



Double Sided Fan Installation Manual

**For LINEA – DUO
Inbuilt Appliances**

VARIABLE SPEED CONTROLLER

Supplied by:
Castworks Pty Ltd
57 Industrial Drive
Braeside VIC 3195



Warnings

Danger of Electrocutation: All electrical work must be carried out by a qualified electrician.

Note: All electrical components should be installed in an airy location away from hot parts



IMPORTANT:

- Must be installed in accordance with AS/NZS 3000.
- Must be installed to the manufacturers' specifications.
- Power supply must be installed by a licensed electrician.
- If the power cables are damaged, for any reason, do not use. Have the cord replaced immediately.
- A means for switching off and isolating the appliance, for maintenance requirements, is recommended.
- In all heat zones the wiring should be thermally insulated with the silicone sleeves provided.

The cable for the control switch and thermostat switch is made with a high temperature rated silicon outer case. If additional cabling is required check with your electrician, standard electrical cables can be used outside of the heat zones. The 240 Volt supply cord and plug is not supplied; confirm length of supply cord required with electrician.


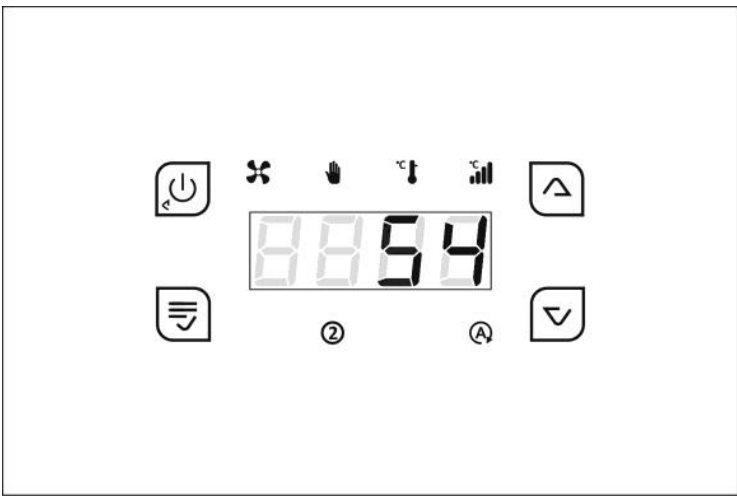



Mount the control switch into wall, do not mount in wall above the heater or within 200mm from each side of the heater.








See installation instructions on page 5.



1. Operation of the Controller (User Manual)

Control Panel, Use and Functions

ON/OFF Exit the Menu				Fan Speed Up, Menu Scroll
MENU Enter User Menu and Probes Menu				Fan Speed Down, Menu Scroll

	The Temperature of the Heater Thermostat (°C)		Manual Control Setting
	The Temp. of 2 nd Thermostat (If fitted)		Automatic Setting
	ON: Fan is on FLASHING: Fan in Safety mode		Proportional Setting
	Damper Activated (N/A in Australian models)		

1.2 OFF mode: the ON/OFF Button will be lit up only.

1.3 Turn ON: Press the ON button for 3 seconds

1.4 To change the Setting: Hold the Menu key for 3 Seconds, then scroll to the required setting:

Manual Display = “NAnu”; Adjust the Fan speed using the Scroll buttons. From P02 to P08. To turn down to select P0.

Auto Display = “Auto; The fan will turn on and off at thermostat setting (45 °C). Fan speed will be at consumers setting. Select your preferred Speed from P02 to P08.

Proportional Display = “ProP”. The fan will change speed automatically for every

20°C change in temperature.

Once the chose, to save the Preferred Selected speed, press the ON button, or wait 5 seconds.

2. To go into the Main Menu, hold the Menu button for 3 seconds. Press the Menu button to scroll through setting options. Press the UP and DOWN to change the value. Press the MENU button to save the new setting. Wait 10 seconds or Press the ON button to exit.
3. Safety Function: In Manual mode, if the Thermostat reaches 100°C, the Fan will switch to the Proportional mode to prevent electricals from overheating. If the fan is OFF, and the Thermostat reaches 100 to 120°C (E02 to E03), the Fan will switch ON to prevent electricals from overheating
4. Alarm Function: If the Thermostat reaches 120°C (E03), an audible and visual alarm will sound/flash. Press any key to turn alarm off for every 5mins until temp drops below 120°C. To turn off Alarm function change P05 setting (see page 16).
5. Fan Safety cut off: If the thermostat reaches 135°C (E04), the Fan will cut off to avoid Damage to itself.
6. Thermostat Temperature Display: By pressing the MENU button once, the 2nd Thermostat Temp will display (If fitted). To exit press the ON button.
Note: If Thermostat temp is below Minimum, it will display Lo.
If Thermostat temp is above Maximum, it will display Hi.

Installation Instructions



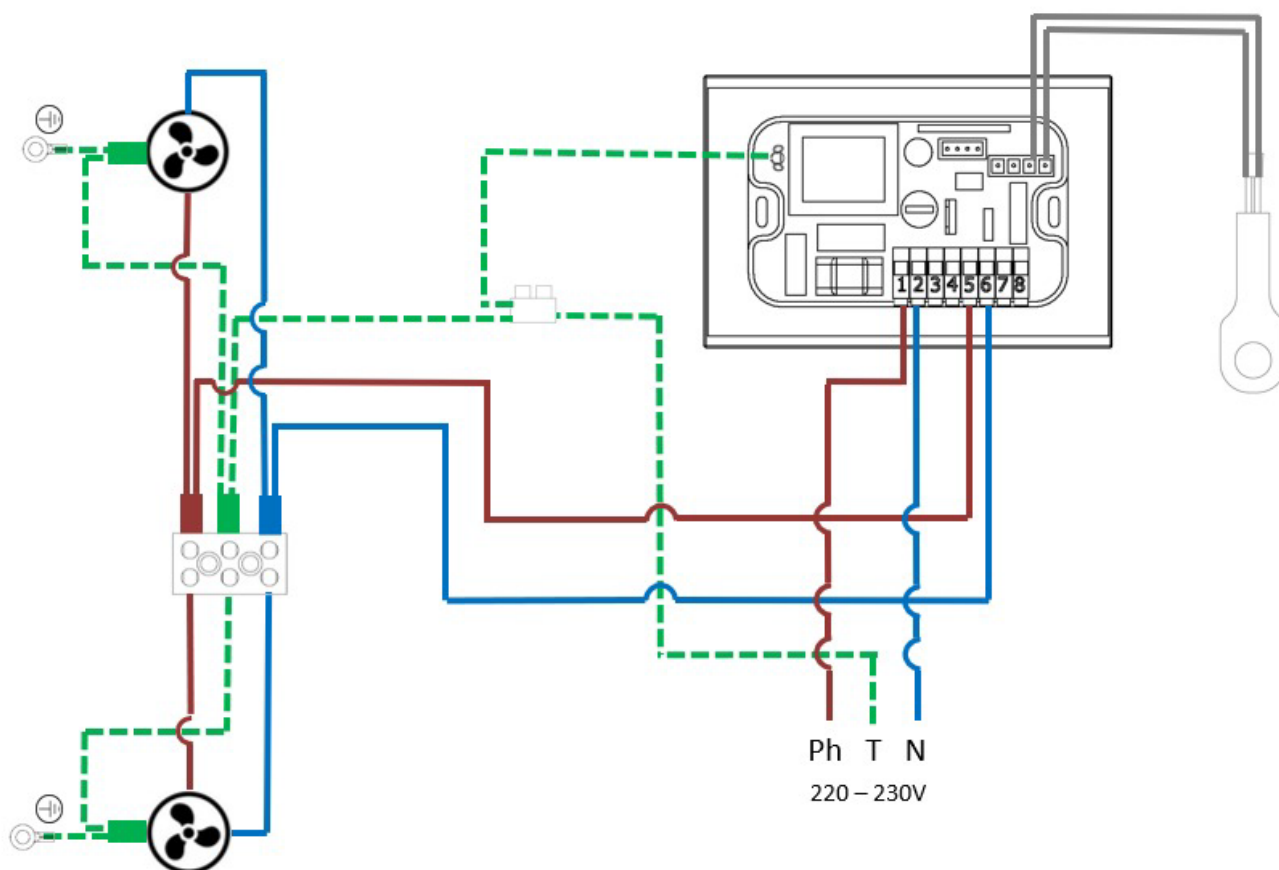
Warning

Danger of Electrocution: All electrical work must be carried out by a qualified electrician.

Note: All electrical components should be installed in an airy location away from hot parts.

Make sure that the Main Power Supply is OFF prior to installing the device.

1. Install a GPO General power outlet for the fan to plug into, so the power to the fan can be switched off if required for maintenance.
2. Electric circuit layout for Wall Mounted Controller



1 And 5 Wires – BLUE
2 And 6 Wires – BROWN
Dotted E wires = Earth

(Note: for colour version wiring colours are incorrect)

Wire the 2 motors together matching the corresponding colours



Into the White Ceramic connector:

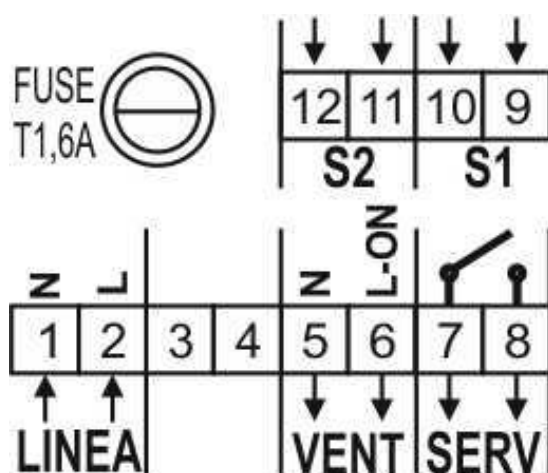
Blue to Blue

Brown to Brown

Earth to Earth (Yellow/Green)

3. Connect the controller to the Ventilation Kit

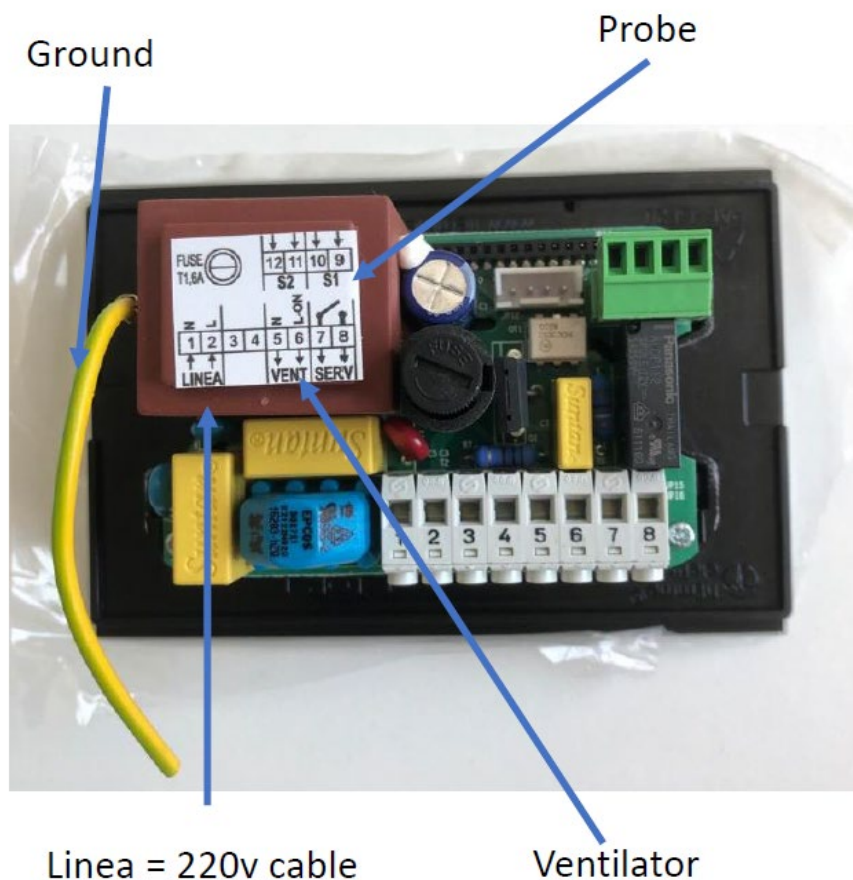
Electrical connecting diagram for the back of the Wall Mounted Controller



- 240V supply attaches to position 1 (Neutral), and 2 (Live).

- The cabling to the Fan attaches to 5 (Neutral) and 6 (Live).
- The Thermostat wiring for the Heater attaches to S1, positions 9 and 10.
- Additional thermostat for S2 (11, and 12) not supplied. The flue damper option (7 & 8) isn't available for Australia Standards.
- Ensure the thermostat is fixed below the heater as per instructions. See 7 below.
- The Earth Wiring from the controller must be joined to the Earth from the Fan and the Earth from the 240V supply. Use the **Blue Connector** to join the 3 Earths together.
- Note the fan comes with the heat resistant silicon cables that must be used for wiring through the heater enclosure area.
The cabling and plug for the 240V mains supply to the controller: The 3 pin plug is not connected, if a longer cable is required or the unit will be hardwired, please discuss this with your electrician.

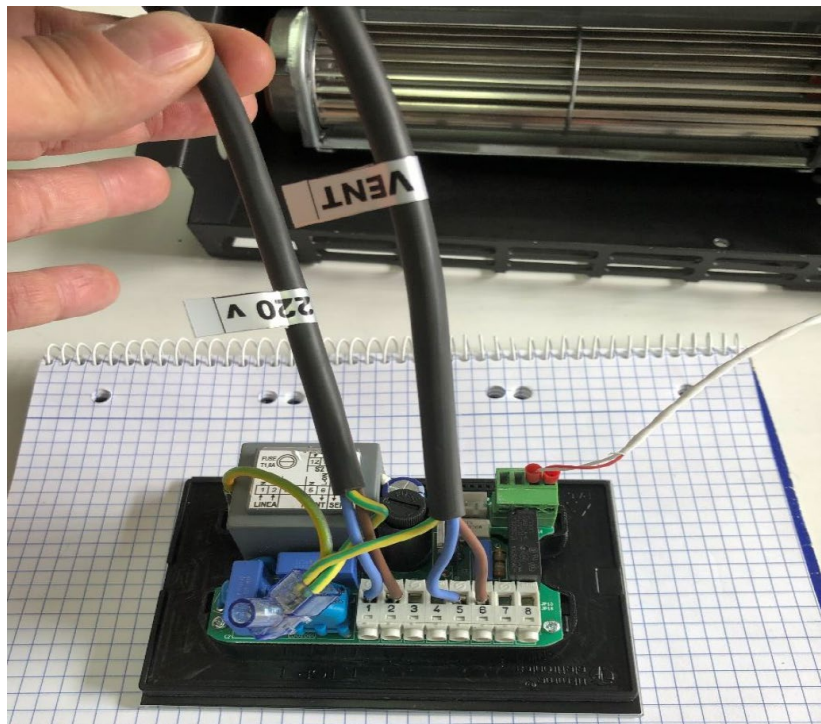
Wiring layout on back of Controller:



Earth wiring using Blue Connector:



Wiring completed on back of Wall controller:



1 And 5 Wires – BLUE

2 And 6 Wires – BROWN

Wires through Blue Joiner, Earth = Yellow and Green stripe

4. Access to Fan

Remove ash retainer by lifting it upward slightly to clear the base brick, then rotating it forward (below) and finally pulling out diagonally by lifting one side higher and out.



Remove the vermiculite base bricks from the floor of the firebox.



Undo the screws and remove the fan access cover (flat steel plate). Single sided shown. Double sided has each fan running front to back on LHS and RHS.



5. Install the Fan

The controller must be positioned away from vents or the heat source, where it won't get too hot. A minimum of 200mm from either side of the firebox. Do not place above the firebox.

Remove the bottom plate from the outer body, by tapping with a hammer to break the perforation ties.



Once the heater is installed in correct position, pass the electrical cable for the controller and the 240V connection through the fan cut out.



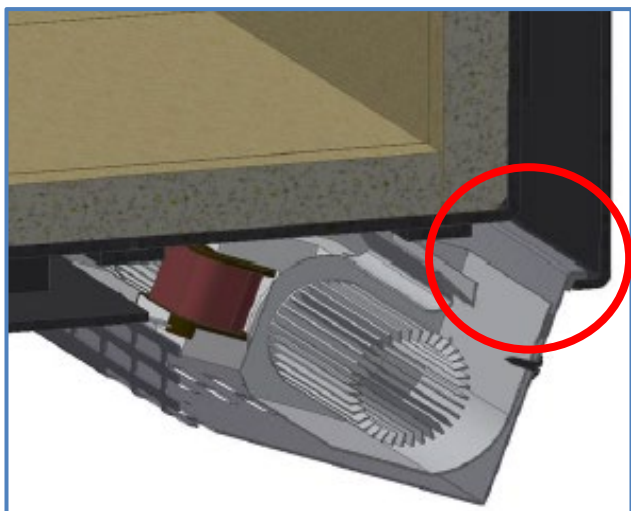
Now install the fan by slotting it into the cut out inside the firebox, with the grill intake facing towards the front.



Ensure there is NO Gap in the Top between the fan and the heater.



Position must be as below, with the tab on the rear of fan casing, so that it sits on the heater on the fold “shelf” at the rear.



Fix the fan in position with 2 screws on each end.



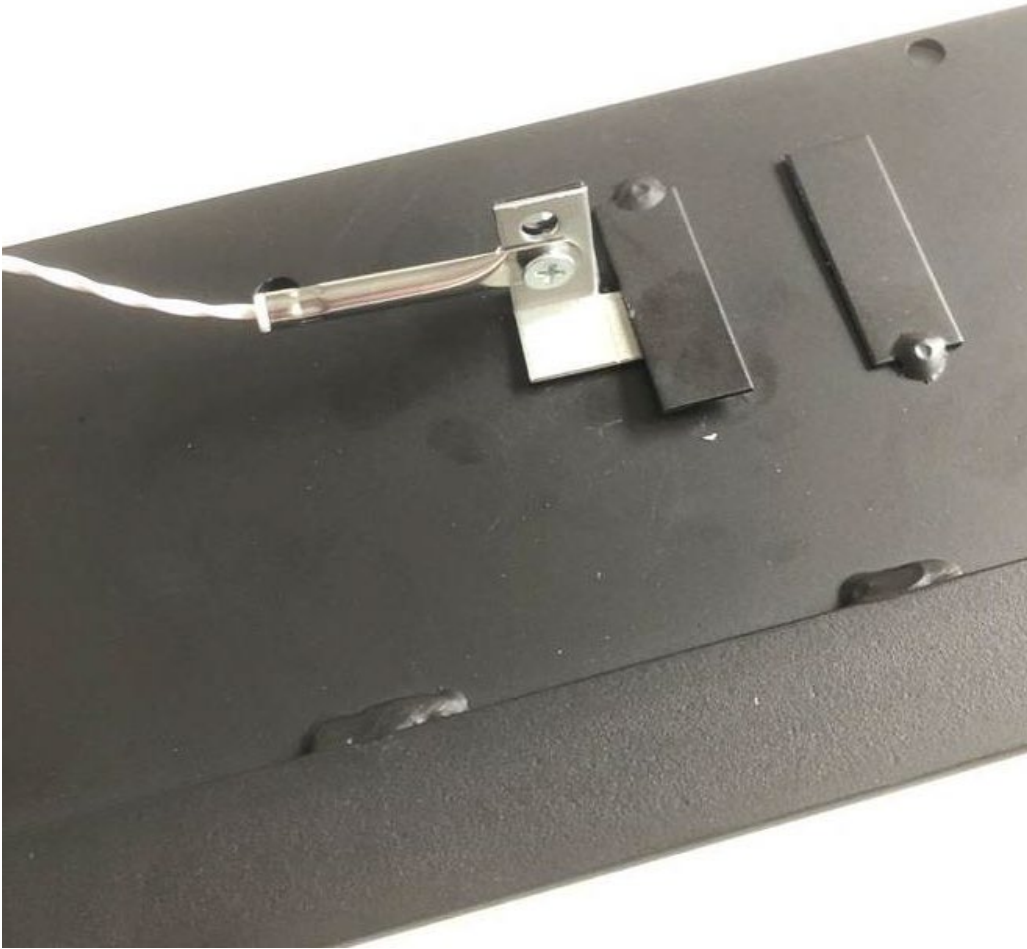
6. Fitting the Thermostat.

Fit the thermostat to the underside of the Fan access cover. This is for Versions MANUFACTURED from February 2020 with the Tab like below fixed to the bottom of the firebox plate. Use the hole closest to the heater.



For appliances built before February 2020, use the supplied adaptor bracket, to fix below the Thermostat tabs on the underside of the firebox, and fit the thermocouple wire to the adaptor bracket.





Replace the cover for Fan Access.

When inserting, ensure that the thermostat cabling is fixed in position so it cannot move and rub or get caught in the fan blades. Besides being noisy, this could damage the cables, the blades or the fan. Use cable ties if required (not supplied).

Screw the cover back into position. Carry out the **reverse of 4.** to re-assemble the fire linings and complete assembly.

7. Install the Fan controller

The controller must be positioned away from vents or the heat source, where it won't get too hot. A minimum of 200mm from either side of the firebox. Do not place above the firebox.

8. Test and Commission the Fan and Controller

To check the fan operation, use the instructions on page 3.
For Installer adjustment see the instructions from page 16.

9. INSTALLER MENU FOR ADJUSTING CONTROL PARAMETERS

Only Qualified Personnel must access this MENU, because changing the set of parameters could make the product completely unsuitable for the application.

- To enter this Menu, Press the MENU and DOWN button at the same time for 3 Seconds.
- Scroll through the parameter Codes by pressing the Up and Down buttons.
- To view the current value of the code, and to adjust, press the Menu Key.
- To modify the value, use the Up and Down buttons.
- To save the new value, press the MENU key.
- To exit without saving a new value, Press the ON/OFF button.
- Press the ON/OFF button again to exit the MENU (or wait 60 seconds).

Description	Cod.	Min	Set	Max	U.M.
Air Thermostat for Fan Activation	E01	30	45	100	[°C]
Air Thermostat for SAFETY	E02	80	100	140	[°C]
Air Thermostat for ALARM	E03	100	120	180	[°C]
Air Thermostat for FAN SAFETY	E04	100	135	180	[°C]
Air Thermostat for Valve Opening	E05	20	30	140	[°C]
Air Thermostat for Valve Closure	E06	20	80	140	[°C]
Air Thermostat for SERVICE output Activation	E07	20	50	180	[°C]
Temperature Delta for Proportional management	E50	20	20	100	[°C]
Hysteresis Thermostat for fan Activation	IE01	1	2	40	[°C]
Hysteresis Thermostat for SAFETY	IE02	1	2	40	[°C]
Hysteresis Thermostat for ALARM	IE03	1	2	40	[°C]
Hysteresis Thermostat for FAN SAFETY	IE04	1	2	40	[°C]
Hysteresis Thermostat for Valve Opening	IE05	1	2	40	[°C]
Hysteresis Thermostat for Valve Closure	IE06	1	2	40	[°C]
Hysteresis Thermostat for SERVICE output Activation	IE07	1	2	40	[°C]
Hysteresis Ambient Thermostat	Ib01	0	1	20	[°C]
P01 Fan Speed (minimum)	UA01	20	1	100	[%]
P09 Fan Speed (ninth)	UA09	80	1	100	[%]
P10 Fan Speed (maximum)	UA10	100	1	100	[%]
Delay time for Air Damper closure	t 06	0	10	120	[min]
Audible alarm suspension time	t 07	1	5	60	[min]
Time for the Fan Accelerator function	t 08	0	2	10	[sec]
S2 Input Configuration	P01	0	0	2	n
SERVICE Output Configuration	P02	0	0	3	n
Enable FAN SAFETY	P03	0	1	1	n
Enable Air SAFETY	P04	0	1	1	n
Enable Air ALARM	P05	0	1	1	n
Enable "Start" Function of Air Damper	P12	0	0	1	n

NOTE: if you modify **UA01**, **UA09**, **UA10**, the Fan immediately works at the speed you are calibrating, showing the effect of calibration

9.1 SERVICE OUTPUT

SERVICE is Programmable from the Installer Manual by using parameter P02:

P02 = 0 DISABLED: the output does not work.

P02 = 1 THERMOSTAT: the output is activated if the temperature of S1 probe is above Thermostat E07

P02 = 2 GRILL: press for 3 seconds K3 key to turn on/off the output

P02 = 3 AIR DAMPER: this output is used to manage an Air Damper to adjust for Combustion Air Flow

9.2 AIR DAMPER

To make use of the Air Damper function set parameter **P02 = 3**

If the output is ON the Air Damper will be Open, if the output OFF the Air Damper will be closed.

The Air Damper will stay Open as long as the temperature of S1 probe is below E06 Thermostat. The Air Damper will close when the temperature is above this Thermostat.

If **P12 = 1** the **Start Manual** function is enabled:

If S1 Temperature is below E05, the Air Damper will Close. During the Ignition phase of the Fireplace, by pressing K3 key, the Air Damper will Open manually (the output corresponding Led will flash). When the Temperature falls below E05, Thermostat after t06 time the Air Damper will close automatically.

9.3 S2 INPUT CONFIGURATION

Parameter **P01** can be enabled to manage the following:

P01 = 0, input S3 = DISABLED

P01 = 1, input S3 = AMBIENT PROBE

P01 = 2, input S3 = AMBIENT THERMOSTAT

9.4 PROBE SENSOR/ AMBIENT THERMOSTAT

With the parameter **P01** it is possible to enable the managing of the della Sonda/Termostato **AMBIENT** Probe/thermostat.

If the Temperature of the Ambient Probe is above the thermostat **b01** or the Contact of the External Ambient Thermostat is **Open** (the Led flashes)

- The Fan is Off
- The Air Shutter is Closed

9.5 FAN ACCELERATOR FUNCTION

It allows the Fan to work at Maximum Speed, during a programmable time(**t08**), every time the fan is powered on. Once the time has elapsed, the Fan will work at the programmed speed.

In order to disable the Accelerator Function, set the time **t08** at **0 seconds**.

<p>Imported By:</p> <p>Castworks, 57 Industrial Drive, Braeside, Vic 3195</p>	<p>Manufactured by:</p> <p>A.D.F. Lda. Z.I. Relvinha, Sarzedo A.P. 55 3304-909 Arganil-Portugal</p>
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