

Controls – AD05

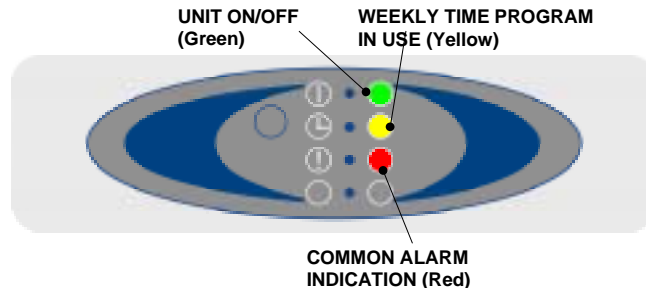
CONTROLS

The microprocessor controller enables user defined room conditions to be maintained remotely and alarms to be monitored at the receiver display on the unit fascia. Communication to the controller is by either a hand held infra red transmitter or hardwired Pendant, both of which are supplied with a wall mounting bracket and batteries.

A Master/Slave scheme of up to 20 units can be configured, see “*Master/Slave Option*” for further details.

DISPLAY

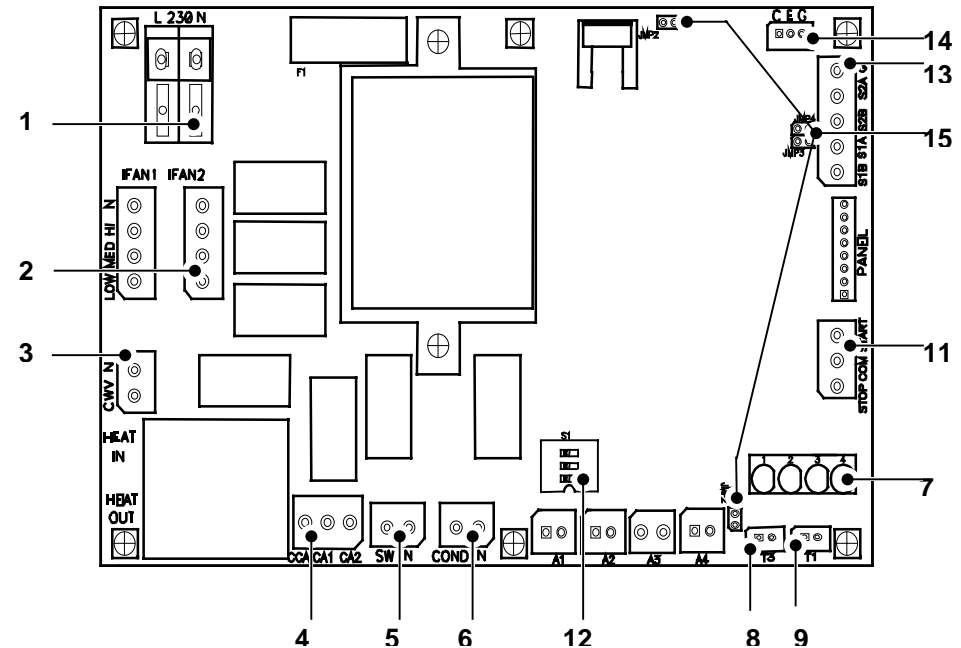
The fascia mounted display indicates unit status with a series of coloured indicators and an audible buzzer (see ‘*Alarms*’ for diagnostics). Being an extension of the indoor unit controller the display is connected by means of a 7 pin plug and socket (Item 10).



MICROPROCESSOR CONTROLLER

The control board (PCB) mounted inside the indoor unit control panel, has installation connections to the fascia display, sensors and the output relays.

- 1 Power Connections
- 2 Indoor Fan
- 3 Chilled Water Valve
- 4 Common Alarm Changeover Contacts
- 5 Swing Motor
- 6 Condensate Pump
- 7 Diagnostic Indicators
- 8 Indoor Coil Sensor
- 9 Return Air Sensor
- 10 Display Panel Connections
- 11 Remote On/Off
- 12 Configuration DIP Switch
- 13 Indoor/Outdoor Communication Connection
- 14 Pendant Connector
- 15 Jumper Links



Controls

ALARMS

When an alarm is present, the common alarm indicator (Red) on the display will switch on for the duration of the alarm. The specific alarm can be identified by four red diagnostic indicators on the control board (see Item 7 on the illustration). These have been pre-programmed to show all possible alarm conditions as outlined in the following table. Note that LED 4 operates independently of the other alarm LEDs.

When the fault indicated has been rectified, the alarm will automatically clear and return to the previous mode of operation.

	LED 1	LED 2	LED 3	LED 4
A1/A2 Indoor Fan Fault	On			
A3 AUXILIARY ALARM		On		
A4 Condensate Float Switch Fault			On	
T1 Return Sensor Fault	Flashing			
T3 COIL SENSOR FAULT			Flashing	
S1 Outdoor Communication Fault ⁽¹⁾				On
S2 Master/Slave Communication Fault ⁽²⁾				Flashing

(1) Chilled Water units only – LED 4 will be on, indicating normal operation.

(2) LED 4 will also flash intermittently when the controller is communicating with the outdoor unit.

Jumper links

The indoor unit has four jumper links (see item 15 on the illustration). The setting of each jumper link is explained below:

	Jumper ON	Jumper OFF
JMP1 – Not Used		
JMP2 – PENDANT OPTION	Pendant Not Fitted	Pendant Fitted
JMP3 – Not Used		
JMP4 – S2 Indoor Network Terminator	Terminator On	Terminator Off

If a pendant controller is to be used then JMP2 should be OFF, if infra-red controls are used then JMP2 should be ON.

To ensure reliable communication between indoor units when networked together to form a Master/Slave network the first and last unit in the network should have JMP4 set to ON. All the units in-between should have JMP4 set to OFF.

JMP1 and JMP3 are not currently used and should be set to OFF.

master/slave option

The network option allows for **1** “master” unit and up to **19** “slave” units to be interconnected using a twin twisted pair screened cable to create a network.

The master/slave operation has been programmed to operate the units in the following manner:

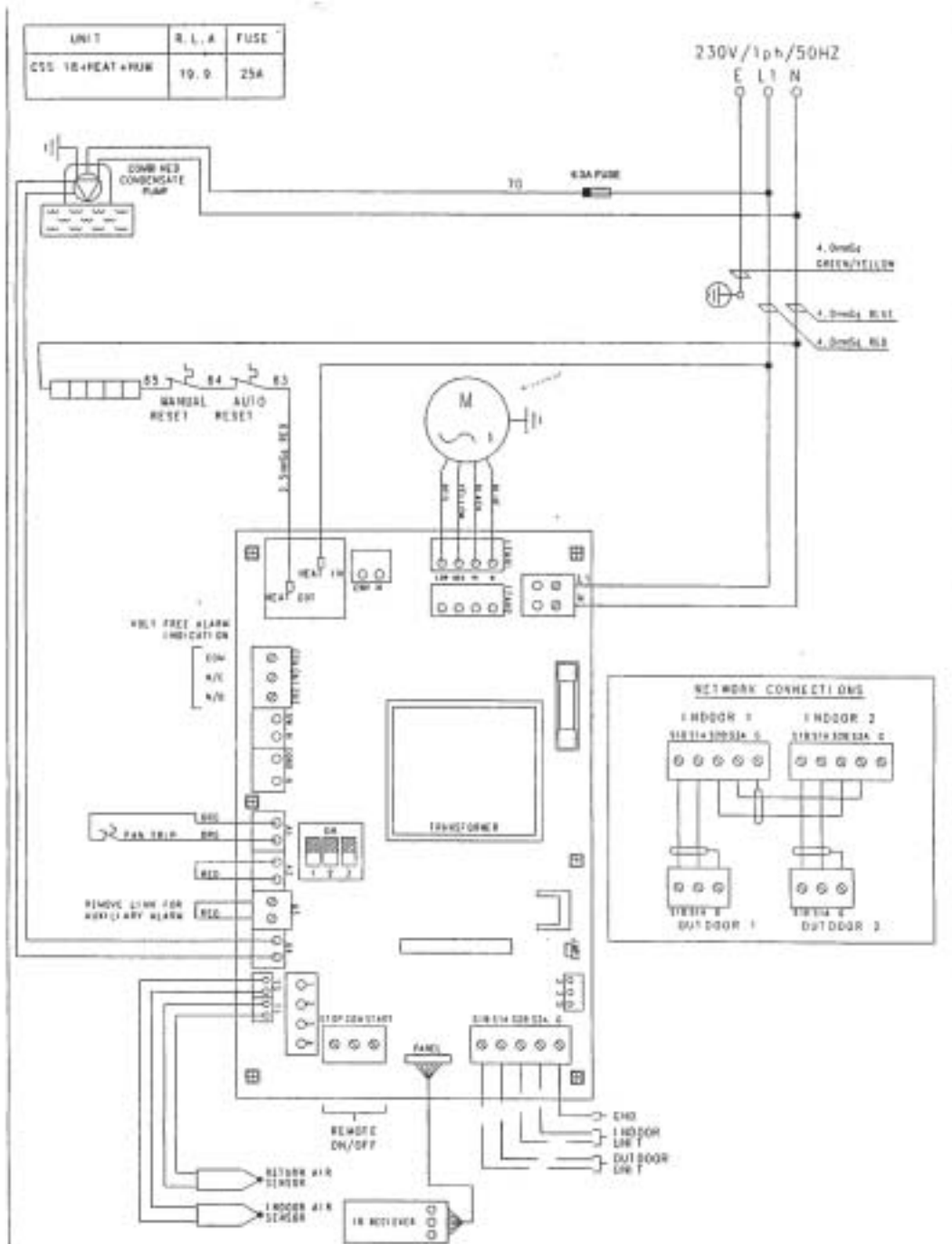
When the master unit receives a transmission from the transmitter, the transmitter settings are provided to all units on the network.

Slave units do NOT monitor the return air temperature but rely instead on the master unit to monitor return air temperature and make all control decisions. Slave units will mimic the operation of the master unit and will cool, heat, switch on, switch off etc, with the Master. When the units are configured as heat pumps the defrost programme is operated independently, to avoid unnecessary defrosting and loss of heating performance.

At all times the slave units will follow the usual method of operation regarding alarms and will act accordingly. When a master unit experiences an alarm it will act in the usual manner whilst maintaining instruction to slave units to operate normally. The exception to this is when the Master unit experiences a return air sensor failure. Due to the fact that it cannot control correctly, the Master unit will instruct the slave units to revert to stand alone operation.

Drawing for reference only

AD05 Indoor



Drawing for reference only

AD05 Indoor

