

NORDAIR

AIRBLOC

AS AIRBLOC SLIMLINE
ENERGY SAVING AIR CURTAINS

User instructions &
installation manual

Index

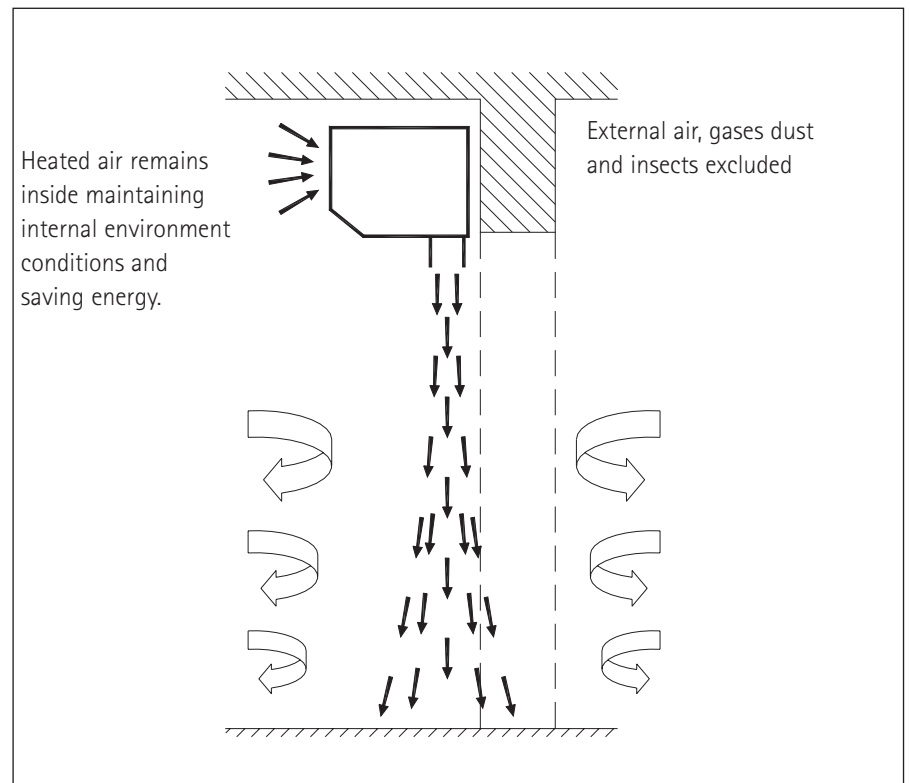
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1. Introduction

The Airbloc slimline is a range of aesthetic high quality air curtains designed for surface mounting to suit applications such as hotels, cinemas, retail outlets, commercial premises, cold rooms or any similar environment where doors are frequently open. They provide environmental separation by using a curtain of ambient or heated air that acts as a protected barrier to maintain comfort conditions within the building or prevent the ingress of dust and flying insects.

Airbloc slimline is available in single units to suit door widths from 700mm to 2 metres and can be combined to cover any width of door. Electrically heated units are available in standard or high capacity versions with the standard capacity suitable for door heights up to 2.5 metres and the high capacity suitable for door heights up to 3.5 metres. Mini series models to suit door widths of 700 and to suit door heights up to 2.3 metres.

Figure 1



2. Product range selection guide

Model	Mini	Standard	High	High
Maximum door height (m)	2.3	2.5	3.5	4.0
Ambient air curtains	X	✓	✓	✓
Electric heated air curtains	✓	✓	✓	X

Ambient models

Model		AS100 AR	AS160 A	AS200 A
Motor orientation		RHS	Centre	Centre
Maximum door width	mm	1000	1600	2000
Maximum door height	mm	4000	4000	4000
Maximum air volume	m ³ /h	2780	4230	5400
Approximate weight	kg	19	26	30
Electrical supply		230 volt 1 phase 50Hz		
Power consumption	kW	0.48	0.40	0.58
Total electrical load	Amps	3	3	3

Ambient models

Model		Mini	Standard capacity				High capacity			
		AS70 SE04	AS80 SE03	AS100 SE06R	AS100 SE09R	AS160 SE12	AS200 SE15	AS100 HE12R	AS160 HE15	AS200 HE18
Motor orientation		Centre	RHS	RHS	RHS	Centre	Centre	RHS	Centre	Centre
Maximum door height	mm	700	800	1000	1000	1600	2000	1000	1600	2000
Maximum door height	mm	2300	2500	2500	2500	2500	2500	3500	3500	3500
Maximum air volume	m ³ /h	300	1100	1100	1100	1510	2200	2600	3900	5000
Maximum heating capacity	kW	4	3.5	6	9	12	15	12	15	18
Approximate weight	kg	4	10	21	21	30	37	28	37	41
Motor power	kW	0.06	0.062	0.06	0.06	0.15	0.15	0.58	0.58	0.58
Electrical supply		230 volt 1 phase 50Hz				415 volt 3 phase 50HZ				
Total electrical load (per phase)	Amps	18	16.5	26	13	18	22.5	20	24	29

All Airbloc slimline air curtains are manufactured in accordance with BS EN ISO9002 and are CE approved with reference to the following directives

EN 60335-1	89/336	} Electromagnetic compatibility
EN 60335-2-30	91/31	
EN 60555	93/68	
EN 60555-3		
EN 292	89/392	} Machine Specifications
EN 55014	91/368	
EN 50082-1		

3. Mounting guide

Airbloc slimline 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, with the open room space against a wall or ceiling as shown in Figures 2 to 4. 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. For ceiling mounted installations, a clear distance must be allowed to the top of the unit for wiring. The discharge opening should be as close to the top of the door as possible and to cover the entire door width. Depending on size and the model of the air curtain either brackets or fixing plates are supplied. Typical fixing methods are shown in Figures 2 to 4.

Note Fixing rings are standard items for the AS70 & AS80 only, (the AS80 has swivel bracket for alternative fixing), all other types of air curtains are supplied with brackets as standard.

Figure 2 Wall mountings

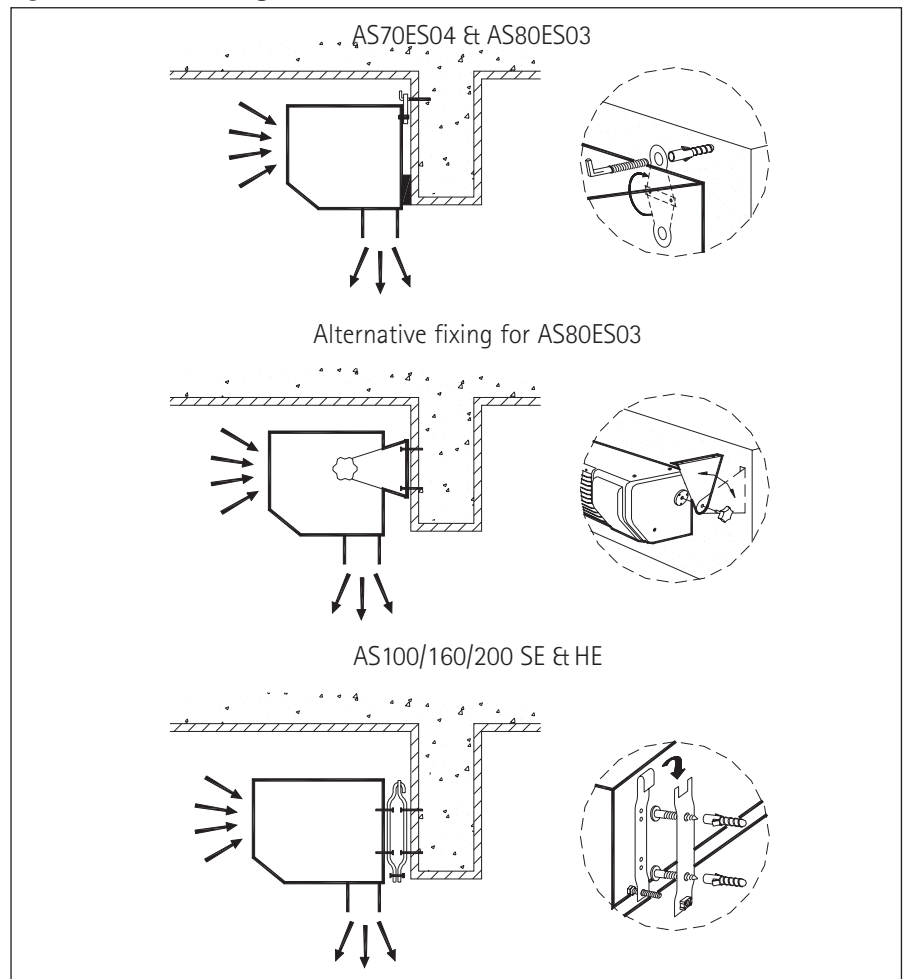


Figure 4 Mounting against glass

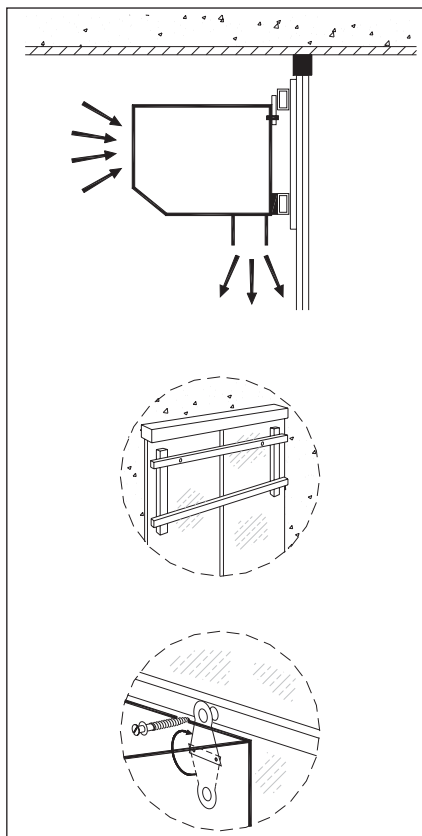
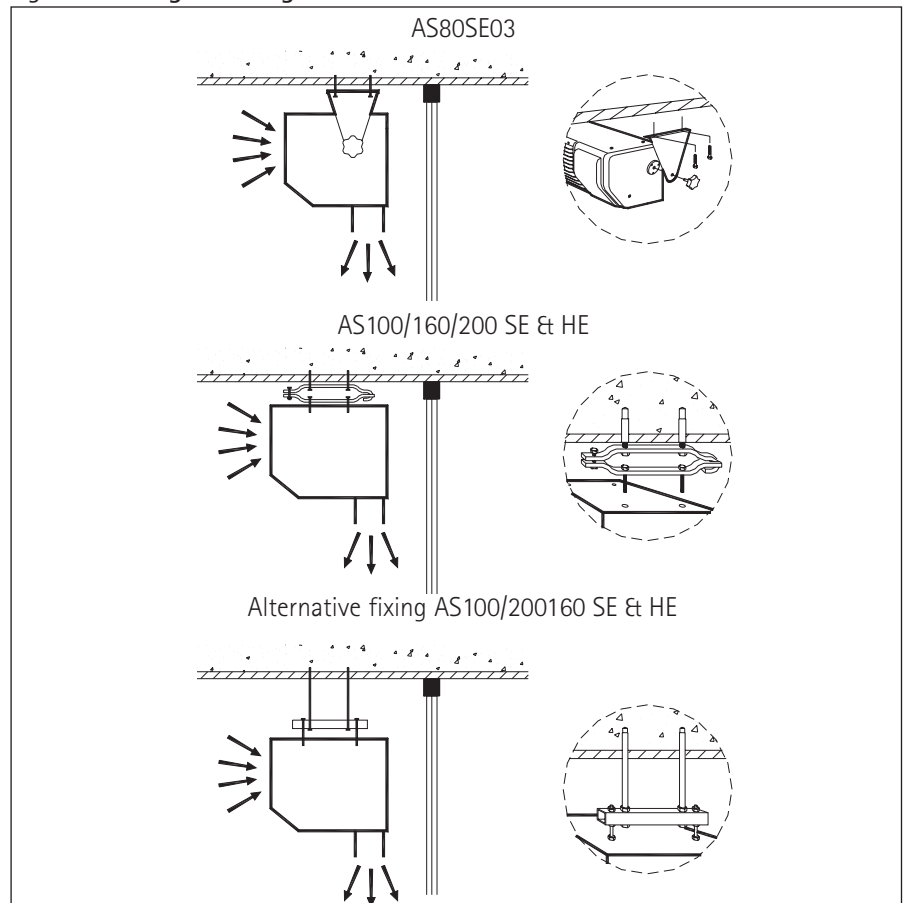


Figure 3 Ceiling mounting



4. Fixing point data

Airbloc slimline air curtains are supplied with M6 nuts for installation to either the wall or ceiling. AS70SE04 are supplied with factory fitted rings. AS80SE03 are supplied with factory fitted rings and swivel brackets.

Ambient Models (Fig 10)

	A	B
AS160A	1200	220
AS200A	1400	320

Electrically heated models (Fig 5-9)

Capacity	Model	A	B
Standard	AS160SE12	1100	250
	AS200SE15	1300	350
High	AS160HE15	1200	220
	AS200HE18	1400	320

Figure 5 AS70SE04

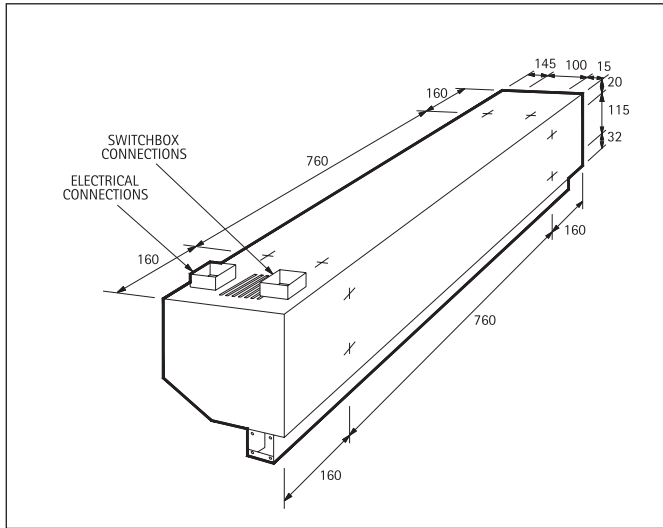


Figure 7 AS100SE06R & AS100SE09R

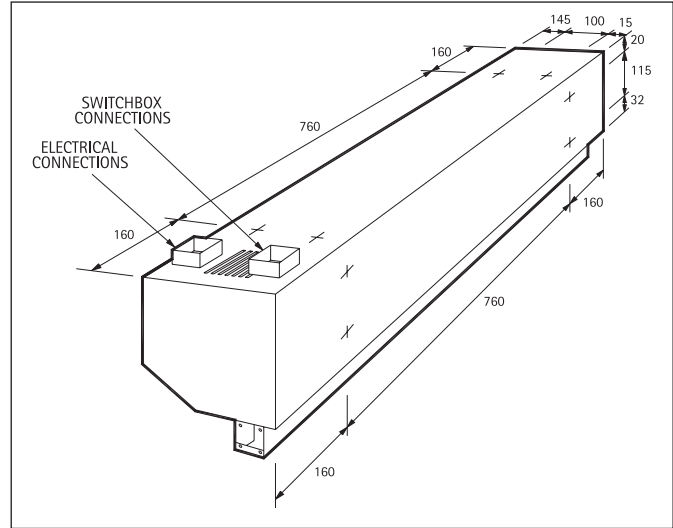


Figure 6 AS80SE03

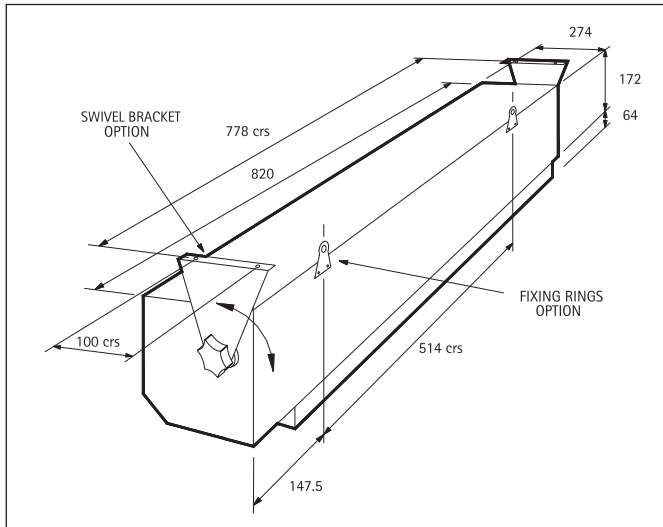


Figure 8 AS100HE12R

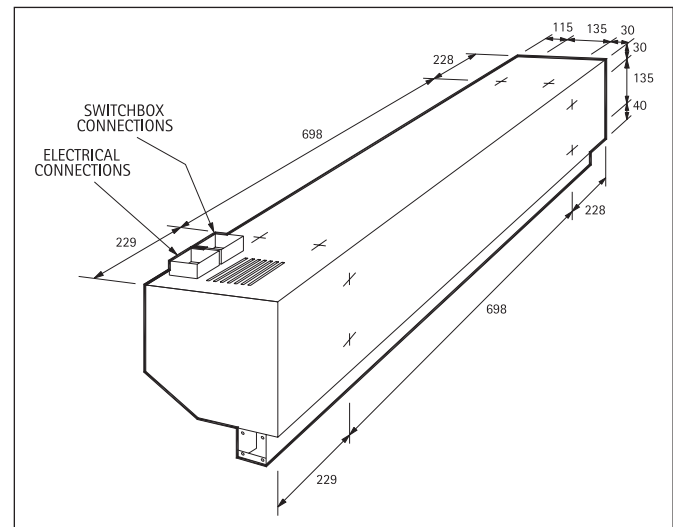


Figure 9 AS160SE12 & AS200SE15

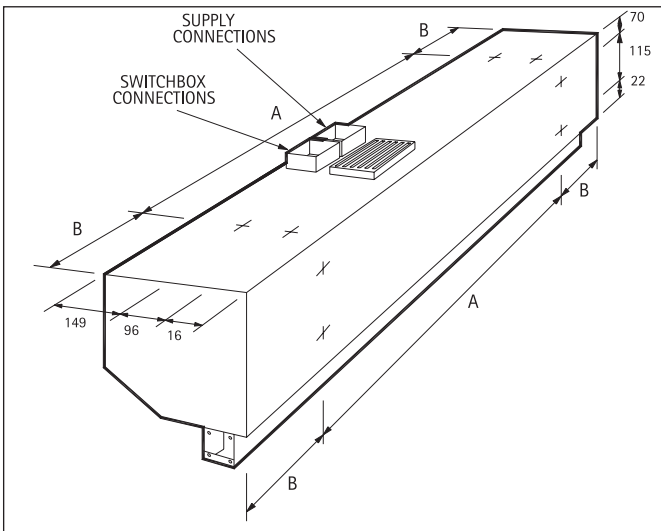


Figure 12 AS160A & AS200A

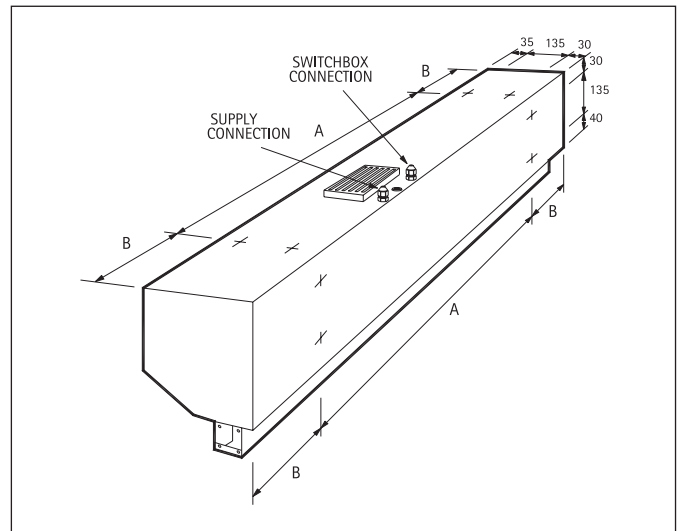


Figure 10 AS160HE15 & AS200HE18

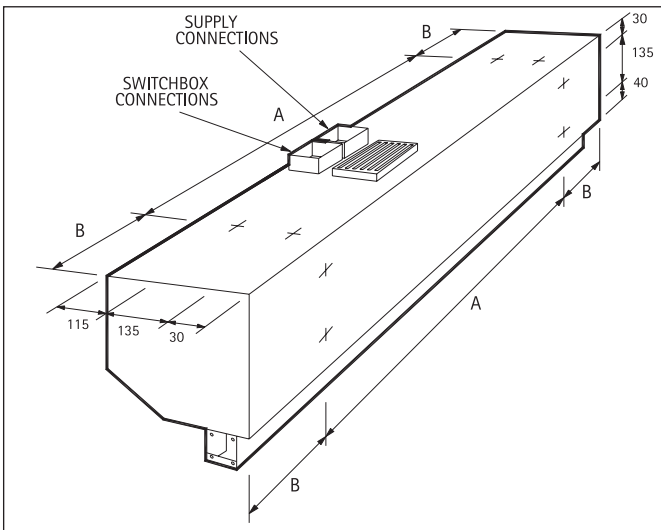
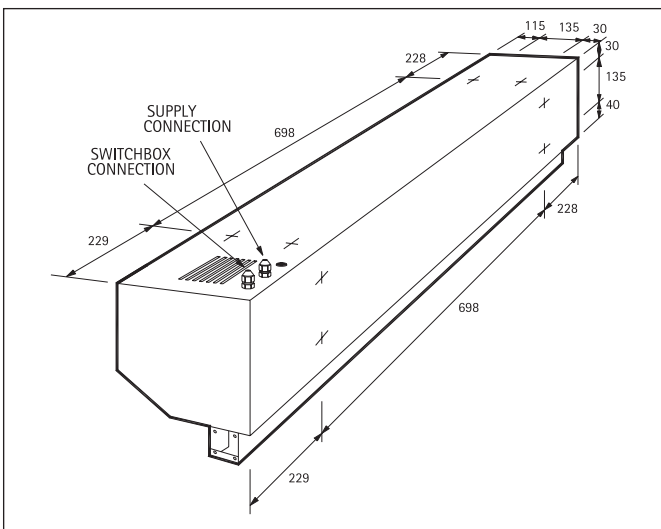


Figure 11 AS100AR



5. Wiring instructions

Ambient models

All slimline ambient air curtains require 230V, 1ph, 50Hz supply via a 3 core cable for connection to the mains isolator. ON/OFF and HIGH/LOW settings are operated via a remote switchbox (See Figure 13).

For details on interconnection between heater and switchbox please refer to section 12.

Electrically heated models

AS70SE04 models require 230V, 1ph, 50Hz supply via a 3 core cable for connection to the mains isolator. ON/OFF and HIGH/LOW settings are operated via switches located on the front of the unit. (See Figure 17).

AS80SE03 models require 230V, 1ph, 50Hz supply via a 3 core cable for connection to the mains isolator. Heat and fan settings are operated via a remote switchbox. (See Section 6).

AS100SE06 - AS200HE18 models should be connected to a 415V, 3ph, 50Hz supply via a 5 core cable for connection to the mains isolator and to the terminal block on top of the unit. Heat and fan settings are controlled via a remote switchbox. (See Figure 14).

It is also possible for the 6kW model to be connected to a single phase system by linking the R, S, and T terminal blocks together. (See Figure 15).

Electrical connections must always be undertaken by a suitably qualified electrician wired in accordance with this installation manual.

For details on interconnection between heater and switchbox. Please refer to section 12.

WARNING

Cabling should be 5 core 2.5mm dia for heating capacity up to 9kW. For heaters up to 18kW a 5 core 4mm dia cable should be used.

Warning

Before installation carefully read the instruction manual and labels on the upper side of the air curtain and remote switchbox connection box. Before final connection check earthing of the supply.

Warning

Always use the ON/OFF switch on the remote switch box to operate the unit. DO NOT operate the air curtain by means of the mains isolator switch. On the AS70SE04 use ON/OFF switch on the air curtain.

Figure 13 Electrical connection - (AS160A shown)

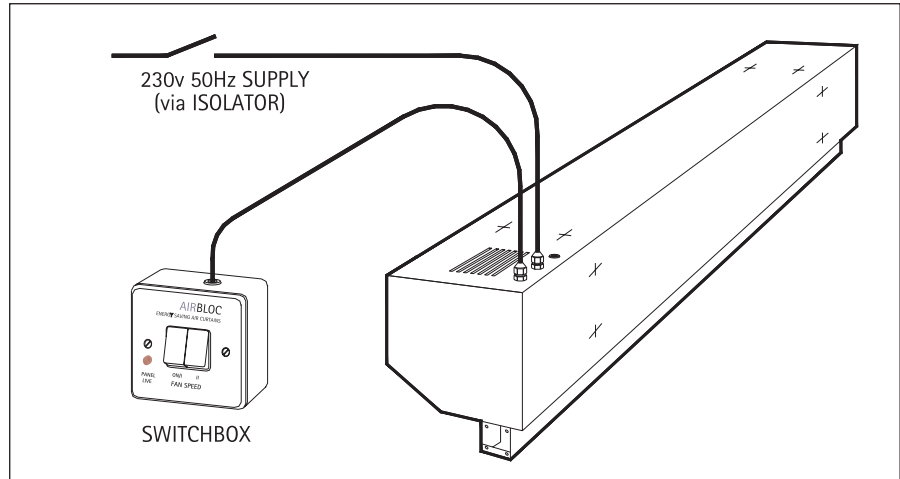


Figure 14 Open power supply plastic box - (AS160SE12 shown)

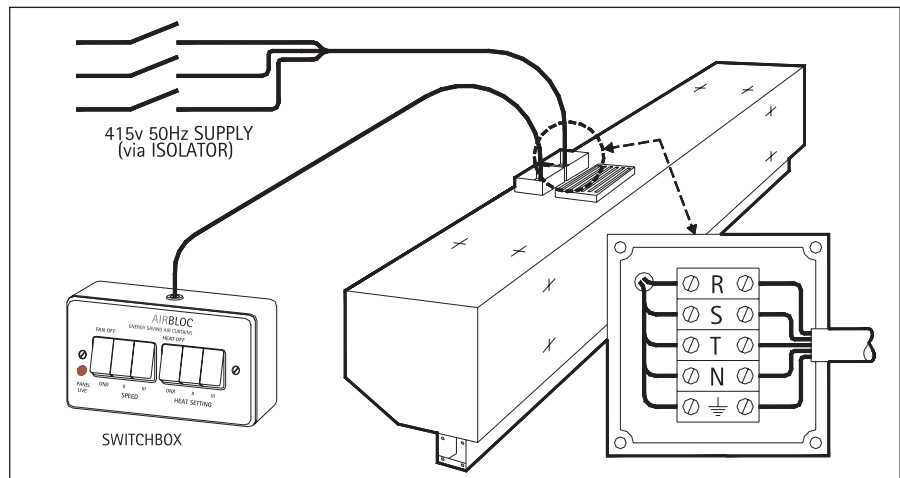
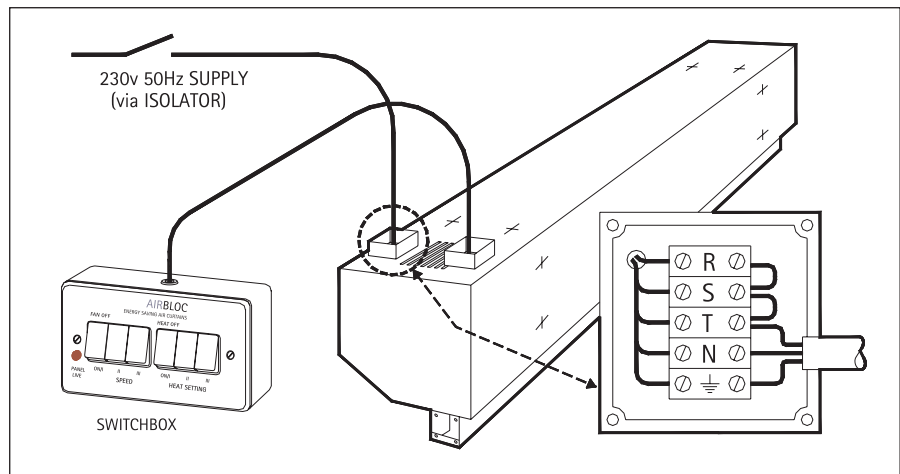


Figure 15 Open power supply plastic box - (AS100SE06R shown)



6. Switches & remote switchboxes

Ambient models

Are supplied with a remotely sited switchbox. ON/OFF, HI/LOW fan speed can be activated from the switchbox. (See Figure 16).

Electrically heated models

AS70SE04 are supplied with ON/OFF, HI/LOW heat settings. Switches are located adjacent to the outlet grilles. No remote switchbox is available. (See Figure 17)

AS80SE03 are supplied with a remotely sited switchbox. ON/OFF, HI/LOW fan speed, HI/LOW heat settings can be activated from the switchbox. (See Figure 18).

AS100SE06 - AS200HE18 are supplied with a remotely sited switchbox. ON/OFF, HI/MED/LOW fan speed, HI/MED/LOW heat settings can be activated from the switchbox. (See Figure 19).

Warning

Air Curtains must not be controlled by the mains isolator. The remote control panel or the integral control switches must be used.

Figure 16 Switchbox ASCP1-2

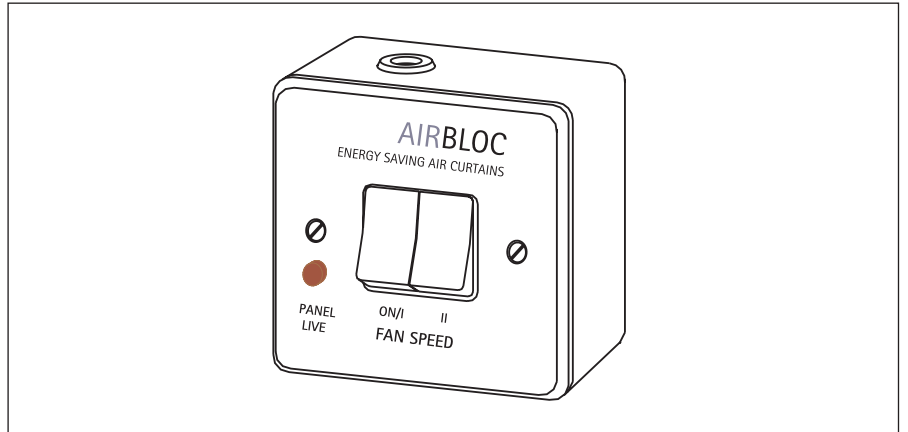


Figure 17 Switches AS70SE04

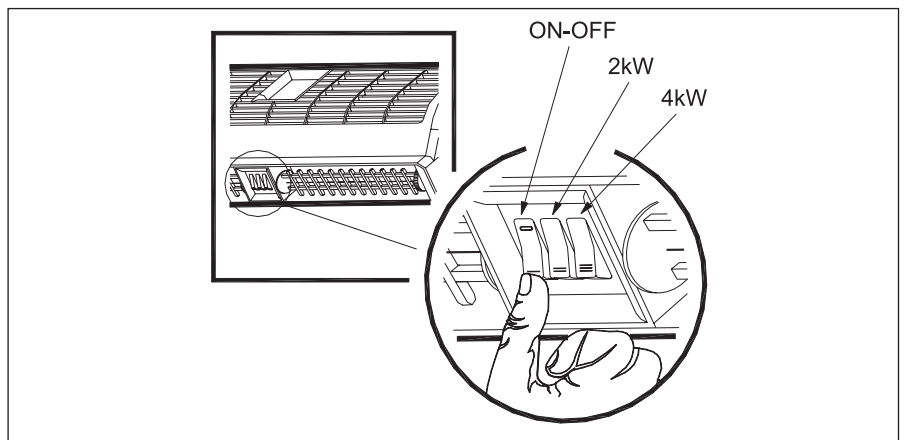


Figure 18 ASCP1-4 Switchbox

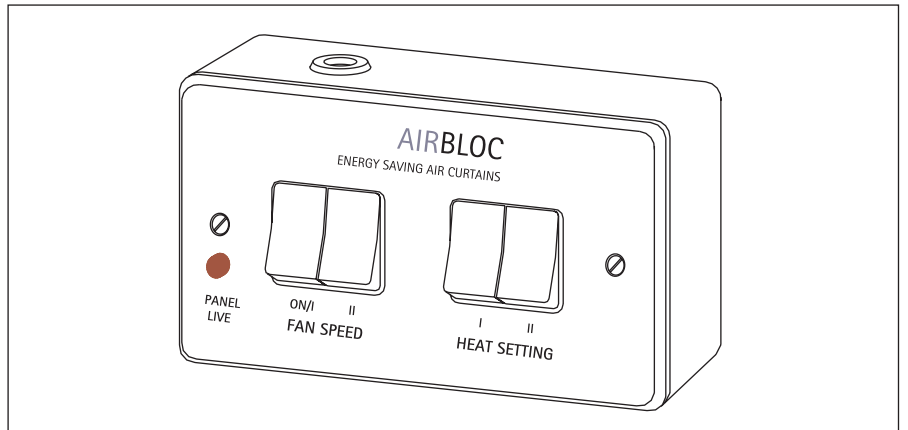
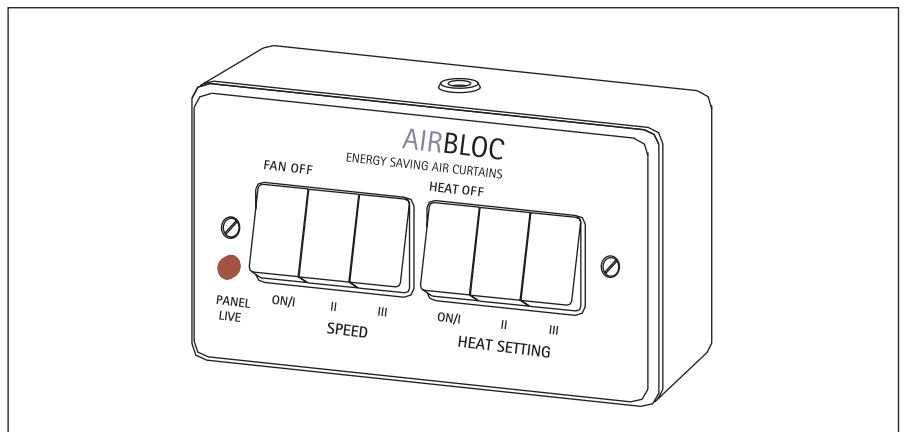


Figure 19 ASCP1-6 Switchbox



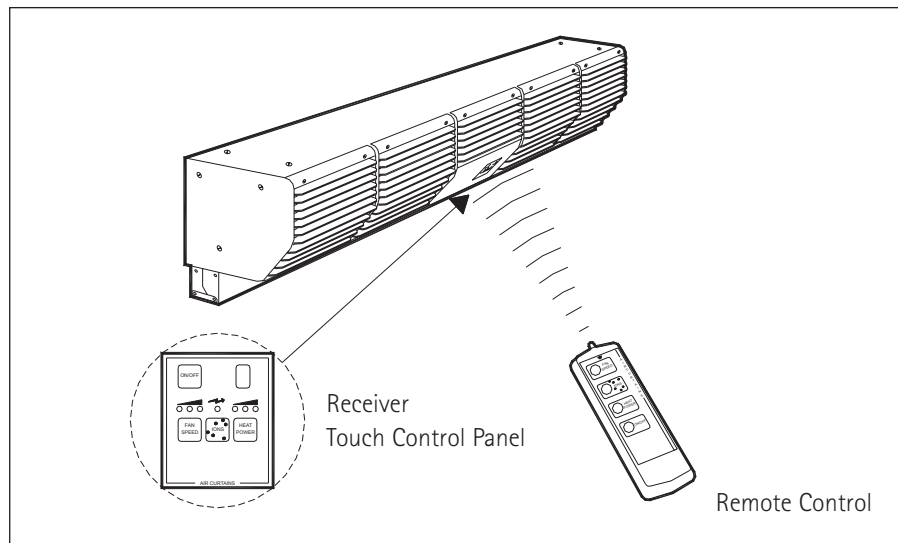
7. Infra-red remote control

Airbloc slimline air curtains may be specially ordered with remote infra-red control. (See Figure 20).

This feature greatly simplifies on site wiring and eliminates low level switches and unauthorised adjustment. The hand held controllers operate up to a maximum distance of 10m from the unit and a radius of $\pm 15^\circ$.

A single infra-red control can operate multiple air curtains installed in one area.

Figure 20 Remote control



8. Commissioning & adjustment

All air curtains are equipped with a very flexible and simple discharge air outlet that facilitate regular and smooth air flow. Using these outlets it is possible to adjust air flow angle up to 15° from the vertical. Once the outlets are adjusted the position can be maintained by tightening the fixing screws (See Figure 21).

Airflow may be adjusted according to diagrams opposite.

9. Maintenance

Airbloc air curtain are simple to operate and maintain. It is recommended that they are maintained on a regular basis to the following procedures.

Regularly clean fans and air grilles with a vacuum cleaner or soft brush. To gain access to fans release air grilles by quarter turn screws and remove.

For electrically heated models the electrical elements should be cleaned carefully with a soft brush only when completely cool.

Note If fans vibrate or are noisy the fans may have been damaged.

Please call for service assistance on 01384 489700.

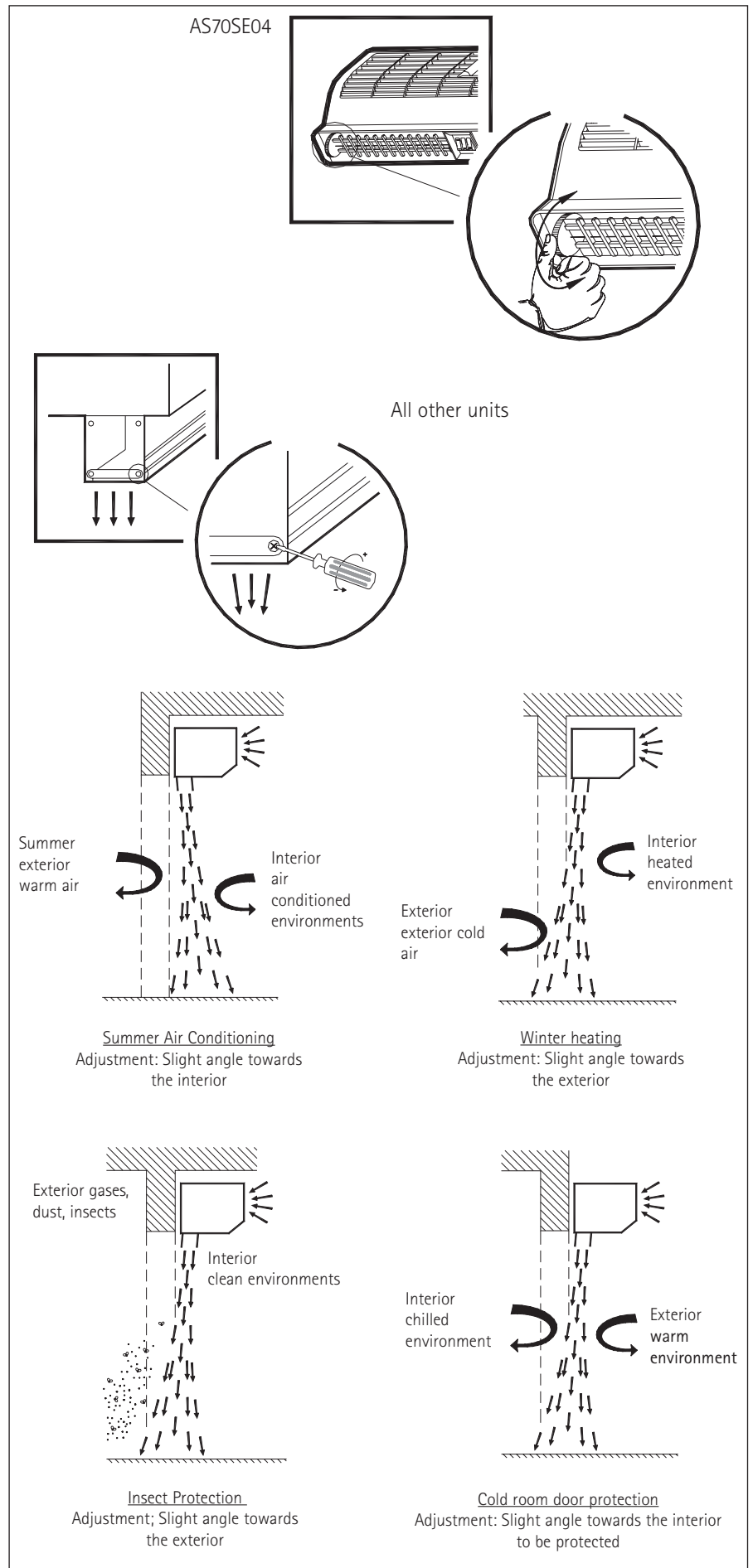
10. Warranty

Warning

12 months parts and labour.

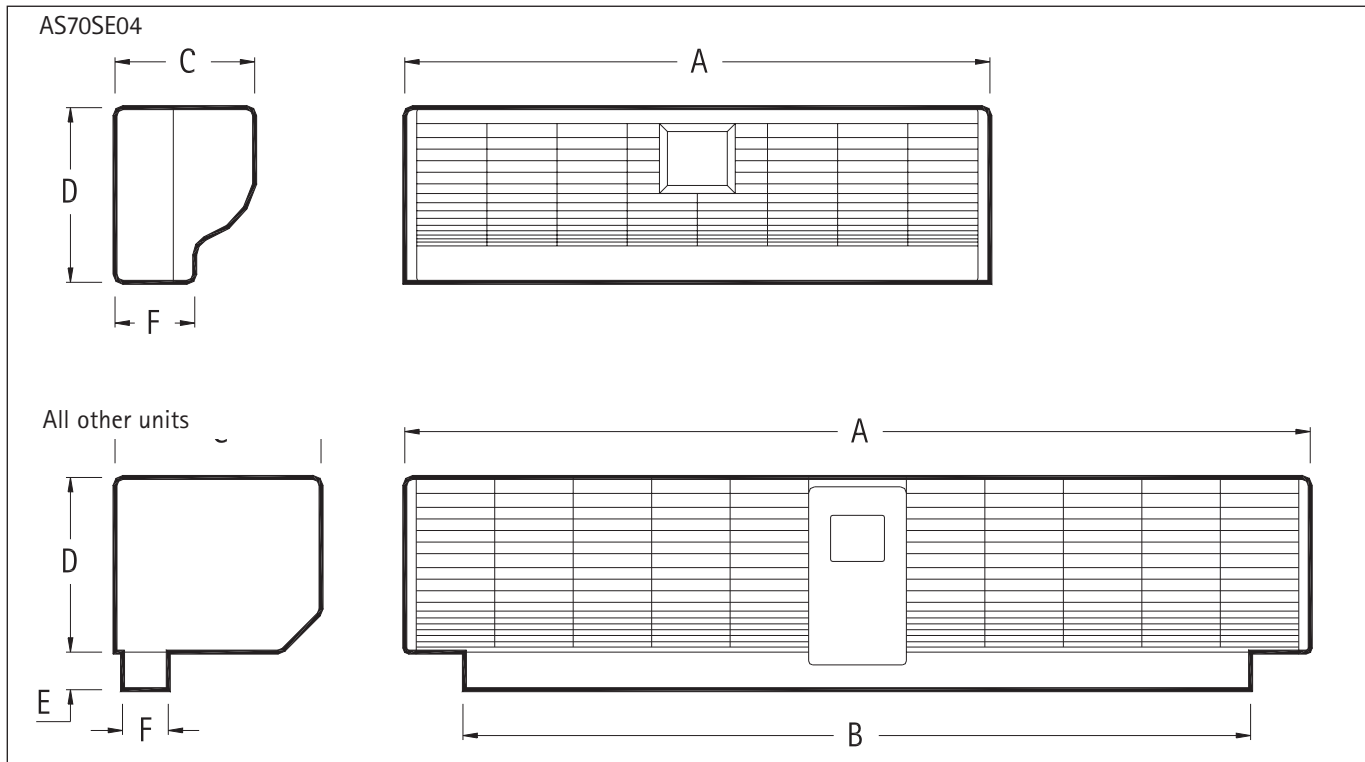
This warranty is void if any mechanical components have been damaged by improper use.

Figure 21 Examples of air flow adjustment



11. Dimension data

Figure 22 Slimline range



Ambient models Dimensions in mm

Models		AS100AR	AS160A	AS200A
Overall width	A	1157	1651	2053
Outlet width	B	920	1600	2003
Total depth	C	212	212	212
Total height	D	205	205	205
Outlet height	E	64	64	64
Outlet width	F	56	56	56

Electrically heated models

Models		AS80SE03	AS100SE06/09R	AS160SE12	AS200SE15	AS100HE12	AS160HE15	AS200HE18
Overall width	A	870	1089	1609	2009	1157	1651	2053
Outlet width	B	665	923	1560	1960	920	1600	2003
Total depth	C	274	274	274	274	277	277	277
Total height	D	172	172	172	172	205	205	205
Outlet height	E	64	64	64	64	64	64	64
Outlet width	F	60	40	40	40	56	56	56

Model	AS70SE04	
Overall Width	A	699
Outlet Width	B	N/A
Total Depth	C	121
Total Height	D	202
Outlet Height	E	N/A
Outlet Width	F	66

12. Wiring diagrams

Figure 23 Ambient air curtains internal wiring (AS100AR, AS160A & AS200A)

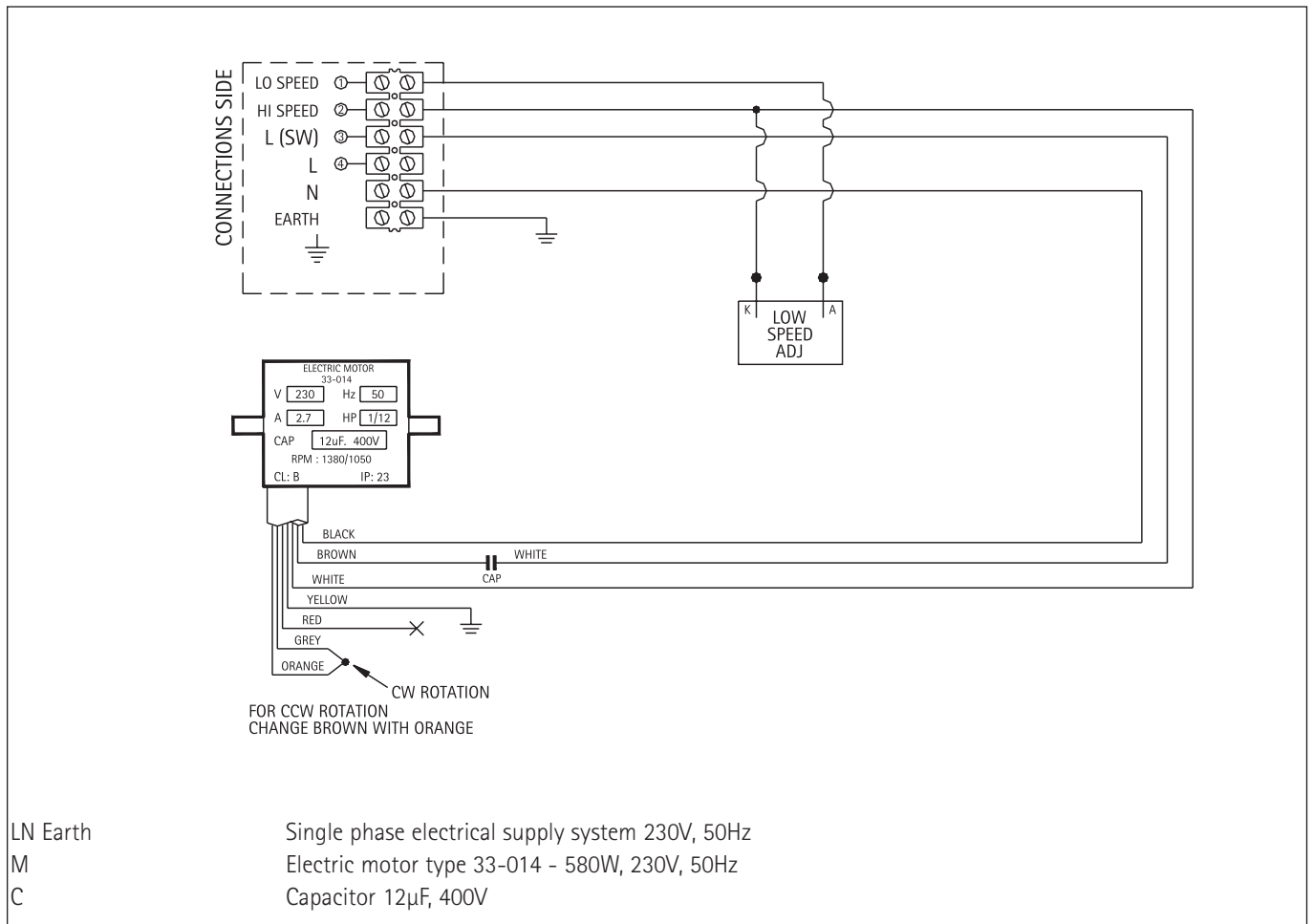


Figure 24 ASCP1-2 Switchbox interconnecting wiring (to suit above)

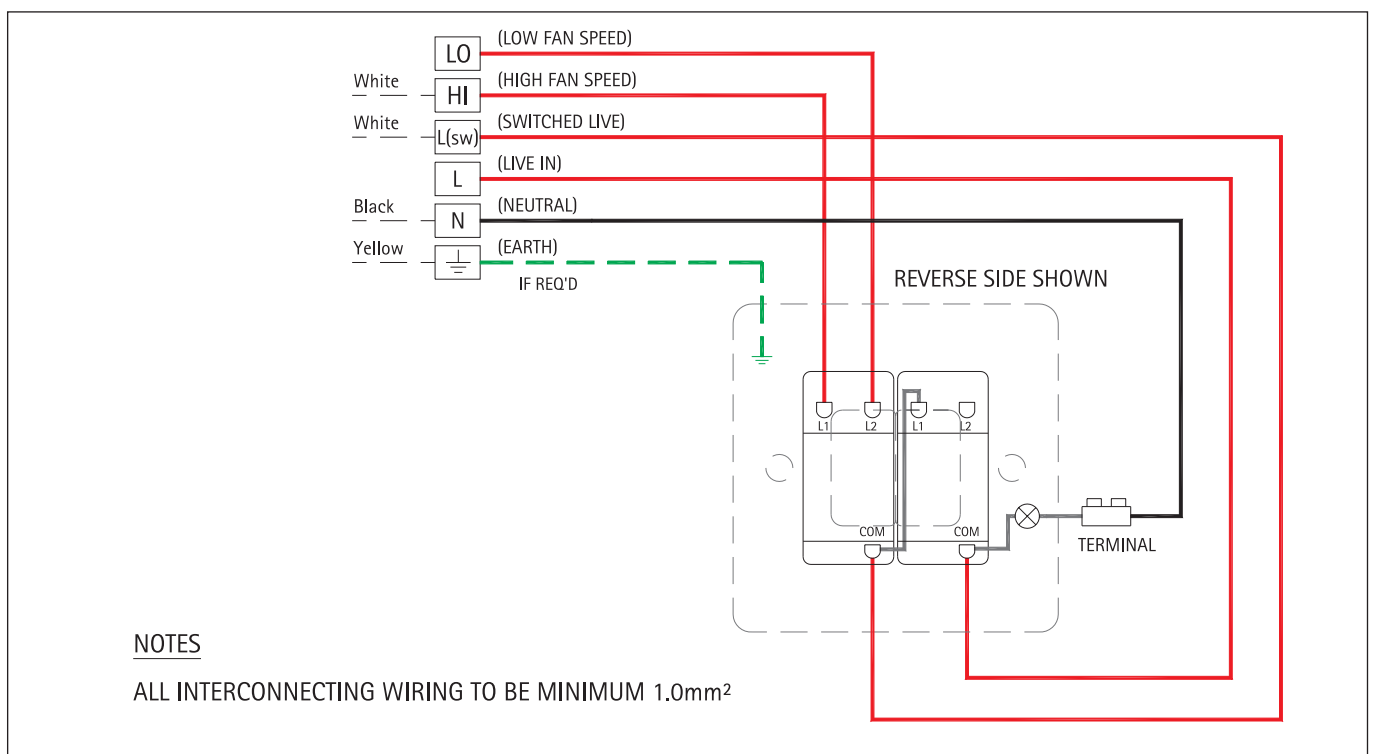
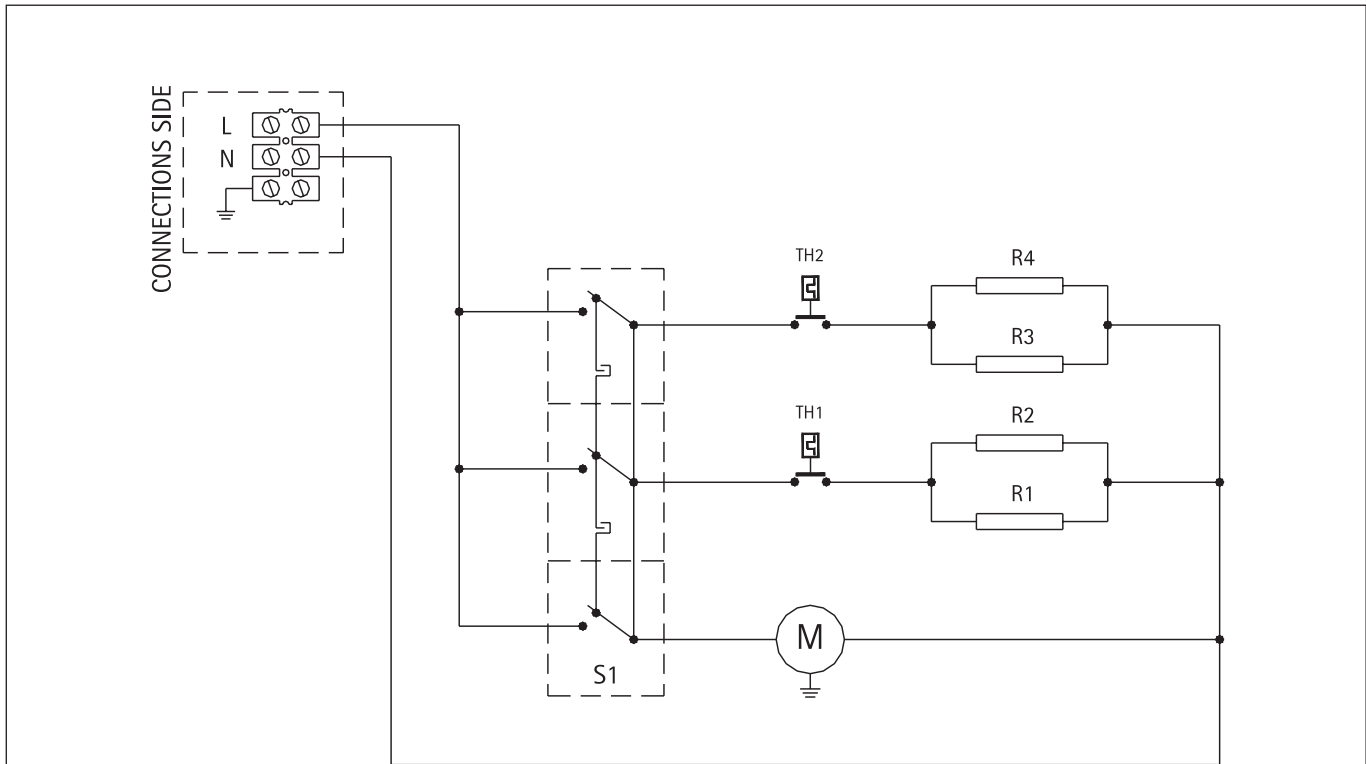


Figure 25 Electrically heated air curtains internal wiring (AS70SE04)



L, N, EARTH
M
TH, TH2
S1
R1,R2,R3,R4,

Single phase electrical supply system 230V, 50Hz
Electric motor 230V, 50Hz, 60W Input
Elements thermostats
Triple rocker switch 10A, 230V
Electrical heating elements 230V, 1000W each

Figure 26 Electrically heated air curtains internal wiring (AS80SE03)

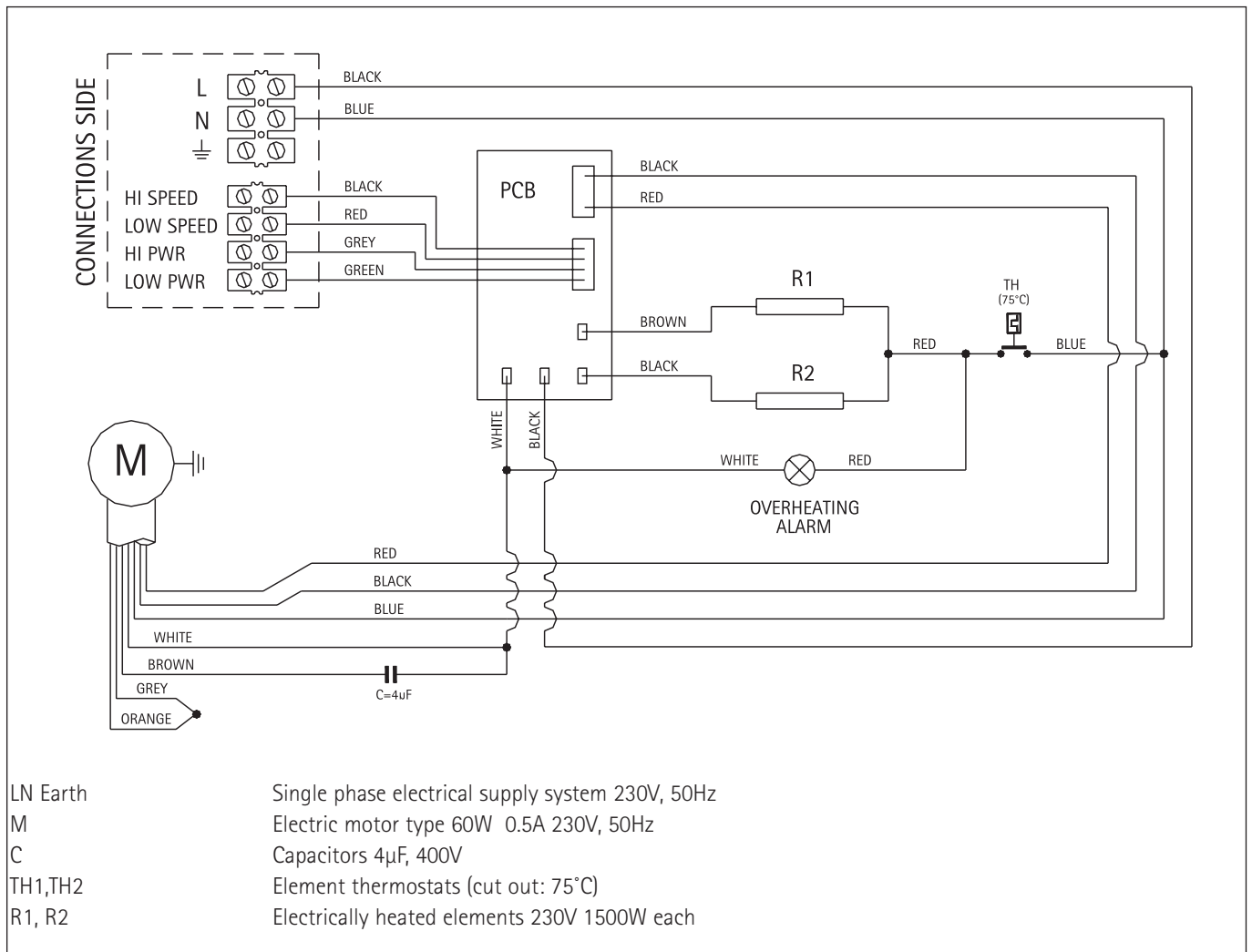


Figure 27 ASCP1-4 Switchbox interconnecting wiring (to suit above)

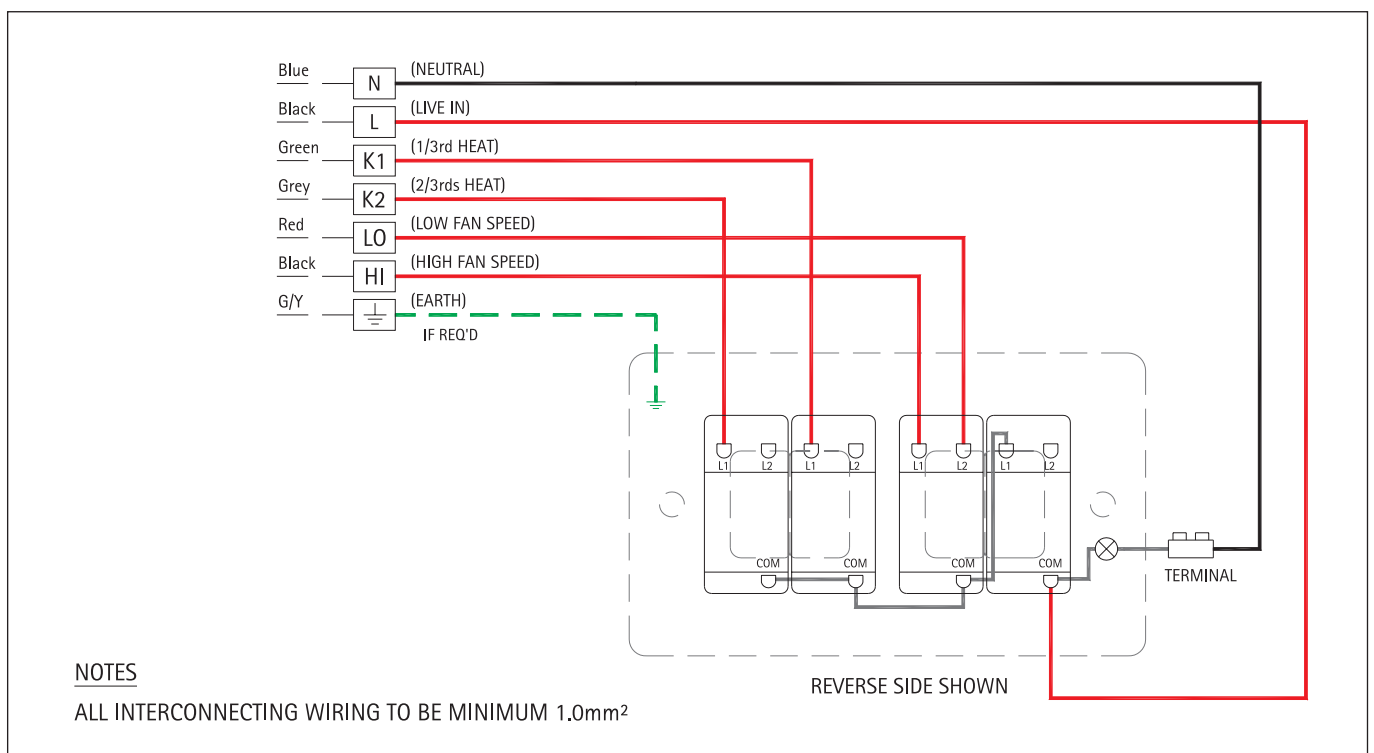


Figure 28 Electrically heated air curtains internal wiring (AS100SE06, AS100SE09, AS160SE12, AS200SE15)

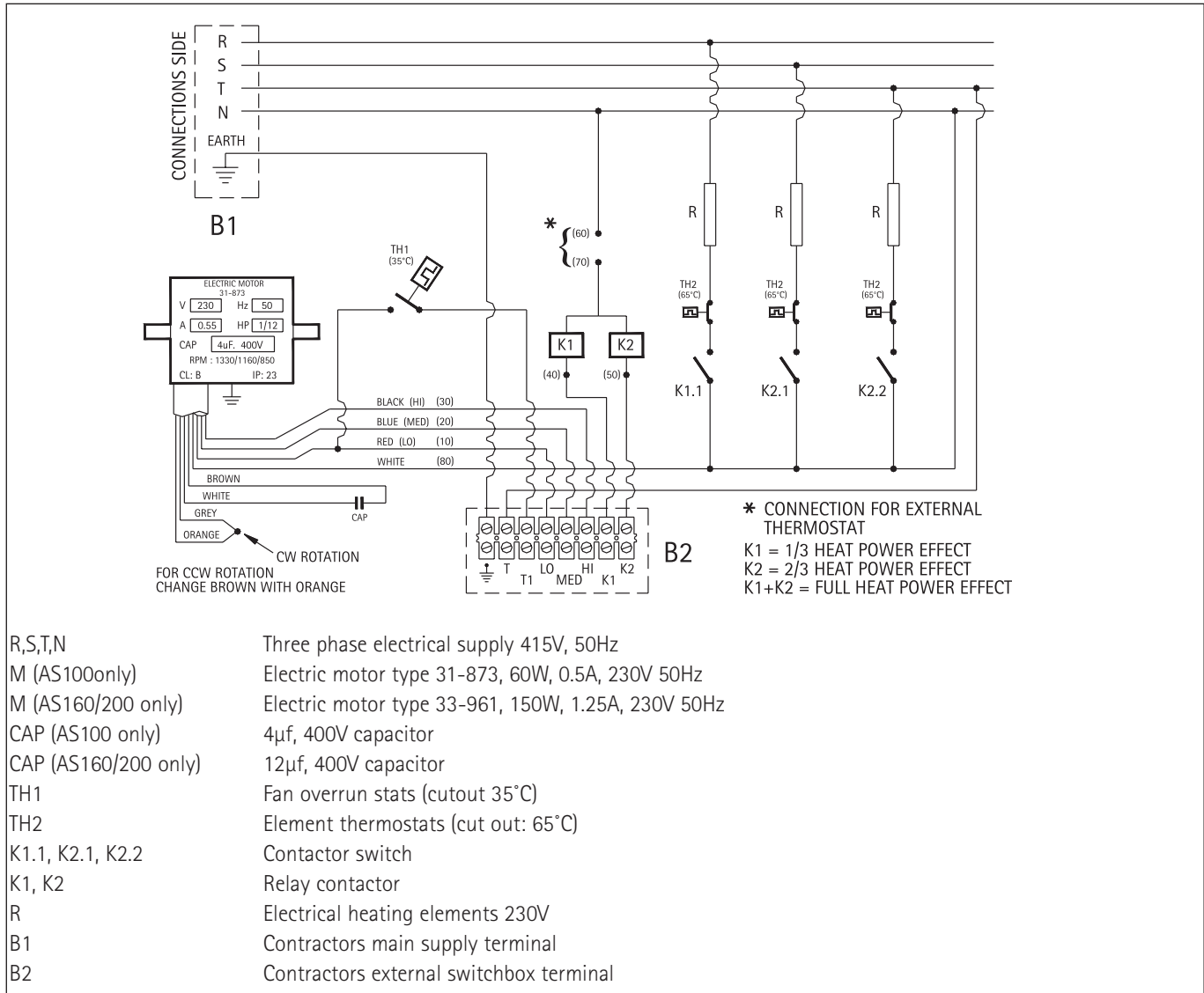


Figure 29 ASCP1-6 Switchbox interconnecting wiring (to suit above)

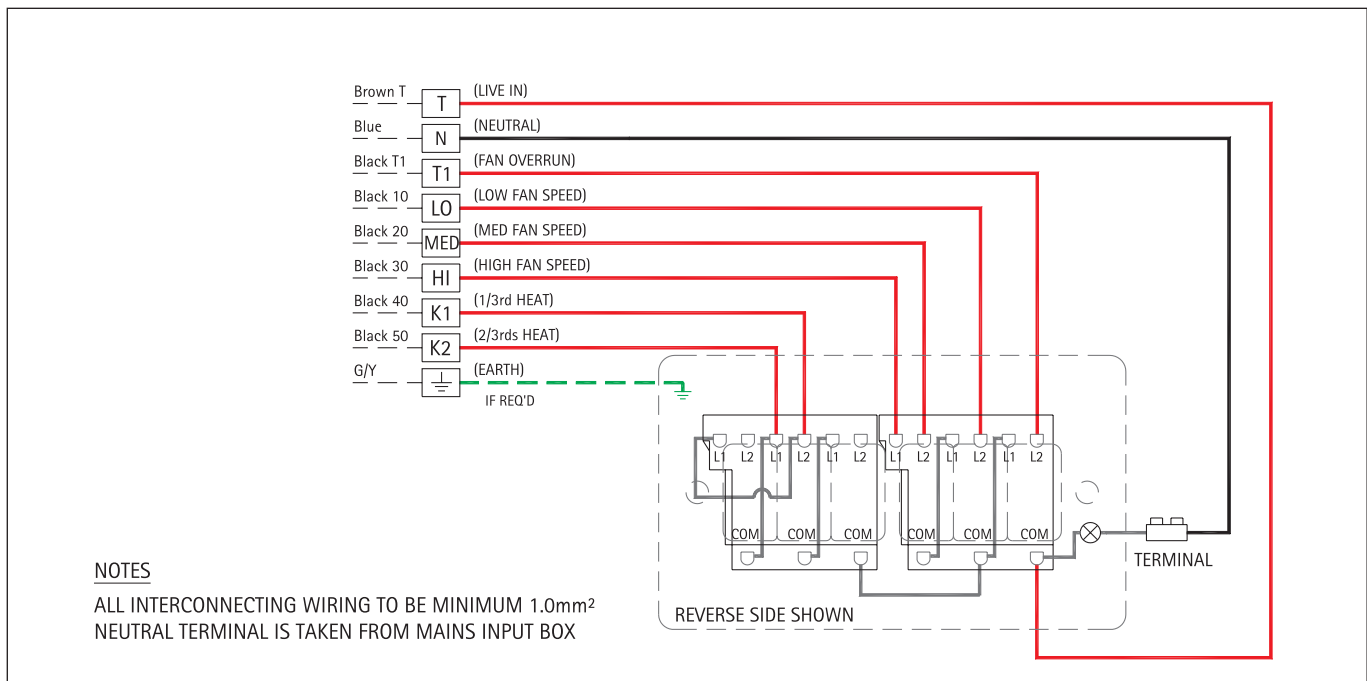


Figure 30 Electrically heated air curtains internal wiring (AS100HE12R, AS100HE12)

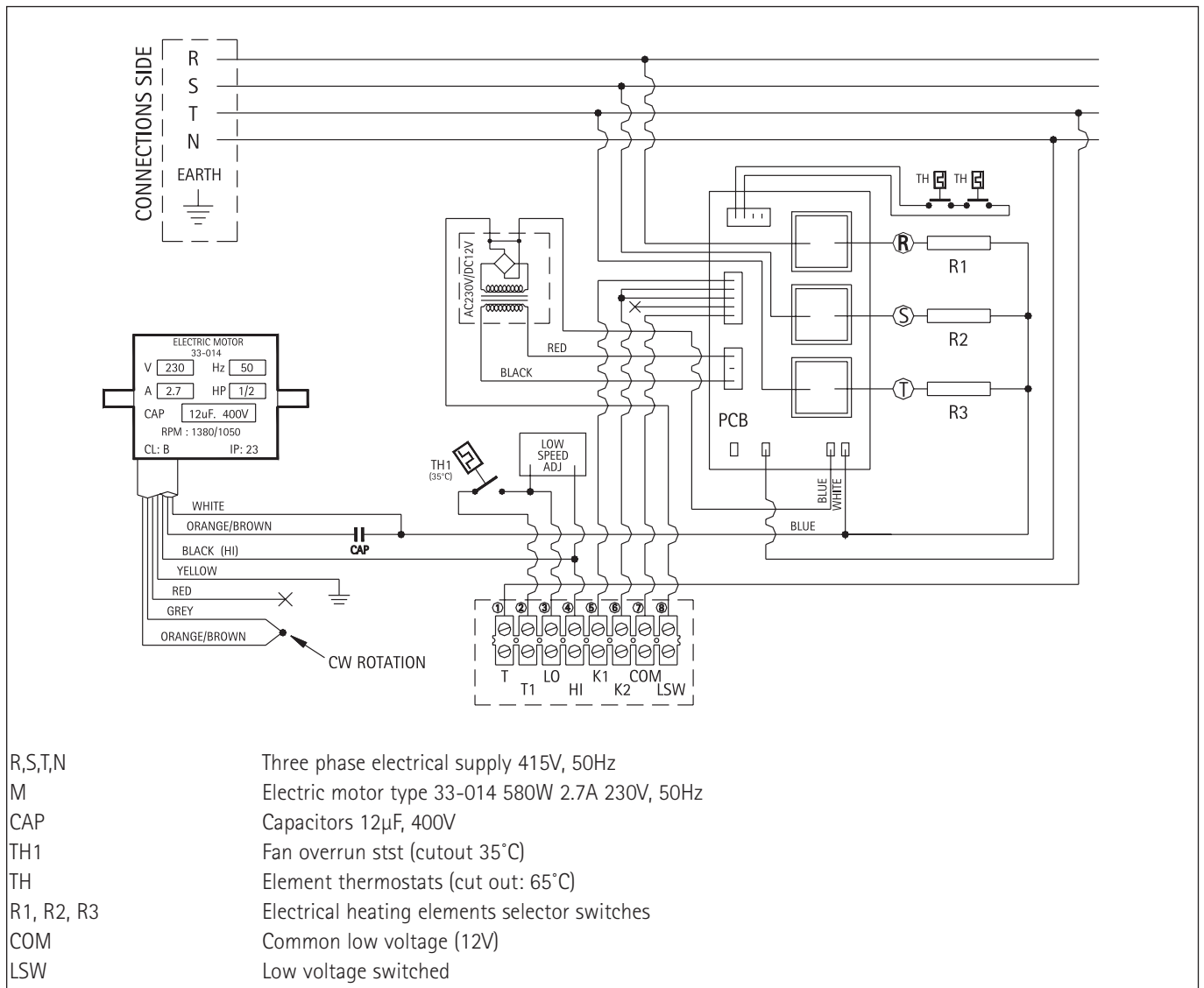


Figure 31 ASCP1-6 Switchbox interconnecting wiring (to suit above)

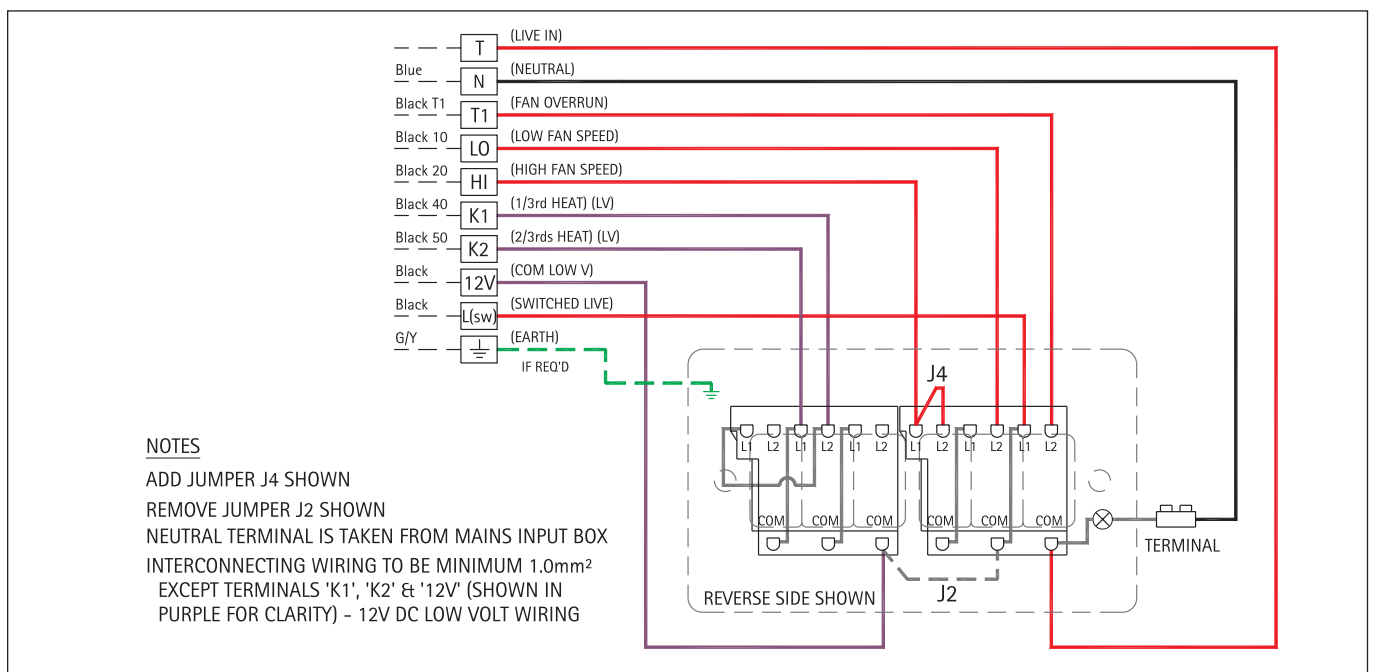


Figure 32 Electrically heated air curtains internal wiring (AS160HE15, AS200HE18)

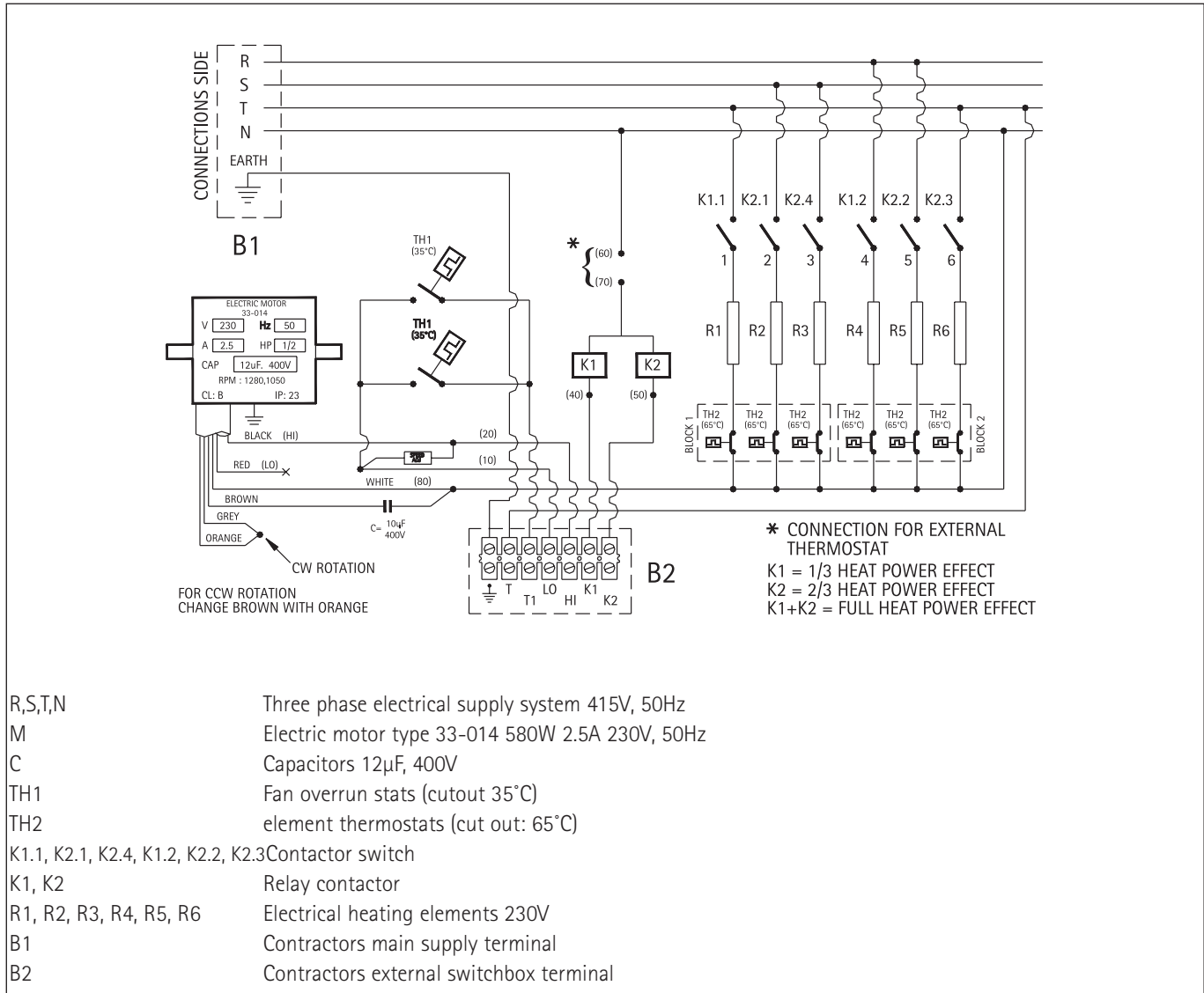


Figure 33 ASCP1-6 Switchbox interconnecting wiring (to suit above)

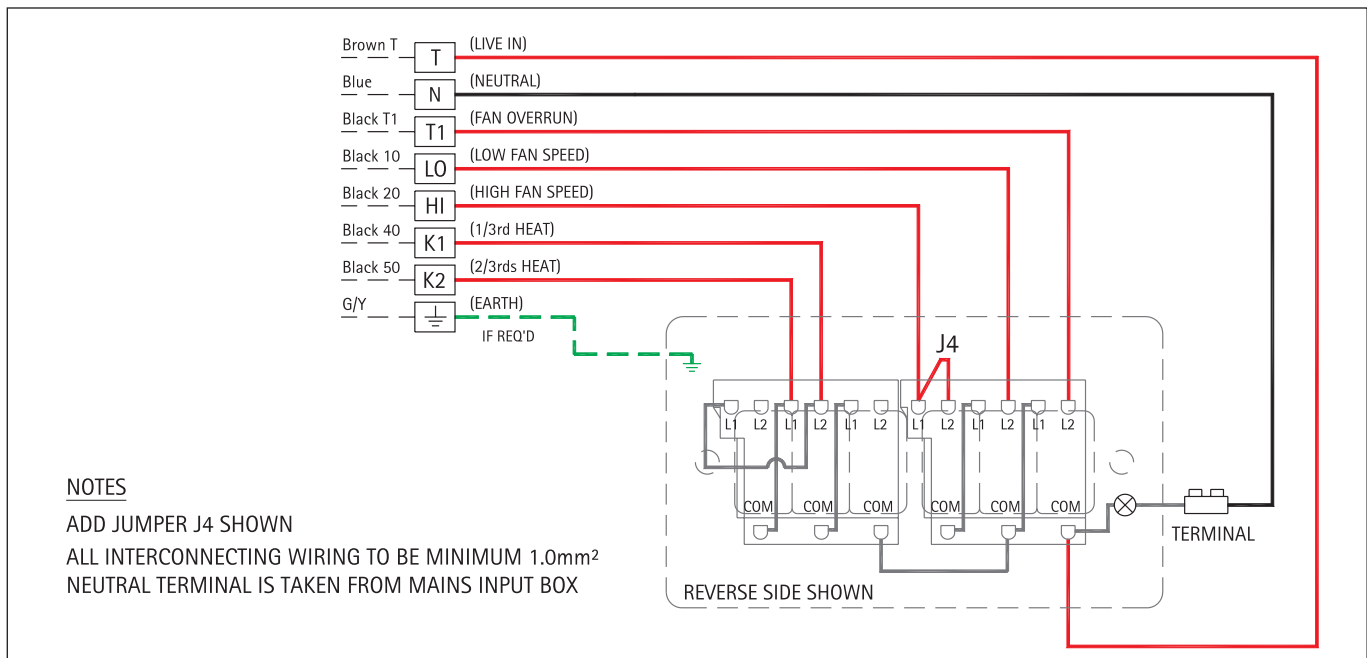


Figure 36 ASCP1-6 Switchbox interconnecting wiring to suit AS100SE06R, AS100SE09R, AS160SE12, AS200SE15

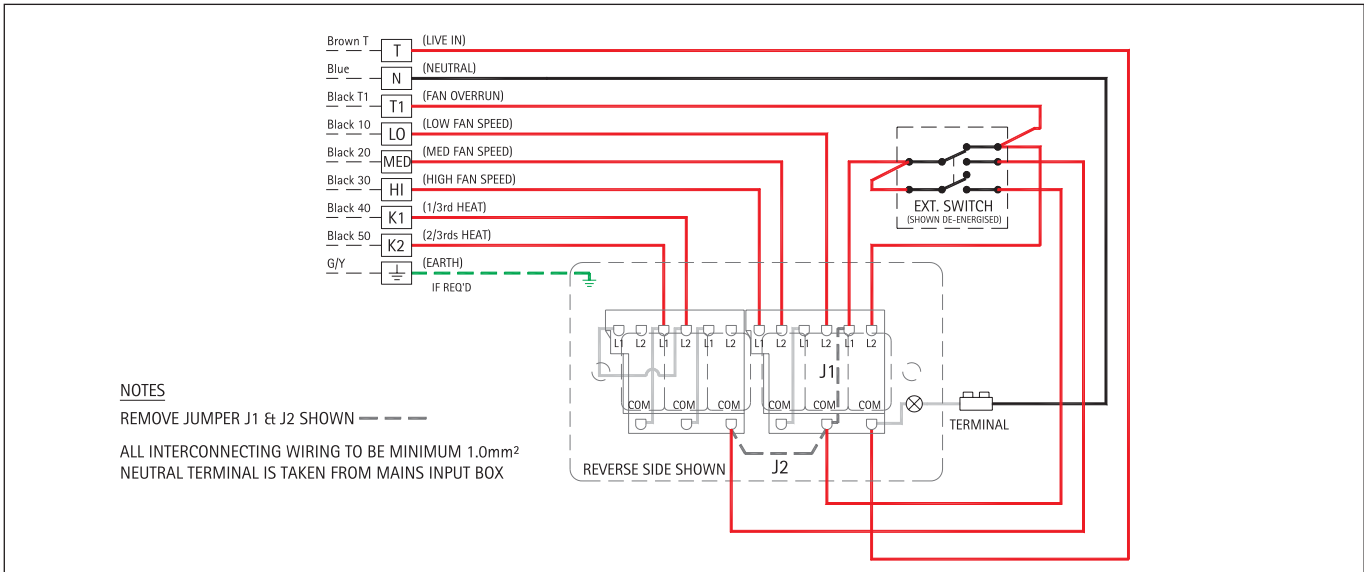


Figure 37 ASCP1-6 Switchbox interconnecting wiring to suit AS100HE12R

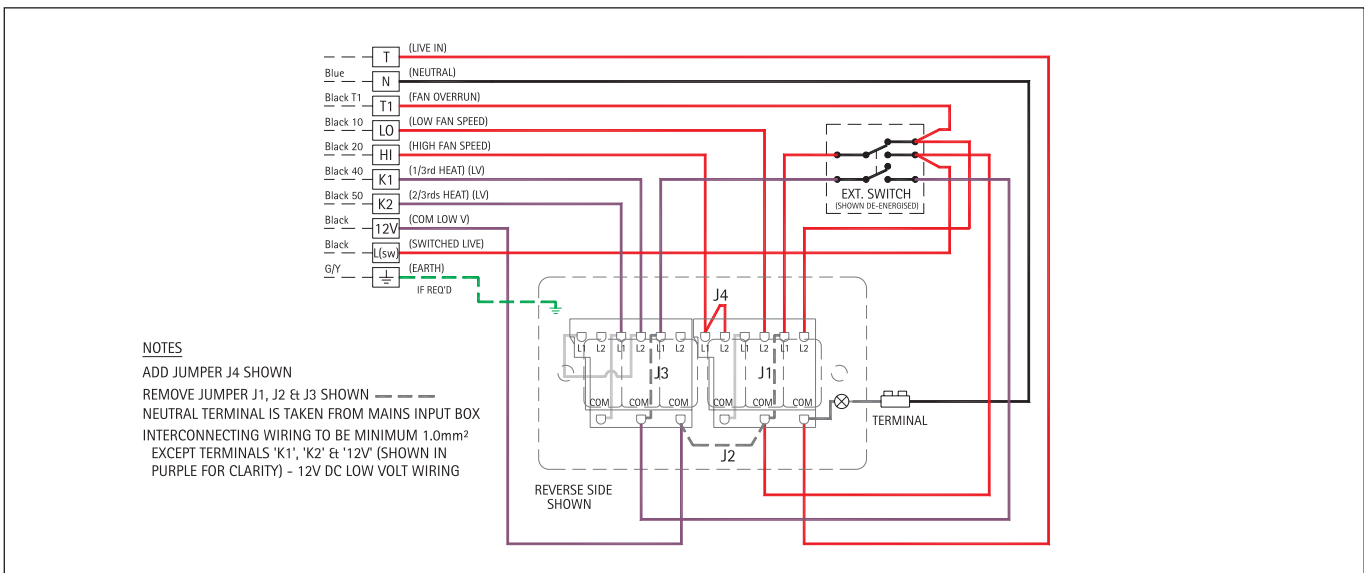
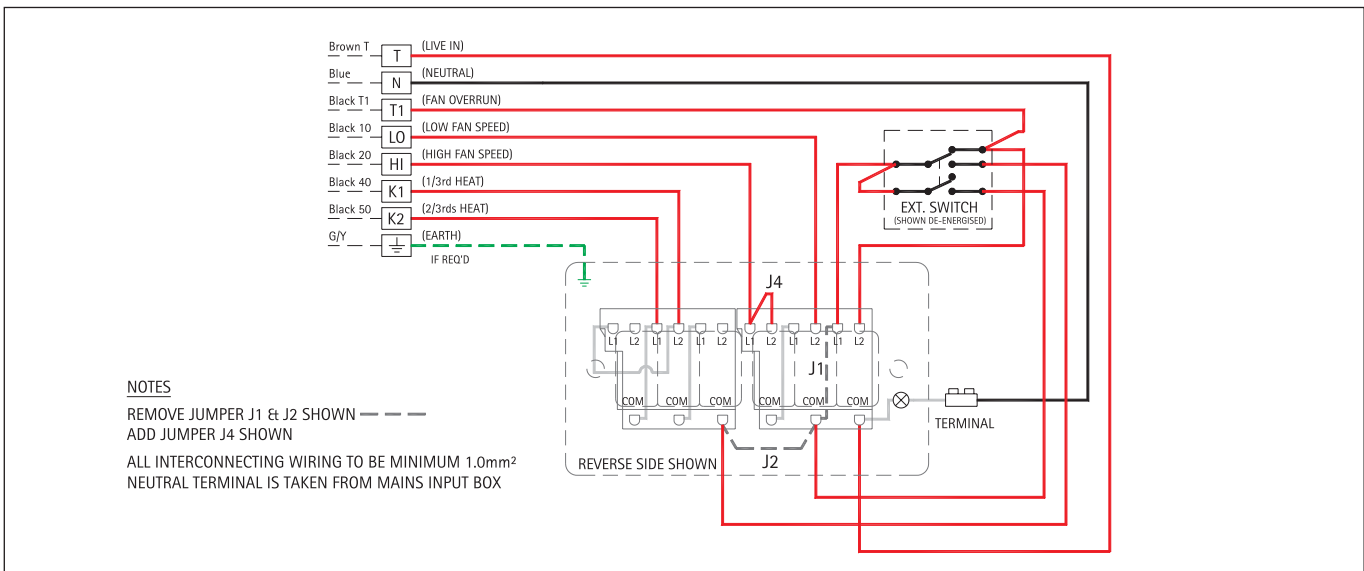


Figure 38 ASCP1-6 Switchbox interconnecting wiring to suit AS160HE15 & AS200HE18



13. User instructions

Ambient models

Follow instructions shown in Section 3-11 . To activate the unit use the switchbox and depress the 'ON/I' switch. This will bring the unit on to low speed fan. To activate the high fan speed press the 'II' switch. The unit can be deactivated by pressing the 'ON/I' switch again (See Figure 39).

Electrically heated models

AS70SE04 - Follow instructions shown in section 3-11. To activate the unit, use the switches located on the outlet of the heater. By pressing the 'ON/OFF' switch to ' _ ' will effect ambient fan only. Multiples of 2kW heat settings can be achieved by pressing ' _ ' and ' _ ' respectively (max 4kW). The 'OFF' switch ' ○ ' will turn off the unit.. (Fan may continue to run for a short period, dependent on temperature within the unit. (See Figure 40).

AS80SE04 Follow instructions shown in sections 3-11. To activate the unit, use the switchbox and press the 'ON/I' switch. This will bring the unit on to low speed fan. High speed fan can be activated by pressing the 'II' switch above 'Fan Speed'. Temperature settings can be activated by depressing switch 'I' then 'II' above 'Heat Settings' to obtain low and high temperature respectively. The unit can be turned OFF at any stage by pressing the 'ON/I' switch again. If the unit was turned OFF whilst in the heated model the fan will continue to run for a short period to dissipate any remaining heat. (See Figure 41).

Figure 39 Ambient models

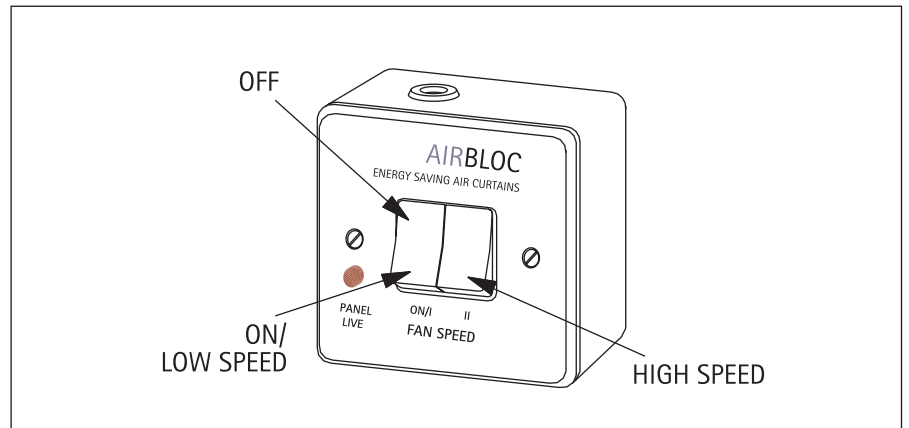


Figure 40 Electrically heated models

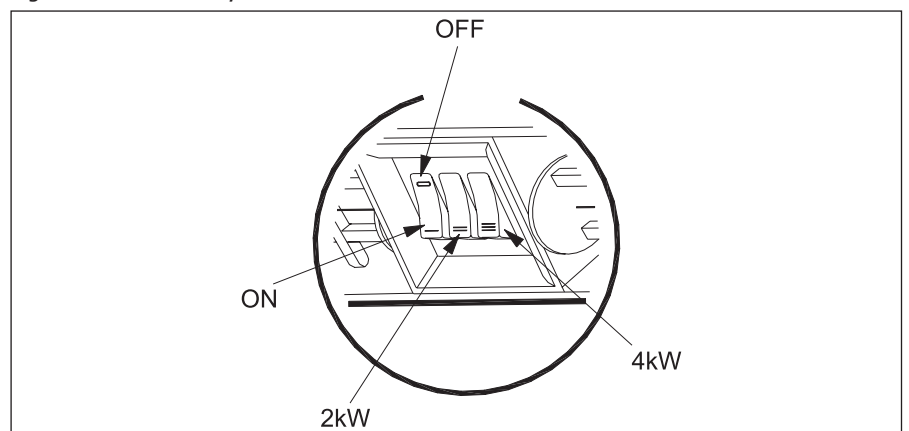


Figure 41 AS80SE04

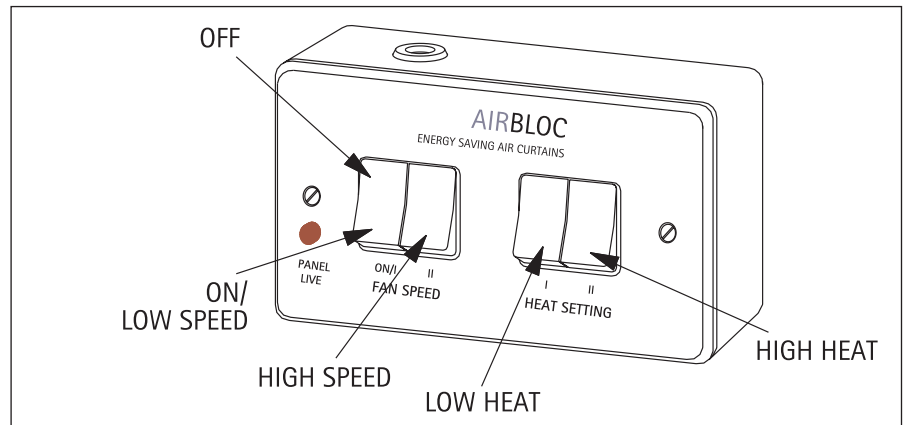
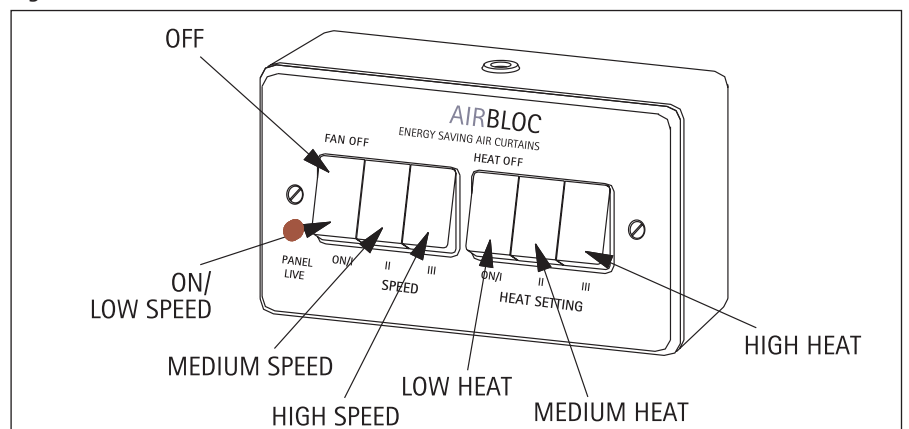


Figure 42 AS100SE06-AS200HE18

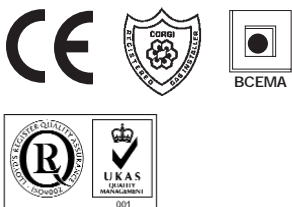


Maintenance /User instructions

AS100SE06 - AS200HE18

Follow instructions shown in section 3-11. To activate the unit, use the switchbox and press the 'ON/I' switch. This will bring the unit on to low fan speed. Medium speed and high speed can be activated by depressing switches 'II' and 'III' above 'Fan Speed'. (Some models may only have two fan speeds. High speed fan will be achieved by pressing either '11' or '111'). Temperature settings can be activated by pressing 'ON/I' or 'II' or 'III' above 'Heat setting' to obtain low, medium or high temperature respectively. The unit can be turned off at any stage by pressing both 'ON/I' switches again. (FAN & HEAT to the 'OFF' position). If the unit was turned off whilst in the heating mode. The fan will continue to run for a short period to disipate any remaining heat. (See Figure 41).

Note A red neon indicates a live feed to the switchbox. It is not an indicator that the unit is in operation.



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