

## **Contact Details**

Please note that some of the contact details on this PDF document may not be current.

Please use the following details if you need to contact us:

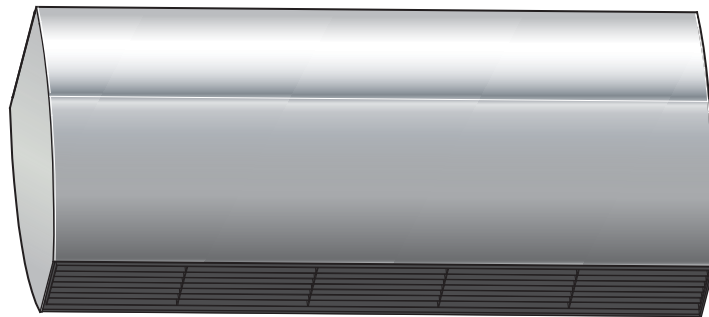
Telephone: 0844 879 3588

Email: [customer.services@gdcgroup.co.uk](mailto:customer.services@gdcgroup.co.uk)

The customer support section of our website also features a wide range of information which may be of use to you and is available 24 hours a day. It includes:

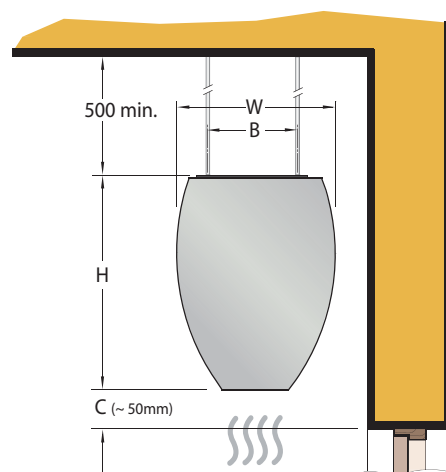
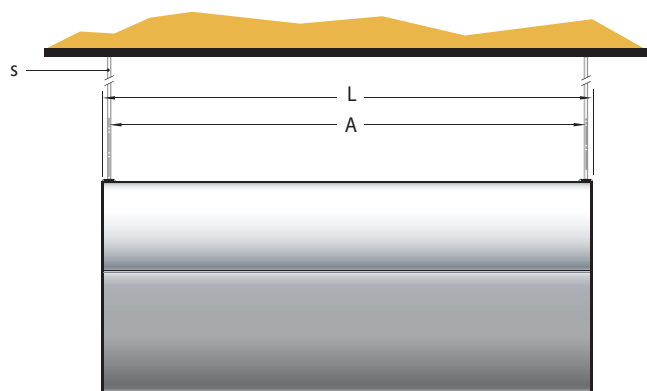
- Operating and installation instructions
- Easy 'How to use' guides for storage heaters
- Service and repairs
- Where to buy our products
- Literature downloads
- Heating requirement calculator

Visit - [www.dimplex.co.uk/support](http://www.dimplex.co.uk/support)



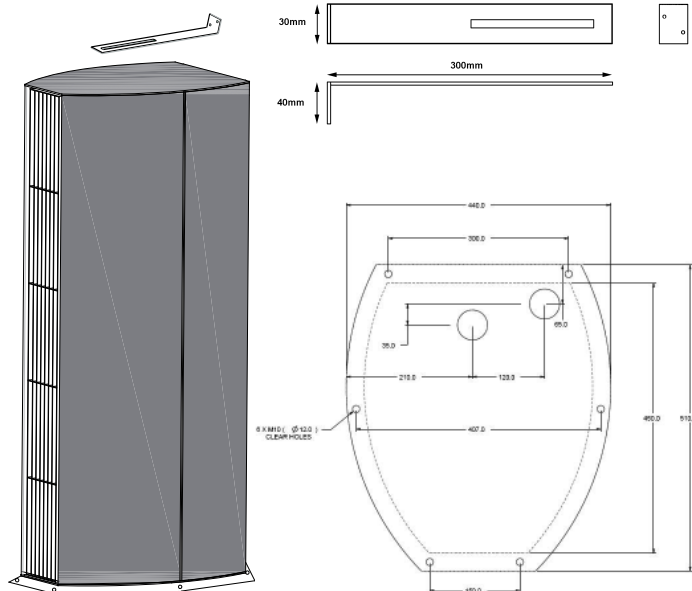
ARC10E, ARC15E, ARC20E,  
ARC10W, ARC15W, ARC20W,  
ARC10WLT, ARC15WLT, ARC20WLT  
ARC10A, ARC15A & ARC20A

1

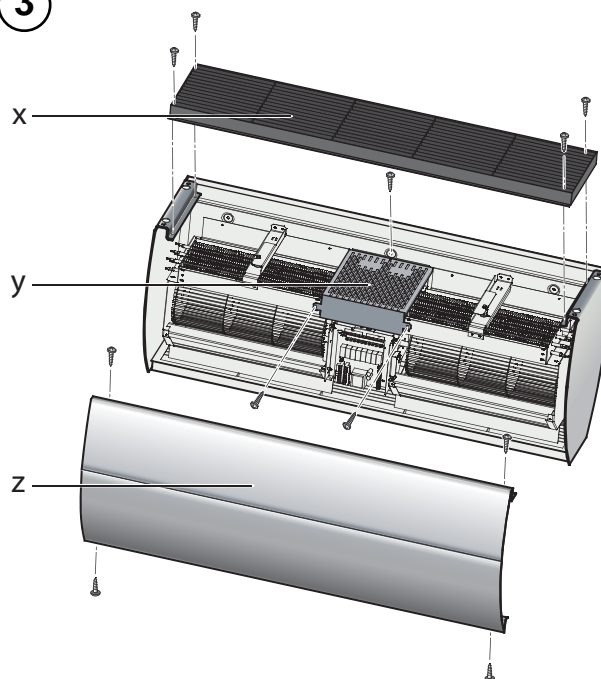


	L	W	H	A	B
ARC10 E/W/WLT/A	1150	390	450	1110	175
ARC15 E/W/WLT/A	1650	390	450	1610	175
ARC20 E/W/WLT/A	2200	390	450	2160	175

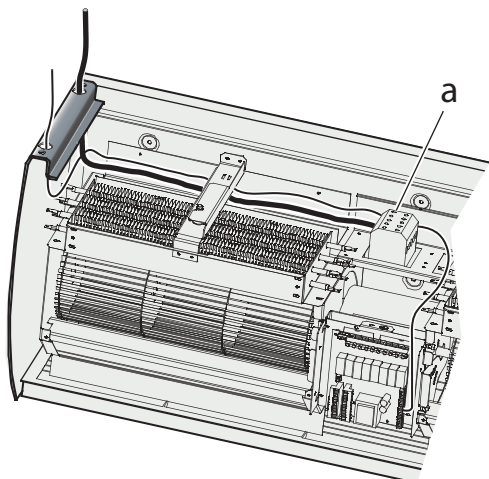
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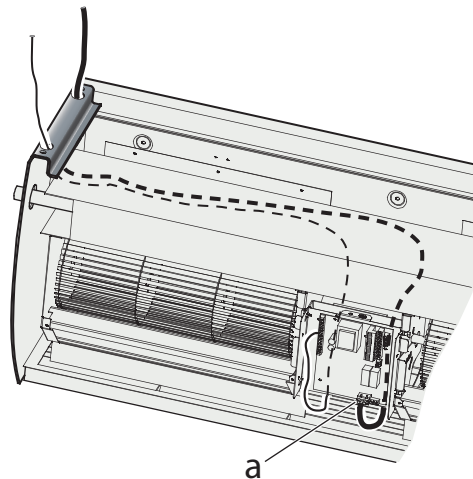
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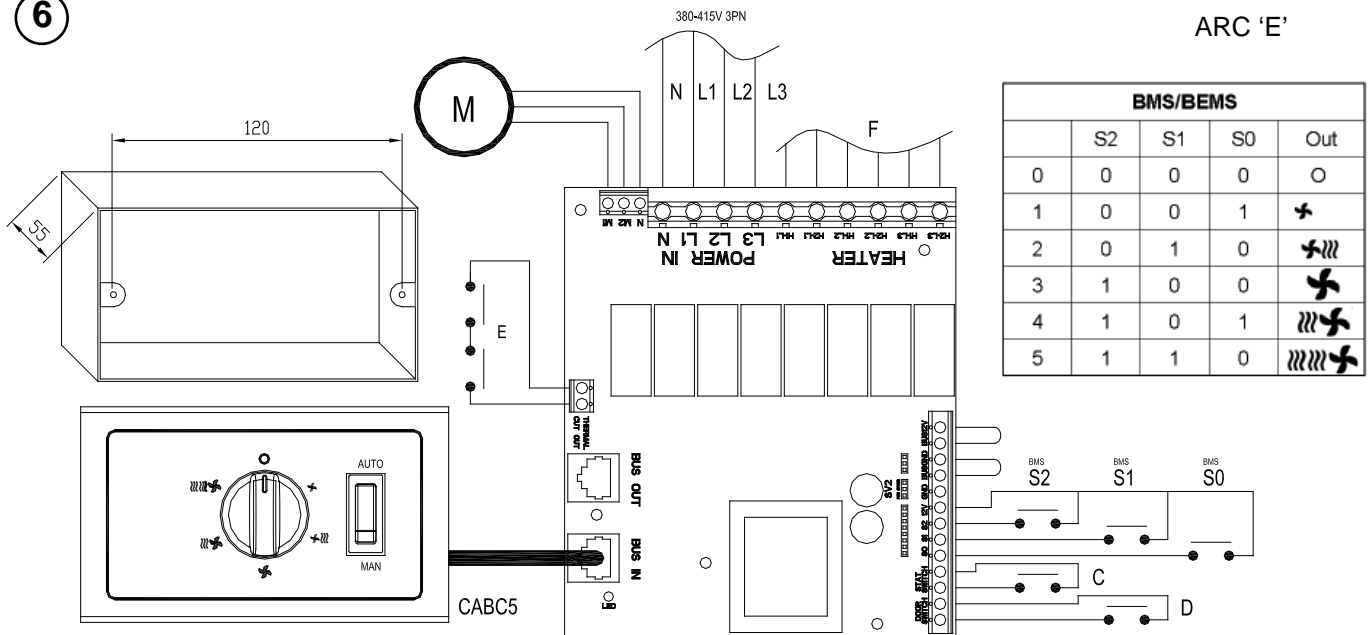
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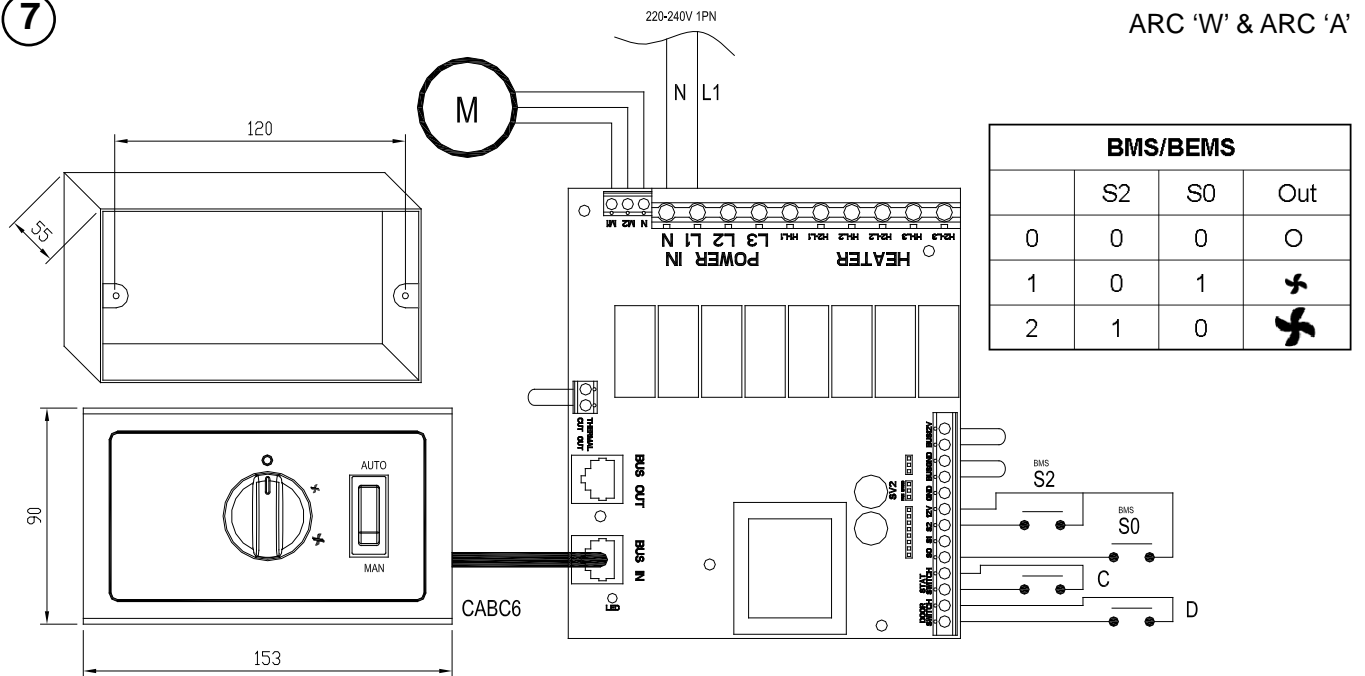
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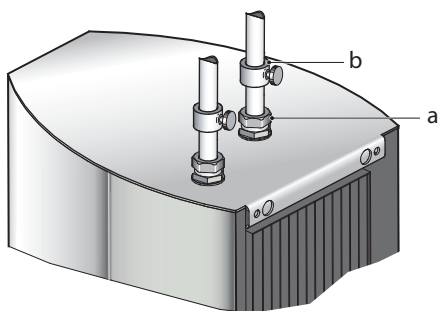
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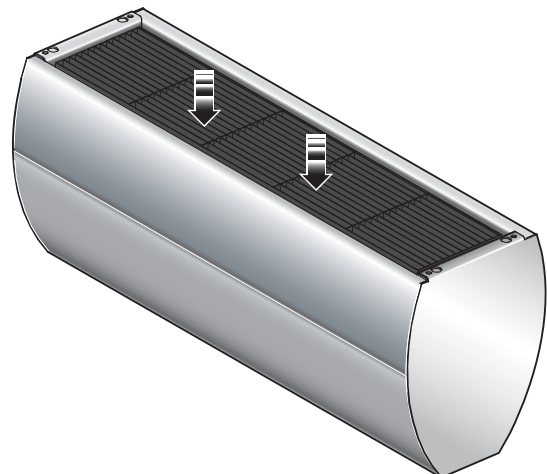
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# Architectural Air Curtains

Models : ARC10E, ARC15E, ARC20E, ARC10W, ARC15W, ARC20W,  
ARC10WLT, ARC15WLT, ARC20WLT, ARC10A, ARC15A & ARC20A

IMPORTANT: THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE

## IMPORTANT SAFETY ADVICE

DO NOT COVER OR OBSTRUCT the air inlet or outlet grille.

ENSURE THE APPLIANCE IS EARTHED.

Do not use this product in areas where excessive dust exists.

Do not use this product with young children unattended.

This appliance is not intended for use by children or other persons without assistance or supervision if their physical, sensory or mental capabilities prevent them from using it safely. Children should be supervised to ensure that they do not play with the appliance.



The product carries the Warning symbol indicating that it must not be covered.

Warning: In order to avoid overheating, do not cover the product.

This product must not be located immediately above or below a fixed socket outlet or connection box.

Always disconnect supply before working on the product.

This appliance should only be connected to the fixed wiring of the premises by means of conduit.

This product should be mounted safely to solid wall, floor or ceiling surfaces only.

If mounting the appliance horizontally it should not be mounted less than 1.8m from the floor.

This product must not be subjected to water spray or immersion.

Ensure the supply cables are of adequate current carrying capacity and are protected by a suitable fuse.

This appliance should not be mounted in a toilet or washroom.

Ensure proper manual handling procedures are observed at all times.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or medical capabilities, or lack of experience or knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

This product is not equipped with a device to control the room temperature. Do not use this product in small rooms when they are occupied by persons not capable of leaving the room on their own, unless constant supervision is provided.

**WARNING:** Isolate electrical supply to ALL modular linked units when carrying out maintenance.

## Models

Model	Heat output kW	Electrical Supply	Electrical load * (per phase) A	Weight kg	Recommended height m
<b>AMBIENT</b>					
ARC10A	n/a	220-240V ~1PN	1.5	55	3.75
ARC15A	n/a	220-240V ~1PN	2.3	82.5	3.75
ARC20A	n/a	220-240V ~1PN	3.0	110	3.75
<b>ELECTRICALLY HEATED</b>					
ARC10E	6.0 / 12.0	380-415V ~3PN	18	60	3.75
ARC15E	9.0 / 18.0	380-415V ~3PN	27	90	3.75
ARC20E	12.0 / 24.0	380-415V ~3PN	36	120	3.75
<b>WATER HEATED (at 60/40, 55/45, 45/35 °C - LPHW)**</b>					
ARC10WLT	12	220-240V ~1PN	1.5	65	3.75
ARC15WLT	18	220-240V ~1PN	2.3	95	3.75
ARC20WLT	24	220-240V ~1PN	3	130	3.75
<b>WATER HEATED (at 82/71 °C - LPHW)**</b>					
ARC10W	17	220-240V ~1PN	1.5	65	3.75
ARC15W	24	220-240V ~1PN	2.3	95	3.75
ARC20W	34	220-240V ~1PN	3	130	3.75

\* Standard Units Only

\*\* See separate specification sheet from Dimplex

## Electrical

The installation of this appliance should be carried out by a competent electrician and be in accordance with the current IEE wiring regulations.

## Fixing Positions

This appliance may be either fixed to a ceiling - see Fig. 1 or floor mounted see Fig. 2 using an appropriate foot.

A minimum distance of 500mm is required from top of the appliance to the ceiling (see Fig. 1) and also the distance between the bottom of the appliance and the top of the door should be kept to a minimum (see 'C' in Fig. 1).

This appliance should not be mounted less than 1.8mt. from the floor.

To open the appliance, remove the inlet grilles ('x' in Fig. 3) Remove the front panel ('z' in Fig. 3).

## Horizontal Mounting

By using the fixing holes in the top of the air curtain, attachment to a ceiling over the product can be achieved using suitable M10 threaded steel rod or similar supports of sufficient strength - see 's' in Fig. 1.

## Vertical Mounting

The architectural range of air curtains can be vertically mounted using a suitable floor foot (Ref: ARCVMF). Contact Dimplex or your service agent for further information. Refer to Fig. 2 for fixing details.

## Electrical connection

All products are fitted with a microprocessor control. Electrical power and control connections are made as shown in **Fig. 6 & 7**. A suitable local isolating switch must be provided in the electrical supply circuit with at least 3mm clearance on each pole. In order to access the electrical connections, remove the inlet grilles (see 'x' in **Fig. 3**). Remove the front panel (see 'z' in **Fig. 3**) and also remove the mains cover plate (see 'y' in **Fig. 3**).

### ARC Electric Models

Feed an appropriate supply cable as shown in **Fig. 4** and attach to the terminal block (see 'a' in **Fig. 4**).

Note: Ensure that cables are secured to the cable tray with fixing ties to avoid contact with the elements.

### ARC Water/Ambient Models

Feed an appropriate supply cable as shown in **Fig. 5** and attach to the terminal block (see 'a' in **Fig. 5** and **Fig. 7**).

A suitable cable for a switch panel (kit ref. - CAB5 for electrically heated models or CAB6 for water heated/ambient models) can be similarly introduced through the top panel and connected to the circuit board.

If the unit is to be operated in conjunction with a door switch, a normally closed switch should be wired (see 'D' in **Fig. 6 & 7**) as appropriate. **Note:** If using a door switch, an additional 2 core (low Voltage) cable is required between the door switch and the air barriers.

If the unit is to be connected to a Building Energy Management System, connections to be made (see 'S0, S1, S2' in **Fig. 6 & 7**) as appropriate.

Ensure that the air curtain is securely fastened in position and that the supply cables are firmly clamped before operating the appliance.

## Water connection

Models designed for use in conjunction with a low pressure hot water supply should be individually connected (in a parallel circuit) to the flow and return pipe-work.

Connections (see 'a' in **Fig. 8**) and isolation valves (see 'b' in **Fig. 8**) should be fitted as close to the air curtain connection points as possible. Care should be taken to release as much air as possible to prevent air locks.

Maximum water supply conditions are 100°C and 10 bar (1.03MPa).

## Switch Panel Installation

The backing box (standard double gang) should be rebated into a suitable wall. The box should be fitted so that the switch panel will be flush with the wall. Suitable conduit should be used where applicable to carry the cable between the heater and the switch. An RJ45 Patch cable with straight through connections should be used to connect the switch panel to the appliance PCB.

**Warning:** Ensure cable is secure and the cable path does not come into contact with heater element or other moving parts. Test all switch settings once installation is complete.

## Electrically heated variants

### Operation using switch box - CAB5

Switch on electrical supply to the air curtain. Rotate the switch to the desired heat setting. Settings available are;

**OFF**

**Low Fan**

**Low Fan with Low Heat**

**High Fan**

**High Fan with Low Heat**

**High Fan with Full Heat**

The rocker (auto / manual) switch allows for manual over-ride of a door switch if fitted. Manual allows the appliance to run at the desired setting, while Auto provides an energy saving feature by shutting down the appliance while the door is closed.

**The unit should always be switched OFF using the switch box control, and not by mains power supply interruption.**

When the unit is switched off (via the switch box) the fan will run on for 1 minute without heat to discharge any residual energy from the heating elements.

When first turned on the control will run through a system check. The selected settings will be reached and maintained after a 30 second period.

### Door switch control (Electric models)

By including a door switch in the circuit (as per 'D' in **Fig. 6** or **Fig. 7**) the air curtain will respond to door openings as follows:

- (1) Door opening will energise the air curtain at the set conditions (switch box settings).
- (2) On door closure operation will continue at the set conditions for a further 1 minute.
- (3) Between 1 minute and 2 minutes from door closure, set back operation, ½ heat (if heat selected) and ½ fan will activate.
- (4) Between 2 minutes and 3 minutes, the fan only (½ speed) shut down cycle will be engaged.
- (5) After 3 minutes, the air curtain will return to a dormant state until the door is re-opened.

If the door re-opens during this 3 minute run on cycle, the process will restart at (1).

## Thermal Safety cut outs

The power supply to the heating elements will be interrupted if one or a combination of the following abnormal events occur:

1. Air inlet or outlet grilles are obstructed.
2. Internal ventilation is impaired due to build up of dust and fluff.
3. Blower unit stalls.

To reset the thermal safety cut-outs, access reset (red) buttons (see **Fig. 9**). Before re-setting the reason for activation must be determined and corrective action taken.

## Low pressure hot water heated / Ambient (fan only) variants

### Operation using switch box - CABC6

Switch on electrical supply to the air curtain. Rotate the switch to the desired heat setting. Settings available are;

OFF  
Low Fan  
High Fan

The rocker (auto / manual) switch allows for manual over-ride of a door switch if fitted. Manual allows the appliance to run at the desired setting, while Auto provides an energy saving feature by shutting down the appliance while the door is closed. The unit should always be switched OFF using the switch box control, and not by mains power supply interruption. When first turned on the control will run through a system check. The selected settings will be reached and maintained after a 30 second period.

### Thermostatic control (optional)

- 1) A thermostat may be connected to 'C' in **Fig. 6** or **Fig. 7** to regulate the outlet air temperature on electric heated models.
- 2) A thermostatic regulation valve with a remote sensing bulb (not supplied) can be positioned in the supply water pipe-work to regulate the heat output on water heated models.
- 3) An electrical 3-Port Solenoid Valve can also be connected into the system. Please contact your service agent using the contact details for more details.

### Door switch control (Water heated & Ambient models)

By including a door switch in the circuit (as per 'D' in **Fig. 8**) the air curtain will respond to door openings as follows:

- (1) Door opening will energise the air curtain at the set conditions (switch box settings).
- (2) On door closure operation will continue at the set conditions for a further 1 minute.
- (3) Between 1 minute and 2 minutes from door closure ½ fan set back operation will activate.
- (4) After 2 minutes, the air curtain will return to a dormant state until the door is re-opened. If the door re-opens during this 2 minute run on cycle, the process will re-start at (1).

## Wiring Diagrams

ARC 'E' - Electric models - see **Fig. 6**

ARC 'W' / 'A' - Water heated & Ambient models - see **Fig. 7**

C - Thermostat  
D - Door Switch (Optional)  
E - Thermal Safety Cut-out Circuit  
F - Elements  
    - BMS Switches (Optional)(S0,S1,S2)  
M - Motor

## Remote (BMS / BEMS) Operation

Connection to Building Energy Management Control Systems (BEMS) is possible so that remote control of the air-curtain can be carried out in conjunction with other equipment. Please refer to the table in **Fig. 6 & 7** to make the appropriate connections to the PCB.

## Modular Connection

A number of units can be connected together to form one continuous long air curtain. Each appliance should be supplied separately. Simultaneous control of all the air curtains is achieved by linking the PCB's with a modular linking cable found in the modular linking kit. (Kit Ref. - CABM1) Refer to instructions provided with the modular linking kit.

## Cleaning

**WARNING: DISCONNECT SUPPLY before carrying out maintenance.**

External appearance can be maintained by wiping occasionally with a damp cloth ; for stain removal, a weak soap solution can be applied with a cloth and the surface wiped dry. Care must be taken to avoid any moisture ingress into the product.

## Recycling



For electrical products sold within the European Community.

At the end of the electrical products useful life it should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice in your country.

## After Sales Service

Your product is guaranteed for two years from the date of purchase.

Within this period, we undertake to repair or exchange this product free of charge provided it has been installed and operated in accordance with these instructions.

Your rights under this guarantee are additional to your statutory rights, which in turn are not affected by this guarantee.

Should you require after sales information or assistance with this product please go to [www.dimplex.co.uk](http://www.dimplex.co.uk) where you will find our self help guide by clicking on "After Sales" or ring our helpdesk on 0845 600 5111 (UK) or 01 842 4833 (R.O.I.) .

Spare parts are also available on the website.

**[www.dimplex.co.uk](http://www.dimplex.co.uk)**

Please retain your receipt as proof of purchase.



**CE** The product complies with the European Safety Standards EN60335-2-30 and the European Standard Electromagnetic Compatibility (EMC) EN55014, EN60555-2 and EN60555-3. These cover the essential requirements of EEC Directives 2006/95/EC and 2004/108/EC

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