:--	--:--	--:--	--:--
6	--:--	--:--	--:--	--:--

Each weekday is 21°C from 6.30 to 8.30am, then 4°C until 4.30pm, then 21°C until 11.00pm, then finally 4°C until program 1 on the next day. To restore this program press ▲ ▼ together during 'copy day' in 'Setting the 7 day program'.

Frost protection 4°C

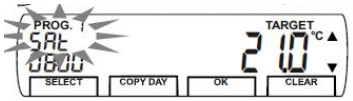
Set target temperature to 4°C. For no frost protection set to - - -. The snowflake symbol appears if the actual temperature falls below 4°C.

Celsius or Fahrenheit
Pressing BOOST and SET-BACK together changes actual and target temperatures from Celsius to Fahrenheit.

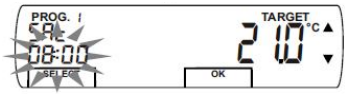


Setting the 7 day program
To set a program press SET-BACK and ADVANCE together. This will take you to stage 1 below. *Program times cannot overlap.*
Note: should the unit accidentally lock while setting a program, see 'Locking the controller' section.

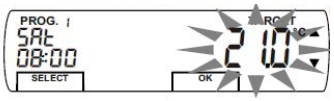
1) The program number and day will flash. Change using ▲ ▼ SELECT goes to stage 2.



2) The time flashes. Adjust using ▲ ▼ SELECT goes to stage 3.



3) The temperature flashes. Adjust using ▲ ▼ for room temperature, 4°C (frost protection) or - - - (no heating)

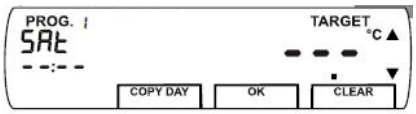


4) When programing has finished, press OK to return to normal operation.

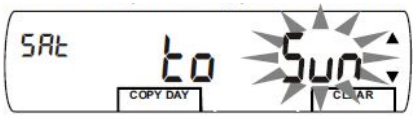
Continuous fan
While temperature is flashing press ▲ ▼ together to choose continuous fan for current program.

Manual operation
If all 6 programs in all 7 days are cleared, then the temperature control is done by 'Quick adjust'.

Clearing a program
From stage 1 press CLEAR to clear a program, or press again to un-clear a program.
A cleared program displays as --:--,-,°C, and the program is ignored.



Copy day
This copies all 6 programs from the day being programed to another day. Press COPY DAY to do the copy. CLEAR will return to stage 1.



8. Maintenance

ALWAYS ENSURE THAT THE ELECTRICITY SUPPLY IS SWITCHED OFF BEFORE COMMENCING WORK ON THIS HEATER.

To obtain the best results from the heater, it is essential to avoid the accumulation of dust and dirt within the unit on the air inlet and discharge grilles. For this reason regular cleaning is necessary, paying particular attention to the removal of dirt build up on the rotor blades.
Cleaning of the fan is best carried out with a soft brush.
A single drop of light oil should be applied to the motor bearing from time to time.

9. Spares & Servicing

ALWAYS ENSURE THAT THE ELECTRICITY SUPPLY IS SWITCHED OFF BEFORE SERVICING THIS HEATER.

It is essential when ordering spares or replacement parts to state the model number and the serial number on the rating label adhered to the rear of the unit.

The air curtain should be serviced annually. The company offer a service facility, call 01384 489700. Servicing should be undertaken by a competent person.

Any repair or alteration carried out to this product (during the warranty period) without prior authority will invalidate said warranty.

Refer to air curtain Instruction manual for details.

10. Replacing Parts

ALWAYS ENSURE THAT THE ELECTRICITY SUPPLY IS SWITCHED OFF BEFORE REPLACING PARTS ON THIS HEATER.

10.1 MINI 600SE03

10.1.1 TO REPLACE THE FAN HEATER ASSEMBLY

- Isolate the unit from the electric supply.
- Remove the outer cover after disconnecting from the swivel mounting bracket where fitted.
- Disconnect the internal wiring from the main terminal block and earth stud.
- Release the fixings and wiring that secure the fan assembly to the rear panel.
- Remove the four nuts and washers fixing the fan heater assembly to the back of the case.
- The fan heater assembly can now be eased forward and removed from the heater case.
- Fit replacement fan heater and re-assemble in reverse order.

10.1.2 TO REPLACE A SWITCH

- Isolate the unit from the electric supply.
- Remove the top cover.
- Release the three fixings which secure the switch bracket to the right hand side of the main case.
- Remove the push-on connectors, noting their position.
- Remove by compressing the plastic retaining tabs, and lifting out the switch.
- Insert the new switch, refit and push on connectors in the correct order, test and reassemble.

10.2 MINI 800SE4-5 & MINI 1000SE06

10.2.1 TO REPLACE THE FAN HEATER ASSEMBLY

- Isolate the unit from the electric supply.
- Remove the outer cover after disconnecting from the swivel mounting bracket where fitted.
- Disconnect the internal wiring from the main terminal block and earth stud.
- Release the fixings and wiring that secure the

10. Replacing Parts cont.

fan assembly to the rear panel.

- Fit replacement fan heater and reassemble in reverse order.
- Test product for correct operation.

10.2.2 TO REPLACE A SWITCH IN THE CONTROL

- Switch off the mains supply.
- Remove the switch box cover.
- Disconnect the wiring to the switch.
- Remove the appropriate fixing screw(s) and push out the switch.
- Fit the replacement switch, reconnect the wiring and replace the cover.

11. Fault Finding

11.1 Protection

(Thermal cut-out)

The units are protected from overheating in the event of fan failure or an obstruction of the free airflow, by auto resetting thermal cut outs. If this happens the thermal cut outs switch off the appliance. The appliance will not operate until it has cooled down. If this fault re-occurs, refer to 'fault conditions'.

NOTE: DO NOT COVER the air inlet or outlet grilles, at any time.

11.2 To reset the self hold cut-out

- The cut-out is reset by switching OFF mains power to the appliance.
- Allow the appliance to cool for 20 minutes.

Switch ON the appliance. If the cut-out trips again, a qualified electrician should be consulted.

11.3 Fault conditions

If the heater will not operate, disconnect it from the mains and arrange for a certified electrician to attend to investigate the reason.

WARNING:

THIS HEATER SHOULD NOT BE INSTALLED WHERE THERE IS A CORROSIVE ATMOSPHERE.

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