

AVC3 MANUAL

INSTALLATION

Power Supply Unit

Refer to diagram 1, only connect the 3 core black mains lead to a 240V AC supply. The unit connects to the console via an 8 way socket on the side. The orange 2 core cable connects to the fan starter control circuit, it is common (brown) and normally open (blue) relay output format.

Console

Refer to diagram 1, the 8 way lead mounted socket connects to the short, inter-connecting RH lead (550-014). The console can either be mounted on the bracket supplied for wall fixing or can be directly mounted onto a control cabinet, to do this remove the bracket and use the two fixing studs provided, the template drawing will aid accurate fixing.

RH and Temperature Sensor - Part No. 200-022

Refer to diagram 1, connect the 10m sensor lead (200-013) to the short RH connecting lead (550-014), then connect up the RH sensor itself after it has been mounted in a suitable position.

RH and Temperature Sensor - Part No. 200-032

Refer to diagram 3. First mount the RH sensor then connect the sensor 5 meter lead directly to the AVC3. 5m extension leads are available separately.

The RH sensor should be mounted either at the air intake to the fan or where the ventilating duct air can be "bled" onto the sensor with a tube or pipe of at least 30mm in diameter but where it will still sense ambient air without the fan running.

The sensor should not be exposed to the direct effects of the weather, eg sun and rain.

HOW TO USE THE SYSTEM

WARNING

THIS PRODUCT SHOULD ONLY BE USED IN CONJUNCTION WITH A CROP CONDITIONING AND STORAGE MANAGEMENT REGIME.

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AVC MANUAL

REFERENCE TO BULK GRAIN DRYING AND CONDITIONING LEAFLET WILL ASSIST, BUT IF IN DOUBT A QUALIFIED AGRONOMIST SHOULD BE CONSULTED.

Power Supply Unit

The two indicator lamps show "power" and "fan" status, the green lamp will be on at all times when power is present, whilst the red lamp will show when the fan should be running.

Console

Refer to the 7 keys on the front panel, from left to right.

- 1&2) The arrow keys "up" and "down" are used to adjust setting.
- 3) **%RH** key will allow RH target (high) and RH low to be set and show the actual value of RH at the sensor. RH set points adjustable here using the arrow keys. Reducing the value of RH target will automatically "push" down the low set point, however increasing the low value will only be possible up to the high or target set point less 2% RH.

- 4) **Temp**, set points can be adjusted here, the first is referred to as "target temp".

In "RH and temp" mode it is referred to the ambient air temperature at the sensor.

In "RH temp and diff" mode it is referred to the crop temperature.

Next is "actual ambient" and is the actual temperature of air at the RH sensor.

The crop sensor temperature, when connected, can be read at "Crop 1, Crop 2" etc up to 4 but only in the "RH Temperature and Diff" mode.

Differential temperature setting "Diff Set" will only allow the fan to run if the ambient air is cool enough by the value of the differential setting. This also only is accessible in the "RH and Temperature and Diff" mode.

- 5) The **check** key will allow the control and monitoring sequence of the system to be followed on the display, refer also to the flow diagrams.
- 6) **Mode** key will select which flow diagram the console will operate on.

* 3 *

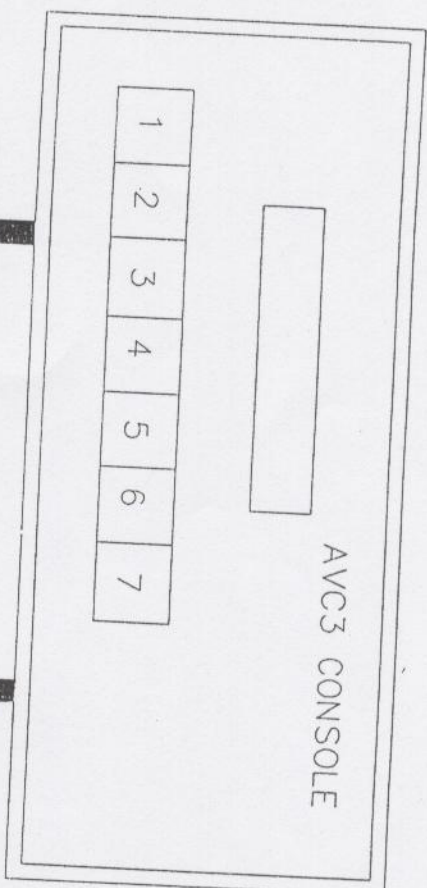
AVC3 MANUAL

- 7) To the right of the mode key is a "hidden" key, to access the functions on this key ensure the console is switched OFF, hold the key and then switch power ON, the hidden mode is now available.

The settings here are:-

- 1) The temperature dead band, usually set to 1°C, only used on "RH temp and Dif" mode, will give an operating band of temperature in the stored crop.
- 2) Wait time, in minutes, this adjusts the waiting time in the control loop (see flow diagrams) to prevent the fan hunting. Usually set to not less than 15 minutes.

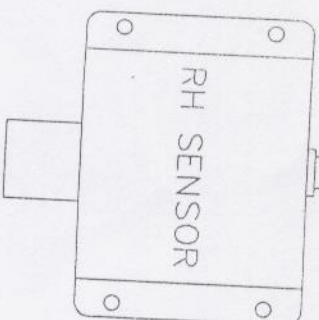
AVC3 INTERCONNECTION DIAGRAM 1



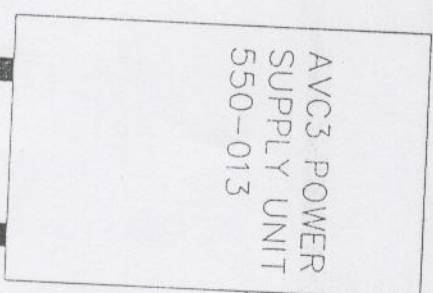
8 WAY LEAD

INTERCONNECTING LEAD
550-014

RH SENSOR LEAD
200-013



2 CORE ORANGE LEAD
RELAY OUTPUT.
CONNECT TO FAN STARTER
CONTROL.
MAX LOAD 2A, 230V AC
BROWN - COMMON
BLUE - NORMALLY OPEN



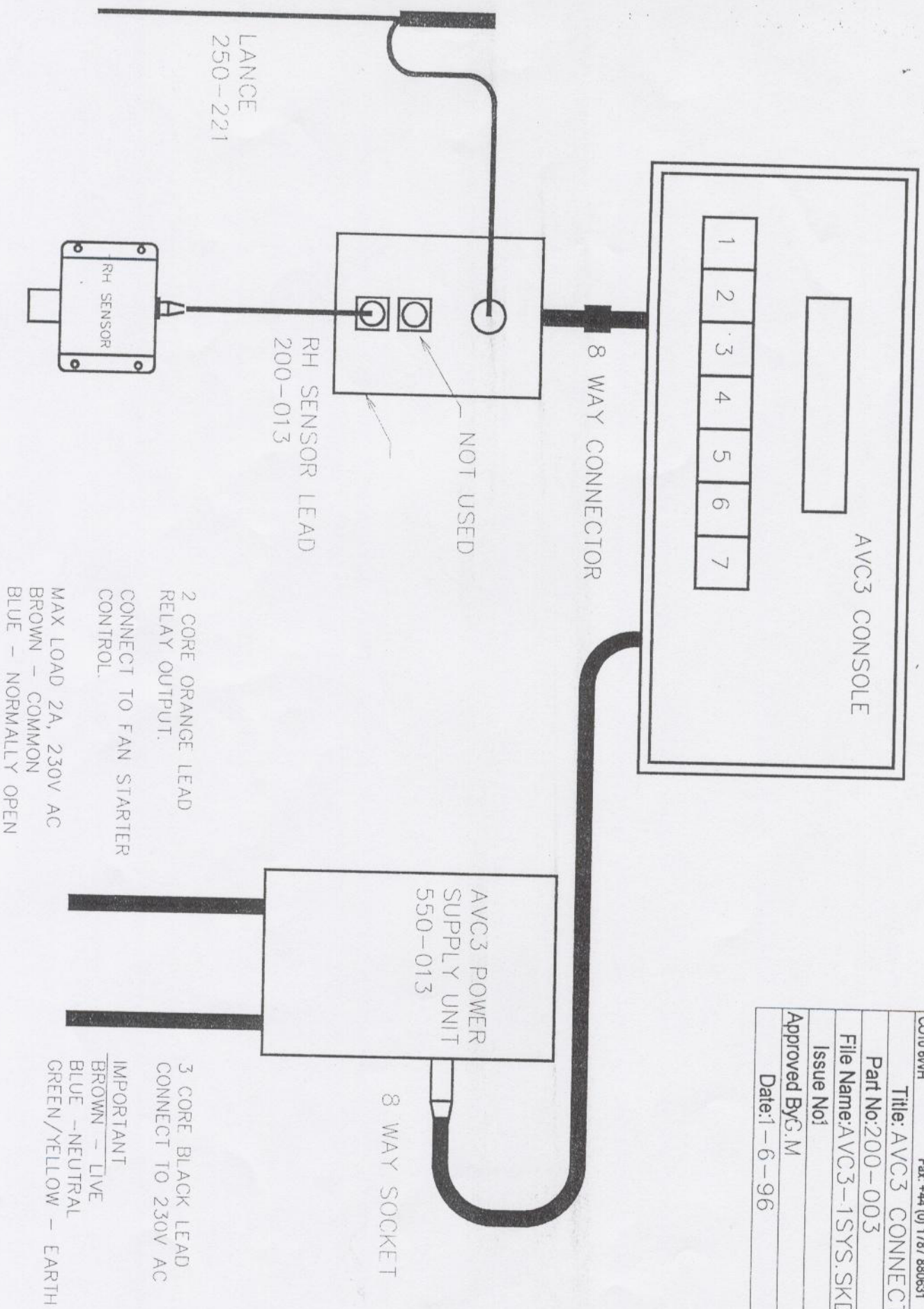
8 WAY SOCKET

3 CORE BLACK LEAD
CONNECT TO 230V AC

IMPORTANT
BROWN - LIVE
BLUE - NEUTRAL
GREEN/YELLOW - EARTH

RO3YDOME	
Woodrall Business Park	
Sudbury	
SUFFOLK	
CO10 6WH	
Tel: +44 (0) 1787 310163	
Fax +44 (0) 1787 880531	
Title: AVC3 CONNECTIONS	
Part No: 200-003	
File Name: AVC3SYS.SKD	
Issue No:1	
Approved By: G.M	
Date: 1-6-96	

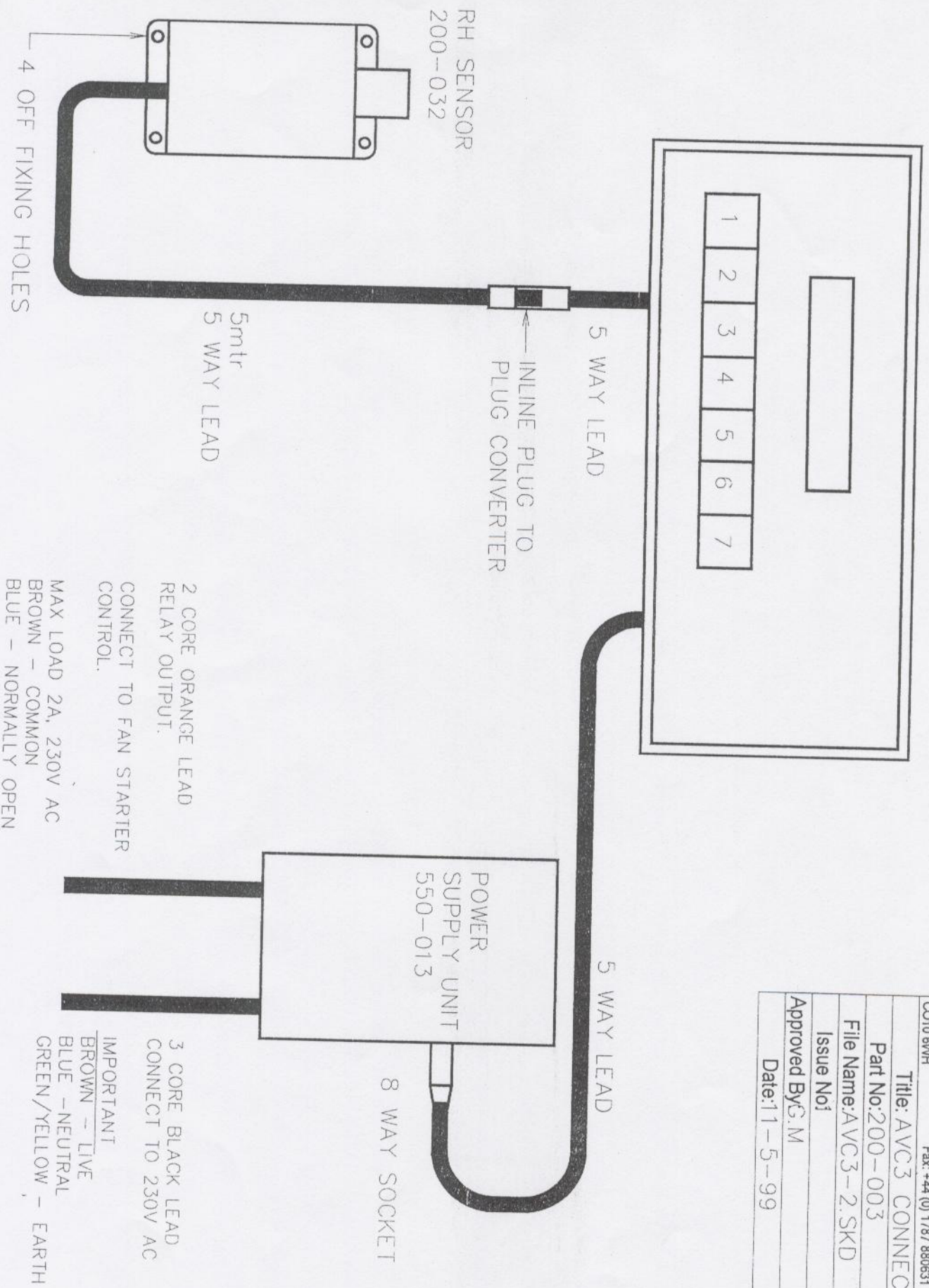
AVC3 INTERCONNECTION DIAGRAM 2



Woodhall Business Park Sudbury SUFFOLK CO10 6MH	Tel: +44 (0) 1787 310163 Fax: +44 (0) 1787 880631
Title: AVC3 CONNECTIONS	
Part No: 200-003	
File Name: AVC3-1SYS.SKD	
Issue No:	
Approved By: G.M	
Date: 1-6-96	

AVC3 INTERCONNECTION DIAGRAM 3

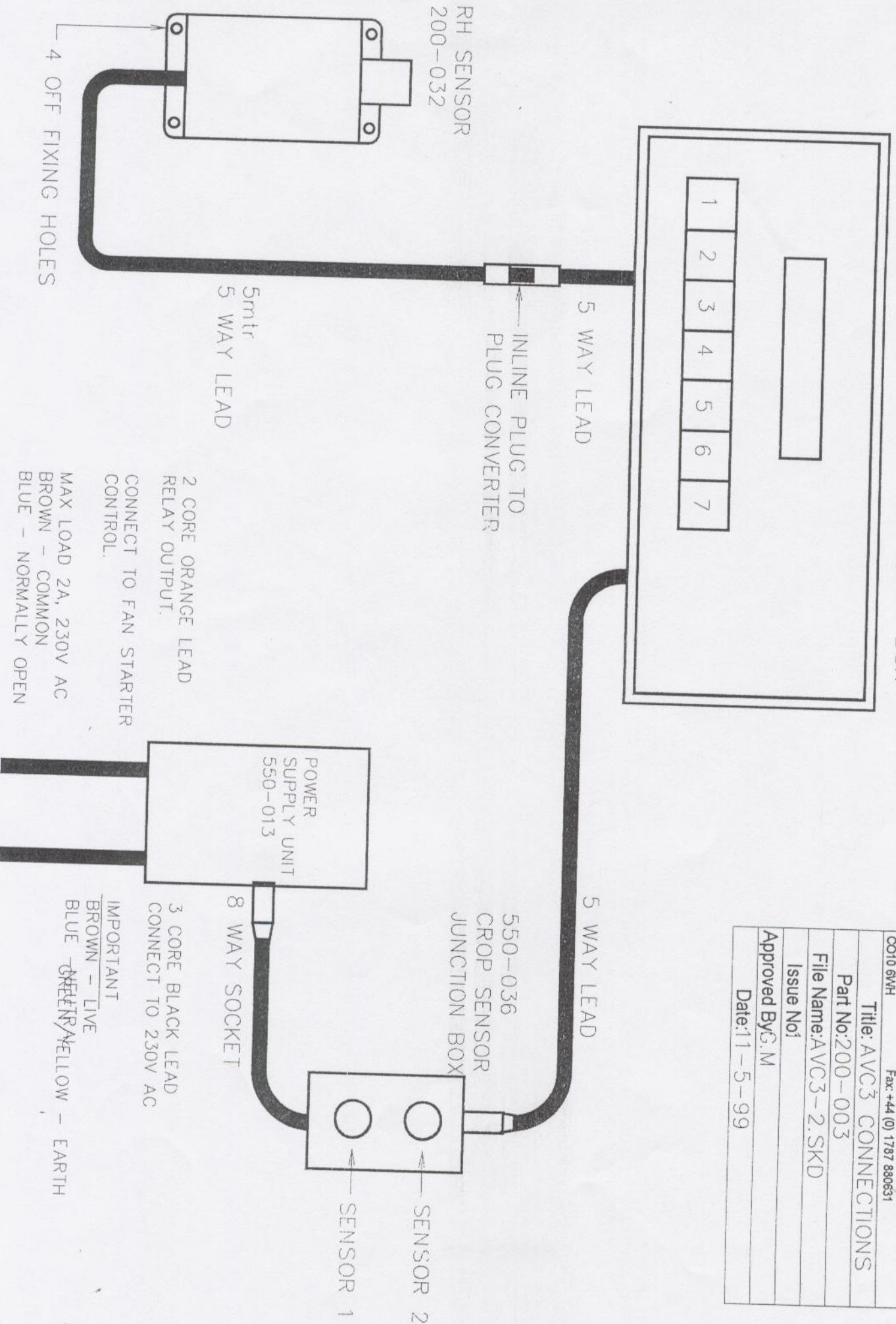
ROBYDOME LTD	
Woodhall Business Park	
Sudbury	
SUFFOLK	
CO10 6WH	
Tel: +44 (0) 1787 310163	
Fax: +44 (0) 1787 880631	
Title: AVC3 CONNECTIONS	
Part No:200-003	
File Name:AVC3-2.SKD	
Issue No:	
Approved By:G.M	
Date:11-5-99	



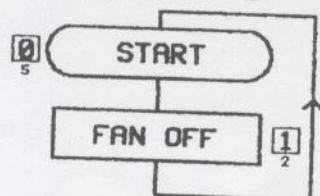
AVC3 INTERCONNECTION DIAGRAM 4

WHEN USED WITH 550-038 CROP SENSOR JUNCTION BOX

ROBYDOME LTD	
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CO10 6WH	
Title: AVC3 CONNECTIONS	
Part No: 200-003	
File Name: AVC3-2.SKD	
Issue No: 1	
Approved By: G.M	
Date: 11-5-99	

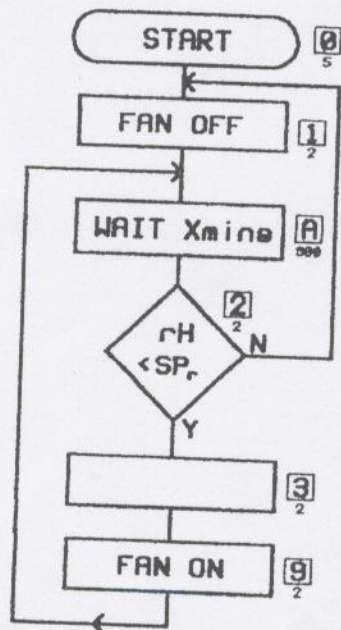


MODE 0



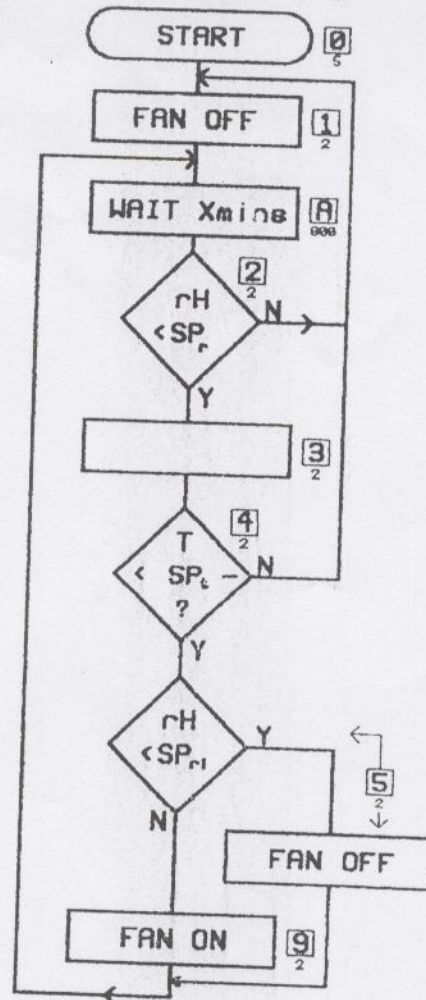
"CONTROL OFF"

MODE I



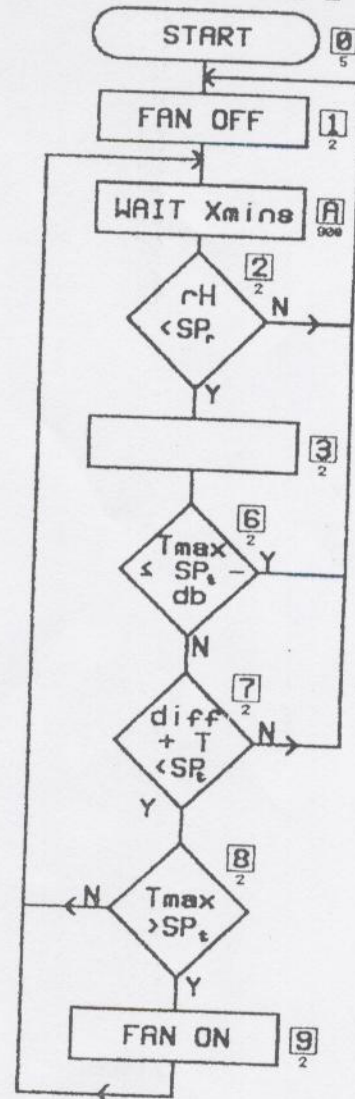
"rH MODE"
DRYING CONTROL

MODE II



"rH, Temp, MODE"
COOLING CONTROL

MODE III



"rH, Dif, Crop, MODE"
COOLING CONTROL

rH = Relative Humidity

T = Temperature (AMBIENT)

Tmax = Highest Crop Temperature

diff = DIFF. SET

SP_t = SETPOINT (TARGET TEMP)

SP_r = SETPOINT (TARGET rH)

db = Dead Band

[n] = Stage number in prog.

~ = Dwell time in seconds

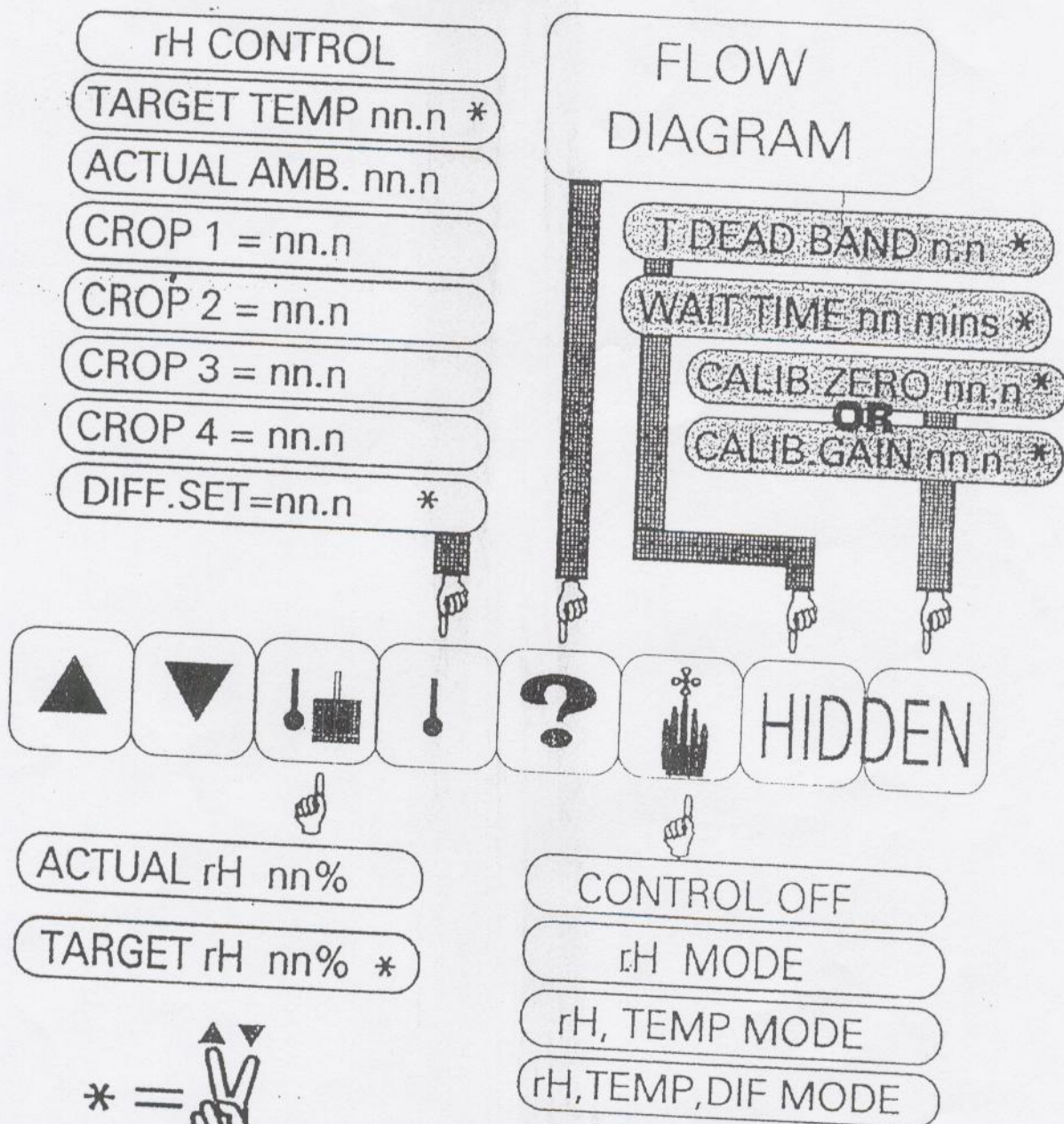
AUC3 CONTROL FLOW DIAGRAMS

(ISSUE 7 24/8/87)

KEYPAD OPERATION

ISSUE 2
6th Nov 1995

AVC3



NOTE: DISPLAY REMAINS IN LAST MODE UNTIL ANOTHER KEY PRESSED

ACCESSIBLE ONLY DURING POWER UP

AVC3LAB.W3D

Woodhall Business Park

Sudbury

SUFFOLK

CO10 6WH

Tel: +44 (0) 1787 310163

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Title: SERIES3 TEMPLATE

Part No:550-006

File Name:550-006B

Issue No:1

Approved By: G.M

Date: 28-6-95

SERIES 3 MOUNTING TEMPLATE

218mm

