

WARMCAIR RANGE

Condensing Air Heater

High Efficiency Downflow, Upflow
& Combined Condensing
Warm Air Heaters

TECHNICAL DATA & FAULT FINDING



FM 525200



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& Starley

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WARMCAIR C RANGE

Condensing Air Heater

High Efficiency Downflow, Upflow Condensing Warm Air Heaters.

TECHNICAL DATA & FAULT FINDING

Models Covered

C10D

C16D

C26D

C36D

C46D

C16U

WARMCAIR DOWNFLOW & UPFLOW TECHNICAL DATA

C10D	
WEIGHT	48 kg
GAS	G20
GAS SUPPLY PRESSURE	20 mbar
GAS CATEGORY	I 2 H
COUNTRIES OF INSTALLATION	United Kingdom, Ireland
ELECTRICAL SUPPLY	230 V ~ 50 Hz fused 5 A (150 W)

	MAXIMUM			MINIMUM		
	KW	MJ/h	Btu/h	KW	MJ/h	Btu/h
INPUT (GROSS)	10.0	36	34,120	5.0	18.0	17,060
OUTPUT	8.8	31.68	30,026	4.4	15.84	15,013
GAS RATE CV 1037Btu/FT ³	0.93 m ³ /h (32.9 ft ³ /h)			0.466 m ³ /h (16.45 ft ³ /h)		
BURNER % CO ²	8 ± 1			8 ± 1		

C16D	
WEIGHT	62 kg
GAS	G20
GAS SUPPLY PRESSURE	20 mbar
GAS CATEGORY	I 2 H
COUNTRIES OF INSTALLATION	United Kingdom, Ireland
ELECTRICAL SUPPLY	230 V ~ 50 Hz fused 5A (215 W)

	MAXIMUM			MINIMUM		
	kW	MJ/h	Btu/h	kW	MJ/h	Btu/h
INPUT (GROSS)	16.0	57.6	54,592	5.0	18.0	17,060
OUTPUT	14.08	31.68	48,041	4.4	15.84	15,013
GAS RATE CV 1037Btu/FT ³	1.94 m ³ /h (52.64 ft ³ /h)			0.466 m ³ /h (16.45 ft ³ /h)		
BURNER % CO ²	9 ± 1			8 ± 1		

C26D	
WEIGHT	68 kg
GAS	G20
GAS SUPPLY PRESSURE	20 mbar
GAS CATEGORY	I 2 H
COUNTRIES OF INSTALLATION	United Kingdom, Ireland
ELECTRICAL SUPPLY	250 V ~ 50 Hz fused 5 A (530 W)

	MAXIMUM			MINIMUM		
	kW	MJ/h	Btu/h	kW	MJ/h	Btu/h
INPUT (GROSS)	26	93.6	88,712	8	28.8	27,296
OUTPUT	22.88	82.37	78,066	7.04	25.34	24,020
GAS RATE CV 1037 Btu/FT ³	2.42 m ³ /h (85.54 ft ³ /h)			0.74 m ³ /h (26.32 ft ³ /h)		
BURNER % CO ²	9 ± 1			8 ± 1		

WARMCAIR DOWNFLOW & UPFLOW TECHNICAL DATA

C36D						
WEIGHT	96 kg					
GAS	G20					
GAS SUPPLY PRESSURE	20 mbar					
GAS CATEGORY	I 2 H					
COUNTRIES OF INSTALLATION	United Kingdom, Ireland					
ELECTRICAL SUPPLY	250 V ~ 50 Hz fused 5 A (530 W)					
	MAXIMUM			MINIMUM		
	KW	MJ/h	Btu/h	KW	MJ/h	Btu/h
INPUT (GROSS)	36	129.6	122,832	11	39.6	37,532
OUTPUT	31.86	114.05	108,092	9.68	34.85	33,028
GAS RATE CV 1037Btu/FT ³	3.35 m ³ /h (118.45 ft ³ /h)			1.025 m ³ /h (36.2 ft ³ /h)		
BURNER % CO ²	9 ± 1			9 ± 1		

C46D						
WEIGHT	96 kg					
GAS	G20					
GAS SUPPLY PRESSURE	20 mbar					
GAS CATEGORY	I 2 H					
COUNTRIES OF INSTALLATION	United Kingdom, Ireland					
ELECTRICAL SUPPLY	250 V ~ 50 Hz fused 5 A (670 W)					
	MAXIMUM			MINIMUM		
	kW	MJ/h	Btu/h	kW	MJ/h	Btu/h
INPUT (GROSS)	46	165.6	156,952	15	54	51,180
OUTPUT	40.48	145.73	138,118	13.2	47.52	45,038
GAS RATE CV 1037 Btu/FT ³	4.29 m ³ /h (151.34 ft ³ /h)			1.4 m ³ /h (49.35 ft ³ /h)		
BURNER % CO ²	9 ± 1			9 ± 1		

C16U						
WEIGHT	65 kg					
GAS	G20					
GAS SUPPLY PRESSURE	20 mbar					
GAS CATEGORY	I 2 H					
COUNTRIES OF INSTALLATION	United Kingdom, Ireland					
ELECTRICAL SUPPLY	230 V ~ 50 Hz fused 5 A (215 W)					
	MAXIMUM			MINIMUM		
	KW	MJ/h	Btu/h	KW	MJ/h	Btu/h
INPUT (GROSS)	16.0	57.6	54,592	5.0	18.0	17,060
OUTPUT	14.08	31.68	48,041	4.4	15.84	15,013
GAS RATE CV 1037Btu/FT ³	1.94 m ³ /h (52.64 ft ³ /h)			0.466 m ³ /h (16.45 ft ³ /h)		
BURNER % CO ²	9 ± 1			8 ± 1		

WARMCAIR DOWNFLOW & UPFLOW TECHNICAL DATA

C26U						
WEIGHT	68 kg					
GAS	G20					
GAS SUPPLY PRESSURE	20 mbar					
GAS CATEGORY	I 2 H					
COUNTRIES OF INSTALLATION	United Kingdom, Ireland					
ELECTRICAL SUPPLY	230 V ~ 50 Hz fused 5 A (530 W)					
	MAXIMUM			MINIMUM		
	KW	MJ/h	Btu/h	KW	MJ/h	Btu/h
INPUT (GROSS)	26.0	93.6	88,712	8.0	28.8	27,296
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BURNER % CO ²	9 ± 1			8 ± 1		

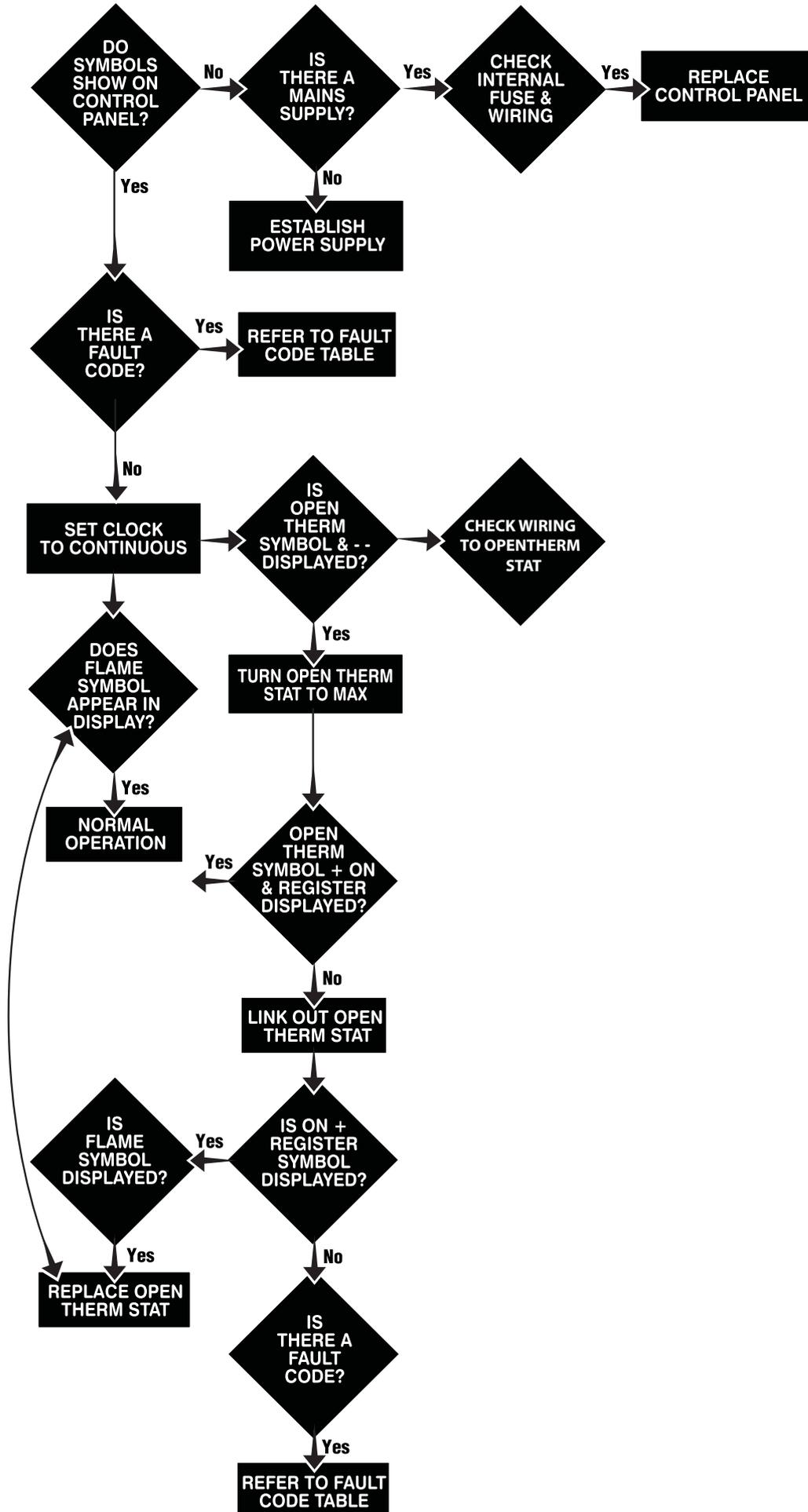
C36U						
WEIGHT	96 kg					
GAS	G20					
GAS SUPPLY PRESSURE	20 mbar					
GAS CATEGORY	I 2 H					
COUNTRIES OF INSTALLATION	United Kingdom, Ireland					
ELECTRICAL SUPPLY	250 V ~ 50 Hz fused 5 A (530 W)					
	MAXIMUM			MINIMUM		
	KW	MJ/h	Btu/h	KW	MJ/h	Btu/h
INPUT (GROSS)	36	129.6	122,832	11	39.6	37,532
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BURNER % CO ²	9 ± 1			9 ± 1		

C46U						
WEIGHT	96 kg					
GAS	G20					
GAS SUPPLY PRESSURE	20 mbar					
GAS CATEGORY	I 2 H					
COUNTRIES OF INSTALLATION	United Kingdom, Ireland					
ELECTRICAL SUPPLY	250 V ~ 50 Hz fused 5 A (670 W)					
	MAXIMUM			MINIMUM		
	kW	MJ/h	Btu/h	kW	MJ/h	Btu/h
INPUT (GROSS)	46	165.6	156,952	15	54	51,180
OUTPUT	40.48	145.73	1138,118	13.2	47.52	45,038
GAS RATE CV 1037Btu/FT ³	4.29 m ³ /h (151.34 ft ³ /h)			1.4 m ³ /h (49.35 ft ³ /h)		
BURNER % CO ²	9 ± 1			9 ± 1		

WARMCAIR DOWNFLOW & UPFLOW FAULT FINDING

TABLE 4		ERROR CODES	
CODE	SYMPTOM	POSSIBLE CAUSE	ACTION
N/A	Heater will not run	No call for heat to heater control board	Check all external controls (if fitted)
			Check setting on time clock
			Check setting of heater controls
1	Flame lockout after several attempts	Flame not detected	Check gas supply and gas cock
			Check ignition electrode condition & spark gap (4mm)
			If burner lights, check flame sensor and wiring to control board
			Check operation of gas valve
2	False flame lockout	False flame detected	Check wiring on ESYS
3 or --	Condense pump failure	Power to the pump	Check for any blockages or restrictions
5	No tacho from fan	Fan not running or wiring fault	Check that the combustion fan runs. If yet then Esys, if no then fan.
			Check wiring between ESYS and fan
7	Flue gas protection	High flue gas temperature	Check airflow and fan operation
8	Flame circuit error	Flame sensing lead shorted to earth	Check flame detection lead between sensing probe and ignition control board
9	Valve driver circuit error	Gas valve not detected	Check that ESYS is correctly fitted on gas valve
			Replace ignition control board or gas valve
13	Remote reset lockout	Exceeded 5 remote resets per hour	Reset it by power off/on
21	ADC error		Change ESYS
25	CRC error	Different software versions	Change ESYS
26	Flame lost signal lost 5 times in 4 minutes	Flame sensing error. Failing gas pressures. Fan fault. Flue blockage.	Check flame detection lead between sensor and ignition control board
			Check the gas supply, does pressure fall when burner fires?
			Check heat exchanger condition. Remove burner & air circulation fan. Introduce light to heat exchanger via burner chamber, inspect heat exchanger through fan aperture.
			Check that flue system is not blocked
BLOCKING CODES			
30	Duct air temperature sensor short circuit	Temperature sensor shorted to earth or failed	Check wiring and connections for shorting to earth
			Check sensor resistance (Fig:46)
31	Duct air temperature sensor open circuit	Temperature sensor not connected or failed	Check wiring connections
			Check sensor continuity
34	Low mains supply voltage	Electrical supply fault to property	Check incoming mains supply
		Faulty wiring to appliance	Check wiring to appliance
43	Return air temperature short circuit	Temperature sensor shorted to	Check wiring connections not shorting to earth
			Check sensor resistance (Fig:46)
44	Return air temperature sensor open circuit	Temperature sensor not connected or failed	Check wiring connections
			Check sensor continuity
45	Flue gas temperature sensor short circuit	Short circuit in wiring between sensor and control board	Check wiring to sensor
			Check electrical resistance of the sensor (Fig:46)
46	Flue gas temperature sensor open circuit	Temperature sensor not connected or failed	Check wiring connections
			Check sensor continuity
57	Restricted airflow	Blocked filter and return air filter/Duct	Check blockage from filter and return air filter/ducts
99	Communication MMI-ESYS lost	Connection between MMI & ESYS incorrectly made	Check wiring and connections
			Check limit switch continuity.

FAULT FINDING FLOW CHART



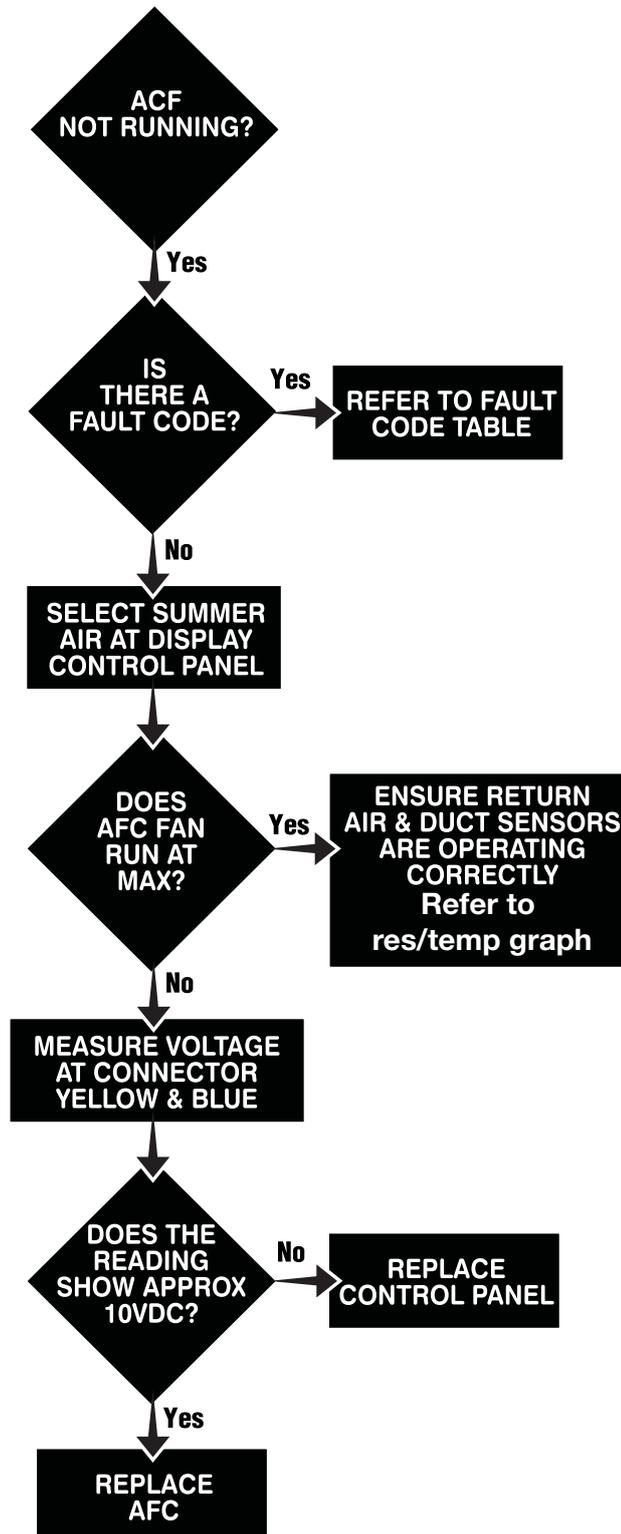
DEFECT DIAGNOSIS FOR THE CIRCULATION AIR FAN

21.1 CIRCULATION AIR FAN

21.1.1 Ensure Air Circulation Fan is running at maximum.

21.1.2 A voltage should be measured and blue (-) and yellow (+). Voltage approx. 10 VDC.

21.1.3 If voltage is present and fan is not running at maximum. Replace ACF.



FUNCTIONAL WIRING DIAGRAMS

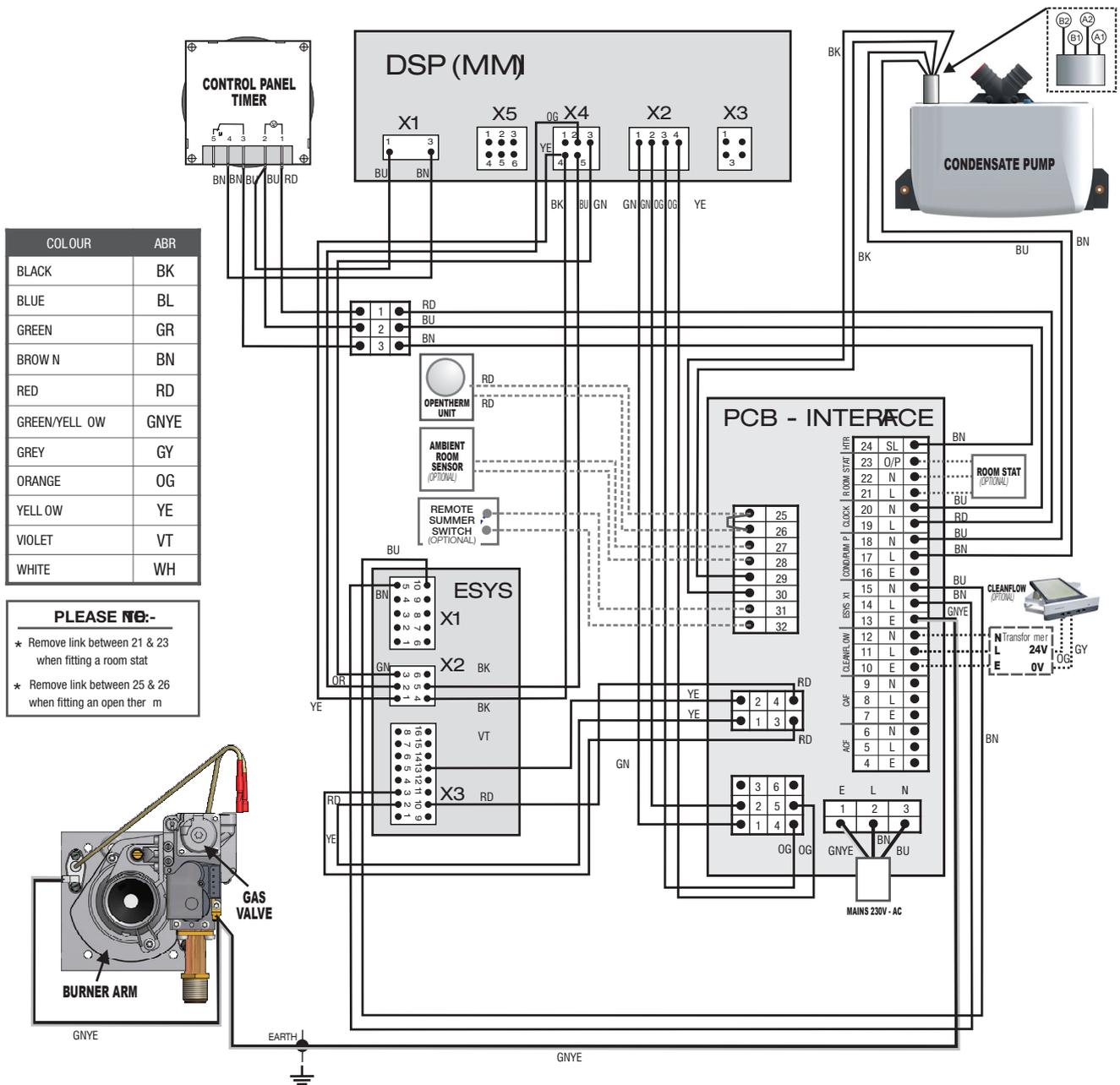


FIGURE 32. WIRING DIAGRAM No. 1 WIRING ROUTING TABLE

FROM UNIT	WIRE COLOUR	TERMINAL	L/N/E	TO UNIT	TERMINAL	
TIMER	red	1	L	PCB INTERFACE	19	
	blue	2	N	PCB INTERFACE	20	
	blue	2		DSP (MMI)	X1 - 1	
	brown	3		PCB INTERFACE	24	
	brown	4		DSP (MMI)	X1 - 3	
DSP (MMI)	green	X2 - 1		PCB INTERFACE	X2 - 1	
	green	X2 - 2		PCB INTERFACE	X2 - 2	
	orange	X2 - 3		PCB INTERFACE	X2 - 4	
	orange	X2 - 4		PCB INTERFACE	X2 - 5	
GAS VALVE	green/yellow	1	E	PCB INTERFACE	13	
	green/yellow	1	E	ELECTRODE		
CLEANFLOW	orange	Transformer	E	PCB INTERFACE	10	
	grey		L	PCB INTERFACE	11	
	-		N	PCB INTERFACE	9	
ESYS	brown	X1 - 5		PCB INTERFACE	14	
	blue	X1 - 10		PCB INTERFACE	15	
	yellow	X2 - 1		DSP (MMI)	X4 - 4	
	orange	X2 - 2		DSP (MMI)	X4 - 2	
	green	X2 - 3		DSP (MMI)	X4 - 3	
	black	X2 - 4		DSP (MMI)	X4 - 4	
	blue	X2 - 5		DSP (MMI)	X4 - 5	
	yellow	X3 - 2		PCB INTERFACE	X3 - 1	
	red	X3 - 3		PCB INTERFACE	X3 - 3	
	red	X3 - 10		PCB INTERFACE	X3 - 4	
	yellow	X3 - 13		PCB INTERFACE	X3 - 2	
	CONDENSATE PUMP	black	A1		PCB INTERFACE	30
		black	A2		PCB INTERFACE	29
blue		B1	N	PCB INTERFACE	18	
brown		B2	L	PCB INTERFACE	17	

FUNCTIONAL WIRING DIAGRAMS

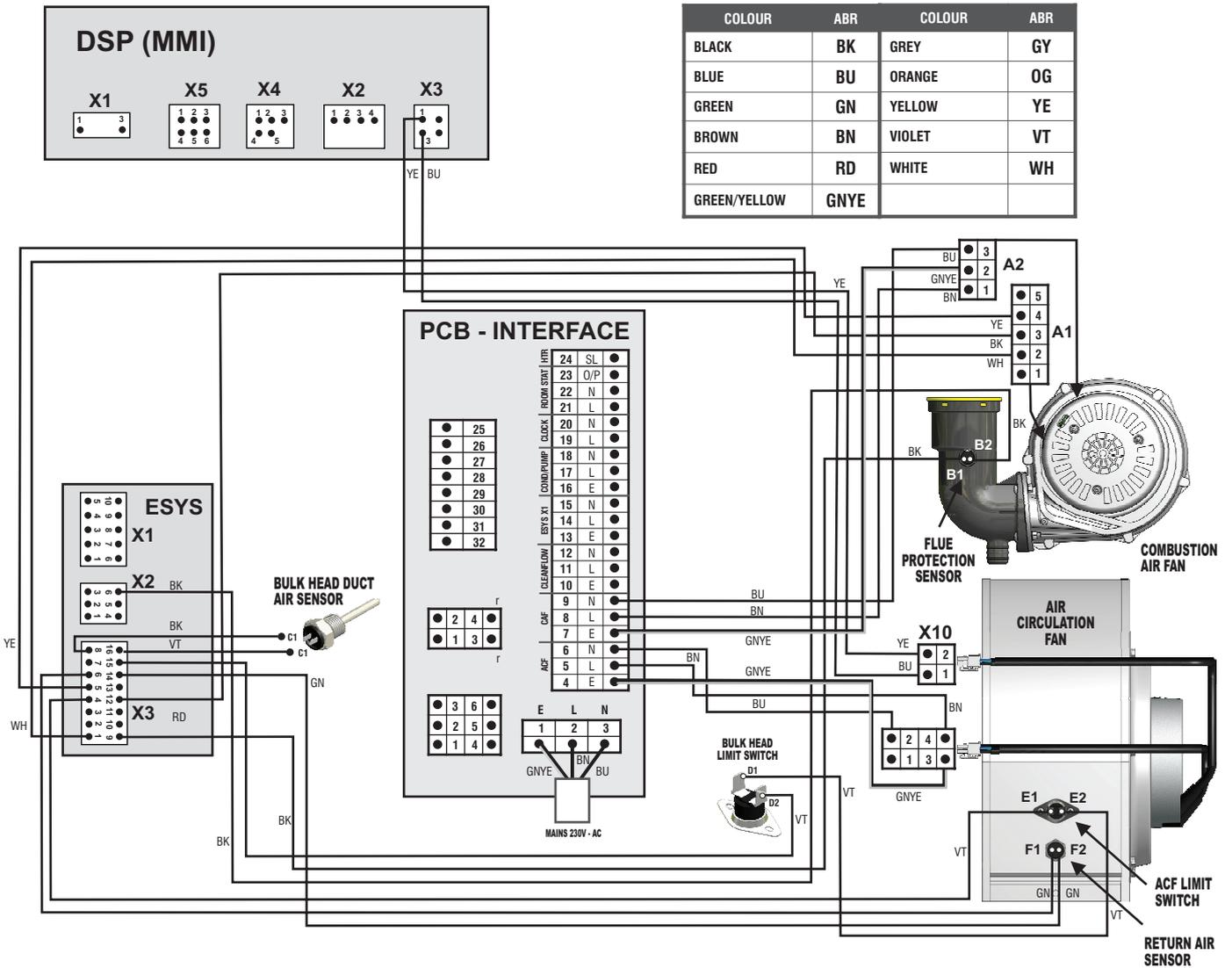
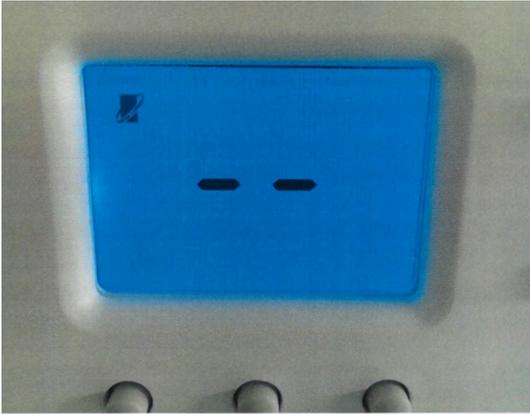


FIGURE 33. WIRING DIAGRAM No. 2 WIRING ROUTING TABLE

FROM UNIT	WIRE COLOUR	TERMINAL	L/N/E	TO UNIT	TERMINAL
COMBUSTION AIR FAN (CAF)	white	A1 - 2		ESYS	X3 - 1
	black	A1 - 3		ESYS	x3 - 12
	yellow	A1 - 4		ESYS	X3 - 5
	brown	A2 - 1	L	PCB INTERFACE	8
	green/yellow	A2 - 2	N	PCB INTERFACE	7
	blue	A1 - 3	E	PCB INTERFACE	9
CAF FLUE PROTECTION SENSOR	black	B1		ESYS	X3 - 9
	black	B2		ESYS	X2 - 6
BULKHEAD LIMIT SWITCH	purple	D1		ACF LIMIT SWITCH	E2
	purple	D2		ESYS	15
BULKHEAD DUCT AIR SENSOR	orange	C1		ESYS	X3 - 8
	orange	C2		ESYS	X3 - 16
AIR CIRC FAN (ACF)	blue	X9 - 2	N	PCB INTERFACE	6
	green/yellow	X9 - 3	E	PCB INTERFACE	4
	brown	X9 - 4	L	PCB INTERFACE	5
	black	X10 - 1		DSP (MMI)	X3 - 3
	yellow	X10 - 2		DSP (MMI)	X3 - 1
ACF LIMIT SWITCH	purple	E1		ESYS	X3 - 4
	purple	E2		BULKHEAD LIMIT SWITCH	D1
ACF RETURN AIR SENSOR	green	F1		ESYS	X3 - 6
	green	F2		ESYS	X3 - 14

CONDENSE PUMP RE-WIRE

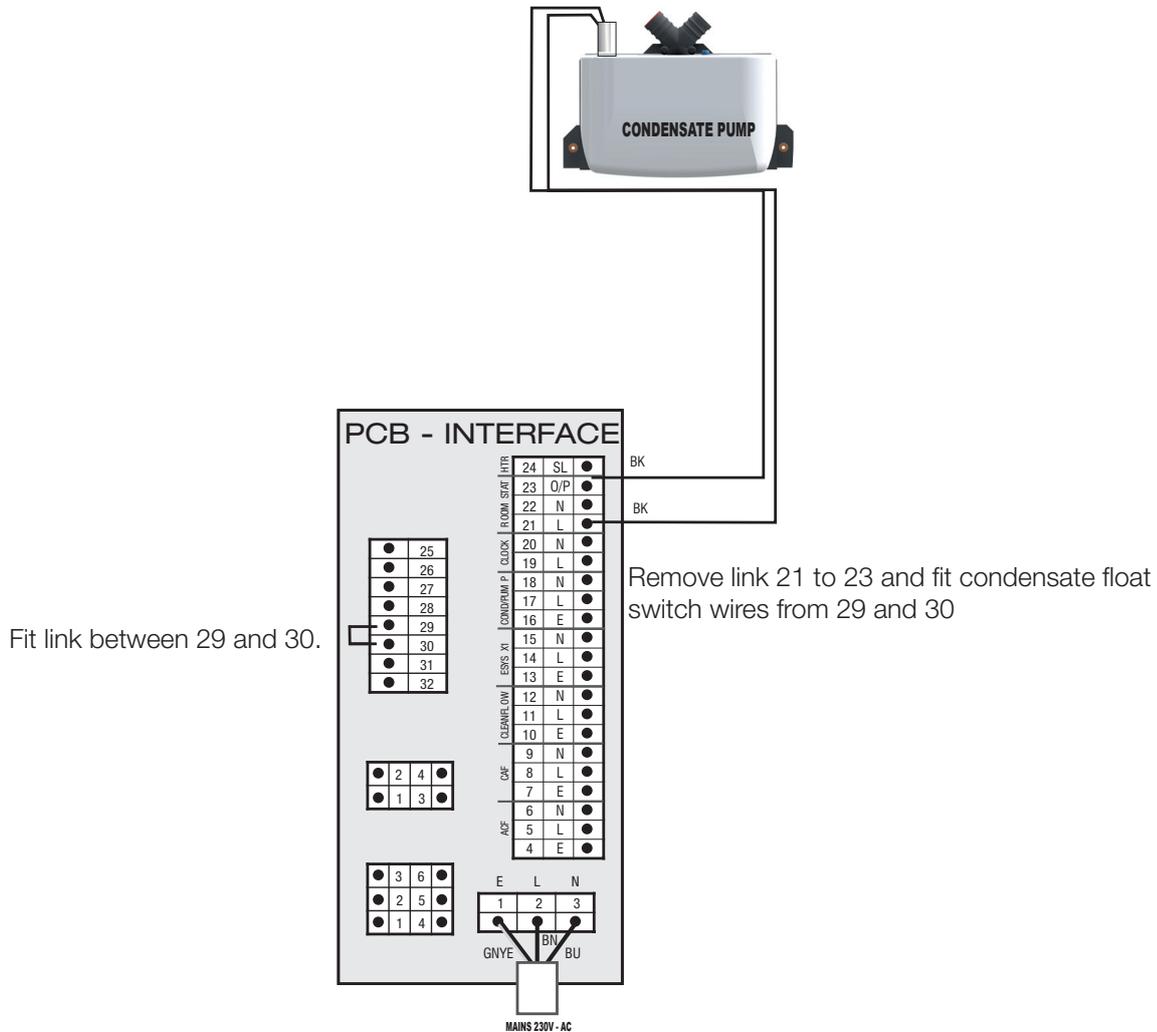


The wiring of this unit has been modified as per the updated wiring diagram fixed to the door. The condensate float switch wiring has been moved from the PCB interface terminals 29 and 30 to terminals 21 and 23.

Condensate pump HI limit error will no longer be shown on E3 but with 2 horizontal lines when the clock is in the 'On' position

NOTE:

The 2 horizontal lines are displayed continually while the clock is off and do not represent an error.



CIRCUIT DIAGRAM FOR CONDENSING AIR HEATERS

CIRCUIT DIAGRAM FOR CONDENSING AIR HEATERS

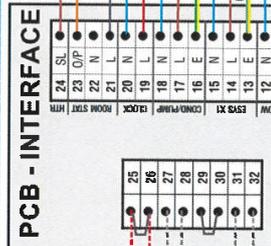
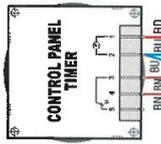
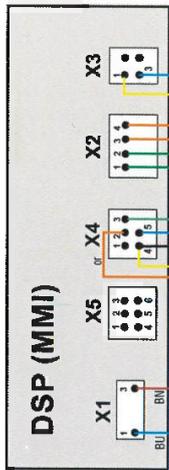
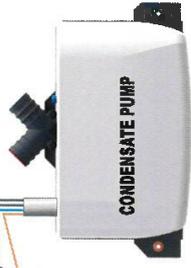
COLOUR	ABR
BLACK	BK
BLUE	BU
GREEN	GN
BROWN	BN
RED	RD
GREEN/YELLOW	GNYE
GREY	GY
ORANGE	OG
YELLOW	YE
VIOLET	VT
WHITE	WH

For use with models
C36D/U-C46D/U only

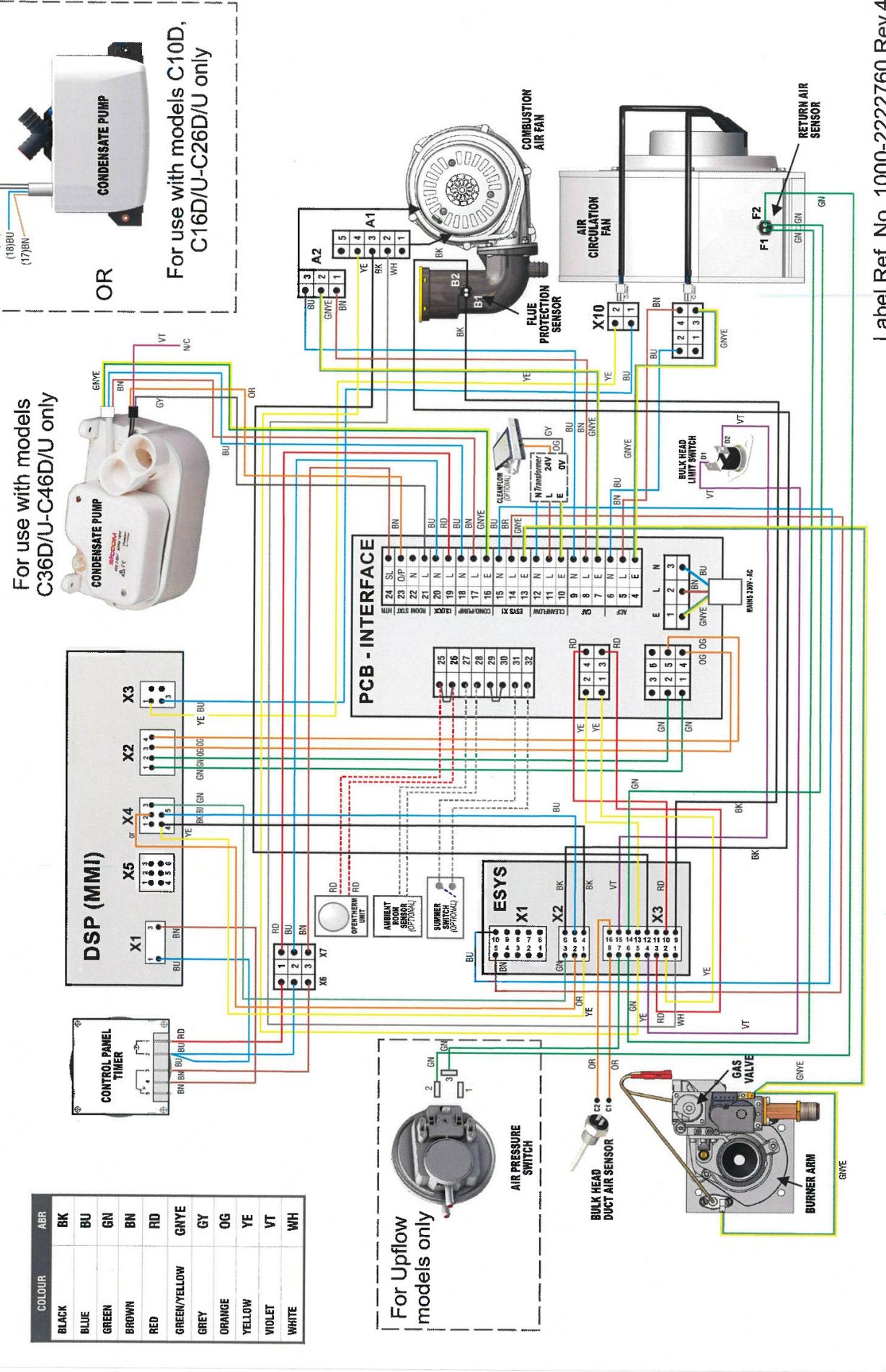
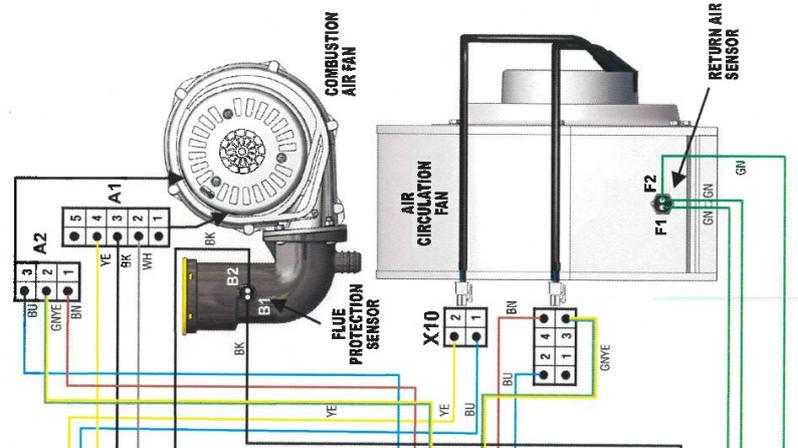
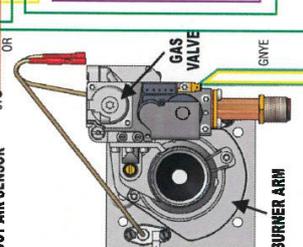


OR

For use with models C10D,
C16D/U-C26D/U only



For upflow
models only



Label Ref. No. 1000-2222760 Rev.4

WARMCAIR DW RANGE

Condensing Air Heater

High Efficiency Downflow Combined Warm Air Heaters.

TECHNICAL DATA & FAULT FINDING

Models Covered

C10DW

C16DW

C20DW

WARMCAIR DW TECHNICAL DATA

TABLE 1		C10DW
Maximum weight lift	kg	66
Gas supply	mbar	2H - G20 - 20 mbar
Gas connection	mm	15 mm copper
Gas Injector size	mm	4.2
Heating flow and return	mm	22 mm copper
Flue terminal diameter	mm	100 (4")
Condense drain	mm	6 ID
Electrical supply	V ~ Hz	230 V ~ 50 Hz
Electrical rating	W	150
External fuse rating	A	3

WARM AIR HEATING

Nominal Rated Output	kW	10
Air on Temperature	°C	20
Air off Temperature	°C	67
Water Supply Temperature	°C	80
Water Return Temperature	°C	73
Water Flow Rate	l/s	0.4
Air Volume	m³/h	576

TABLE 2.			C10DW	
PERFORMANCE DATA			MAXIMUM	MINIMUM
Burner CO ² (%)	case off		9.3	8.4
	case on		9.5	8.6
			± 0.5	
PERFORMANCE DATA FOR WATER HEATING				
Input Q	Net	kW	17	4.4
	Gross	kW	18.9	4.88
Gas Consumption		m³/h	1.75	00.45
Output	Non condensing	kW	16.75	
	Condensing	kW	18.48	4.83
NO _x Classification	CLASS 5			
Recommended Central Heating set point	80 °C			

WARMCAIR DW TECHNICAL DATA

TABLE 1		C16DW
Maximum weight lift	kg	76.5
Gas supply	mbar	2H - G20 - 20 mbar
Gas connection	mm	15 mm copper
Gas Injector size	mm	4.75
Heating flow and return	mm	22 mm copper
Flue terminal diameter	mm	100 (4")
Condense drain	mm	6 ID
Electrical supply	V ~ Hz	230 V ~ 50 Hz
Electrical rating	W	215
External fuse rating	A	3

WARM AIR HEATING

Nominal Rated Output	kW	10
Air on Temperature	°C	20
Air off Temperature	°C	67
Water Supply Temperature	°C	80
Water Return Temperature	°C	72
Water Flow Rate	l/s	0.4
Air Volume	m ³ /h	938

TABLE 2.			C16DW	
PERFORMANCE DATA			MAXIMUM	MINIMUM
Burner CO ² (%)	case off		9.4	8.5
	case on		9.6	8.7
			± 0.5	
PERFORMANCE DATA FOR WATER HEATING				
Input Q	Net	kW	24	4.7
	Gross	kW	26.6	5.21
Gas Consumption		m ³ /h	2.48	0.48
Output	Non condensing	kW	23.4	
	Condensing	kW	25.6	5.17
NOx Classification			CLASS 5 34 mg/kWh	
Recommended Central Heating set point			20 - 82 °C	

WARMCAIR DW TECHNICAL DATA

TABLE 1		C20DW
Maximum weight lift	kg	82.5
Gas supply	mbar	2H - G20 - 20mbar
Gas connection	mm	15 mm copper
Gas Injector size	mm	4.75 mm
Heating flow and return	mm	22 mm copper
Flue terminal diameter	mm	100 mm (4")
Condense drain	mm	6 mm ID
Electrical supply	V ~ Hz	230 V ~ 50 Hz
Electrical rating	W	530
External fuse rating	A	3

WARM AIR HEATING

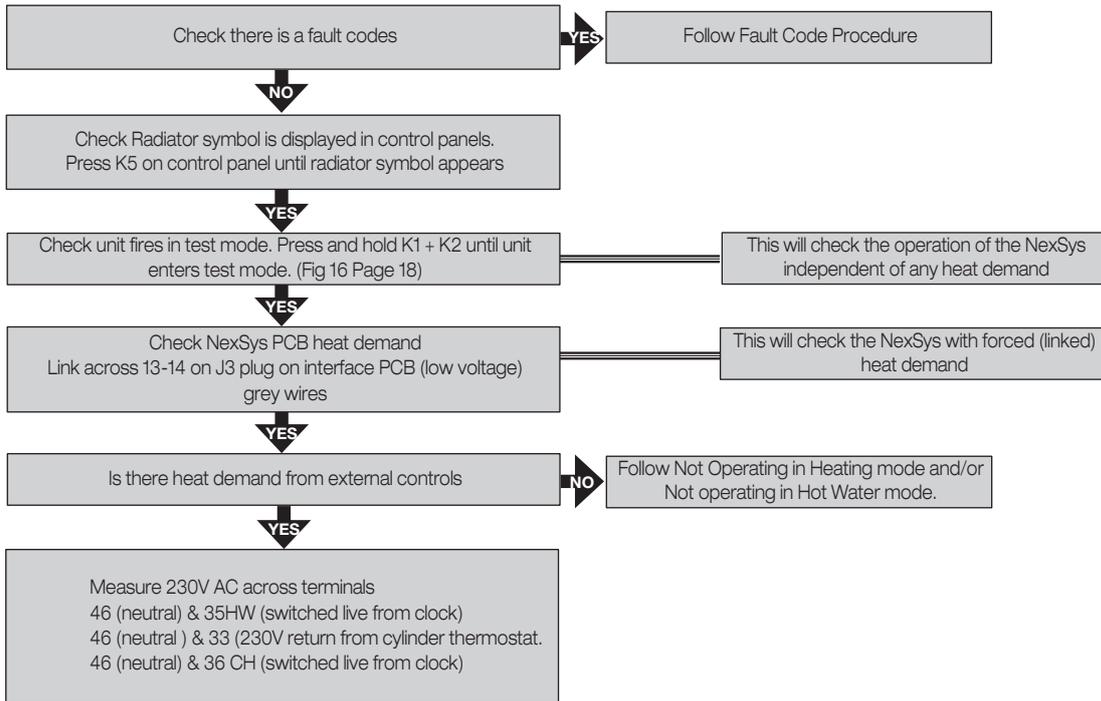
Nominal Rated Output	kW	20
Air on Temperature	°C	20
Air off Temperature	°C	67
Water Supply Temperature	°C	80
Water Return Temperature	°C	71
Water Flow Rate	l/s	0.6
Air Volume	m³/h	1224

TABLE 2.			C20DW	
PERFORMANCE DATA			MAXIMUM	MINIMUM
Burner CO ² (%)	case off		9.4	8.5
	case on		9.6	8.7
			± 0.5	
PERFORMANCE DATA FOR WATER HEATING				
Input Q	Net	kW	24	4.7
	Gross	kW	26.6	5.21
Gas Consumption		m³/h	2.48	0.48
Output	Non condensing	kW	23.4	
	Condensing	kW	25.6	5.17
NOx Classification			CLASS 5 34 mg/kWh	
Recommended Central Heating set point			20 - 82 °C	

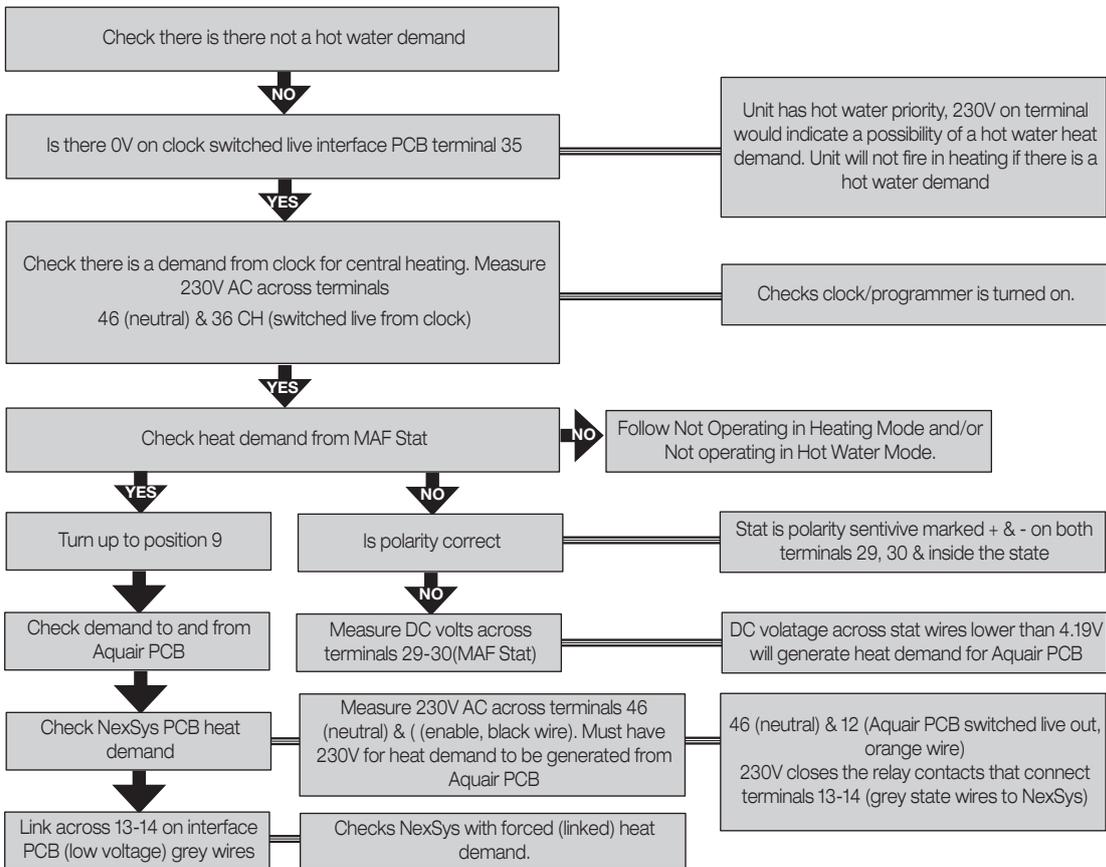
WARMCAIR DW FAULT FINDING

Should a fault occur, the boiler will shut down and these error codes will be displayed.

UNIT DOES NOT FIRE

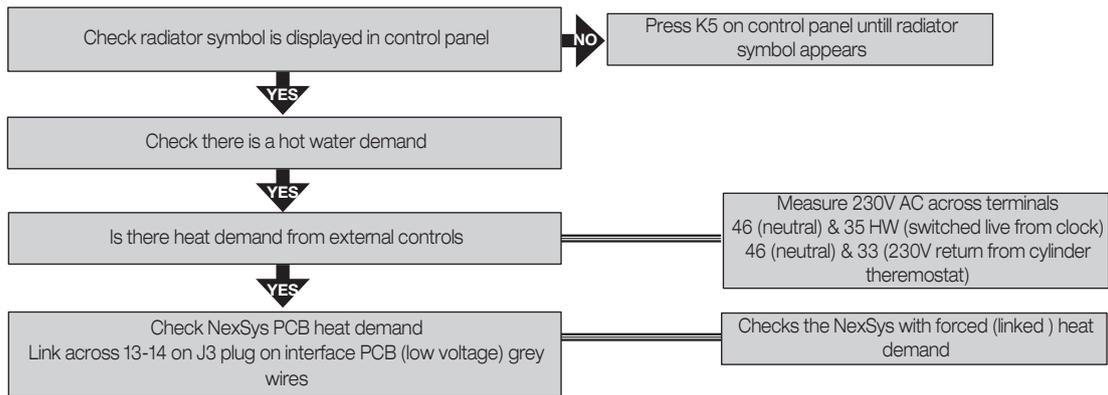


NOT OPERATING IN HEATING MODE

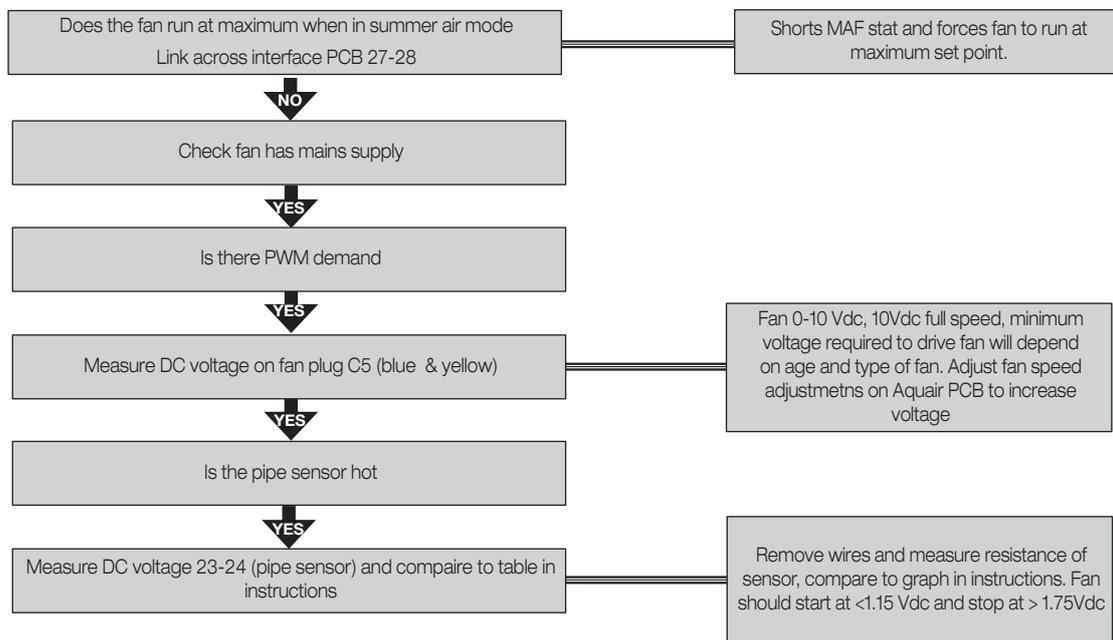


WARMCAIR DW FAULT FINDING

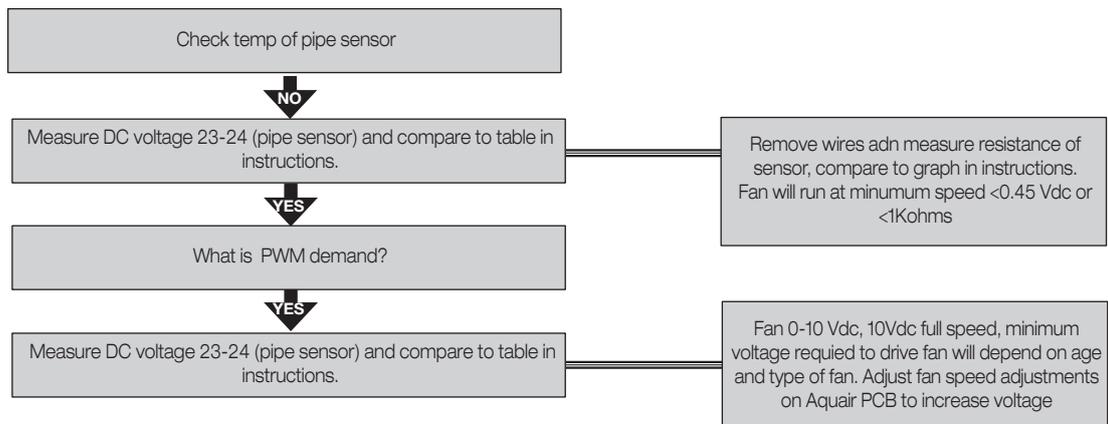
NOT OPERATING IN HOT WATER MODE



CIRCULATING FAN NOT WORKING

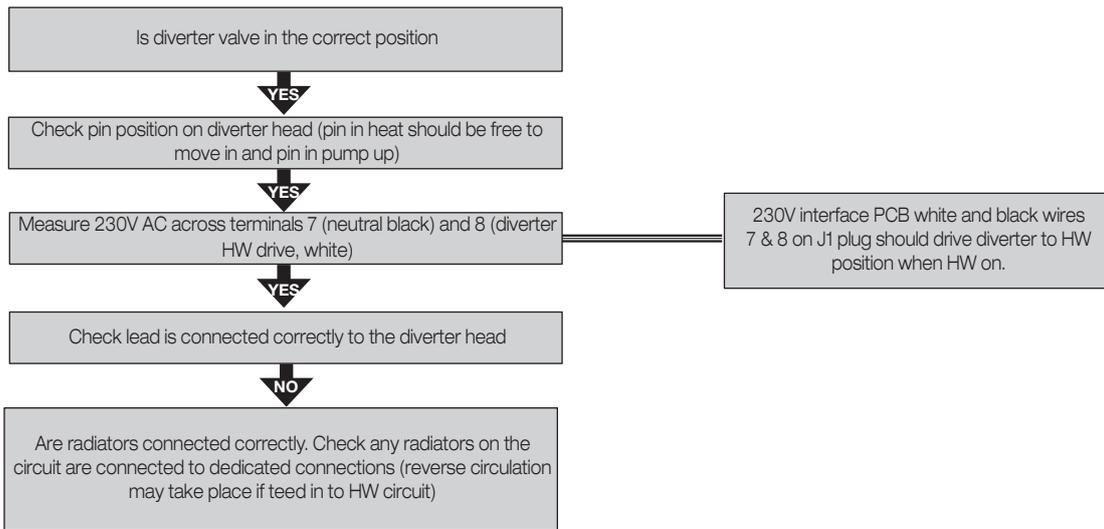


CIRCULATING FAN DROPPING UNEXPECTEDLY TO MINIMUM SPEED.

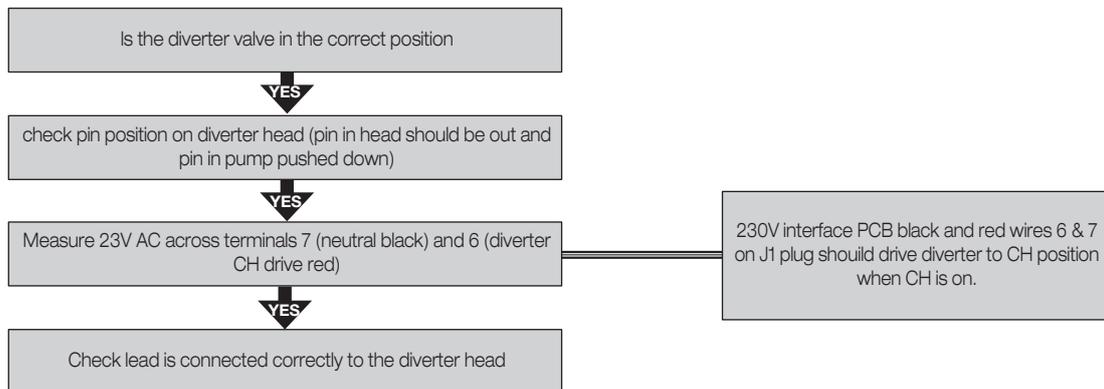


WARMCAIR DW FAULT FINDING

HEATING COMES ON IN HOT WATER DEMAND

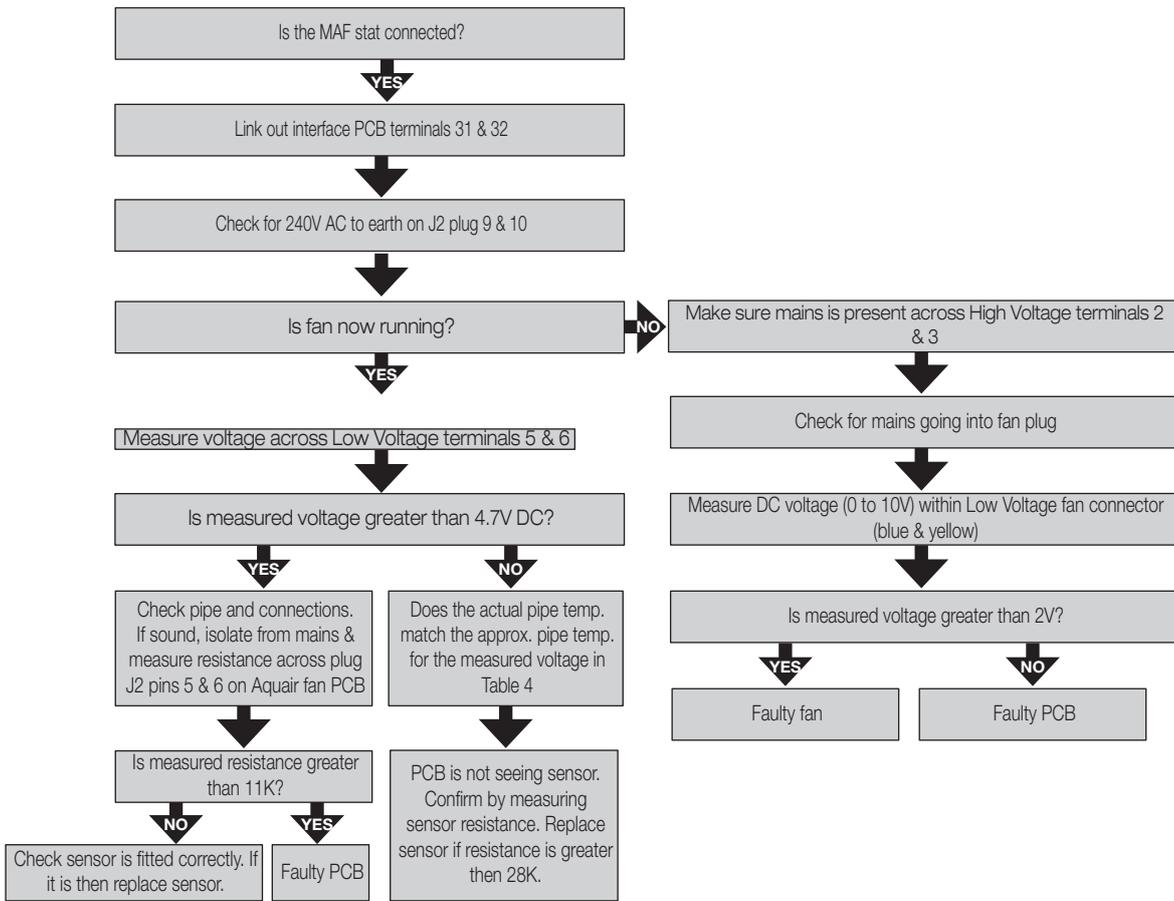


HOT WATER COMES ON IN CENTRAL HEATING MODE



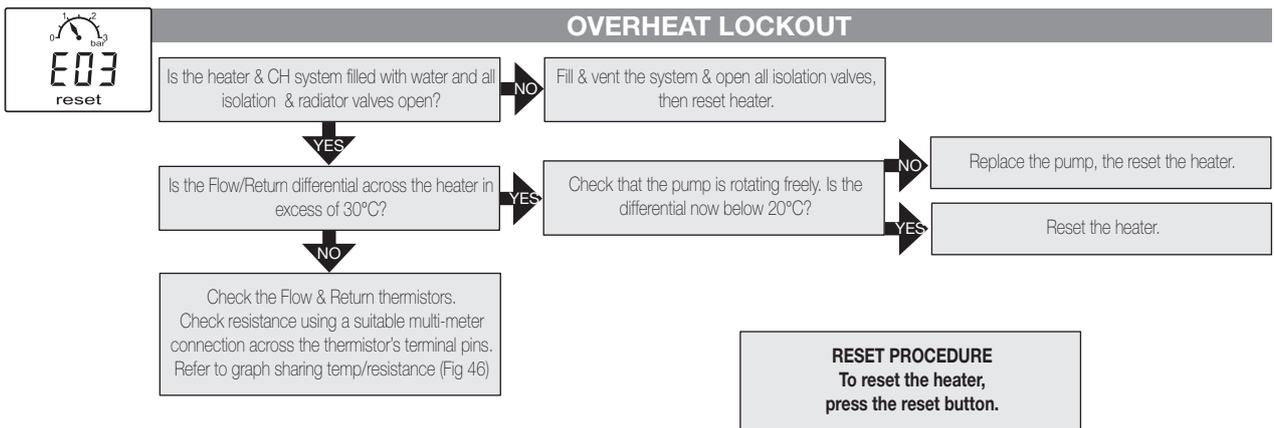
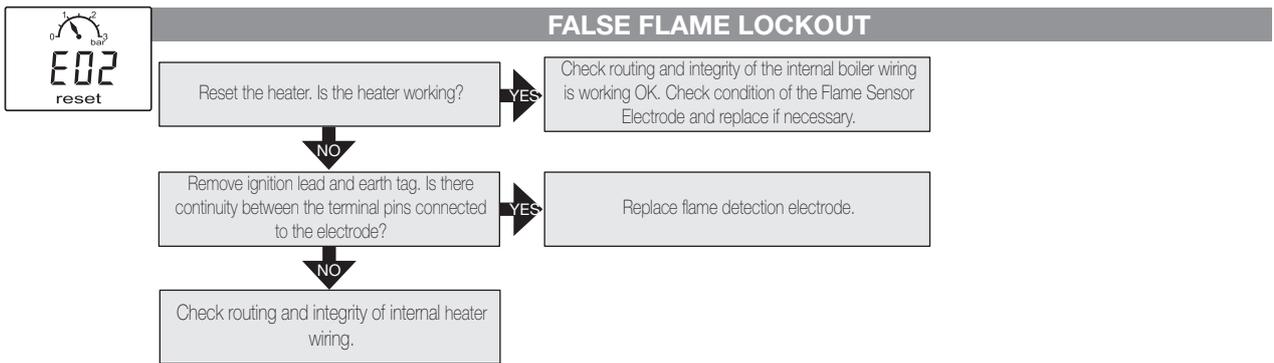
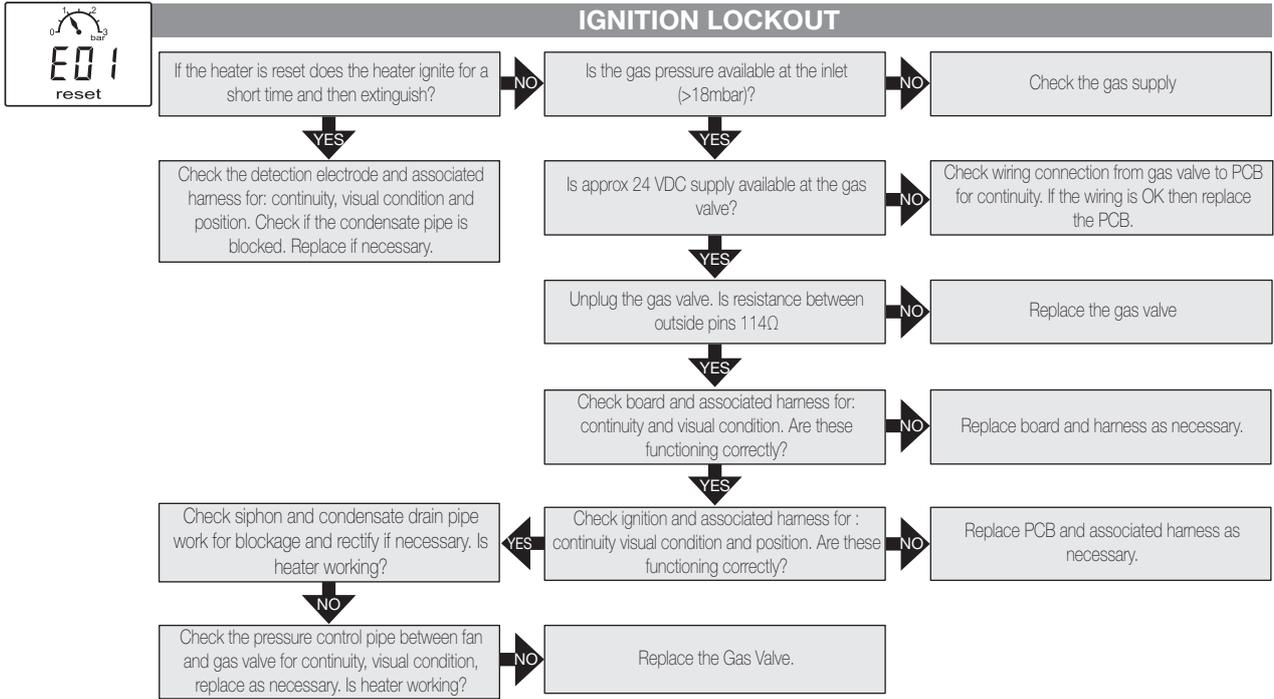
WARMCAIR DW FAULT FINDING

FAN NOT OPERATING WHEN PIPE IS ABOVE 60°C



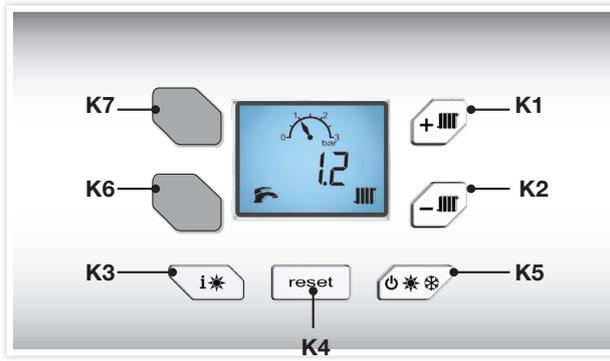
WARMCAIR DW FAULT FINDING

Should a fault occur, the heater will shut down and these blocking codes will be displayed.

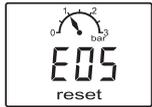


15.5 RESET PROCEDURE - To reset boiler press the reset button 'K4' twice.

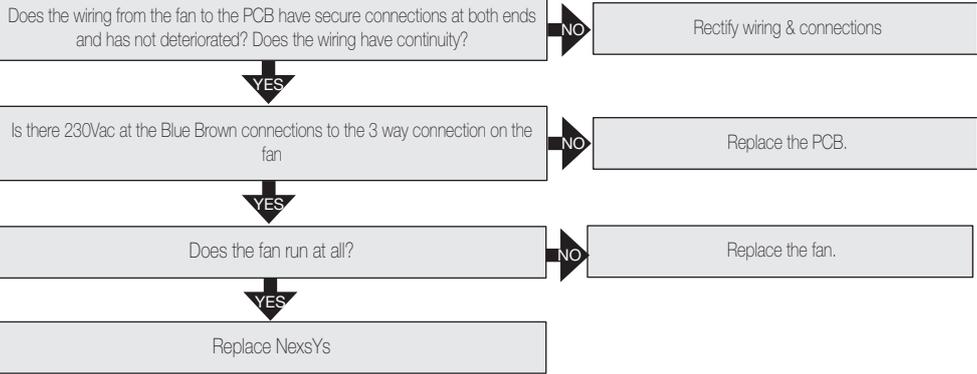
Item	Description
K1	+ Installer function only
K2	- Installer function only
K3	Installer information
K4	Reset
K5	Summer/Winter mode
K6	No Function
K7	No Function



WARMCAIR DW FAULT FINDING



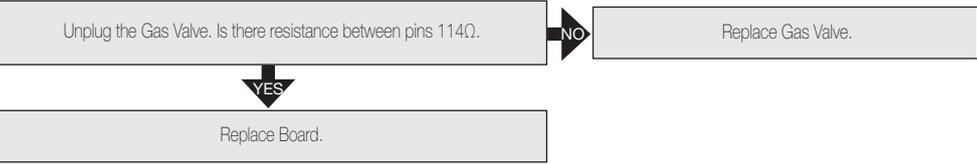
COMBUSTION FAN FAULT



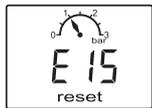
FLAME CIRCUIT FAILURE



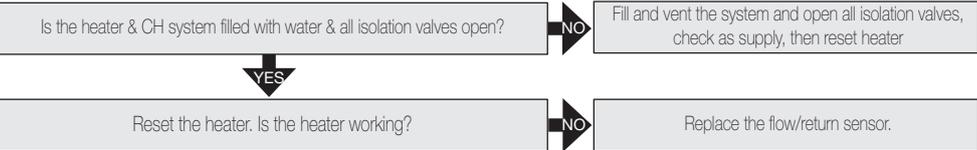
VALVE FEED BACK ERROR



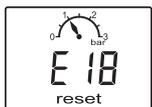
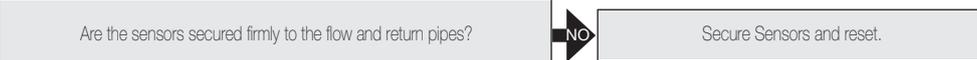
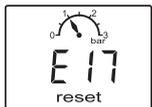
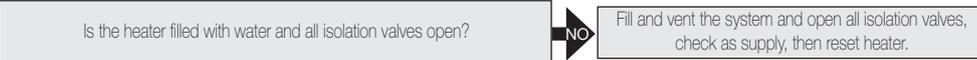
EEPROM LOCKOUT



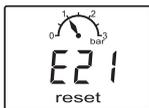
FLOW/RETURN SENSOR CALIBRATION CHECK



SENSOR STUCK LOCKOUT

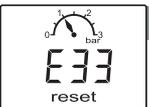


WARMCAIR DW FAULT FINDING



ADC LOCKOUT

Replace the PCB.



RETURN THERMISTOR FAULT

Remove the return thermistor from the CH return pipe and disconnect the wires. Check the resistance using a suitable multi-meter connected across the thermistor's terminal pins. Is the thermistor valve correct?

NO → Fit a new Thermistor.

YES ↓

Is the wiring securely connected to the low voltage 9 way connector X5 on the PCB?

NO → Check and replace wiring as necessary.

YES ↓

Replace the PCB.



FLOW THERMISTOR FAULT

Is the wiring securely connected to the Flow thermistor?

NO → Securely connect the wiring to the flow Thermistor.

YES ↓

Disconnect the wiring from the Flow Thermistor. Check the resistance using a suitable multi-meter connected across the Thermistor's terminal pins. Is the Thermistor value correct?

NO → Fit new Thermistor.

YES ↓

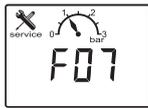
Is the wiring securely connected to the low voltage 9 way connector X5 on the PCB?

NO → Check & replace as necessary.

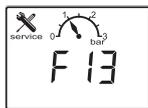
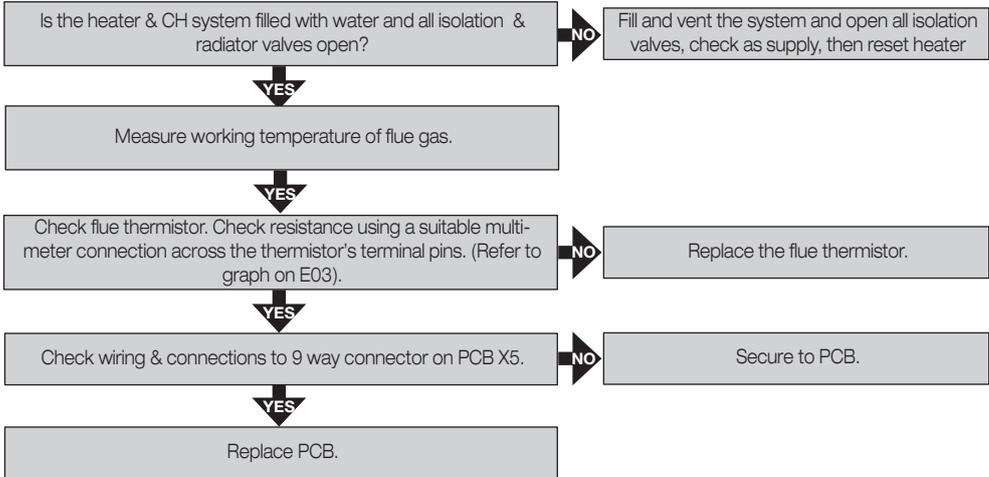
YES → Replace the PCB.

WARMCAIR DW FAULT FINDING

Should a fault occur, the boiler will shut down and these blocking codes will be displayed.



EXHAUST GAS TEMPERATURE TOO HIGH

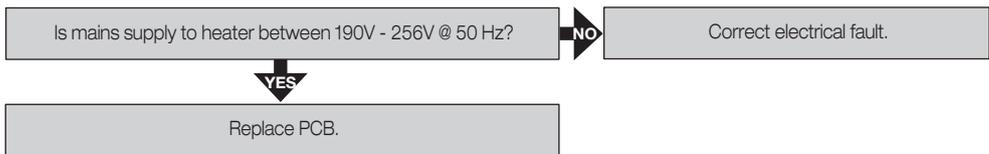


REMOTE RESET LOCKOUT

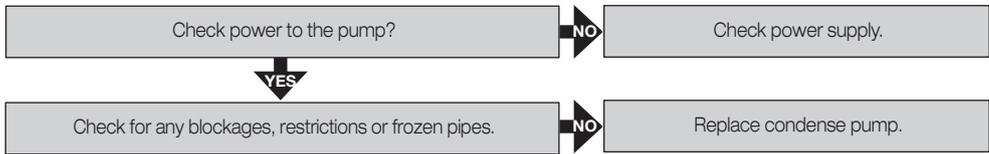
Turn power on and off, reset heater. The heater will correct original lockout error.



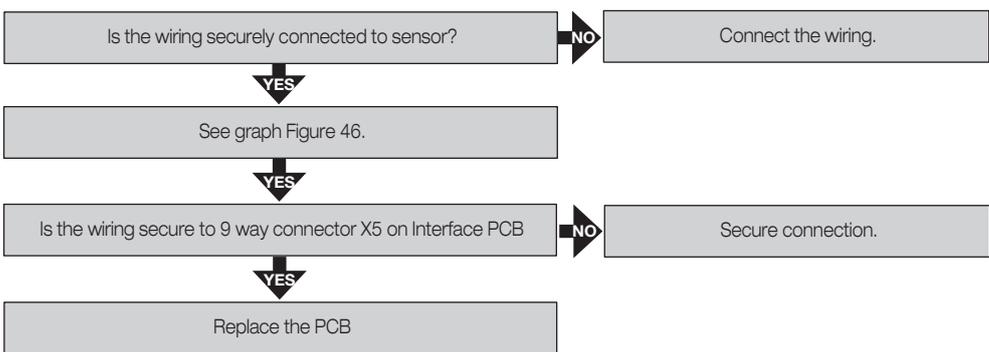
LOW POWER SUPPLY FROM MAINS



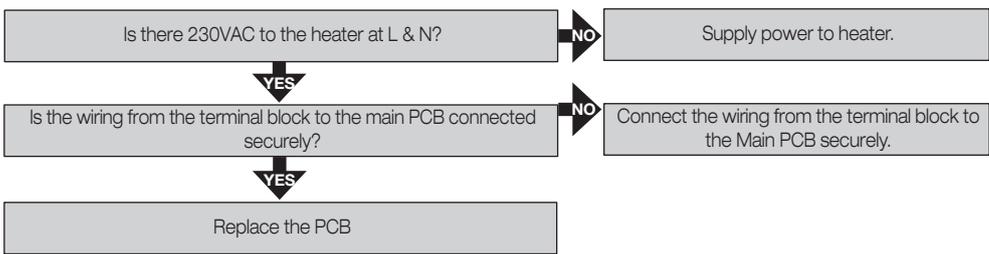
CONDENSATE PUMP SAFETY FLOAT SWITCH



FLUE TEMPERATURE SENSOR LOCKOUT



NO DISPLAY



REFERENCE DATA

DC VOLTAGE ACROSS PIPE SENSOR	APPROX. PIPE TEMP. °C	DC VOLTAGE ACROSS PIPE SENSOR	APPROX. PIPE TEMP. °C	DC VOLTAGE ACROSS PIPE SENSOR	APPROX. PIPE TEMP. °C	DC VOLTAGE ACROSS PIPE SENSOR	APPROX. PIPE TEMP. °C
3.24	10	2.13	33	1.26	56	0.73	79
3.19	11	2.08	34	1.23	57	0.71	80
3.14	12	2.04	35	1.20	58	0.70	81
3.09	13	1.99	36	1.17	59	0.68	82
3.04	14	1.95	37	1.15	60	0.66	83
2.99	15	1.91	38	1.12	61	0.65	84
2.94	16	1.87	39	1.09	62	0.63	85
2.89	17	1.83	40	1.07	63	0.63	86
2.84	18	1.79	41	1.04	64	0.60	87
2.79	19	1.75	42	1.02	65	0.59	88
2.75	20	1.71	43	0.99	66	0.58	89
2.70	21	1.67	44	0.97	67	0.56	90
2.65	22	1.63	45	0.95	68	0.55	91
2.60	23	1.59	46	0.92	69	0.54	92
2.55	24	1.56	47	0.90	70	0.53	93
2.50	25	1.52	48	0.88	71	0.51	94
2.45	26	1.49	49	0.86	72	0.50	95
2.40	27	1.45	50	0.84	73	0.49	96
2.36	28	1.42	51	0.82	74	0.48	97
2.31	29	1.39	52	0.80	75	0.47	98
2.26	30	1.35	53	0.78	76	0.46	99
2.22	31	1.32	54	0.76	77	0.45	100
2.17	32	1.29	55	0.75	78		

TABLE 4

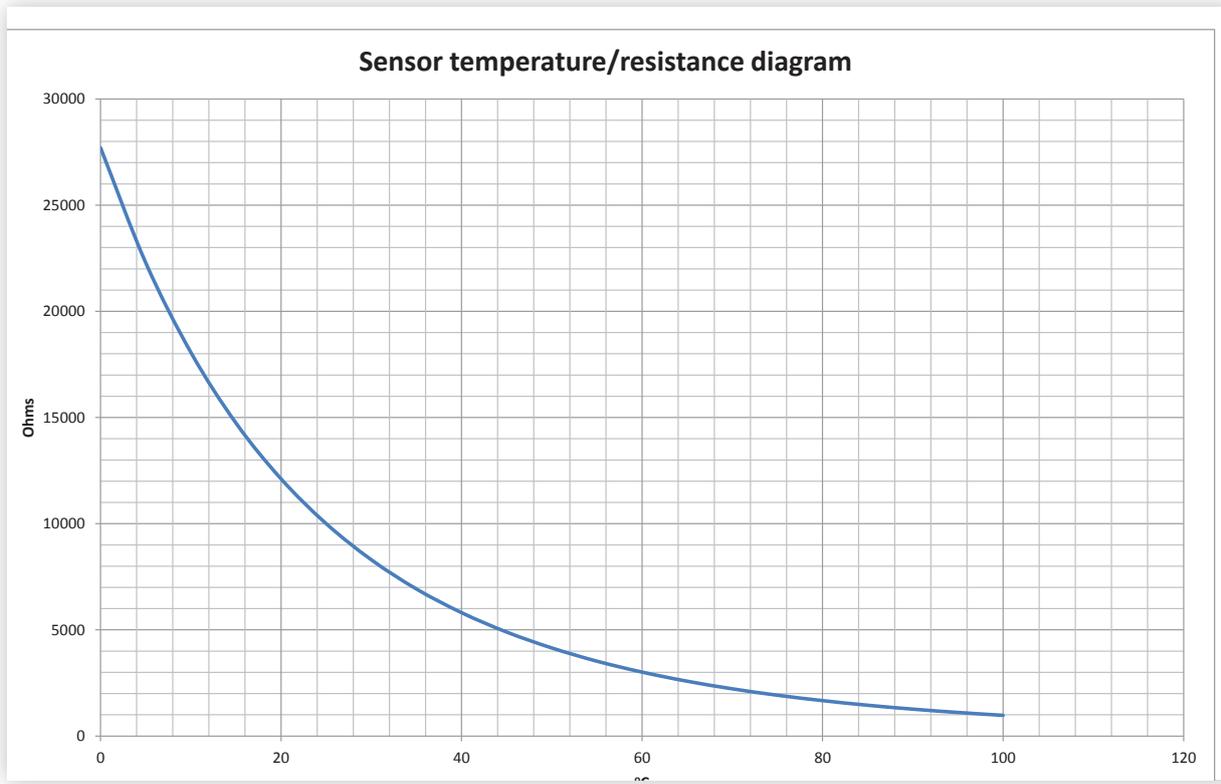


FIGURE 46. SENSOR TEMPERATURE/RESISTANCE DIAGRAM



sustainable solutions
under one roof

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