Fisher&Paykel
appliances
Service Diagnostics

Active Smart™ Refrigerators

517702

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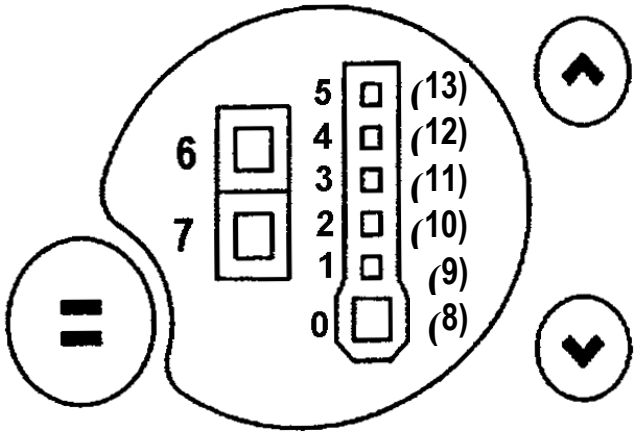
Contents

1.0 Fault Code Display Status

If a fault should develop in the temperature measurement or defrost systems (or fans and low ambient heaters on Version 4.1), a fault code will be shown automatically on the display and the fault audio alarm will sound. When any control button is pressed, the audio alarm is turned off although the display will continue to be "flashed" instead of the normal "back-lit" display.

Fault codes 8 to 13 (Version 4.1 only) are indicated by fault code 7 flashing. Enter current I/O fault log (refer Section 4.0 Mode Status) to determine which I/O fault is current.

The faults and their respective fault code that can be checked and serviced in the field are as follows:



Display Code: 0

Reason: Faulty FC temperature sensor (the resistance is out of normal range: resistance greater than **45K Ohms**).

Action: Check resistance of FC temperature sensor (refer Section 2.0 Thermistor Sensors Resistance Table and Section 15/C4 Sensors - PC / FC). If faulty, replace.

Display Code: 1

Reason: Faulty FC temperature sensor (the resistance is out of normal range: resistance less than **660 Ohms**).

Action: Check resistance of FC temperature sensor (refer Section 2.0 Thermistor Sensors Resistance Table and Section 18/C4 Sensors - PC / FC). If faulty, replace.

Display Code: 2

Reason: Faulty defrost temperature sensor (the resistance is out of normal range: resistance greater than **45K Ohms**).

Action: Check resistance of defrost temperature sensor (refer Section 2.0 Thermistor Sensors Resistance Table and Section 18/C4 Sensors - PC / FC). If faulty, replace.

Display Code: 3

Reason: Faulty defrost temperature sensor (the resistance is out of normal range: resistance less than **660 Ohms**).

Action: Check resistance of defrost temperature sensor (refer Section 2.0 Thermistor Sensors Resistance Table and Section 18/C4 Sensors - PC / FC). If faulty, replace.

Display Code: 4

Reason: Faulty PC temperature sensor (the resistance is out of normal range: resistance greater than **45K Ohms**).

Action: Check resistance of PC temperature sensor (refer Section 2.0 Thermistor Sensors Resistance Table and Section 18/C4 Sensors - PC / FC). If faulty, replace.

Display Code: 5

Reason: Faulty PC temperature sensor (the resistance is out of normal range: resistance less than **660 Ohms**).

Action: Check resistance of PC temperature sensor (refer Section 2.0 Thermistor Sensors Resistance Table and Section 18/C4 Sensors - PC / FC). If faulty, replace.

Display Code: 6

Reason: Defrost was aborted after 60 minutes. This has happened in the last two defrosts therefore probably defrost heater failure.

Action: Check defrost heater (refer Section 18/C3 Defrost Sensor). If faulty, replace.

Display Code: 7 (Stage 4 only)

Reason: Power / control module failed self-test.
Action: Replace power / control module

Display Code: 7 (Stage 4.1)

Reason: I/O (Input / Output) fault OR power / control module failed self test
Action: Check I/O fault logs – refer notes on mode status Version 4.1 (Section 4.0). If no I/O fault then replace power / control module.

Display Code: 8 (Stage 4.1)

Reason: Low ambient heater low current fault – the low ambient heater is drawing less current than expected. Either the heater or wiring is open circuit or the heater is faulty.
Action: Check wiring and connections. Check heater resistance.

Display Code: 9 (Stage 4.1)

Reason: Low ambient heater high current fault – the low ambient heater is drawing more current than expected. Either there is a short in the heater or wiring, or the heater is fault.
Action: Check wiring and connections. Check heater resistance.

Display Code: 10 (Stage 4.1)

Reason: PC fan low current fault – the PC fan is drawing less current than expected. Either the wiring is open circuit or the fan is faulty.
Action: Check PC fan wiring and connections, check fan function.

Display Code: 11 (Stage 4.1)

Reason: PC fan high current fault – the PC fan is drawing more current than expected. Either there is a short in the wiring or the fan is faulty.
Action: Check PC fan wiring and connections, check fan function.

Display Code: 12 (Stage 4.1)

Reason: FC fan low current fault – the FC fan is drawing less current than expected. Either the wiring is open circuit or the fan is faulty.
Action: Check FC fan wiring and connections, check fan function.

Display Code: 13 (Stage 4.1)

Reason: FC fan high current fault – the FC fan is drawing more current than expected. Either there is a short in the wiring or the fan is faulty.

Action: Check FC fan wiring and connections, check fan function.

2.0 Thermistor Sensors Resistance Table

Temperature (°C)	Resistance (K Ohms ± 5%)
-30.0	25.17
-25.0	19.43
-20.0	15.13
-15.0	11.88
-10.0	9.392
-5.0	7.481
0.0	6.000
5.0	4.844
10.0	3.935
15.0	3.217
20.0	2.644
25.0	2.186
30.0	1.817
35.0	1.518
40.0	1.274
45.0	1.075
50.0	0.9106

3.0 Mode Status - Versions 1, 2, 3 and 4

To enter the diagnostic mode:

Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

The lights indicate the PC sensor temperature.

Press the up button.

1 time = FC sensor temperature

2 times = Defrost sensor temperature

3 times = Inputs / outputs status

4 times = Current sensor status

5 times = Fault history

6 times = Software version

To enter the data down load mode:

Press and hold the **MODE** button while pressing the temperature **UP** button, then press the temperature **DOWN** button (this enters the data down load mode).

4.0 Mode Status - Version 4.1

To enter the diagnostic mode:

Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

The lights indicate the PC sensor temperature.

Press the up button.

1 time = FC sensor temperature

2 times = Defrost sensor temperature

3 times = Inputs / outputs status

4 times = Current sensor status

5 times = Fault history

6 times = Software version

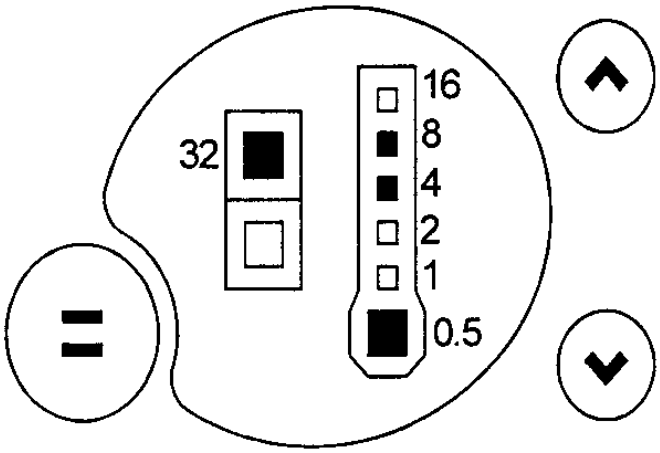
7 times = Current I/O fault log

8 times = Previous I/O fault log

To enter the data down load mode:

Press and hold the **MODE** button while pressing the temperature **UP** button, then press the temperature **DOWN** button (this enters the data down load mode).

5.0 Sensor Temperature Conversion



To obtain the temperature of either compartment sensor or defrost sensor:

1. Enter the diagnostic mode (refer Section 3.0 Mode Status) and scroll to the appropriate sensor temperature.

2. Add up the binary number indicated by the **L.E.D.** light pattern (refer figure below).

3. Subtract **40** from the result to get the temperature.

Example:

Add up the number corresponding to each **L.E.D.** which is on:

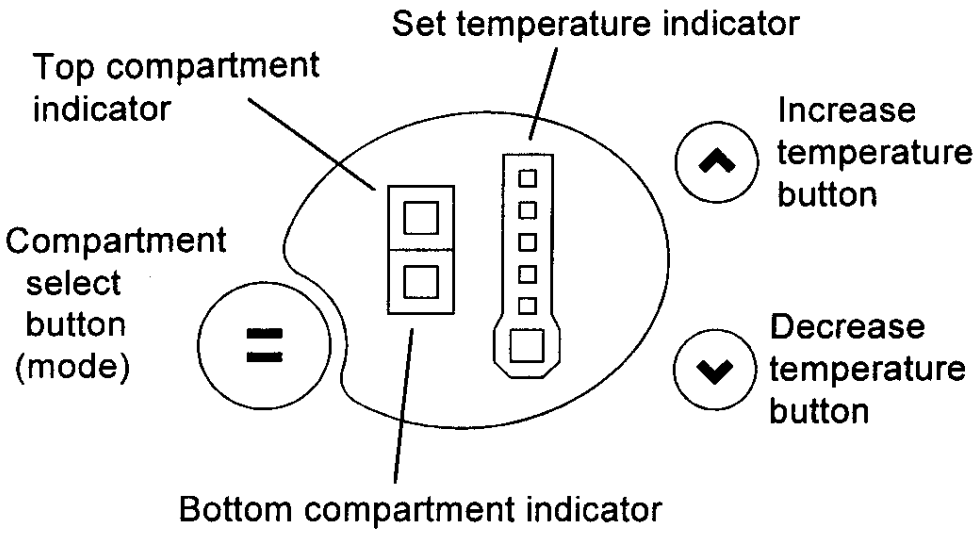
0.5 + 4 + 8 + 32 = 44.5

Subtract **40** from the result

44.5 - 40 = 4.5 °C

Hence the temperature is **4.5°C**

6.0 PC Sensor Temperature



To read the PC sensor temperature:

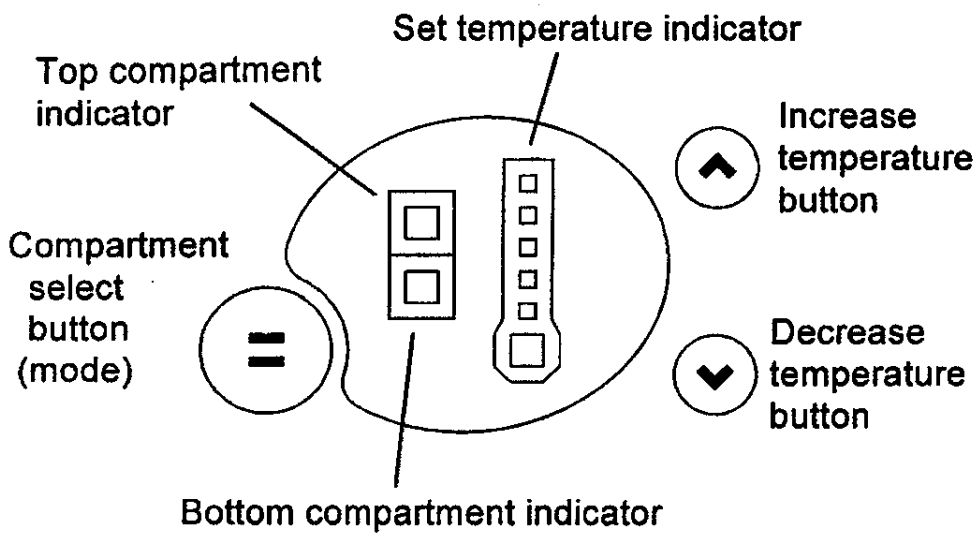
1. Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

2. The current PC sensor temperature is displayed in a code form (refer Section 5.0 Sensor Temperature Conversion).

3. Return to normal operation by pressing the **MODE** button.

CAUTION: In reading temperatures there is a need to enter the required mode when the door is first opened as all temperature readings are only sensor temperature / air temperatures and these will change rapidly with the increase in air temperature as soon as the door is opened.

7.0 FC Sensor Temperature



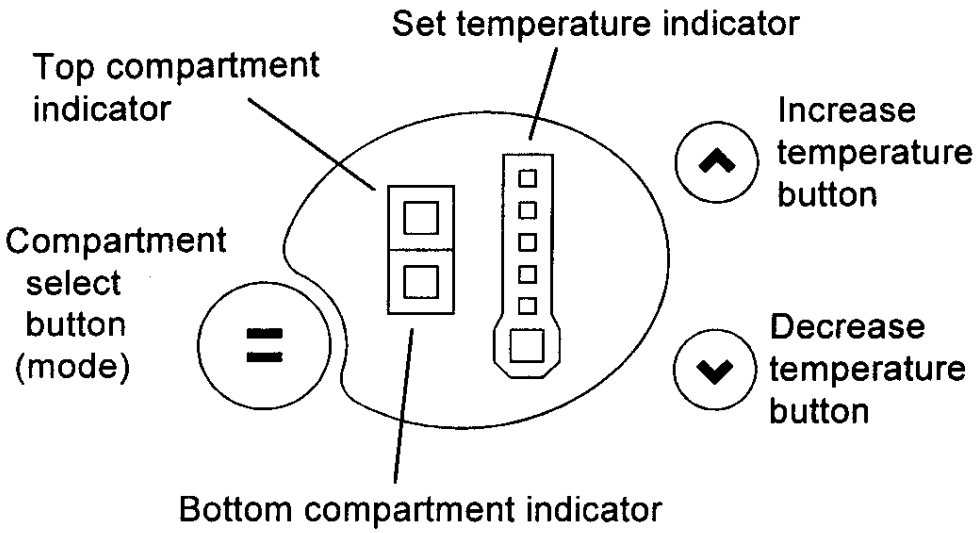
To read the FC sensor temperature:

1. Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

2. Press the temperature **UP** button once. The current FC sensor temperature is displayed in a code form (refer Section 5.0 Sensor Temperature Conversion).

3. Return to normal operation by pressing the **MODE** button.

8.0 Defrost Sensor Temperature



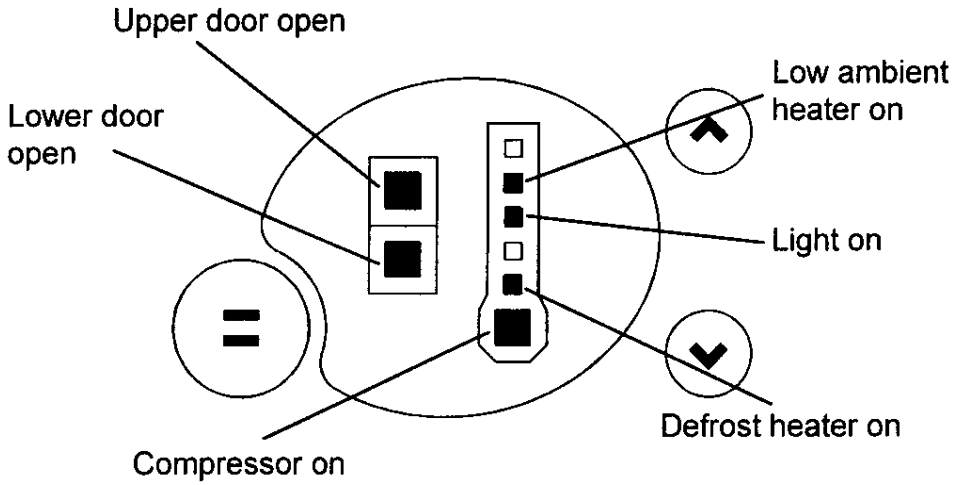
To read the defrost sensor temperature:

1. Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

2. Press the temperature **UP** button twice. The current defrost sensor temperature is displayed in a code form (refer Section 5.0 Sensor Temperature Conversion).

3. Return to normal operation by pressing the **MODE** button.

9.0 Input / Output Status



To enter the input / output status tests:

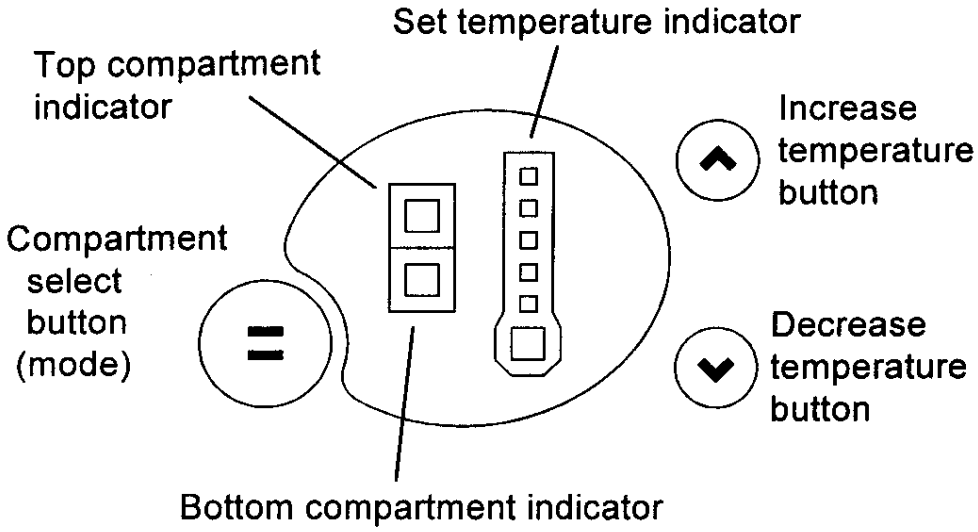
1. Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

2. Press the temperature **UP** button three times. The current input / output status is displayed (refer diagram above).

3. If a device is on or a door is open the respective **L.E.D.** lights up.

4. Return to normal operation by pressing the **MODE** button.

10.0 Fault History



To enter the fault history:

1. Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

2. Press the temperature **UP** button five times. The fault history is displayed (refer Section 1.0 for fault code display status).

4. Return to normal operation by pressing the **MODE** button.

11.0 Software Version

Used to indicate the version of software in the control module.

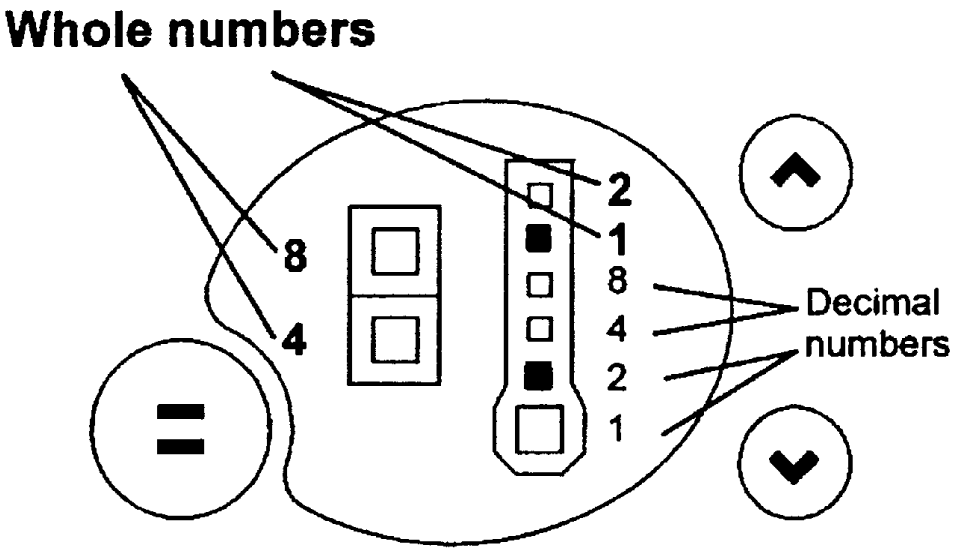
To obtain the version of software:

1. Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

2. Press the temperature **UP** button six times.

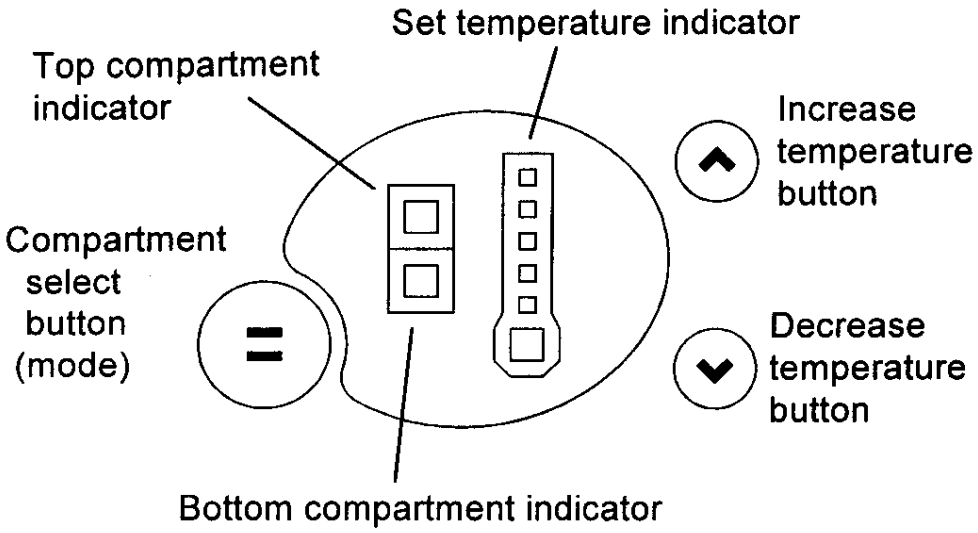
3. Return to normal operation by pressing the **MODE** button.

In the example shown below the software version is **1.2**. This is indicated through a binary code count as shown on the control board interface.



Indicating version 1.2

12.0 Input / Output Faults
(Version 4.1 only)



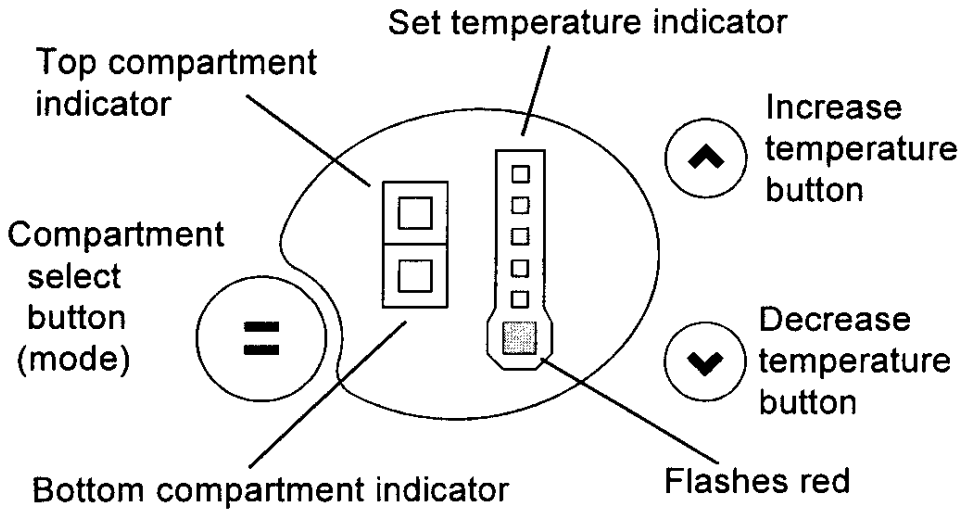
To enter the input / output fault log:

1. Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

2. Press the temperature **UP** button seven times. Any Input / Output faults (8 to 13) are displayed (refer Section 1.0 for fault code display status).

4. Return to normal operation by pressing the **MODE** button.

13.0 Download Data



To download data into your laptop:

1. Press and hold the **MODE** button while pressing the temperature **UP** button (this enters the diagnostic mode).

2. Press the temperature **DOWN** button once. A **RED L.E.D.** will show at the bottom of the temperature scale.

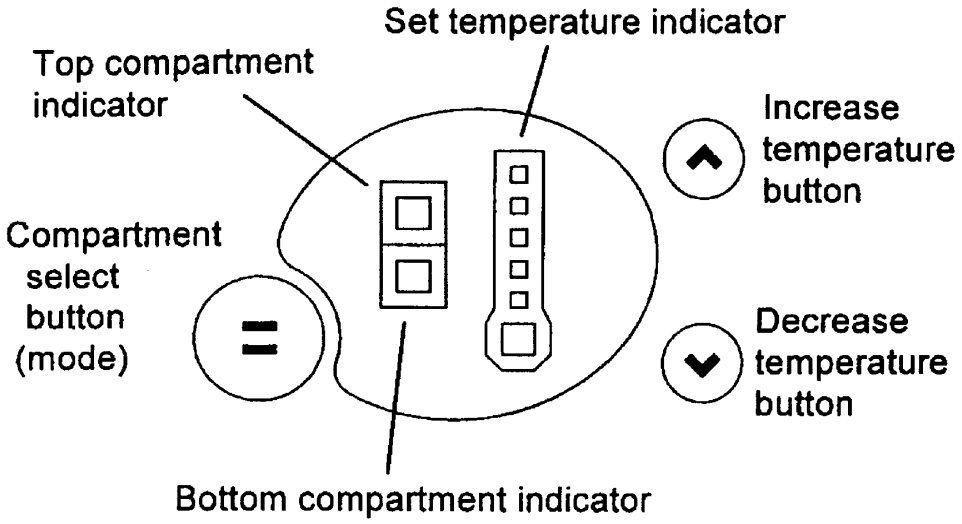
3. Place the **INTERFACE PEN** over the top of the **RED L.E.D.** until the downloading has been completed.

4. Return to normal operation by pressing the **MODE** button.

Notes on data downloading:

An interface MK2 downloading pen is needed, part number 425930B, and the FISHER & PAYKEL Smart Tool diagnostic programme loaded on to a laptop computer.

14.0 To Manually Force A Defrost



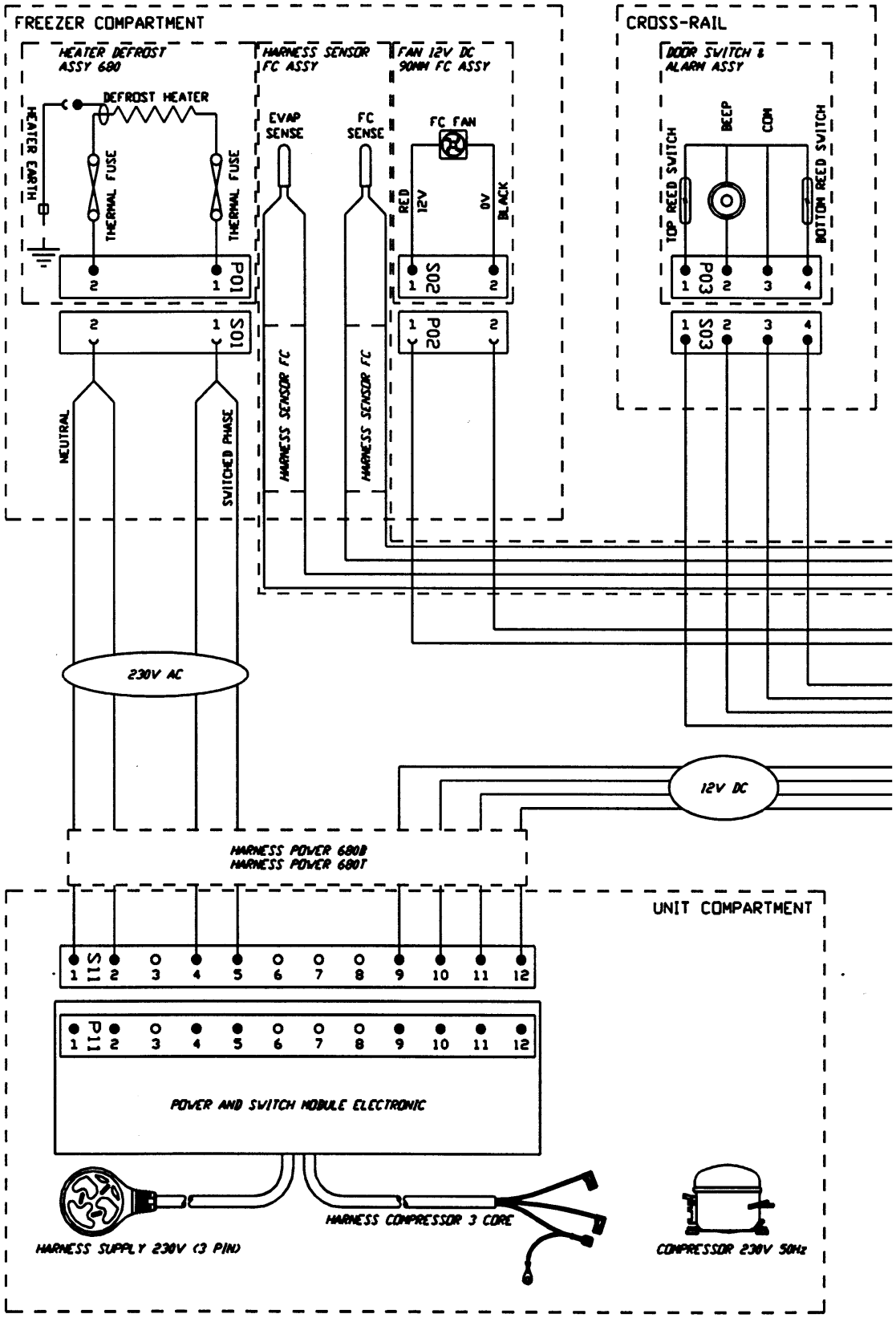
Press and hold the **MODE** button while pressing the temperature **DOWN** button. Note there will be a delay of 2 minutes before the element starts to heat after going into this mode.

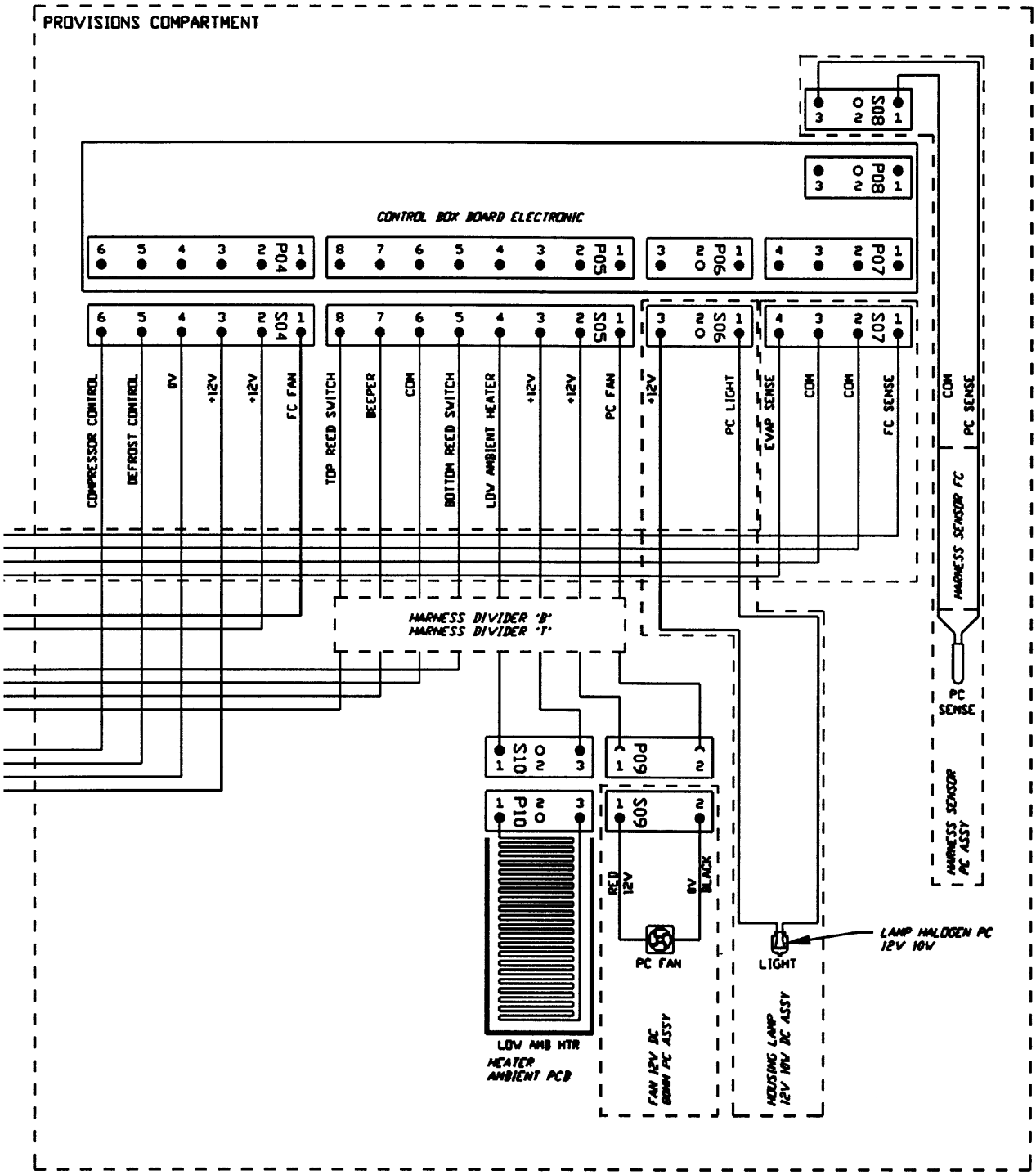
Also, after the defrost is terminated, the compressor will stay off for 4 minutes before restarting and the fans will stay off a further 30 seconds after the compressor has started.

NOTE: A defrost will not occur if the defrost sensor is above +8^{o}C. The use of a phase plug and clip on amp meter in the power lead will indicate whether the defrost element is drawing current.

15.0 Service Manual Wiring Diagram

(Phase 1) Power And Console Board



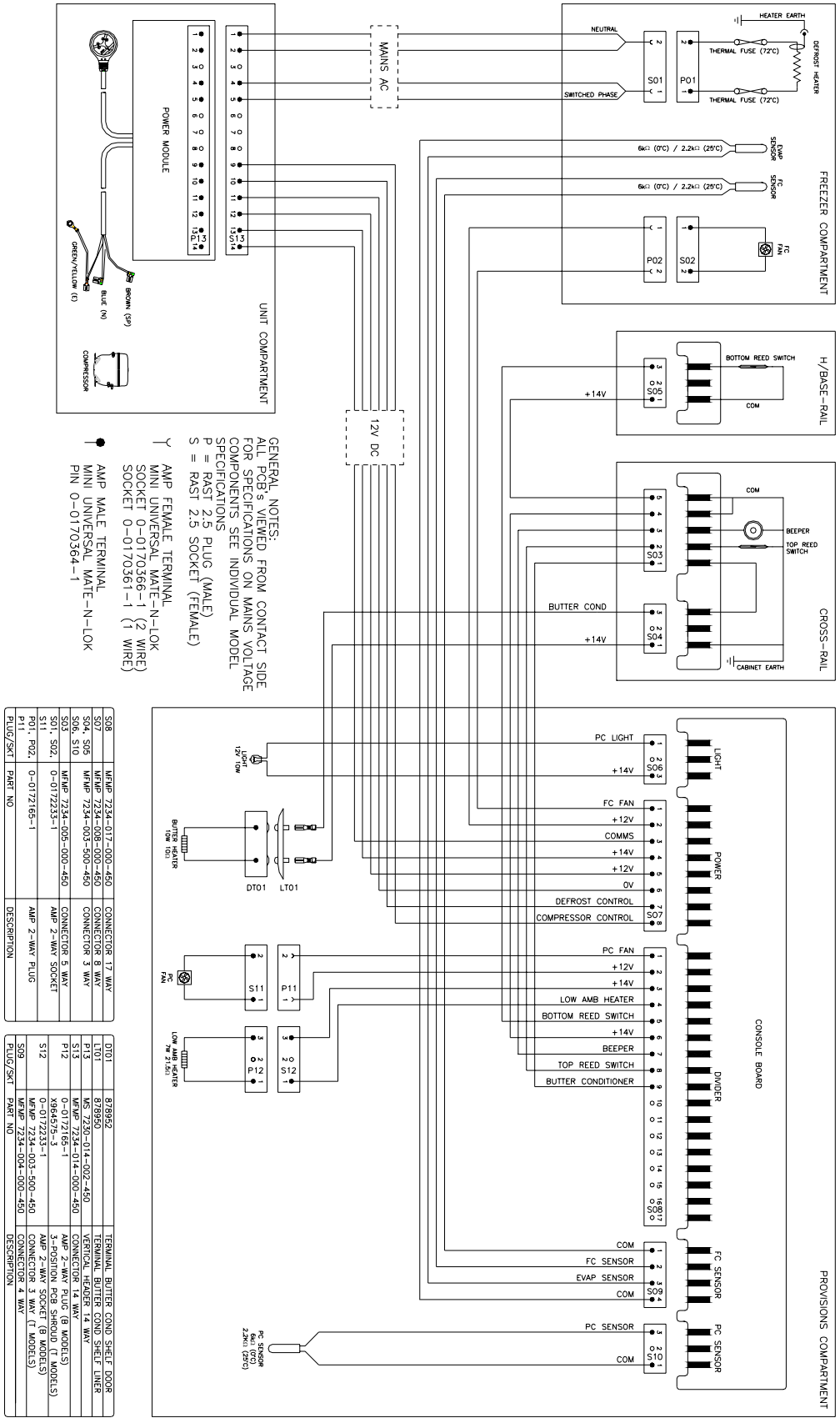


GENERAL NOTES:
P = RAST 2.5 PLUG (MALE)
S = RAST 2.5 SOCKET (FEMALE)

AMP FEMALE TERMINAL
MINI UNIVERSAL MATE-N-LOK
SOCKET 0-0170366-1

AMP MALE TERMINAL
MINI UNIVERSAL MATE-N-LOK
PIN 0-0170364-1

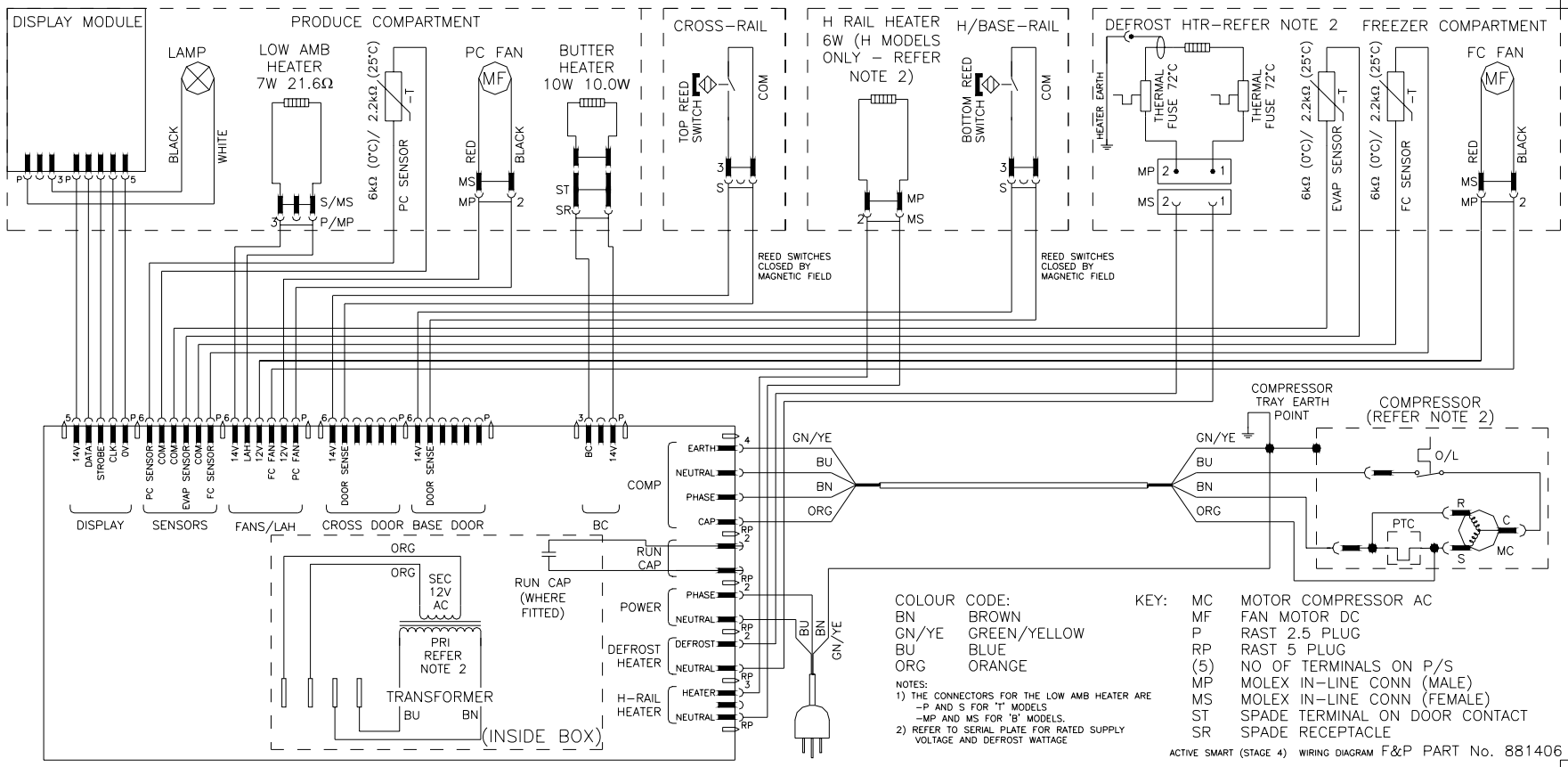
ACTIVE SMART WIRING DIAGRAM (With Butter Conditioner) Phase 2 Power & Console Board



S08	MTMP 7234-017-000-450	CONNECTOR 17 WAY
S07	MTMP 7234-008-000-450	CONNECTOR 8 WAY
S04, S05, S06, S10	MTMP 7234-003-500-450	CONNECTOR 3 WAY
S03, S01, S02, S11	0-0172233-1	CONNECTOR 5 WAY
P01, P02, P11	0-0172165-1	AMP 2-WAY SOCKET
		AMP 2-WAY PLUG
PLUG/SKT	PART NO	DESCRIPTION

DT01	878052	TERMINAL BUTTER COND SHELF DOOR
LT01	878950	TERMINAL BUTTER COND SHELF LINER
P13	MS 7230-014-002-450	VERTICAL HEADER 14 WAY
S13	MTMP 7234-014-000-450	CONNECTOR 14 WAY
P12	0-0172165-1	AMP 2-WAY PLUG (B MODELS)
	X9645715-3	3-POSITION PCB SHROUD (T MODELS)
S12	0-0172233-1	AMP 2-WAY SOCKET (B MODELS)
	MTMP 7234-003-500-450	CONNECTOR 3 WAY (T MODELS)
S09	MTMP 7234-004-000-450	CONNECTOR 4 WAY
PLUG/SKT	PART NO	DESCRIPTION

ACTIVE SMART (STAGE 4) WIRING DIAGRAM



COLOUR CODE:

BN	BROWN
GN/YE	GREEN/YELLOW
BU	BLUE
ORG	ORANGE

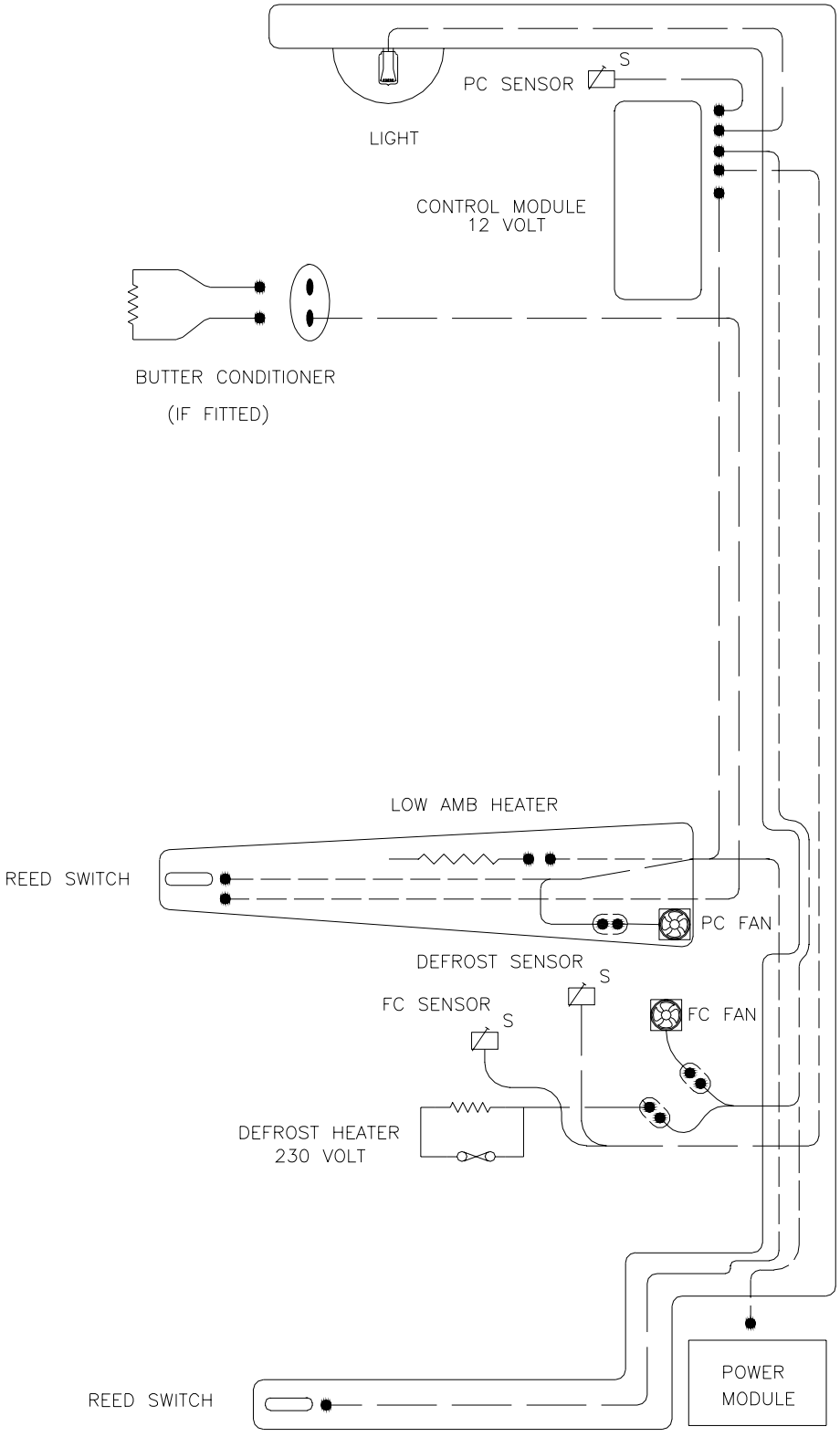
NOTES:
1) THE CONNECTORS FOR THE LOW AMB HEATER ARE
   -P AND S FOR 'T' MODELS
   -MP AND MS FOR 'B' MODELS.
2) REFER TO SERIAL PLATE FOR RATED SUPPLY VOLTAGE AND DEFROST WATTAGE

KEY:

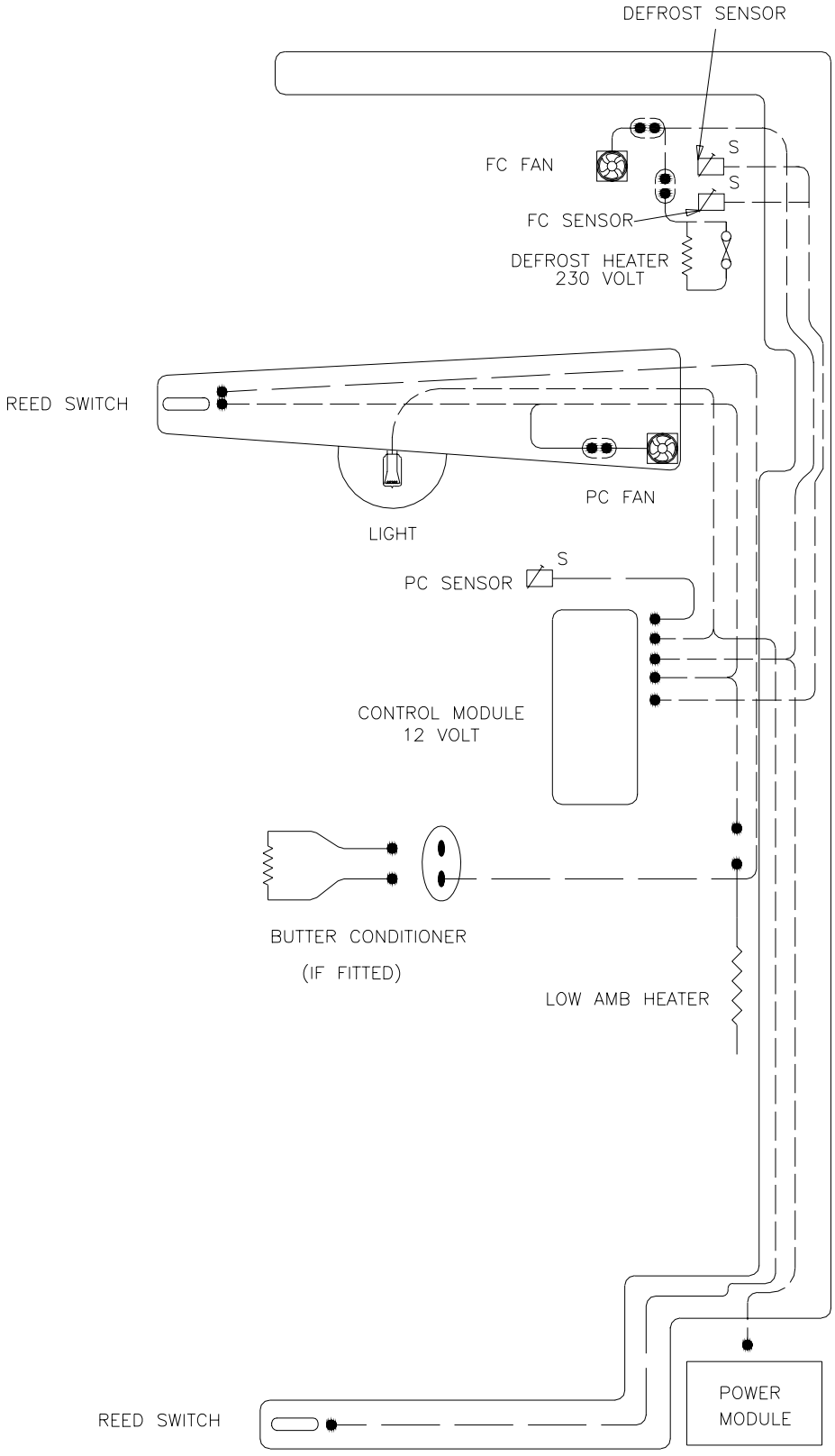
MC	MOTOR COMPRESSOR AC
MF	FAN MOTOR DC
P	RAST 2.5 PLUG
RP	RAST 5 PLUG
(5)	NO OF TERMINALS ON P/S
MP	MOLEX IN-LINE CONN (MALE)
MS	MOLEX IN-LINE CONN (FEMALE)
ST	SPADE TERMINAL ON DOOR CONTACT
SR	SPADE RECEPTACLE

ACTIVE SMART (STAGE 4) WIRING DIAGRAM F&P PART No. 881406

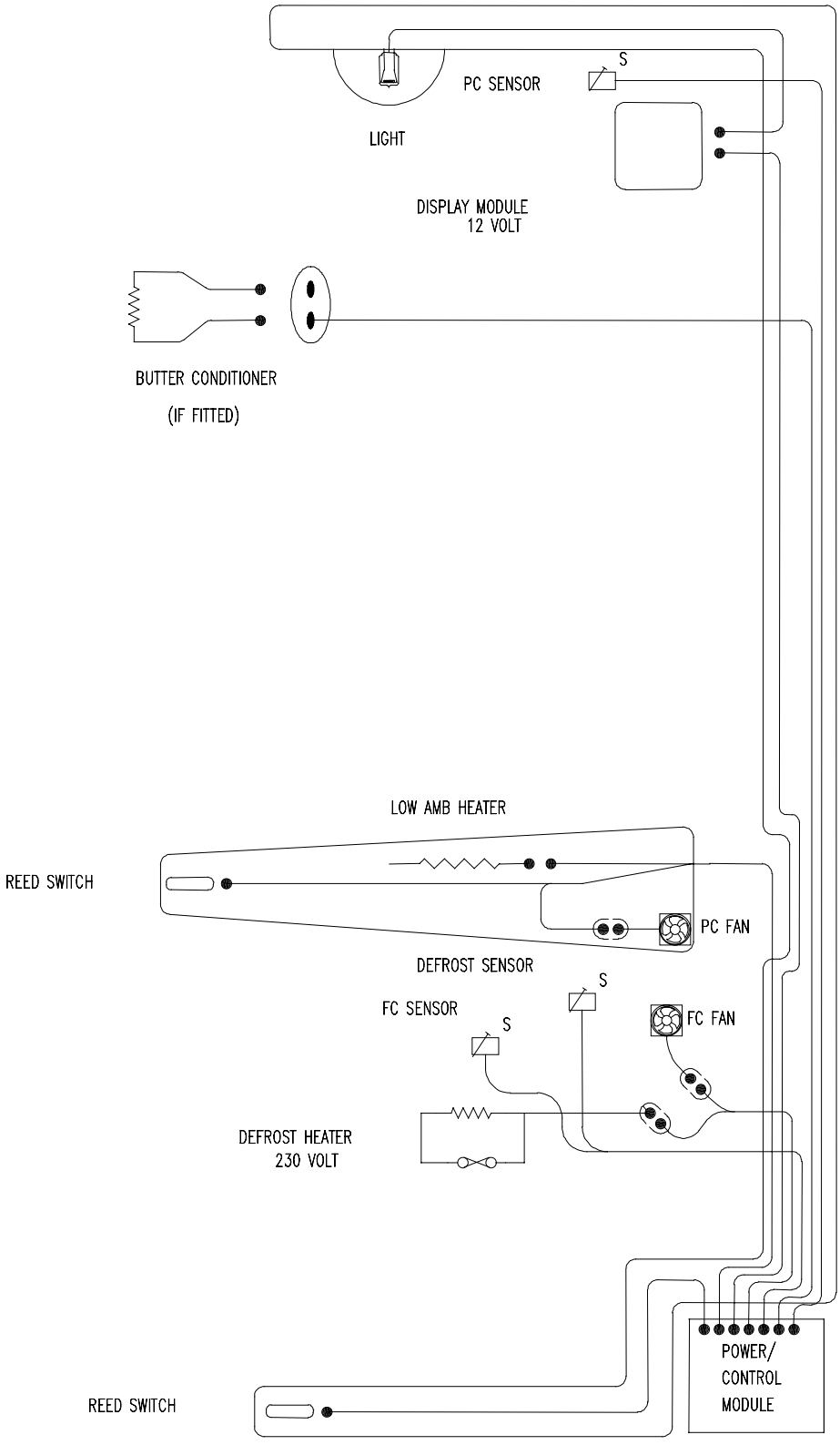
“B” MODEL WIRING ROUTE - Active Smart Stage 1-3



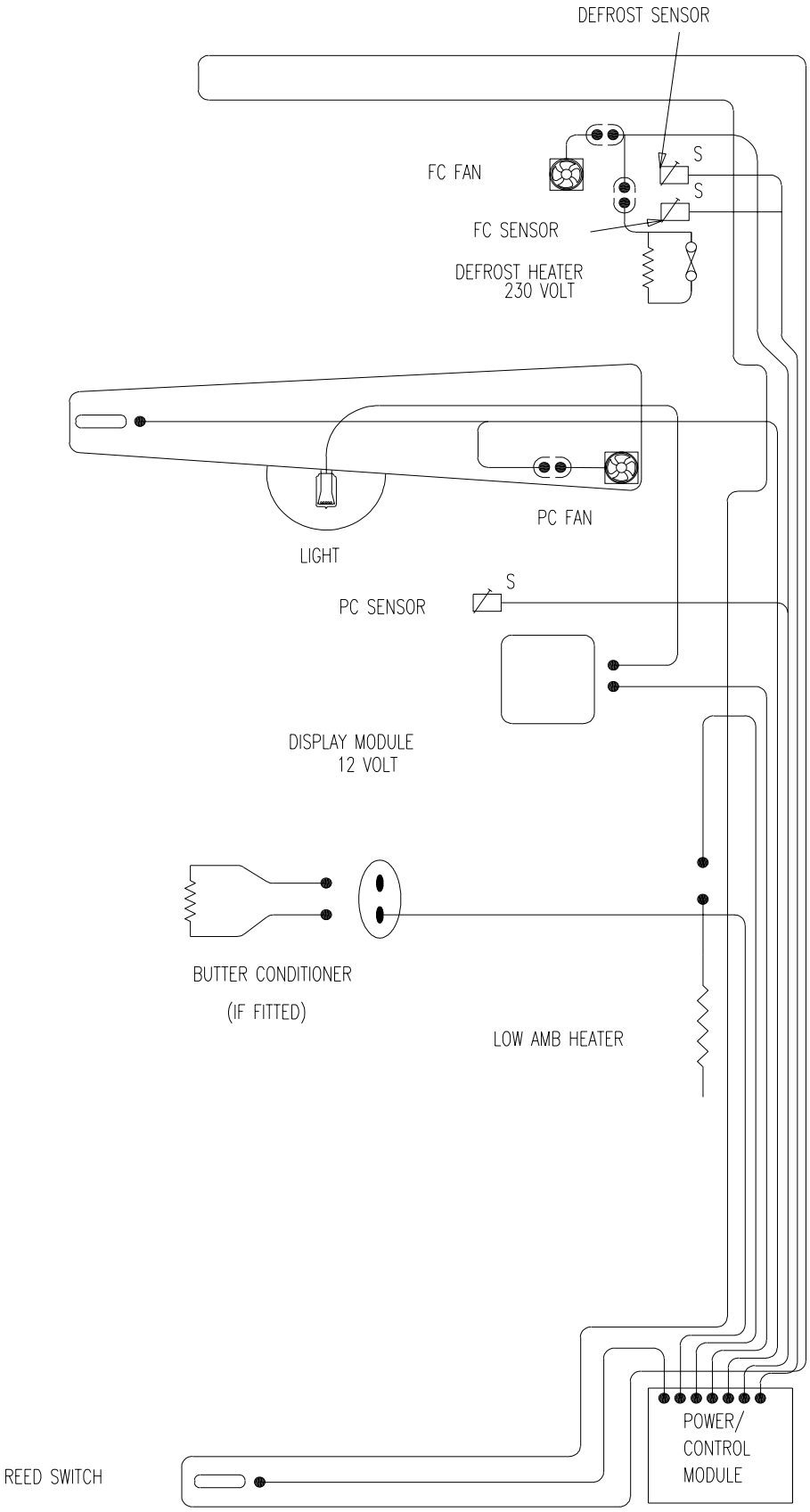
“T” MODEL WIRING ROUTE -
Active Smart Stage 1-3



“B” MODEL WIRING ROUTE - Active Smart Stage 4



“T” MODEL WIRING ROUTE -
Active Smart Stage 4



16.0 Service Reference "B" Models

PC TOO COLD Cold Crispers Ice in crispers	* Ambient heater open circuit	- Check continuity of element using multimeter.
	* PC fan fitted upside down	- Fan hub to be facing PC
	* PC fan not going	- Check voltage to plug, check wiring polarity
	* Air leakage base duct cover	- Seal with foam tape on duct divider spigot
	* PC sensor location	- Remove insulation pad
Cold Compartment Warm Top	* PC fan not going	- Check for mechanical obstruction - Check power to plug - Check polarity - Replace fan - Check for broken wires.
Total Compartment Too Cold	* FC fan not going	- Check power to plug - Check for broken wires - Check polarity - Replace fan
	* Short of gas	- Check run percentage, if high, check evaporator - Check fully flooded evaporator, check for leak.
	* PC sensor inaccurate	- Check calibration of sensor ice point using interface binary or refer to thermistor resistance table in service manual.

PC TOO WARM Warm Compartment Cool Bottom	* PC fan not going	- Check power to plug - Check polarity - Check for broken wires - Replace fan - Check fan is not jammed with ice or anything else.
	* PC fan upside down	- Fan hub to be facing FC refit.
	* Return duct iced up	- De-ice duct area behind chassis - Check PC duct insulation for good seal in return duct. - Check doors are sealing.
Total Compartment Warm	* PC duct blocked	- Defrost evaporator chassis - Check for door seal
	* Evaporator ice up	- Check defrost element, check continuity - Check door seal / door left open
	* No refrigeration	- Does cabinet run? If no check power supplies. If yes, check refrigeration system. If running, check for live frost / fully flooded evaporator. If not check for leak.
	* Fans not working	- Is there a 12 volt supply, PC light working. - 12 volt supply to console board, check harness and plugs. - 12 volt AC secondary of transformer open circuit.

FC TOO COLD Total Compartment too cold	* FC sensor location	- Check set temperature Sensor clipped and located in correct position.
	* Faulty sensor	- Check calibration of sensor ice point using interface binary or refer to thermistor resistance table in service manual.
	* PC faulty sensor	- Check PC cooling, fan running
FC TOO WARM Bottom warm top frozen	* Iced up evaporator	- Check defrost element is working, replace if faulty. Check doors are sealing or have they been left open, adjust and advise customer. FC fan jammed, clear restriction, replace fan if necessary. Check defrost sensor position, reposition onto chassis if not already there.
Total Compartment Warm	* No refrigeration	- Does cabinet run? If no check power supplies. If yes check refrigeration system. If running check for live frost / fully flooded evaporator, if not check for leak.

TOTAL CABINET TOO WARM	* No refrigeration	- Does cabinet run? If no check power supplies. If yes check refrigeration system. If running, check for live frost / fully flooded evaporator. If not, check for leak.
		- Compressor is not running, check power module voltage outputs. Check compressor and ancillaries .
		- Check reed switches are working OK.
FC COOLING PC WARMING	* Iced up evaporator	- Check defrost circuit continuity - Doors sealing, adjust - PC fan is running, if not refer PC too warm
`	* Iced up return duct	- De ice duct area - check PC duct insulation for good seal in return duct - Check doors are sealing
ALARM ON	* Defrost heater	- Check console for any fault code - Check defrost element check continuity - Check power module 230v output
	* Sensors	- Check console for fault codes 0-5 - Sensors above or below limit, refer thermistor service table in service manual
	* Alarm board fault	- Check that PC / FC doors activate reed switches - Check also reed switches with magnet - Check wiring harness to console board
	* DC fan fault PC & FC	- Check open circuit - Check console for fault - Check diagnostics for fault - Check short circuit
	* Ambient heater	- Check open circuit - Check console for fault - Check diagnostics for fault - Check short circuit

FAULT DISPLAYED, NO ALARM	* Console board but no alarm sounding	- Alarm has been switched off by user - Piezo alarm faulty on board, replace board
LIGHT NOT FUNCTIONING	* Blown bulb	- Check power supply to socket 7 volts, if nil check plug at board - Check continuity of bulb, if nil replace
	* Cabinet type	- Console board not initialised, close FC door and press any button
	* Poor connection	- Spread halogen bulb legs - Lamp holder, replace where possible - Connector on control module
CONSOLE NO LED LIGHTS	* Power module no power	- Is there a 12 volt supply - 12 volt supply to console board, check harness and plugs - 12 volt AC secondary of transformer open circuit - Initiate cabinet.
RASPBERRY NOISE	* Wrong control module	- Initialise console module, close FC door and push any button on console module

NOISY FAN PC	*	Ice around gasket	- Replace assembly with new fan kit
	*	Wires touching	- Tuck wires away from fan blade
	*	Faulty fan	- Fit replacement
	*	Wires pulled too tight	- Re route wires
NOISY FAN FC	*	Ice on cover	- Clear ice off cover and check doors are sealing
	*	Ice on grill	- Clear ice off grill and check doors are sealing
	*	Fan off mountings	- Refit
	*	Wires touching	- Tuck wires away from fan blade
	*	Capillary touching	- Shift capillary from fan area, make sure it is not touching any part of the cabinet
	*	Fan motor noisy	- Fit replacement
	*	Wires pulled tight	- Re route wiring
ICE BUILD UP COMPARTMENT	*	Doors sealing	- Check gaskets are sealing, adjust gaskets - Fit drain valve to drain tube
REFRIGERATION NOISE	*	Popping, farting	- Evacuate recharge with ISCEON 49
	*	Gurgling, whistling	- Check alignment of capillary and apply sound dampening tape

17.0 Service Reference "T" Models

PC TOO COLD Total Compartment Too Cold	* FC fan not going	- Check power to plug - Check polarity - Replace fan
	* Short of gas	- Check run percentage, if high check evaporator - Check fully flooded evaporator, check for leak
	* PC sensor inaccurate	- Check calibration of sensor ice point using interface binary or refer to thermistor resistance table in service manual
PC TOO WARM Total Compartment Warm	* Evaporator ice up	- Check defrost element, check continuity - Check door seal / door left open
	* No refrigeration	- Does cabinet run? If no, check power supplies. If yes, check refrigeration system - If running, check for live frost / fully flooded evaporator, if not check for leak
	* Fans not working	- Is there a 12 volt supply, PC light working - 12 volt supply to console board, check harness and plugs - 12 volt AC secondary of transformer open circuit - Check fan is not a Y97-16 stalling on fan speed 3
	* Power module failure	- Is compressor running, is there a 12 volt supply from module to console board. If not, replace board
	* PC delivery duct blocked	- De ice area behind chassis

FC TOO COLD Total Compartment Too Cold	* FC sensor location	- Check set temperature - Sensor clipped and located in correct position
	* Faulty sensor	- Check calibration of sensor ice point using interface binary or refer to thermistor resistance table in service manual
	* PC faulty sensor	- Check PC cooling, fan running
FC TOO WARM Total Compartment Warm	* No refrigeration	- Does cabinet run? If no check power supplies. If yes, check for live frost / fully flooded evaporator, if not check for leak
TOTAL CABINET TOO WARM	* No refrigeration	- Does cabinet run? If no check power supplies. If yes, check refrigeration system - If running, check for live frost / fully flooded evaporator - If not, check for leak - Compressor is not running, check power module voltage outputs - Check compressor and ancillaries
FC COOLING PC WARMING	* Iced up evaporator	- Check defrost circuit continuity - Doors sealing, adjust - PC fan is running, if not refer PC too warm

ALARM ON	* Defrost heater	- Check console for any fault code - Check defrost element, check continuity - Check power module 230 volt output
	* Sensors	- Check console for fault codes 0-5 - Sensors above or below limit, refer thermistor service table in service manual
	* Alarm board fault	- Check that PC / FC doors activate reed switches - Check also reed switches with magnet - Check wiring harness to console board
	* DC fan fault PC & FC	- Check open circuit - Check console for fault - Check diagnostics for fault - Check short circuit
	* Ambient heater	- Check open circuit - Check console for fault - Check diagnostics for fault - Check short circuit
FAULT DISPLAYED NO ALARM	* Console board display but no alarm sounding	- Alarm has been switched off by user - Piezo alarm faulty on board, replace board
LIGHT NOT FUNCTIONING	* Blown bulb	- Check power supply to socket 7 volts, if nil check plug at board - Check continuity of bulb, if nil replace
	* Cabinet type	- Console board not initialised, close FC door and press any button.
	* Poor connection	- Spread halogen bulb legs - Lamp holder, replace where possible

CONSOLE NO LED LIGHTS	*	Power module no power	- Is there a 12 volt supply? - 12 volt supply to console board, check harness and plugs - 12 volt AC secondary of transformer open circuit
RASPBERRY NOISE	*	Wrong control module	- Initialise console module, close FC door and push any button on console module
NOISY FAN PC	*	Ice around gasket	- Replace assembly with new fan kit
	*	Wires touching	- Tuck wires away from fan blade
	*	Faulty fan replace assy with new fan kit	- Fit replacement
NOISY FAN FC	*	Ice on cover	- Clear ice off cover and check doors are sealing
	*	Ice on grill	- Clear ice off grill and check doors are sealing
	*	Fan off mountings	- Refit
	*	Wires touching	- Tuck wires away from fan blade
	*	Capillary touching	- Shift capillary from fan area and make sure it is not touching any part of the cabinet
	*	Fan motor noisy	- Fit replacement
	*	Wires too tight	- Re route wiring
ICE BUILD UP COMPARTMENT	*	Doors sealing	- Check gaskets sealing, adjust gaskets - Fit drain valve to drain tube
REFRIGERATION NOISE	*	Popping farting	- Evacuate recharge with ISCEON 49, check alignment of capillary
	*	Gurgling whistling	- Check alignment of capillary and apply sound dampening tape

18.0 Fault Finding Flow Chart - (Listing)

A) System Faults

A1 Nothing in cabinet operating
A2 Compressor
A3 Compressor running, but warm PC / FC
A4 Console Fault Code
A5 No power to Power and Control modules
A6 Refrigerant System

B) Temperature Faults

B1 FC too cold, PC too warm
B2 FC PC warm
B3 Ice / Condensation forming
B4 PC too cold

C Sensor Faults

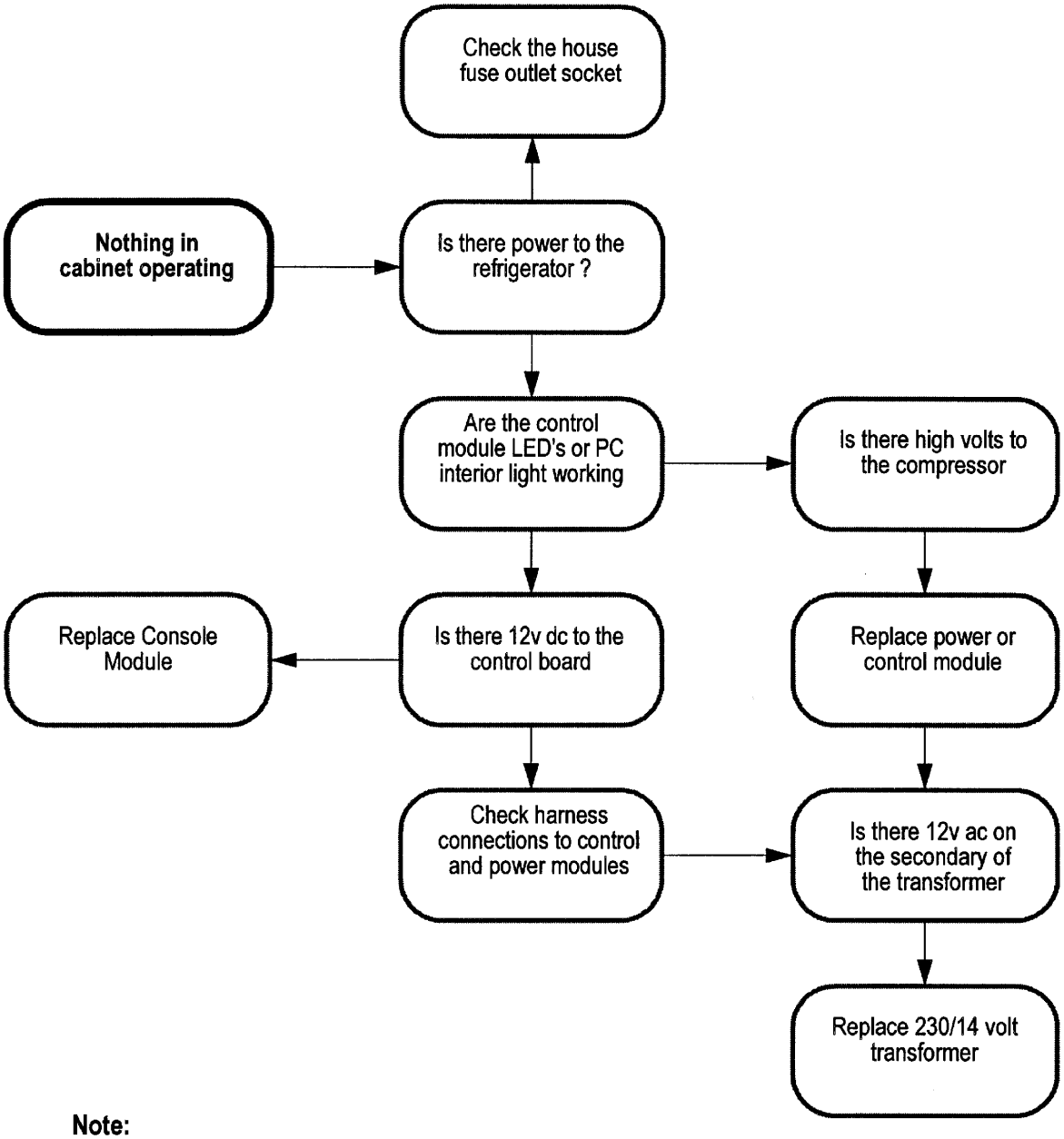
C1 FC stratification
C2 PC stratification
C3 Defrost sensor
C4 PC or FC sensor fault code

D Auxiliary Faults

D1 Defrost heater
D2 Door alarm operation
D3 Fans - PC / FC
D4 No Light
D5 Low ambient heater

A. System Faults

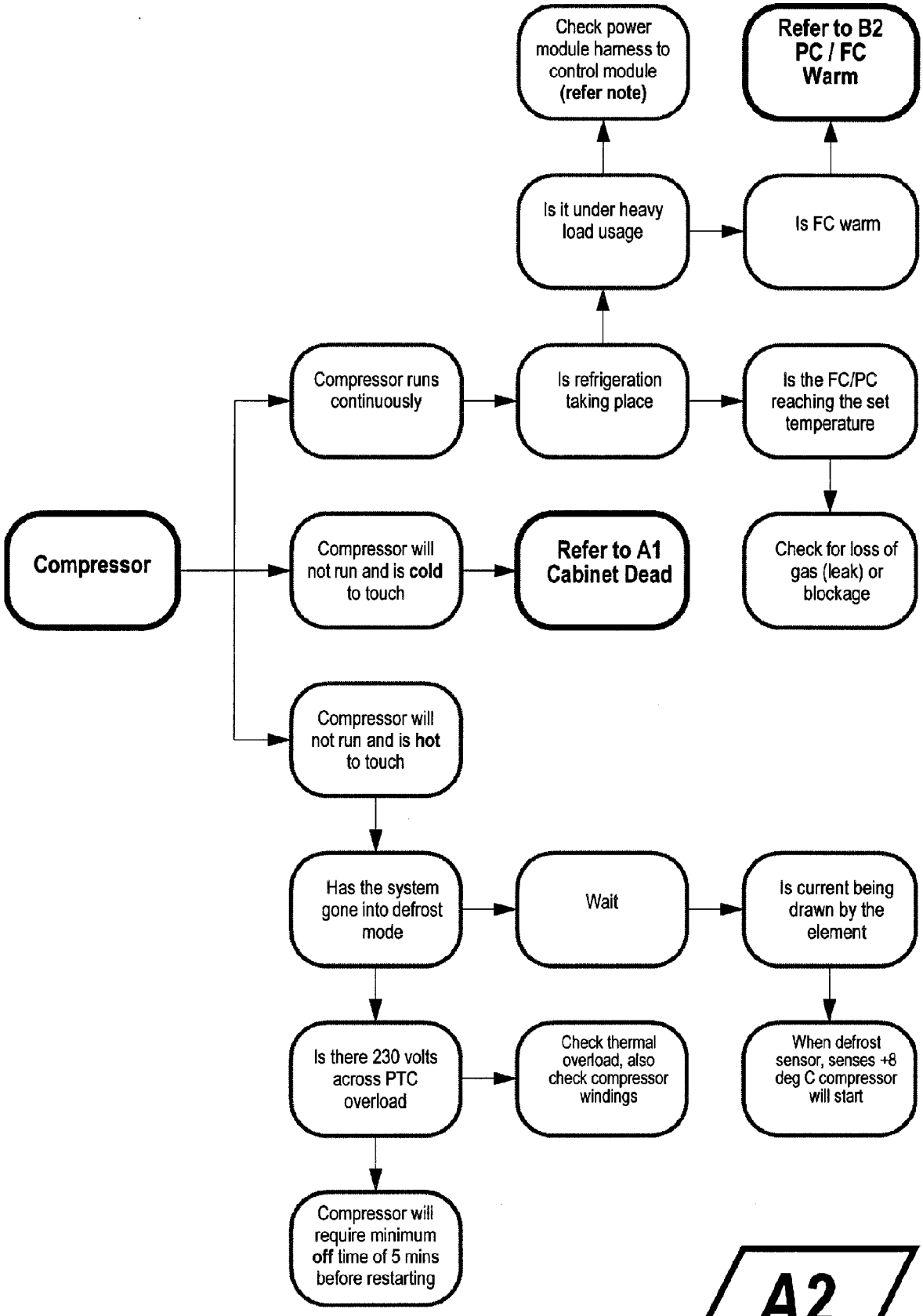
A1 Nothing In Cabinet Operating



Note:
Open circuit transformer - compressor will not run.

A1

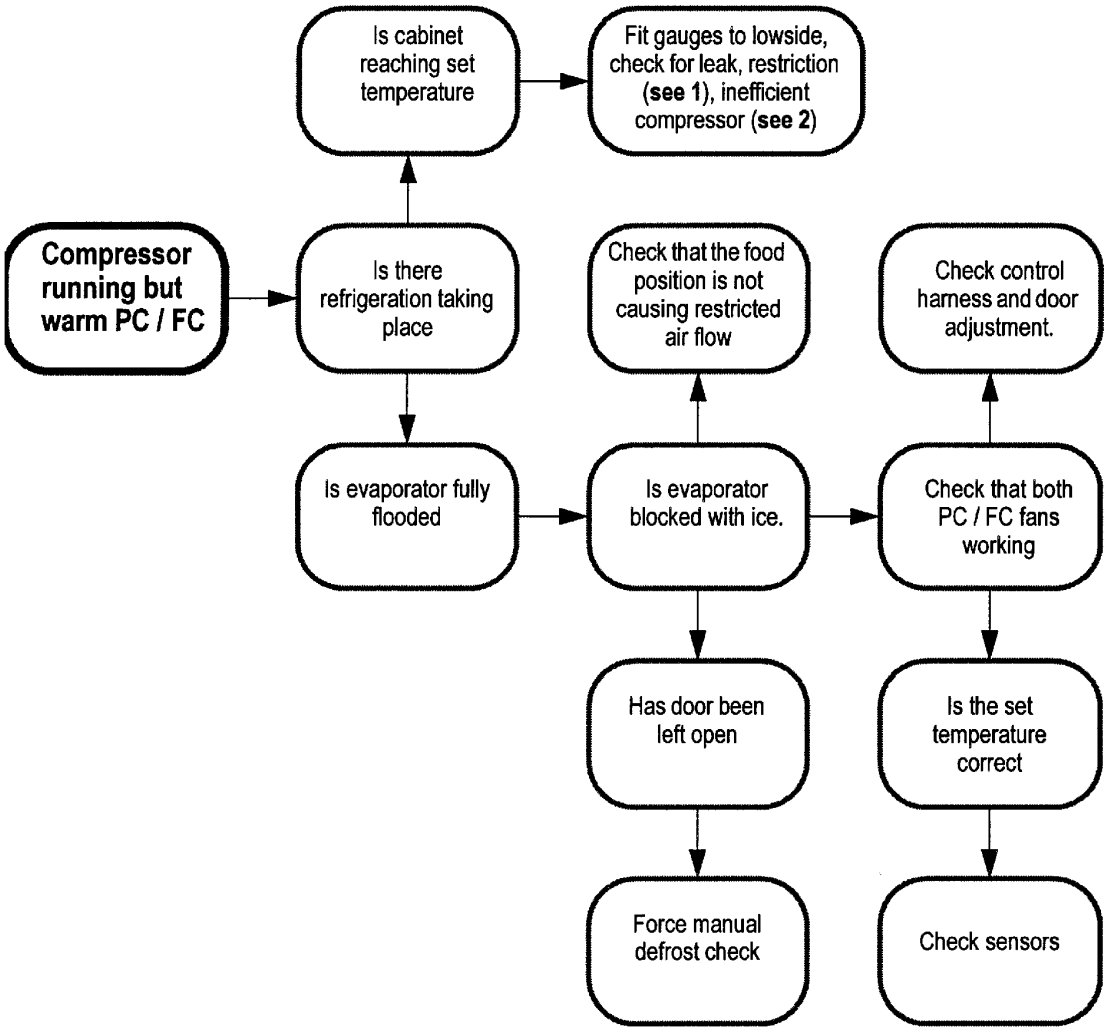
A2 Compressor



NOTE: If the power module is not connected to the console board, or there is no 12v dc supply to the console board, the compressor will run at 100%. If there is no 12v dc supply on the power board the compressor will not run.

A2

A3 Compressor Running, But Warm PC / FC



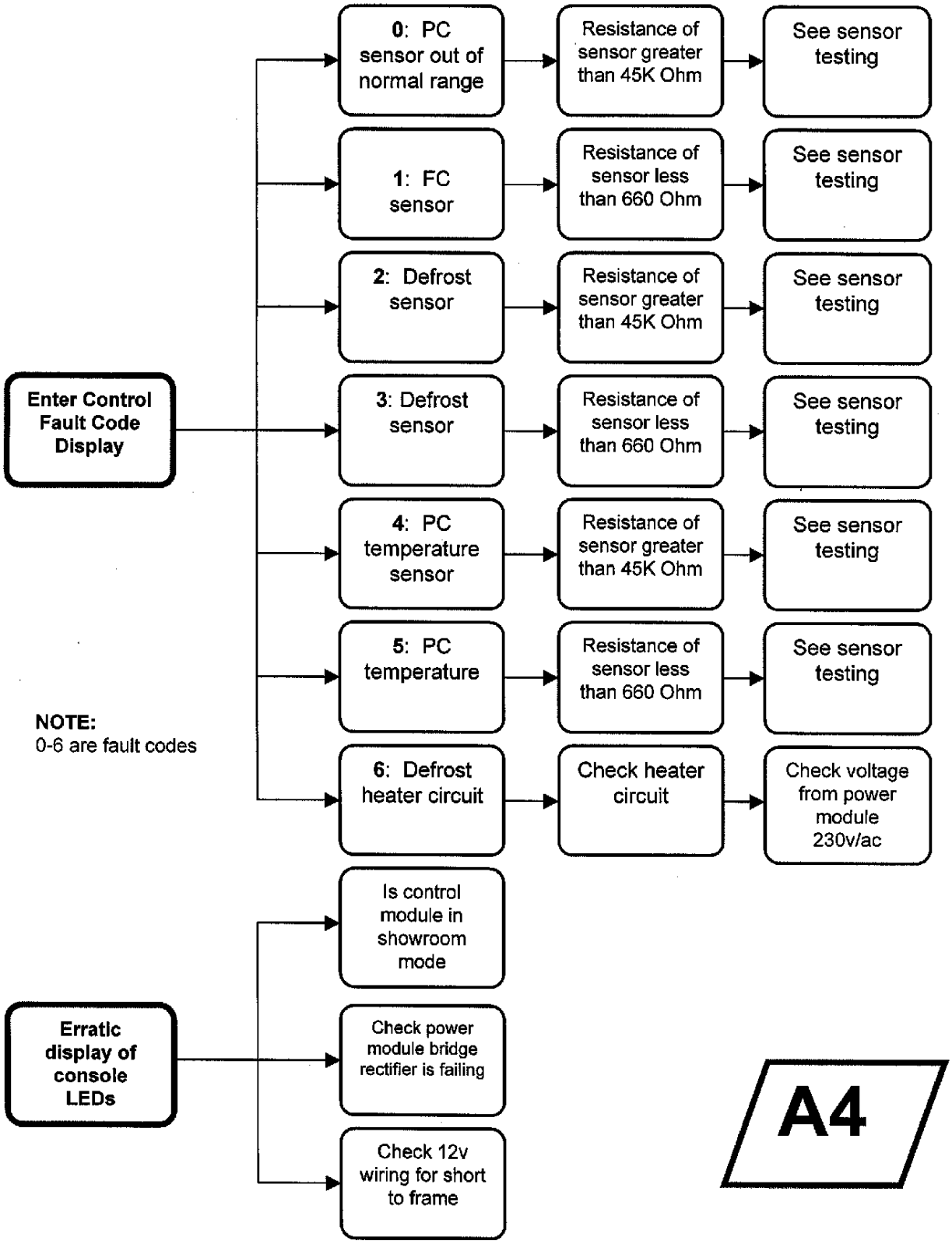
NOTES:

1. Incorrect transportation of cabinets can cause oil slugging. This can give the same symptoms as intermittent and / or permanent blockages, so too can moisture in the system. If these symptoms occur, purge with nitrogen at 827 kPa (120 psi) for 15 minutes or until system is clear. Change the filter and evacuate for at least 2 hours before charging.

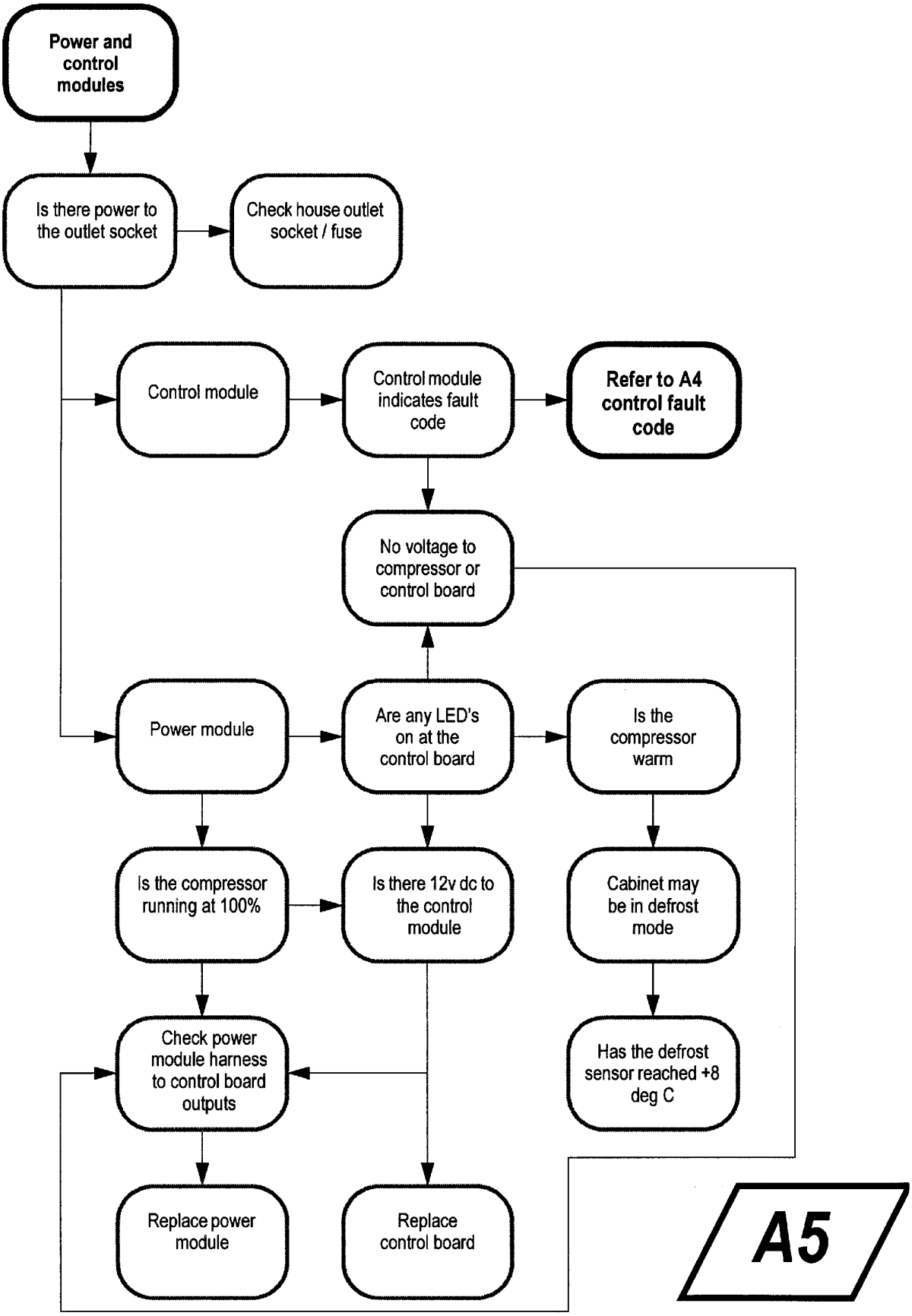
2) To check for an inefficient compressor, pinch off suction line with pinch of pliers. A good compressor should pull at least -30kPa (20 inches of vacuum).

A3

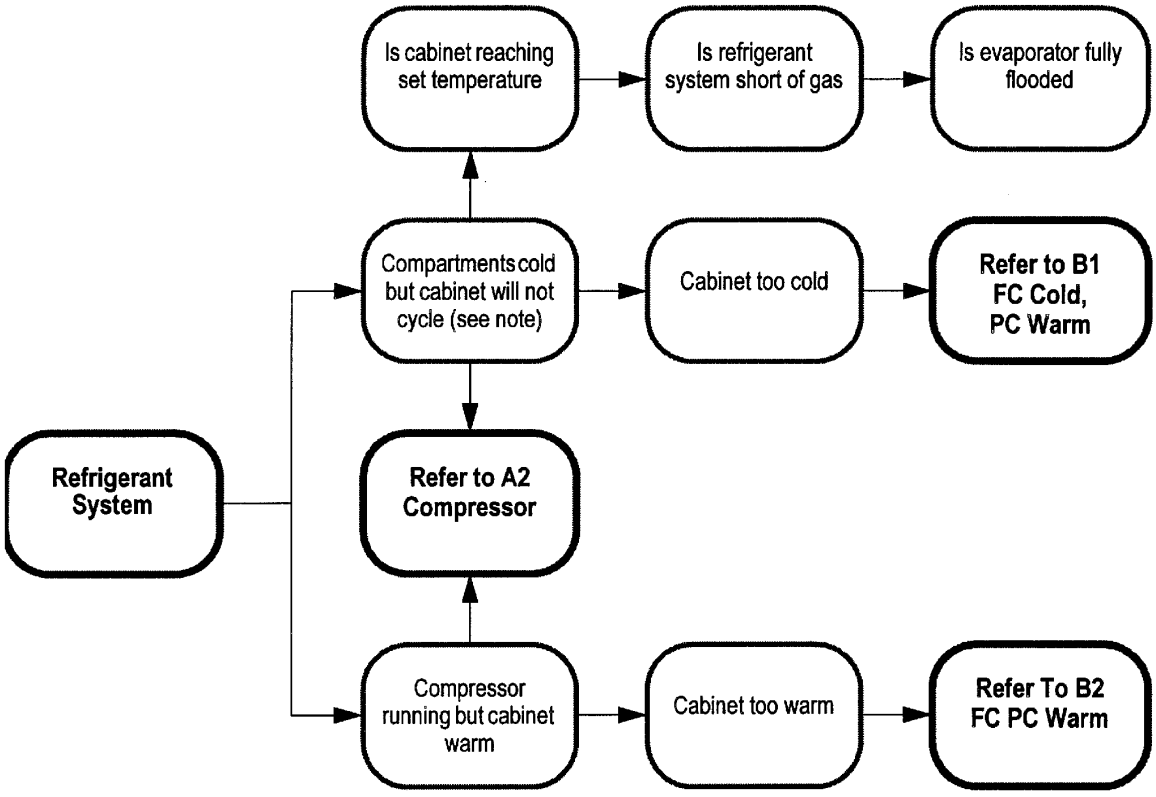
A4 Console Fault Code



A5 No Power To Power And Control Modules



A6 Refrigerant System

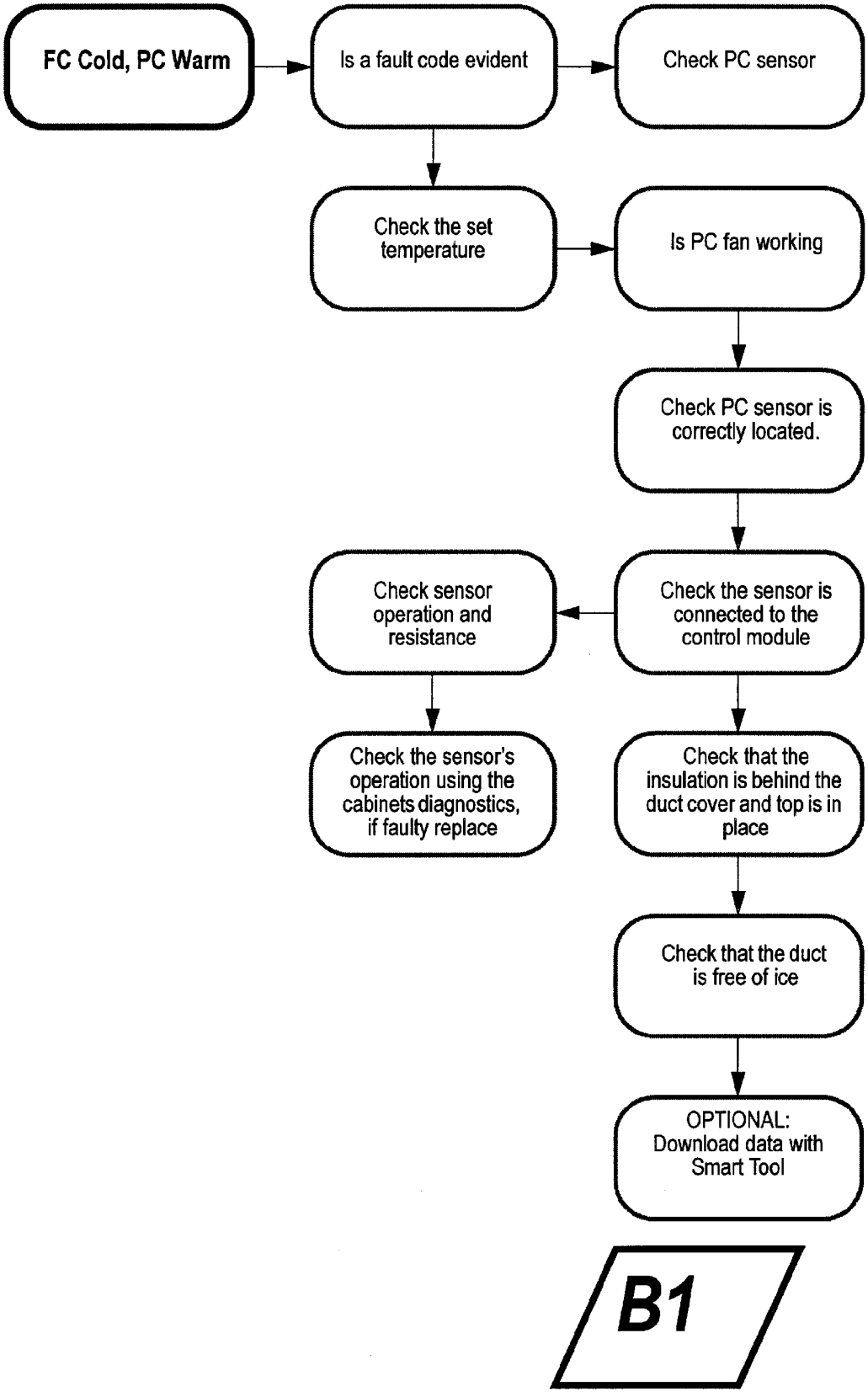


NOTE:
Live frost can only be checked for when the compressor has been running for at least 10 minutes with the door open. Even with a partially flooded evaporator frost may form over the whole evaporator. This may be due to conduction as the result of a long run time. Where the evaporator is not flooded this frost can be easily melted with vigorous rubbing by hand and it will not quickly reform. Where an evaporator is flooded, vigorous rubbing will not be able to easily melt the frost and it will also quickly reform.

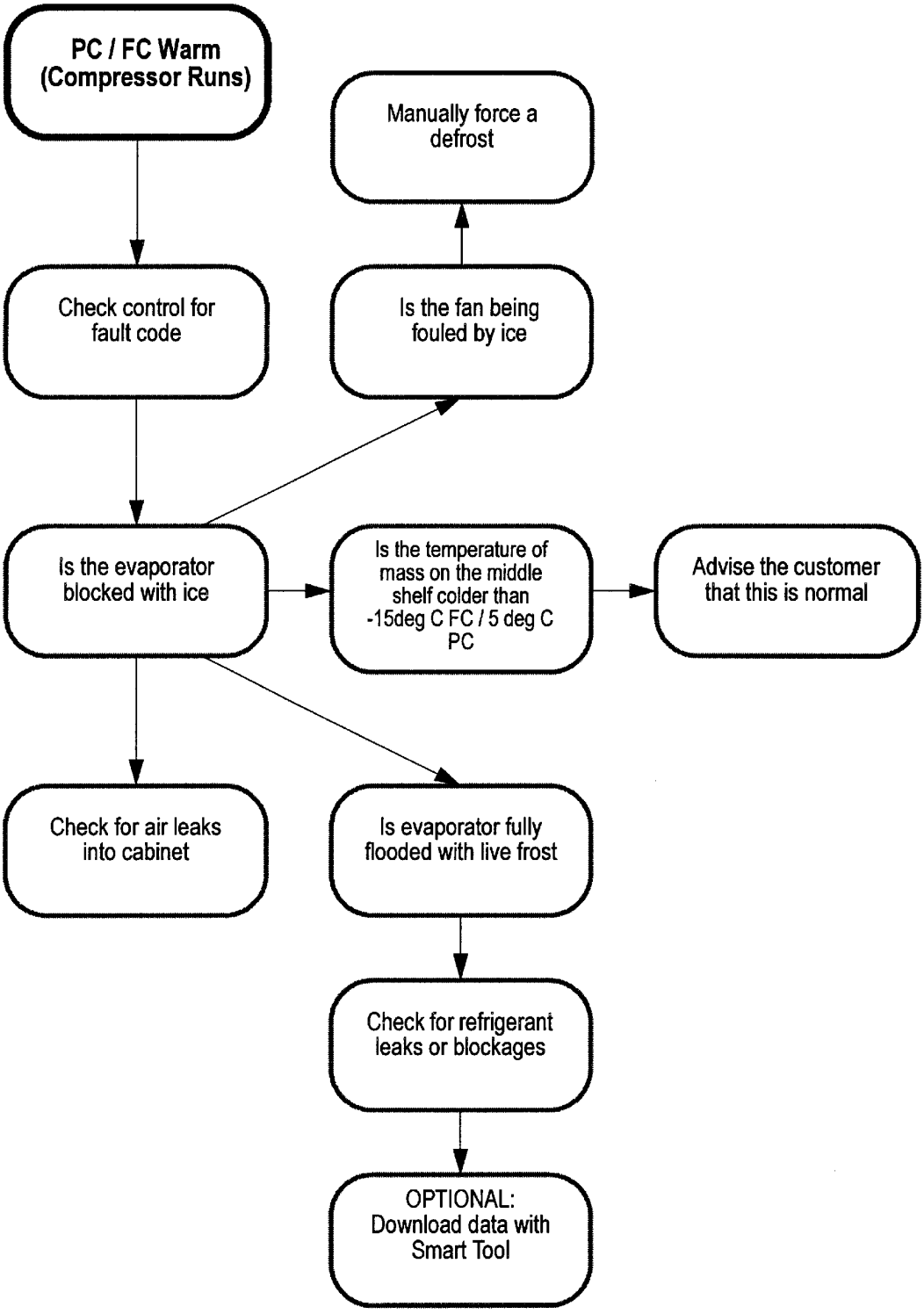
A6

B. Temperature Faults

B1 FC Too Cold, PC Too Warm

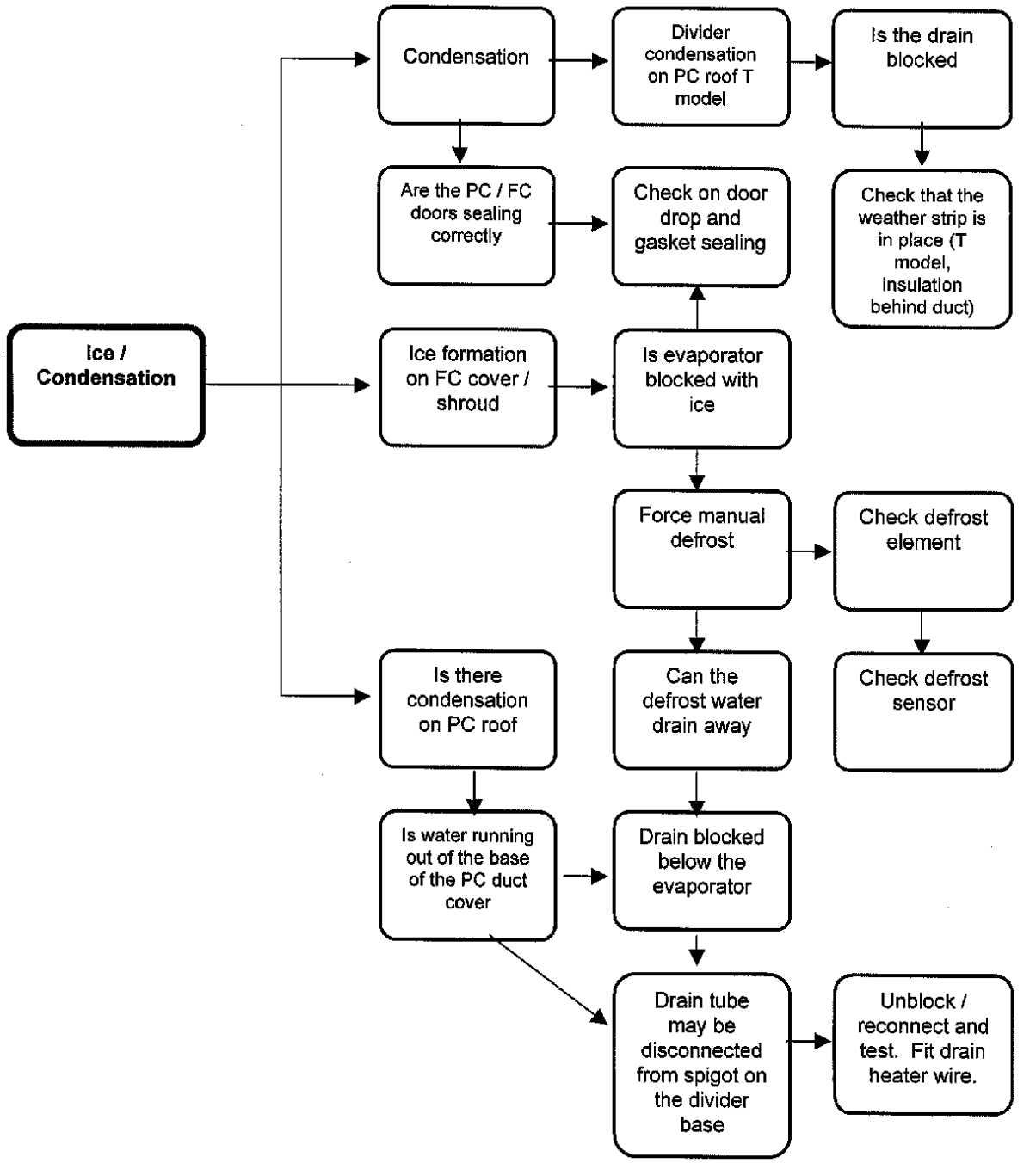


B2 FC / PC Warm



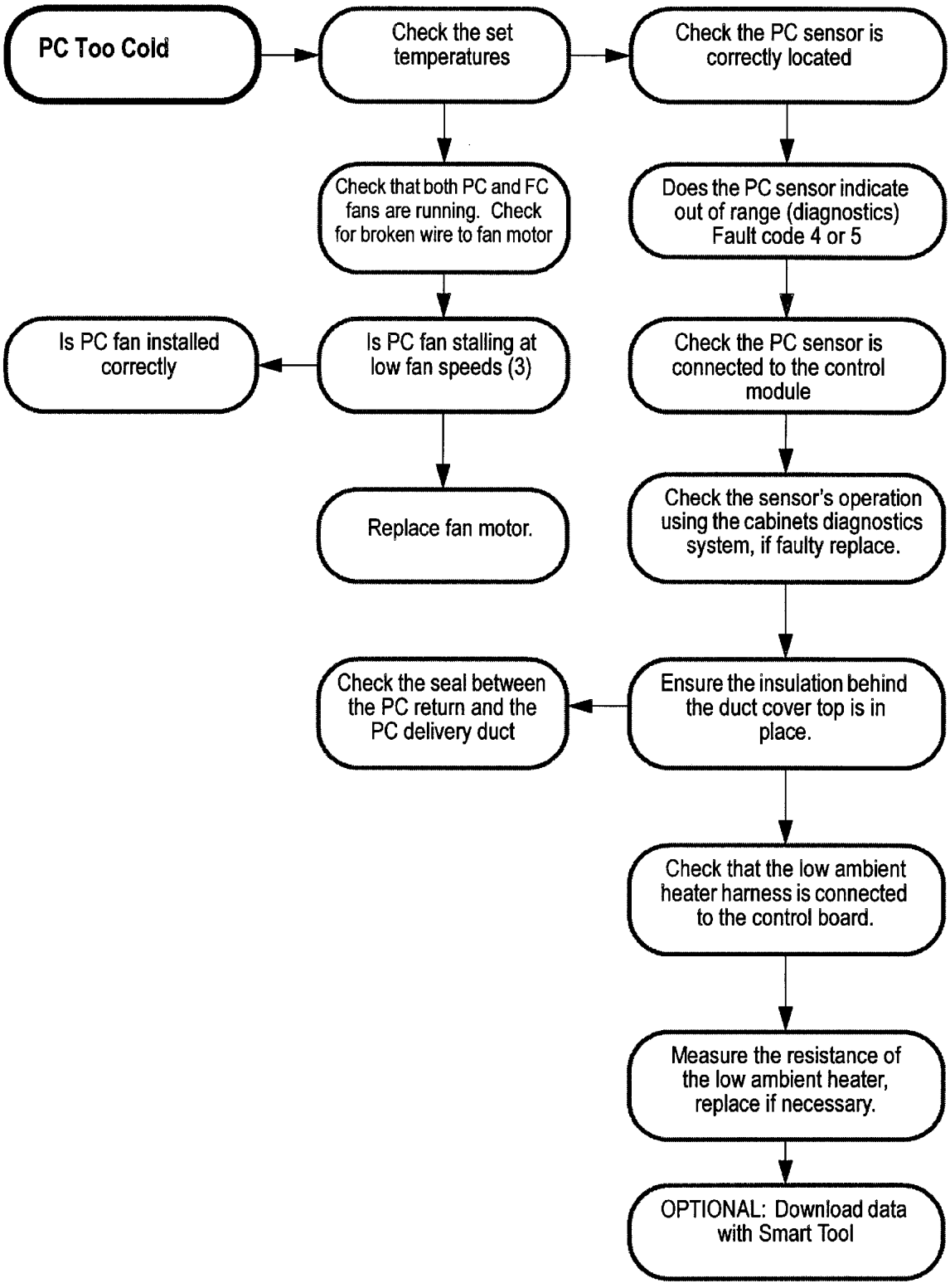
B2

B3 Ice / Condensation Forming



B3

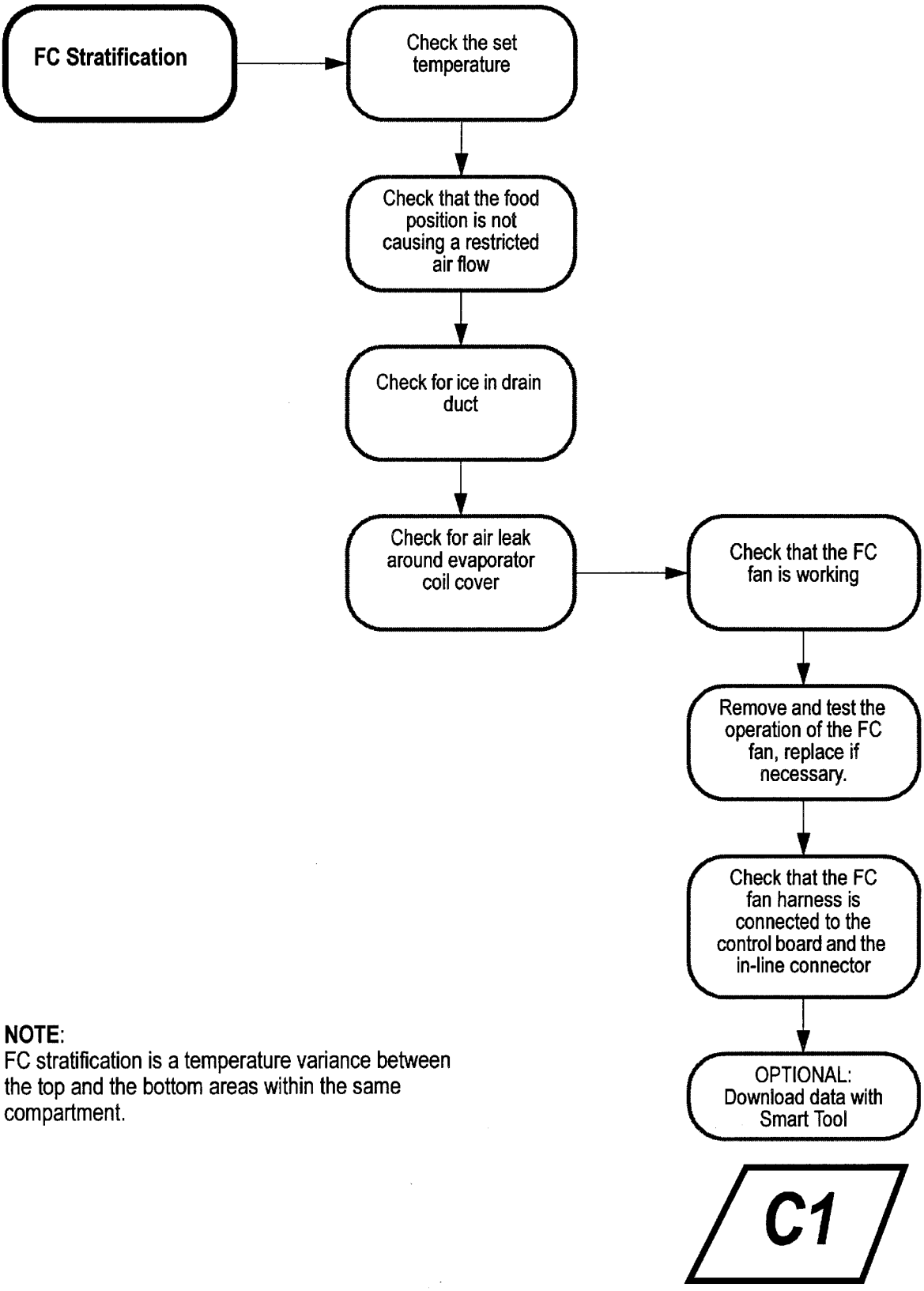
B4 PC Too Cold



B4

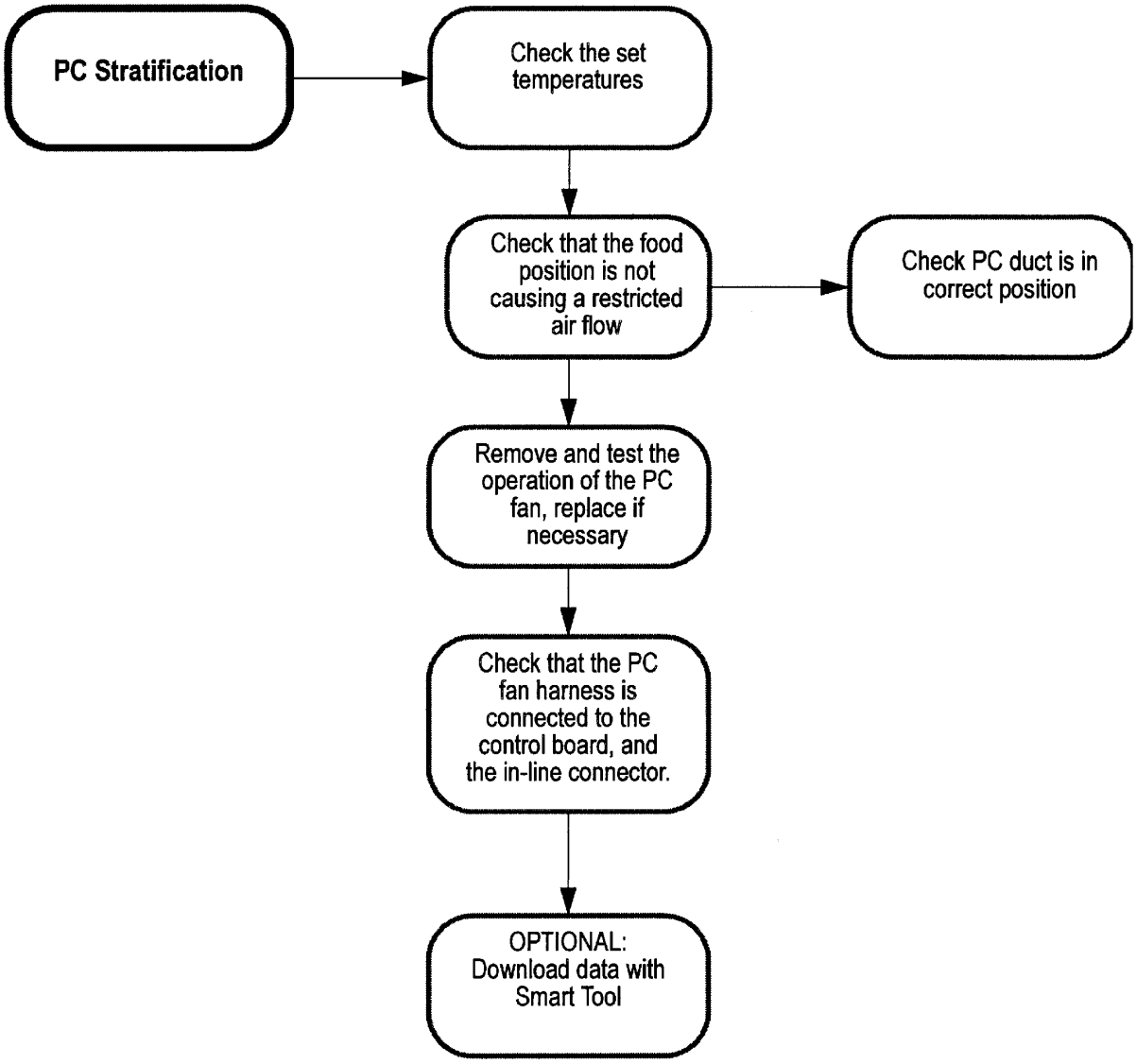
C. Sensor Faults

C1 FC Stratification



NOTE:
FC stratification is a temperature variance between the top and the bottom areas within the same compartment.

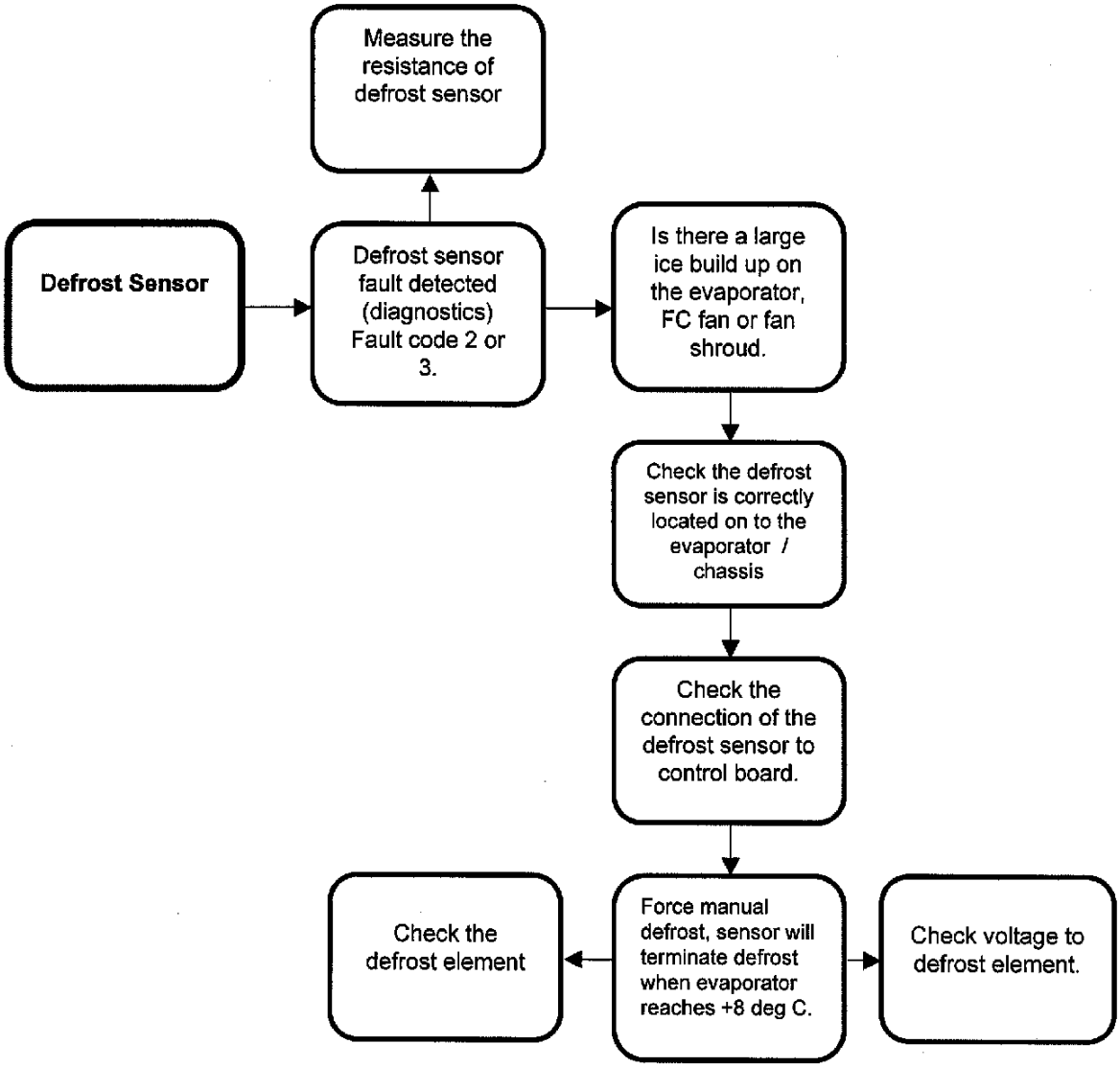
C2 PC Stratification



NOTE:
PC stratification is a temperature variance between the top and the bottom areas within the same compartment. Also refer to the Active Smart Refrigerator - Service Reference for B and T issues.

C2

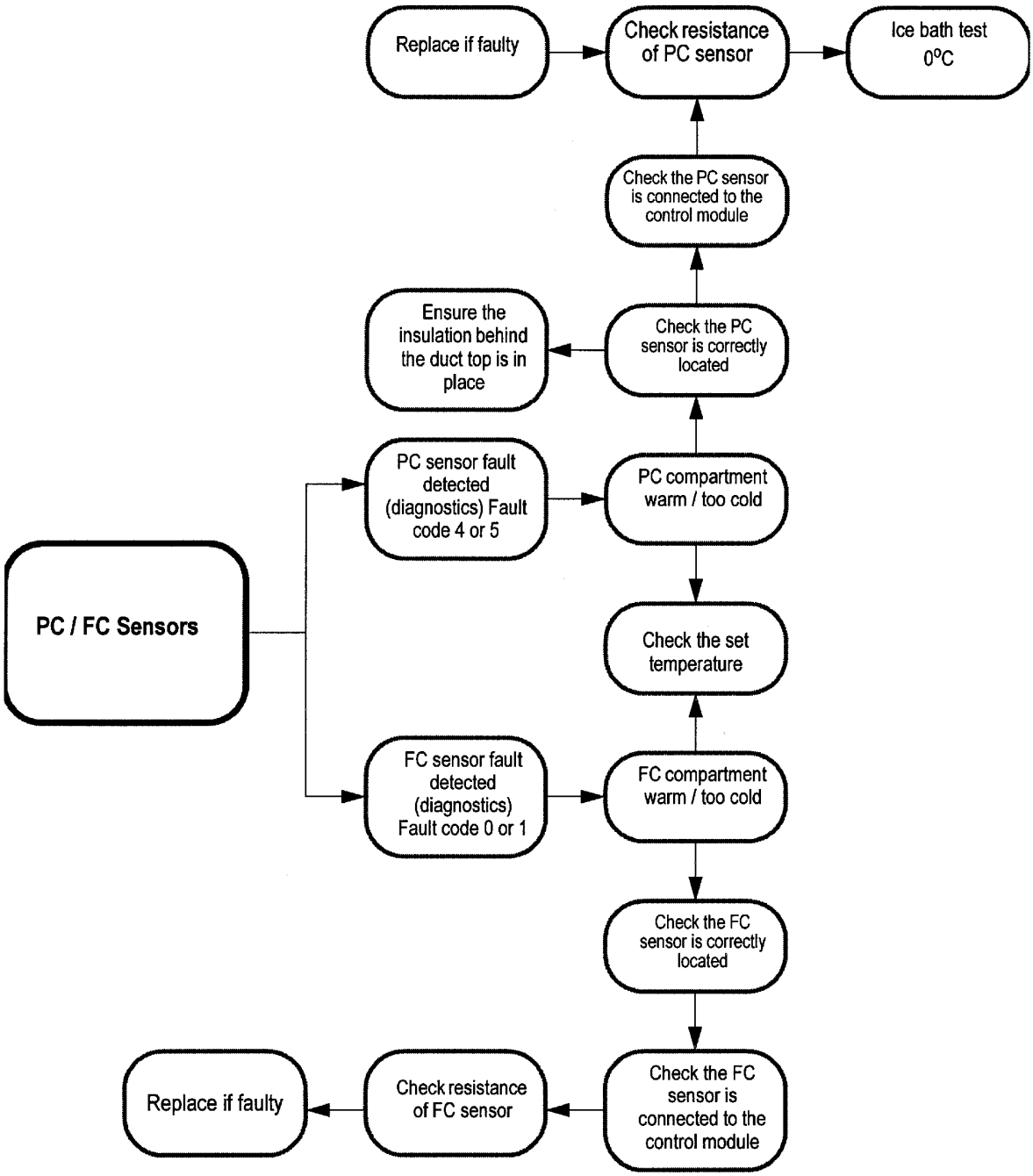
C3 Defrost Sensor



NOTE:
If the sensor is above +8 deg C, place the sensor into the evaporator coil. This will lower the sensor temperature. (The colour of the defrost sensor is black.)

C3

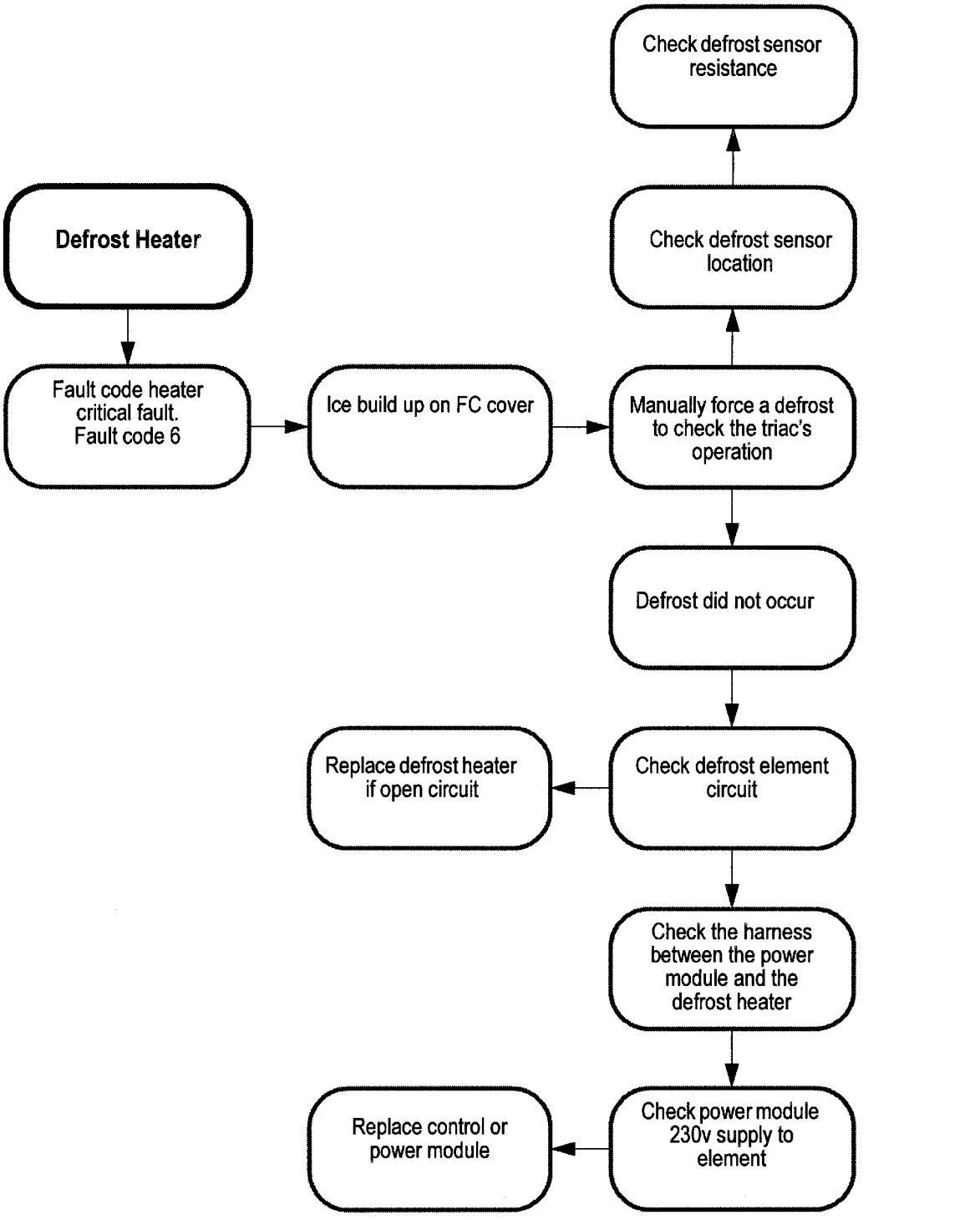
C4 PC Or FC Sensor Fault Code



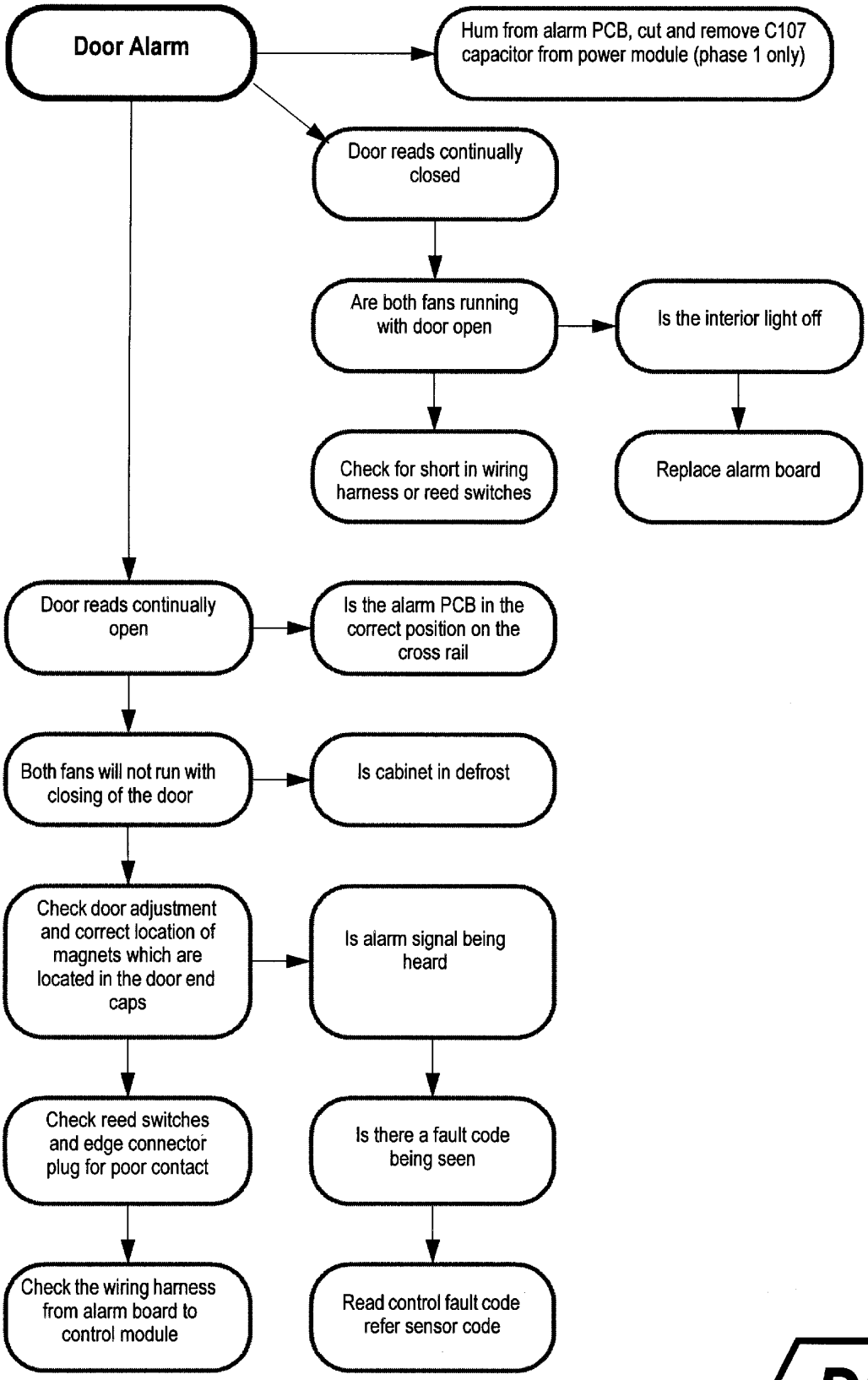
C4

D. Auxiliary Faults

D1 Defrost Heater

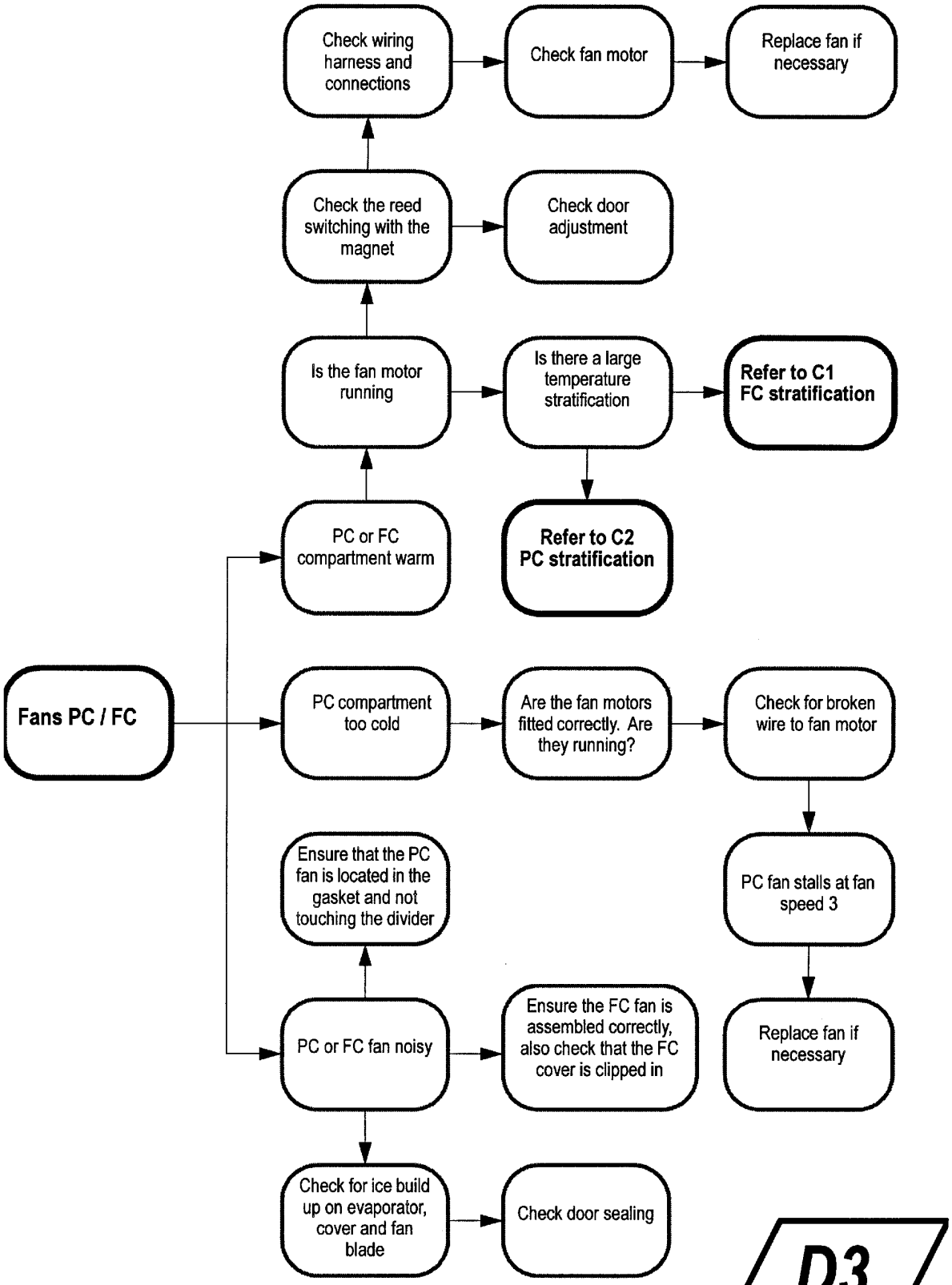


D2 Door Alarm Operation



D2

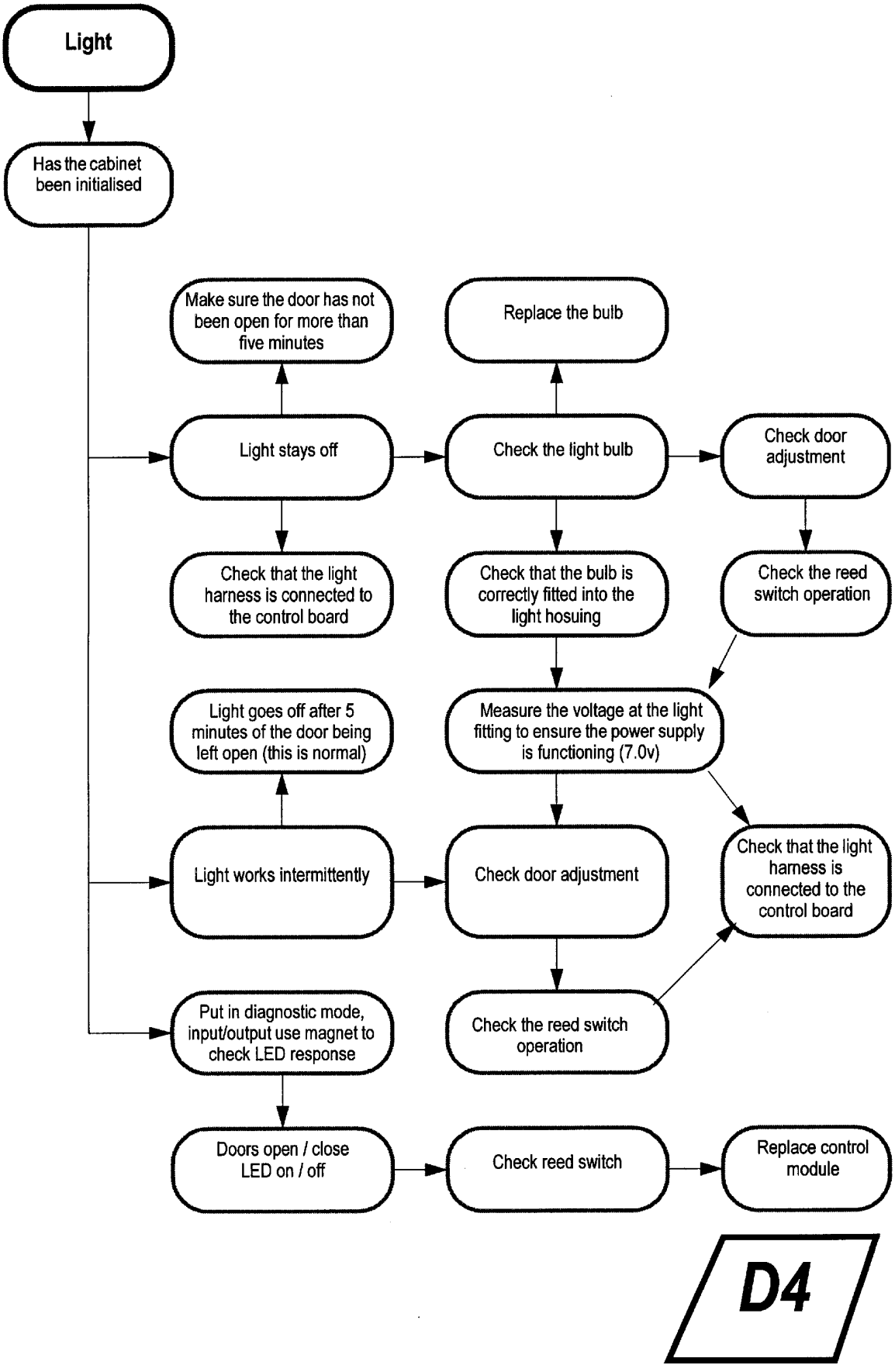
D3 Fans – PC / FC



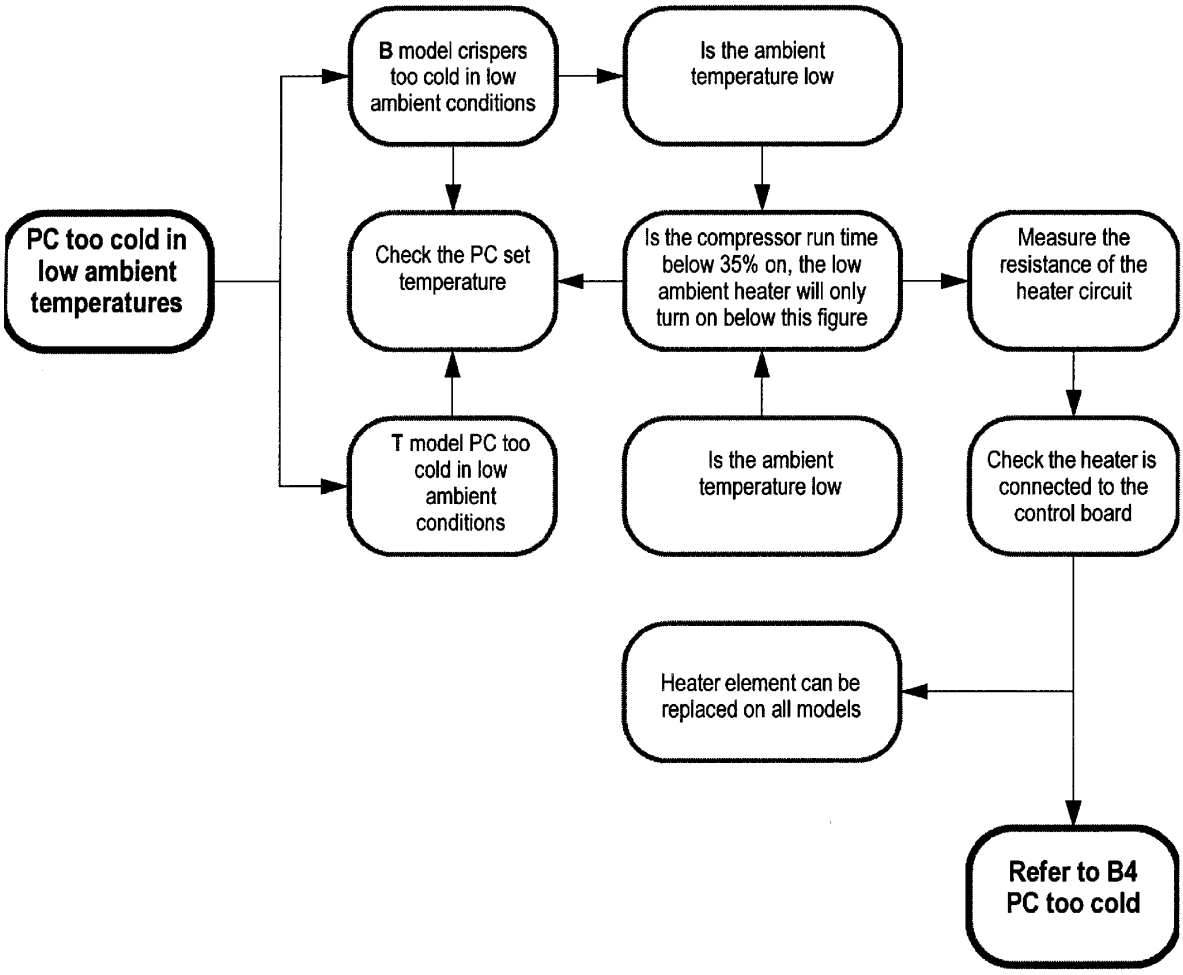
NOTE:
Read in conjunction with Active Smart Refrigerator - Service Reference.

D3

D4 No Light


Light
Has the cabinet been initialised
Make sure the door has not been open for more than five minutes
Replace the bulb
Light stays off
Check the light bulb
Check door adjustment
Check that the light harness is connected to the control board
Check that the bulb is correctly fitted into the light hosuing
Check the reed switch operation
Light goes off after 5 minutes of the door being left open (this is normal)
Measure the voltage at the light fitting to ensure the power supply is functioning (7.0v)
Light works intermittently
Check door adjustment
Check that the light harness is connected to the control board
Put in diagnostic mode, input/output use magnet to check LED response
Check the reed switch operation
Doors open / close LED on / off
Check reed switch
Replace control module
D4

D5 Low Ambient Heater



D5