



# Airflow Engineering

## THE HVAC SHOP

Product Code: **ER12D-1**

### INSTALLATION/OPERATION INSTRUCTIONS

Single Speed Heat Transfer

#### HEAT TRANSFER CONTROLLER FOR USE WITH SINGLE SPEED FAN



Increase key : adjust temperature and value  
Setting key



Decrease key : adjust temperature and value  
Turn ON/OFF



For your safety please follow the installation and operating instructions

## GENERAL USE AND SAFETY INFORMATION

Thank you for purchasing this quality **DIGITAL HEAT TRANSFER CONTROLLER**.

This digital controller has been designed to ensure highly effective transfer of heated air throughout your home. The large screen is designed for easy and straightforward setup of your heat transfer system, using a high precision built-in sensor with custom sensing algorithm to accurately determine room temperature and improve system stability.

**NOTE: THESE UPDATED INSTALLATION AND OPERATION INSTRUCTIONS SUPERSEDE ANY INSTRUCTIONS ON THE CARTON or other FITTING INSTRUCTIONS**

**PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE COMMENCING INSTALLATION.**

**Note:** Pictures and diagrams on packaging are designed only to be used as a concept. All installation details should be carried out as per the instructions herein.

**Note:** **THIS PRODUCT MUST BE WIRED BY A REGISTERED ELECTRICIAN**

### SUITABILITY

The controller constantly monitors the room and set temperatures. When the heat source provides heat to the room and raises the room temperature above the set temperature, the controller will detect this increase and turn the fan on.

### BEFORE YOU START

**DIGITAL HEAT TRANSFER CONTROLLER** must not be mounted in areas subject to direct splashing. Refer to New Zealand standard NZECP2: 1988 Section 4.6 and Australian Standard AS3000:1991, Section 6.2.

### SAFETY NOTE

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

To avoid a hazard, a damaged supply cord must be replaced by the manufacturer. This includes the removal of the supply cord as this appliance is supplied as compliant. Modification including removal of the plug or cutting of the supply cord (fitted to any motor) will render the unit NON-COMPLIANT.

## INSTALLATION INFORMATION

### IMPORTANT

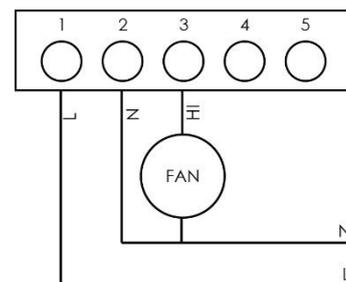
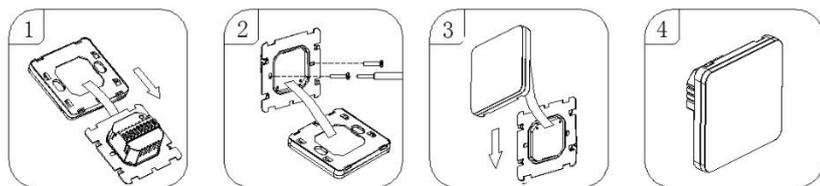
#### Selecting the mounting location

- The controller is for internal use only.
- Mount approx. 1.5 metres above the floor on an inner wall near the heat source.
- The controller must be placed within the same room as the heat source.
- Avoid locations which are not affected by the heat source, e.g. other side of the room or around a corner.
- Do not mount on hot surfaces or surfaces exposed to direct sunlight.

### FOR OPTIMUM PERFORMANCE – Installation Instructions

1. Open the controller by placing your thumb on the bottom edge of the thermostat unit and using your other fingers to apply pressure to the rear portion of the unit. Sliding the rear portion toward your thumb will expose the mounting holes.
2. Choose a mounting position on the wall and cut a 64 mm diameter hole in the wall gip, avoiding any structure timber framing or wiring contained behind.
3. See **Wiring Diagram** below to connect the fan.
4. After connecting the required wiring, mount the base of the controller with the 2 screws, noting the direction of the display is correct.
5. Reconnect the interconnect cable to the display front.

6. Replace the cover by placing over the metal clips located on the base and slide in a downward direction. *Note: Do not use excessive force to fit the cover.*



#### HOW TO CONNECT UP A ER12D-1 DIGITAL CONTROLLER

1. The LIVE line **in** is connected to **terminal 1 (L)** at the rear of the control unit.
2. **Neutral** connections are common to **terminal 2 (N)**.
3. The LIVE line **out** to the **fan** unit is **terminal 3 (HI)**.
4. The controller is then set to the temperature that is required to be maintained in the room with the main heat source (the room with the controller) using the up and down arrows to modify the smaller number (top right of display).

**Note:** Approximate means of disconnection are required to be incorporated in the fixed wiring. This product must be installed **by a registered Electrician**.

#### Display information

Power OFF  System is Off. The fan will be switched off and the controller switches to standby mode.

Set Minimum Room Temperature – The controller adjusts the heat transfer rate according to the set temperature. Adjust the set temperature using the Adjust Up  and Down  buttons.

Mode  As a Heat Transfer specific controller, this controller is locked into Heat Transfer mode and cannot be switched to an alternative mode.

**The advanced settings below are for reference only, and are ordinarily not required as the unit is factory pre-set for heat transfer.**

#### ADVANCED CONTROLLER FUNCTIONS (NOT NORMALLY USED)

##### Entering Advanced set-up

- Turn off your controller with the Power Off  button.
- Press and hold the Fan Indicator  button for 5 seconds.
- Switch between set-up screens using the Fan indicator  button
- Adjust using the Up  and Down  buttons
- Press the Power Off  button to return to the home screen
- The controller will turn off after 5 seconds of no activity in programming mode

##### Advanced set-up screens

1. A1 - Temperature calibration: adjust with the Adjust Up and Down buttons
2. A2 - Lock the controller – Set "0" Half lock, "1" Full lock & "2" Cancel (after 10min &  will display)
3. To unlock the controller press and hold the Down  button for 5 seconds.
4. A3 - Minimum operating temperature (1-25°C): default value 5°C

5. A4 - Maximum operating temperature (30-70°C): default value 35°C
6. AB - Return to Factory Default Setting – (Display A o, Long Press Fan Key to Return to Factory Default Setting)

## COMPLIANCE AND WARRANTY INFORMATION

- This appliance must be installed by a registered electrician in accordance with the relevant electrical wiring rules and regulations and a COC is required for a warranty claim.
- Heat Transfer units are Not for use with a heat pump
- Do not cover the fan unit with any insulation material
- Do not completely close off adjustable outlet vents
- Always install this product with the supplied controller
- Incorrect wiring or installation is not covered by warranty

### QUESTIONS AND ANSWERS

#### Can I place the controller in a different room from the fireplace/heat source?

No. The controller must be mounted in the same room as your heat source. Make sure that the controller is in a position where it can easily detect changes in the room temperature from your heat source, e.g. 2-4 metres away from the heat source. Do not place the controller in the hallway or near the doorway, around a corner from the heat source, or far away (>6 metres) from the heat source in a large room.

#### How far away from the heat source should I place the fan?

You should keep at least 1.5 metres of distance between the heat source extraction point and the fan. However, the recommended distance between the extraction point and the fan is 3 metres.

## IMPORTANT NOTES

#### Troubleshooting: The control panel has built-in error detection and may display the following faults:

Sensor fault will display  and "E1" and "E2".

E1: Sensor short circuit alarm

E2: Sensor open circuit alarm

When temperature higher than 55°C displays "HI"

When temperature lower than 0°C displays "LO"

#### Technical Specifications

Set Temperature Range:	5 - 35°C	Sensing Element:	NTC
Temperature Resolution:	0.5°C	Operating Temperature:	0 to 50°C
Operating Voltage/Frequency:	220V 50/60Hz	Approval:	All relevant AS/NZS standards
		EMC Approval:	All relevant AS/NZS standards

- The unit should be checked annually for correct operation.

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