Service manual

Selecta II

T4290, T4530, T4650,
T4900, T41200, T4300
TD30, TD50, TD75,
TD100, TD135, TD30x30
T4250 from machine no. 23350/0006970
T4350 from machine no. 23250/0003715

Thinking of you

Electrolux

487 05 40 31/EN
08.36

Service manual

Safety rules

Programming is only to be carried out by qualified personnel.

High voltage on the printed circuit board.

IMPORTANT SERVICE NOTE!

Continuity and resistance measurements suggested by the procedures in this manual require that power to the dryer be disconnected, and that the device whose resistance is being measured be disconnected from all circuits that might affect the accuracy of the measurement.

Note! It is very important that the board is protected from static electricity

Remember!

- Always use an earthed wrist strap.
- Without the antistatic wrapping the board is unprotected.
- Keep all subjects away from the board which can cause static electricity.
- Subjects like plastic, foam plastic, nylon, or cellophane wrapping are all big dischargers of static electricity.
- Static electricity can not always be felt, heard or seen.
- Board components can be damaged by static electricity under 100V.
- Static electricity can not be felt, heard or seen till the voltage reaches 2500V.

Contents

Generel

From factory, the dryer has been set to specific values for:
Time, temperature, cooling, reversing, etc.

The above parameters are changeable by reprogramming the Selecta PCB.

Selecta II PCB

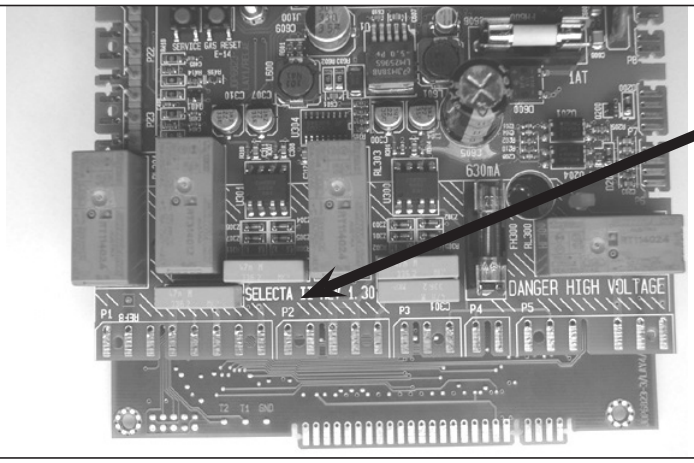
Fig. 1 The PCB Module is located on the back of the operating panel, see the Service Manual for the specific dryer.
In order to reprogramme the dryer it is necessary to switch the print board into programming mode.

In programming mode the buttons on the operating panel are used for changing the parameters. See page later in this section “Switching to service mode”.

Glossary

Auto Stop	The tumble dryer stops automatically when the clothes are dry.
AHL	**A**partment **H**ouse **L**aundry - Communal laundries / Housing block laundries.
GN	Natural gas
LPG	Bottle gas
OPL	**O**n **P**remises **L**aundry - Institutional laundries.
PCB	**P**rinted **C**ircuit **B**oard.
RMC	**R**esidual **M**oisture **C**ontrol - The tumble dryer has residual moisture control.
CP	**C**entral **P**ayment
CMD	**C**oin **M**eter **D**ouble
CMS	**C**oin **M**eter **S**ingle
CMSNCB	**C**oin **M**eter **N**o **C**oin **B**ox
ESS	**E**lectrolux **S**ingle **S**ystem
PCR	**P**repared for **C**ard **R**eader

1



Operating panel

There are different types of operating panels.

On the dryer operating panel the buttons might not have any symbols in which case they are only usable when the dryer is in service mode.

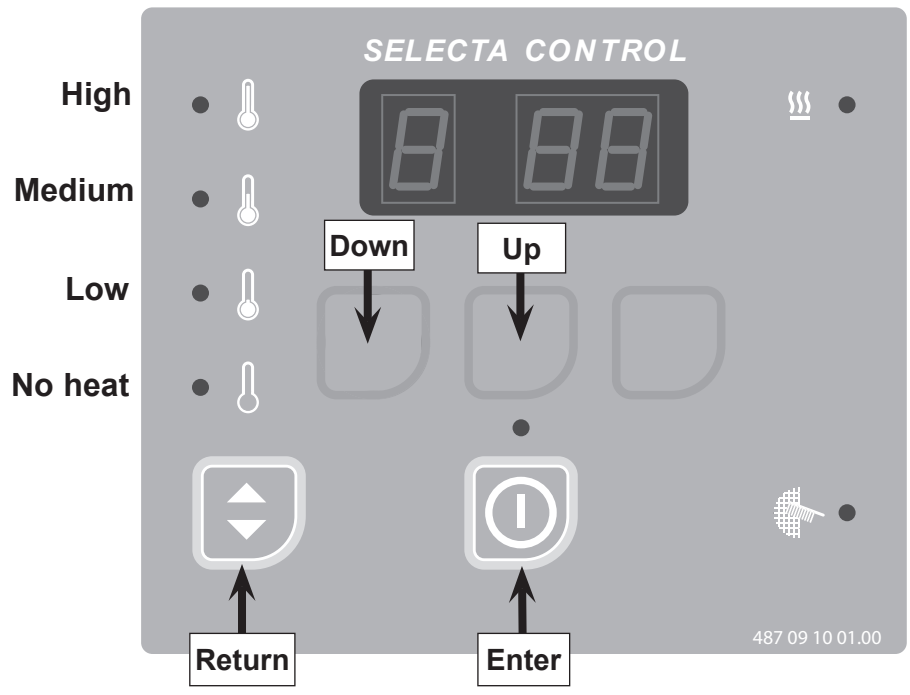
Fig. 1 In service mode the 4 buttons are used for changing the parameters.

Selected temperature

Light emitting diode is lit at the selected temperature or show the default-temperature setting.

Default temperature can be set in Group A in parameter A 05.

1



Versions

Software version

Software version is only readable in group 3, see section 4

If the software has been upgraded a label will be placed.

Hardware version

Fig. 1 The hardware documentation is printed on a label.

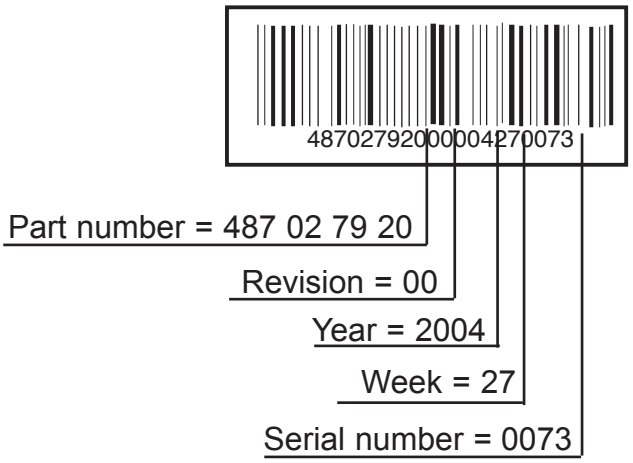
The label is affixed on that print board which is facing the operating panel. The label is only visible when the print board is demounted.

Parameter version

The parameter version is only readable in group 3, see section 4 “To access log”.

1

Hardware version



Connector numbers

In the error analyses in section 12 later in this manual connections P1-P23 are mentioned.

The P-numbers are printed on the print board.

The usage of the connections appears from the wiring diagrams supplied the dryer.

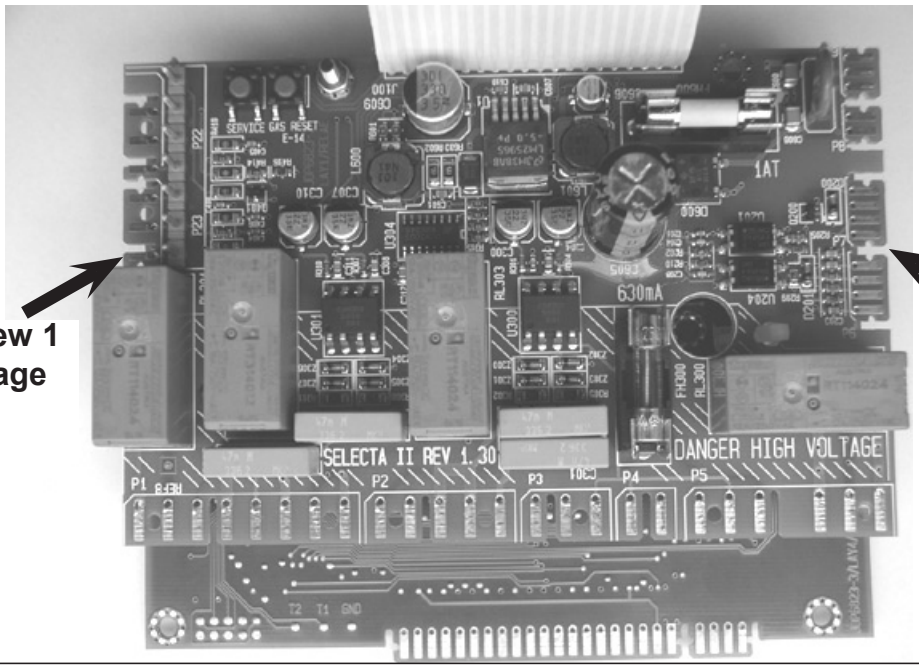
The positionings of P1-P23 are shown next page.

High voltage on the printed circuit board

Do not touch the printed circuit board

The shaded areas indicate high voltage.

1



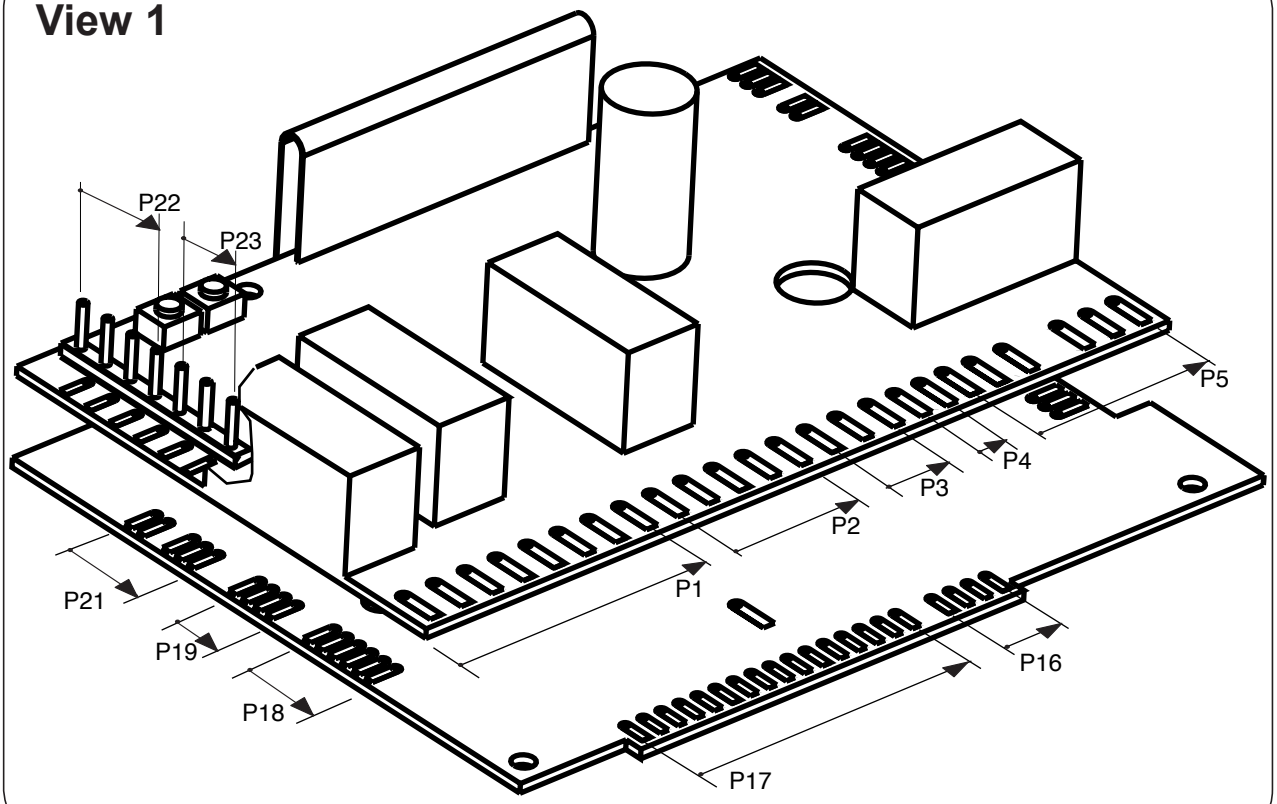
See view 1 next page

See view 2 next page

Warning!

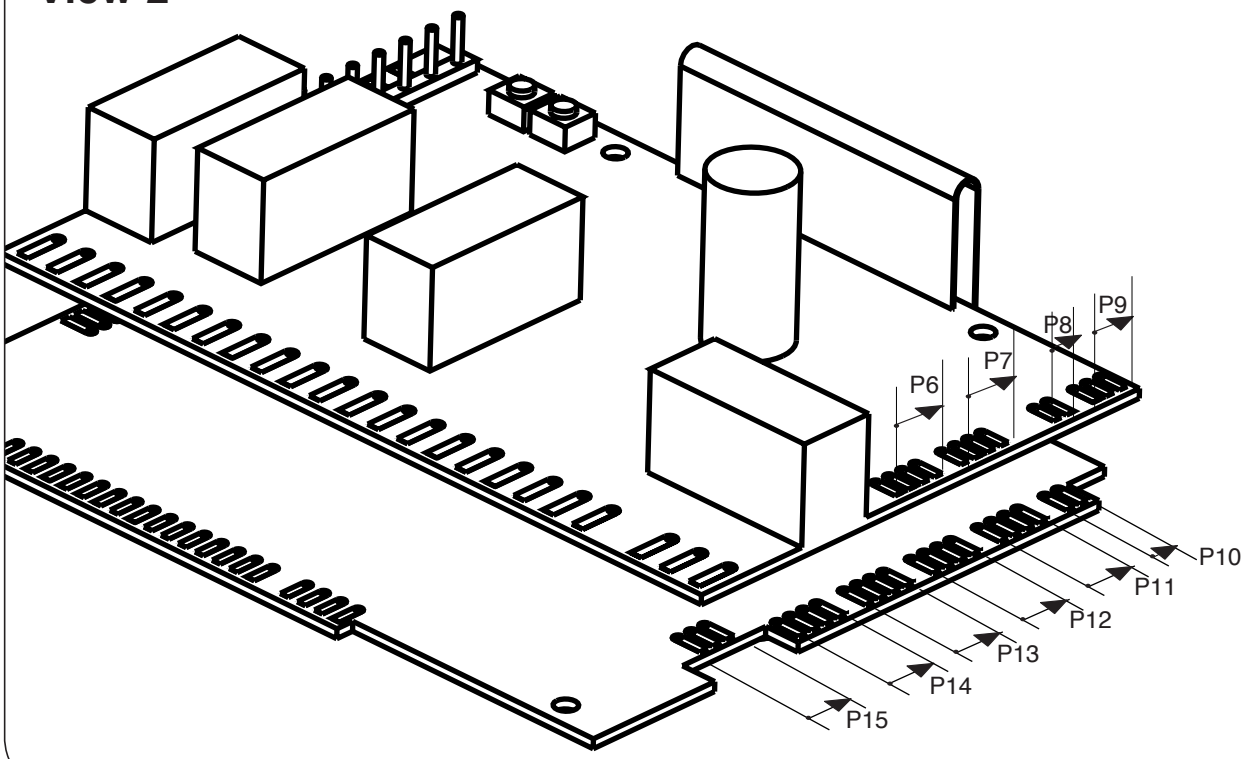
The shaded areas indicate high voltage

View 1



Seeview 1

View 2



The usage of the connections

It is possible to connect following features to the PCB.

P1	**Motor control**
P2	**Vacuum and fan input**
P3	**Power on**
P4	**Power out**
P5	**Heat control**
P6	**Els-Network**
P7	**Els-Network**
P8	**18V AC out**
P9	**18v AC in**
P10	**RMC**
P11	**RS 232 - internal use (incl. 24V DC)**
P12	**RS 232 - programme**
P13	**Data bus (incl. 24V DC)**
P14	**Data bus (incl. 24V DC)**
P15	**Gas control**
P16	**Rotary (compass control)**
P17	**Display (compass control)**
P18	**Temperatur sensor and filter input**
P19	**Extern gas reset and service switch**
P20	**Discount and external error (option)**
P21	**Free dry**
P22	**CP, CMS, CMSNCB, ESS, PCR**
P23	**CMD**

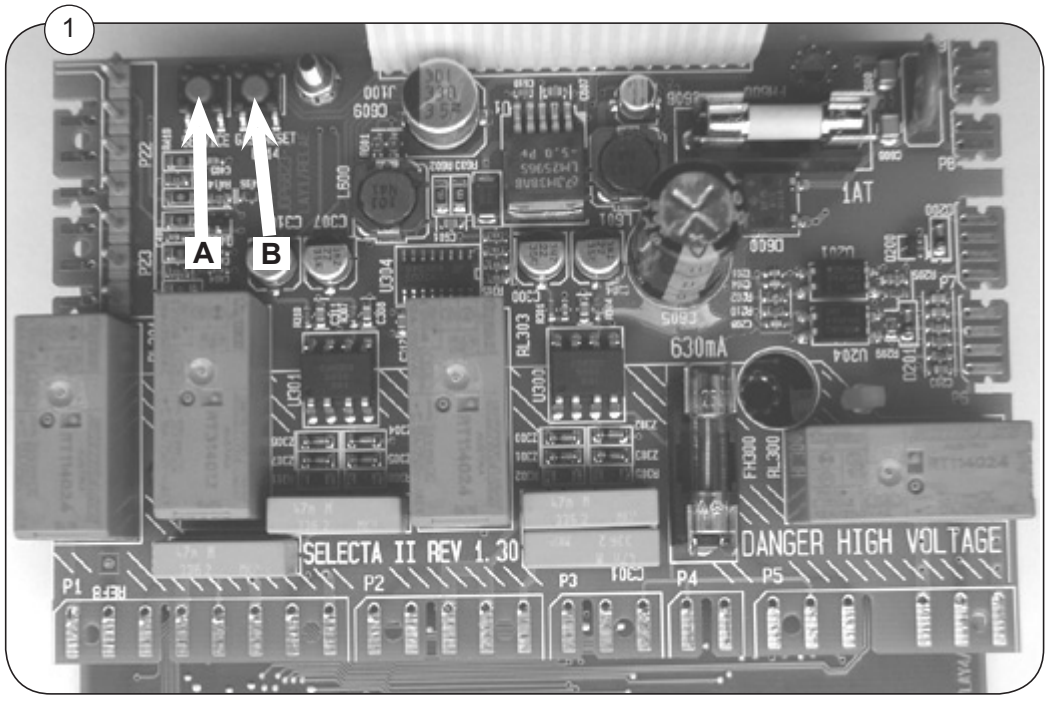
Switching to Programming mode

Fig. 1 **A** = Service button.

Fig. 1 **B** = Gas reset button, active on gas dryer.

Switching

1. Press button **A**. After pressing button **A** the display shows: **0 -- = Group 0.**
2. Program the dryer as described on the following pages.



Contents

General

The Selecta II Control parameter memory is divided into 2 areas.

Area A: General user level, eg. the owner or manager.

Contains: Group 0 and Group 1

Group 2

Group 0 and 1 are owner-accessible registers for setting time and temperature values, and reading operating timers.
See Selecta Control manual supplied the dryer.

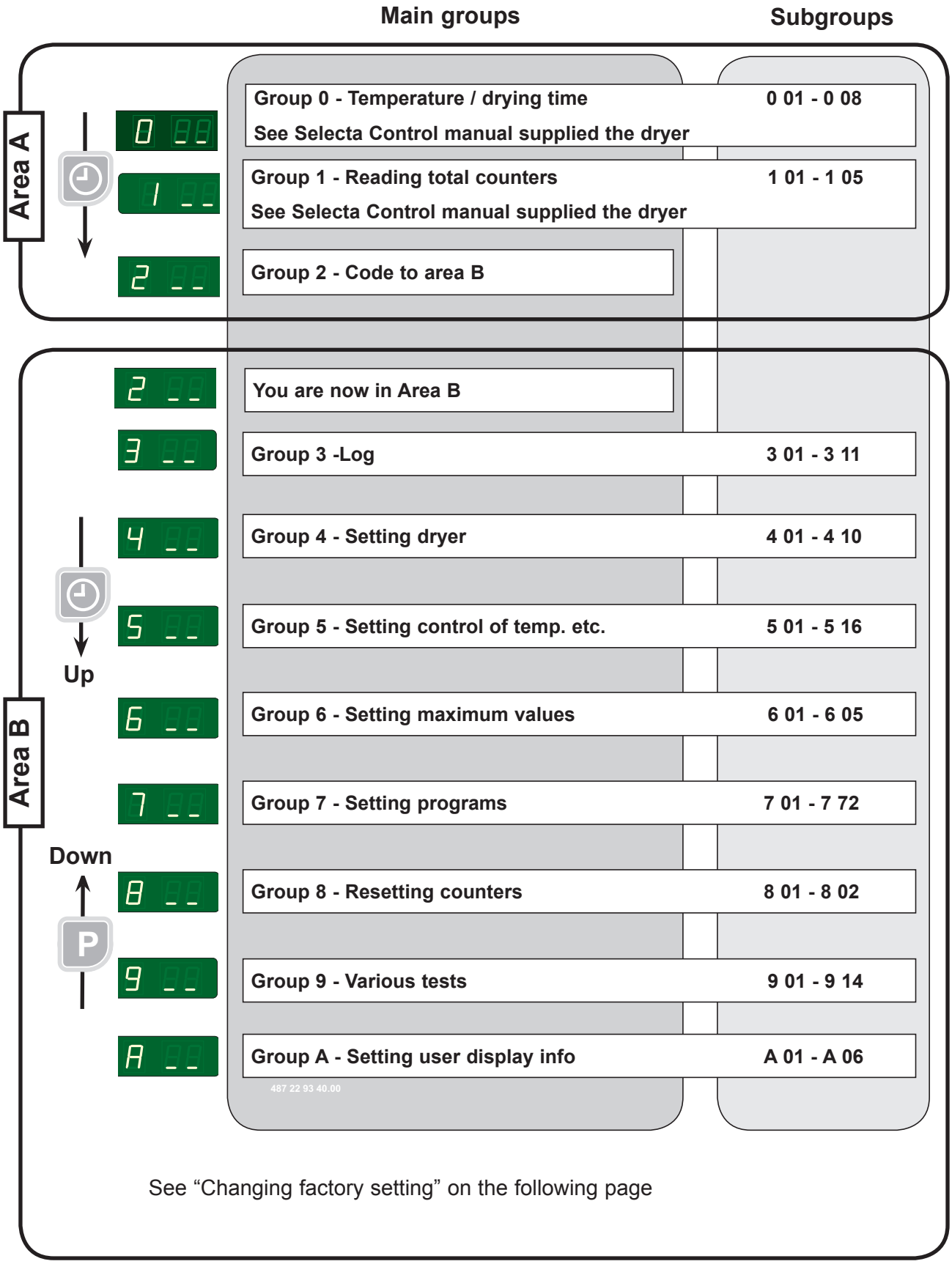
Group 2 only serves as an access to Area B.

Area B: Service technicians.

Contains: Group 3 to group 9

Group A

Quick-diagram



See “Changing factory setting” on the following page

Changing factory settings

In order to clarify things a step by step instruction of how to move within a main group follows.

Based on an example the instruction shows how to change the residual moisture factory setting in program 4 (See Overview of factory setting Group 7).-

Start

1. Switch the user module to programming mode (See section 3).

2. Move to **Area B** (See “To Access Area B” in group 2).

3. Step forward using  to **7_ _**

4. Press **Enter**  to enter subgroups within main groups **7 01**

5. Step forward from 7 01 using  to **7 04** and then press **Enter** 

Note! The factory setting is displayed.

6. Press **Enter** 

Note! The factory setting flashes and is changeable.

7. Step forward using  /  till the setting is reached.

8. Accept the setting using  All values are stored when the display stops flashing.

When the programming has been completed, move the switch back to normal position.

Or if further changes are to be carried out

9. Press **Return**  /  to Subgroup **7 04**.

10. Press **Return**  /  to Main group **7 _ _.**

11. Press **Up or Down**  /  depending on the Main group number in which changes are to be carried out.

Resetting new settings

To delete all special settings and return to the factory settings follow the steps below:

Return to factory settings

Return to factory settings is done in **Group 4 - Setting dryer**, parameter group 4 06.

1. Step forward to group **4_ _**
2. Step **Up**  to **4 06** 
3. Press **Enter** twice,  the display reads **00** blinks 
4. Press **Up** 
   00 = nothing
   01 = reset (return to factory settings)
5. Press **Enter**  display shows the chosen setting
6. Press **Return**  the display shows **4 06** 

Group 2 - To access “Area B”

To access “Area B” (where parameter group 3 to 9 + group A are located), the passcode "01" must be entered into parameter register 2 01, as follows:

Passcode to Area B

1. Press **Down**		the display reads	**2** _ _ 
2. Press **Enter** 3 times		the display reads	**00** (blinks) 
3. Press **Up**		the display reads	**01** (blinks) 
4. Press **Enter**		the display reads	_ **01** 
5. Press **Return** twice		the display reads	**2** _ _ 

You are now in **"Area B"**.

Group 3 - Log

Readable parameters

All error codes are registered in the error log.

Beside error codes E 01 - E 18, there are a number of internal error codes which are not displayed but only registered in the error log.

Error codes registred in the log that are not on the error code list (E 01-E 18) in this manual should be reported to the manufacturer.

Para-meter / group	Designation	Range	Step	Factory setting	Comments
3 01	Last error log n		-	info.	Shows last occured error and time
3 02	Error log (n-1)		-	info.	Second latest error code and time
3 03	Error log (n-2)		-	info.	Third latest error code and time
3 04	Error log (n-3)		-	info.	Fourth latest error code and time
3 05	Error log (n-4)		-	info.	Fifth latest error code and time
3 06	Not in use				
3 07	Selecta software version		-	info.	Software version
3 08	Not in use				
3 09	Identification of parameter part 1			info.	Identification of version
3 10	Identification of parameter part 2			info.	Identification of version
3 11	Production ID number		-	info.	Identification of production data

See example on the next page which shows the latest error code **E08** which occurs after 220 hours of operation.

Group 3 - Reading the Error log

Example

1. Press **Up**		the display reads	**3 _ _**	
2. Press **Enter**		the display reads	**3 01**	
3. Press **Enter**		the display reads eg.	**- 08**	

The display shows the error code. The following steps shows the running time where the error occured.

4. Press **P**		the display reads	**– 02**	
5. Press **P**		the display reads	**_ 20**	

The example shows the latest error code **E08** which occurred after 220 hours of operation.

Now the second latest error code can be read etc.

6. Press **Return**		the display reads	**3 01**	
7. Press **Up**		the display reads	**3 02** etc.	

Group 4 - Setting dryer

Adjustable parameters 4 01

Para-meter / group	Designation	Range	Step	Factory setting	Comments
4 01	Reversing	00 - 01	1	0 / 1	0 = OFF / 1 = ON

Group 4 - Setting dryer

Adjustable parameters 4 02

Para-meter / group	Dryer type	Heating	Step	Factory setting
4 02	**All steam heated dryers**	Steam	1	04
	T4300 TD30x30	Electric	1	01
		Gas normal	1	02
		Gas (JP+US)	1	03
	T4250/4350	Electric	1	06
		Gas normal	1	07
		Gas (JP+US)	1	08
	T4900/41200 TD100/135	Electric	1	09
		Gas normal	1	10
		Gas (JP+US)	1	11
	T4290/4530/4650 TD30/50/75	Electric	1	12
		Gas normal	1	13
		Gas (JP+US)	1	14
	T4190	Electric	1	15
		Gas normal	1	16
		Gas (JP+US)	1	17
	T4130	Electric	1	18
		Condens	1	19

Group 4 - Setting dryer

Adjustable parameters 4 03 to 4 06

Para-meter / group	Designation	Range	Step	Factory setting	Comments
4 03	Payment setting	00 - 08	1	00	No paying
				01	Coin 1 positive (NC, coin sensor)
				02	Coin 1 negative (NO)
				03	Coin 1-2 positive (NC, coin sensor)
				04	Coin 1-2 negative (NO)
				05	CP Time
				06	Single System
				07	CP coin
				08	Master System
				09	LM10
4 04	Type of Control Panel	00 - 04	1	00	Option
				01	Coin
				02	AHL
				03	OPL
				04	Japan
4 05	Type of Programme	00 - 04	1	00	Coin
				01	OPL RMC
				02	AHL RMC
				03	OPL Auto Stop
				04	AHL Auto Stop
4 06	Factory setting	00 - 01	1	01	01 = Establish default setting (reset) **Note!** The resetting deletes all changes made since the dryer left the factory

Group 4 - Connecting CMIS (Option)

Adjustable parameters 4 07 to 4 10

Parameter / group	Designation	Range	Step	Factory setting	Comments
4 07	ELS Network address	0 - 127	1	0	0 = No network
4 08	ELS Network baud rate	0 - 3	1	0	38400 baud
				1	2400 baud
				2	9600 baud
				3	38400 baud
4 09	ELS Network time out setting	0 - 99	1	10	CMIS: 10 sec (Error code E21)
				90	LM10: 90 sec (Error code E22)
4 10	Dryer type	1-14	1	1	T4130
				2	T3190
				3	T3250
				4	T3350
				5	T3300/TD30•30
				6	T4290
				7	T4530
				8	T4650
				9	-------
				10	T4250
				11	T4350
				12	T4900/TD100
				13	T41200/TD135
				14	T4300S/TD30x30
				15	T4190

Group 5 - Setting control of temperature, drum and buzzer

Adjustable parameters

Para-meter / group	Designation	Range	Step	Factory setting	Comments
5 01	Temperature °C / °F	0 - 1	0 / 1	0 / 1	0 = °C / 1 = °F
5 02	Temperature hysteresis	01 – 10 °K	1	2	Hysteresis in °K
5 03	Rotation clockwise	01 – 99 minutes	1	5	Only if reversing is ON
5 04	Pause between reversing	01 – 99 seconds	1	3	Only if reversing is ON
5 05	Reversing	01 – 99 minutes	1	5	minutes
5 06	Anticrease	00-01	0/1	1	0 = OFF / 1 = ON
5 07	Beep on key press	00-01	0/1	1	0 = OFF / 1 = ON
5 08	Beep at cycle end	0 – 60 seconds	1	10	
5 09	Cooling, time, High temp.	1-20 min	1 1	3 1	Non-coin operated machines Coin operated machines
5 10	Cooling, time, Med. temp.	1-20 min	1 1	3 1	Non-coin operated machines Coin operated machines
5 11	Cooling, time, Low temp.	1-20 min	1 1	3 1	Non-coin operated machines Coin operated machines
5 12	Option 1	1-20 min			
5 13	Cooling, temp. (High)	30-85°C / 85-185°F	1	45 / 115	(45°C / 115°F)
5 14	Cooling, temp. (Medium)	30-85°C / 85-185°F	1	45 / 115	(45°C / 115°F)
5 15	Cooling, temp. (Low)	30-85°C / 85-185°F	1	45 / 115	(45°C / 115°F)
5 16	Option 2	30 - 85°C			
5 17	Temperature hysteresis (outlet)	01 – 10 °K	1	1	Temperature hysteresis for damper **Finishing cabinet only**
5 18	Temperature offset (outlet)	0 - 85°C	1	5	Temperature offset for damper **Finishing cabinet only**
5 19	Power CTRL	0 - 1	1	0 / 1	0 = OFF / 1 = ON
5 20	Condense pump running time	01 - 255 seconds	1	15	**4130C only**
	Steam injection time	01 - 255 seconds	1	60	**Finishing cabinet only**
* 5 04	T4900/T41200	12 seconds			
** 5 05	Dryers with reversing and 1 motor (T4190 1-phase)	15 seconds			

Group 6 - Setting maximum values

Adjustable parameters

Para-meter / group	Designation	Range	Step	Factory setting	Comments
6 01	**Number of P programmes**	1 – 9	1	0	Coin
				2	AHL AutoStop
				3	AHL RMC
				5	OPL AutoStop
				9	OPL RMC

Para-meter / group	Designation	Dryer/heating type		Range	Step	Factory setting
6 02	Inlet temperature	4300/30x30	Gas	80 - 180°C / 176 - 356°F	1	180°C / 356°F
		4250/4350	Gas	80 - 155°C / 176 - 310°F		155°C / 310°F
			El	80 - 155°C / 176 - 310°F		155°C / 310°F
		4190	El	80 - 180°C / 176 - 356°F		180°C / 356°F
		4130	El/condens			0
		ALL	Steam		-	0

Para-meter / group	Designation	Range	Step	Factory setting	Comments
6 03	Max. time on time control	10 – 90 min	1	90	Max. time which can be selected (also coin)
6 04	Max. time on P programs	30 – 90 min	1	90	Max. time on AutoStop or RMC
6 05	Autostop	30 - 70°C / 86 - 160°F		50 - 70°C	Depending of the dryer type
6 06	Error code E18	0 / 1	1	0	0 = activated / 1 = deactivated
6 07	Error code E08 flashes when the loading door is open	0 / 1	1	0	0 = activated / 1 = deactivated
6 08	Vaccum error timer	0 - 15 sec.	1	13	Time to pass before vacuum signal appears
6 09	Option	-	-	-	
6 10	Option	-	-	-	

Example

Warning!

Incorrect parameter setting can damage the dryer.

Group 7 - Setting programs
Adjustable parameters

Residual moisture control (RMC) for programmes P1 - P9

Parameter / group	Designation	Range	Step	Factory setting				
				Coin	AHL Auto-Stop	AHL RMC	OPL Auto-Stop	OPL RMC
7 01	Residual moisture P1	0 – 57%	1%	0	0	0	0	0
7 02	Residual moisture P2	0 – 57%	1%	0	0	0	0	0
7 03	Residual moisture P3	0 – 57%	1%	15	0	15	0	5
7 04	Residual moisture P4	0 – 57%	1%	10	0	10	0	10
7 05	Residual moisture P5	0 – 57%	1%	15	0	15	0	15
7 06	Residual moisture P6	0 – 57%	1%	20	20	20	20	20
7 07	Residual moisture P7	0 – 57%	1%	0	0	0	0	0
7 08	Residual moisture P8	0 – 57%	1%	0	0	0	0	0
7 09	Residual moisture P9	0 – 57%	1%	0	0	0	0	0

= Setting is not relevant

Group 7 - Setting programs
Adjustable parameters

Extra drying time for programmes P1 - P9

Para-meter / group	Designation	Range	Step	Factory setting				
				Coin	AHL Auto-Stop	AHL RMC	OPL Auto-Stop	OPL RMC
7 10	Extra drying time P1	00 – 90 min	1	5	5	5	5	5
7 11	Extra drying time P2	00 – 90 min	1	0	0	0	0	0
7 12	Extra drying time P3	00 – 90 min	1	0	0	0	0	0
7 13	Extra drying time P4	00 – 90 min	1	0	0	0	0	0
7 14	Extra drying time P5	00 – 90 min	1	0	0	0	0	0
7 15	Extra drying time P6	00 – 90 min	1	0	0	0	0	0
7 16	Extra drying time P7	00 – 90 min	1	0	0	0	0	0
7 17	Extra drying time P8	00 – 90 min	1	0	0	0	0	0
7 18	Extra drying time P9	00 – 90 min	1	0	0	0	0	0

= Setting is not relevant

Group 7 - Setting programs
Adjustable parameters

Time / Automatic for programmes P1 - P9

Parameter / group	Designation	Range	Step	Factory setting				
				Coin	AHL Auto-Stop	AHL RMC	OPL Auto-Stop	OPL RMC
7 19	Time/Automatic control P1	00 –01	0/1	1	1	1	1	1
7 20	Time/Automatic control P2	00 –01	0/1	1	1	1	1	1
7 21	Time/Automatic control P3	00 –01	0/1	1	1	1	0	1
7 22	Time/Automatic control P4	00 –01	0/1	0	1	0	0	1
7 23	Time/Automatic control P5	00 –01	0/1	0	1	0	0	1
7 24	Time/Automatic control P6	00 –01	0/1	0	1	0	0	1
7 25	Time/Automatic control P7	00 –01	0/1	0	0	0	0	0
7 26	Time/Automatic control P8	00 –01	0/1	0	0	0	0	0
7 27	Time/Automatic control P9	00 –01	0/1	0	0	0	0	0

= Factory setting is not relevant

Group 7 - Setting programs
Adjustable parameters

Air outlet temperature for programmes P1-P9

Para-meter / group	Designation	Range	Step	Factory setting	
				Coin	AHL / OPL
T4190, T4250, T4350, T4300S, T4300LE					
7 28	Temperature for P1	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
7 29	Temperature for P2	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
7 30	Temperature for P3	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
7 31	Temperature for P4	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
7 32	Temperature for P5	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
7 33	Temperature for P6	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
7 34	Temperature for P7	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
7 35	Temperature for P8	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
7 36	Temperature for P9	30-70°C / 86-160°F	1	70°C / 160°F	70°C / 160°F
T4290, T4530, T4650, T4900, T41200					
7 28	Temperature for P1	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
7 29	Temperature for P2	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
7 30	Temperature for P3	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
7 31	Temperature for P4	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
7 32	Temperature for P5	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
7 33	Temperature for P6	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
7 34	Temperature for P7	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
7 35	Temperature for P8	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
7 36	Temperature for P9	30-80°C / 86-176°F	1	80°C / 176°F	80 / 176°F
Coin machines USA, only					
7 28	Temperature for P1	86-160°F	1	151°F	
7 29	Temperature for P2	86-160°F	1	151°F	
7 30	Temperature for P3	86-160°F	1	151°F	
7 31	Temperature for P4	86-160°F	1	151°F	
7 32	Temperature for P5	86-160°F	1	151°F	
7 33	Temperature for P6	86-160°F	1	151°F	
7 34	Temperature for P7	86-160°F	1	151°F	
7 35	Temperature for P8	86-160°F	1	151°F	
7 36	Temperature for P9	86-160°F	1	151°F	

= Factory setting is not relevant

Group 7 - Setting programs
Adjustable parameters

Drying time for Time programmes P1 - P9

Parameter / group	Designation	Range	Step	Factory setting				
				Coin	AHL Auto-Stop	AHL RMC	OPL Auto-Stop	OPL RMC
7 37	Drying time P1	00 – 90 min	1	20	20	20	20	20
7 38	Drying time P2	00 – 90 min	1	20	20	20	20	20
7 39	Drying time P3	00 – 90 min	1	20	20	20	10	20
7 40	Drying time P4	00 – 90 min	1	10	20	10	20	20
7 41	Drying time P5	00 – 90 min	1	20	20	20	30	20
7 42	Drying time P6	00 – 90 min	1	30	20	30	20	20
7 43	Drying time P7	00 – 90 min	1	10	10	10	10	10
7 44	Drying time P8	00 – 90 min	1	20	20	20	20	20
7 45	Drying time P9	00 – 90 min	1	30	30	30	30	30

= Setting is not relevant

Group 7 - Setting programs

Adjustable parameters

The dryer ends the cooling down program when the chosen time has run out (3 min.) and when the chosen temperature (45°C) is reached.

Cooling down <u>temperature</u> for programmes P1 - P9

Parameter / group	Designation	Range	Step	Factory setting				
				Coin	AHL Auto-Stop	AHL	OPL Auto-Stop	OPL RMC
7 46	Cooling down P1	30-85°C / 85-185°F	1	45	45	45	45	45
7 47	Cooling down P2	30-85°C / 85-185°F	1	45	45	45	45	45
7 48	Cooling down P3	30-85°C / 85-185°F	1	45	45	45	45	45
7 49	Cooling down P4	30-85°C / 85-185°F	1	45	45	45	45	45
7 50	Cooling down P5	30-85°C / 85-185°F	1	45	45	45	45	45
7 51	Cooling down P6	30-85°C / 85-185°F	1	45	45	45	45	45
7 52	Cooling down P7	30-85°C / 85-185°F	1	45	45	45	45	45
7 53	Cooling down P8	30-85°C / 85-185°F	1	45	45	45	45	45
7 54	Cooling down P9	30-85°C / 85-185°F	1	45	45	45	45	45

= Setting is not relevant

Cooling down <u>times</u> for programmes P1 - P9

Parameter / group	Designation	Range	Step	Factory setting				
				Coin	AHL Auto-Stop	AHL	OPL Auto-Stop	OPL RMC
7 55	Cooling down P1	1 - 20 min.	1	3	3	3	3	3
7 56	Cooling down P2	1 - 20 min.	1	3	3	3	3	3
7 57	Cooling down P3	1 - 20 min.	1	3	3	3	3	3
7 58	Cooling down P4	1 - 20 min.	1	3	3	3	3	3
7 59	Cooling down P5	1 - 20 min.	1	3	3	3	3	3
7 60	Cooling down P6	1 - 20 min.	1	3	3	3	3	3
7 61	Cooling down P7	1 - 20 min.	1	3	3	3	3	3
7 62	Cooling down P8	1 - 20 min.	1	3	3	3	3	3
7 63	Cooling down P9	1 - 20 min.	1	3	3	3	3	3

= Setting is not relevant

Group 7 - Setting programs

Adjustable parameters

Reversing on/off for programmes P1 - P9

Parameter / group	Designation	Range	Step	Factory setting *				
				Coin	AHL Auto-Stop	AHL RMC	OPL Auto-Stop	OPL RMC
7 64	Reversing P1	00 - 01	0/1	1	1	1	1	1
7 65	Reversing P2	00 - 01	0/1	1	1	1	1	1
7 66	Reversing P3	00 - 01	0/1	0	0	0	1	0
7 67	Reversing P4	00 - 01	0/1	0	0	0	1	0
7 68	Reversing P5	00 - 01	0/1	0	0	0	1	0
7 69	Reversing P6	00 - 01	0/1	1	1	1	1	1
7 70	Reversing P7	00 - 01	0/1	1	1	1	1	1
7 71	Reversing P8	00 - 01	0/1	1	1	1	1	1
7 72	Reversing P9	00 - 01	0/1	1	1	1	1	1

= Setting is not relevant

* Machines without reversing always: 0

Group 8 - Setting programs

Adjustable parameters

Resetting counters

Parameter / group	Designation	Range	Step	Factory setting	Comments
8 01	Reset service counter	00 - 01	00/01		01 = Reset counter
8 02	Reset trip counter	00 - 01	00/01		01 = Reset counter

Group 9 - Setting programs
Adjustable parameters

Various tests

Para-meter / group	Designation	Range	Step	Factory setting	Comments
9 01	Test output 0	01	00/01		01 = Heat on in 3 seconds
9 02	Test output 1	01	00/01		01 = Drum left active in 3 seconds
9 03	Test output 2	01	00/01		01 = External signal active in 3 seconds
9 04	Test output 3	01	00/01		01 = Fan active in 3 seconds
9 05	Test output 4	01	00/01		01 = Drum right active in 3 seconds
9 06	Test input 0	00 - 01	0/1	0/1	Control of door switch 0 = Open, 1 = closed
9 07	Test input 1	00 - 01	0/1	0/1	Control of vacuum switch 0 = Open, 1 = closed
9 08	Test input 2	00 - 01	0/1	0/1	Control of external switch 0 = Open, 1 = closed
9 09	Test input 3	00 - 01	0/1	0/1	Control of condensation filter switch 0 = Open, 1 = closed
9 10	Test input 4	00 - 01	0/1	0/1	Control of filter door switch 0 = Open, 1 = closed
9 11	Test input 5	00 - 01	0/1	0/1	Control of overheating 0 = OK, 1 = Error
9 12	Test input 6	00 - 01	0/1	0/1	Control of gas error inlet 0 = OK, 1 = Error
9 13	Test input 7	00 - 01	0/1	0/1	Control of motor 1 overheating 0 = OK, 1 = Error
9 14	Test input 8	00 - 01	0/1	0/1	Control of motor 2 overheating 0 = OK, 1 = Error

Group A - Setting programs
Adjustable parameters

Customized user panel

Para-meter / group	Designation	Range	Step	Factory setting	Comments
A 01	Standby value	000 - 0999	1		Value shown when dryer is free
A 02	Standby value blinks	00/01	1	01/00	01 = Value blinks when dryer is free
A 03	Final blinks	00/01	1	01/00	01 = Final symbol blinks
A 04	Show temperature	00/01	1	01/00	01 = Temperature is displayed when temp. key is activated.
A 05	Default temperatur setting	0 - 5	1	0	No default
				1	Max
				2	Medium
				3	Low
				4	Now heat
				5	Last temperature
A 06	Min. minutes between pendling	255 sec.	1		Second
				120	Electric, Steam
				20	Gas heated dryer
					Electric heated dryer T4250/T4350
					Electric heated dryer T4190
					Electric heated dryer T4300

Changing P-programs

Following parameters determine how eg. program P1 is executed.

Parameter	Explanation
7.01	**Residual moisture level** in %.
7.10	**Extra drying time**, for how long the drying must carry on after 0% is reached.
7.19	**Time / Automatics**, the program can be set with a specified time period or with a non-time determined drying via the built-in automatics.
7.28	**Max outlet air temperature set-up**, roughly represents the temperature of the garments.
7.37	**Drying time** which might be set in 7.19.
7.46	**Cooling down condition for temperature**, the cooling down of the garments stops when both conditions (7.46 / 7.55) are met.
7.55	**Cooling down condition for time**, the cooling down of the garments stops when both conditions (7.46 / 7.55) are met.
7.64	**Reversing** during P-program on/off.

Example: Changing P1

Program P1 can be adjusted to the individual textiles which are to be used in the dryer.

The below example shows how to change the set up of program for drying thick lining boiler suits in mixed fabric 65/35 with polyester lining.

7.01	00	factory setting = 00% is maintained
7.10	15	extra drying time is set to 15 min
7.19	01	automatic program is maintained
7.28	60	outlet air temperature is set to 60°C (140°F)
7.37	20	factory setting = 20 min is maintained
7.46	35	max outlet air temperature is set to 35°C (95°F)
7.55	10	cooling down time is set to 10 min
7.64	01	factory setting = 01 is maintained

Contents

General

The dryer is equipped with an automatic diagnostic system.

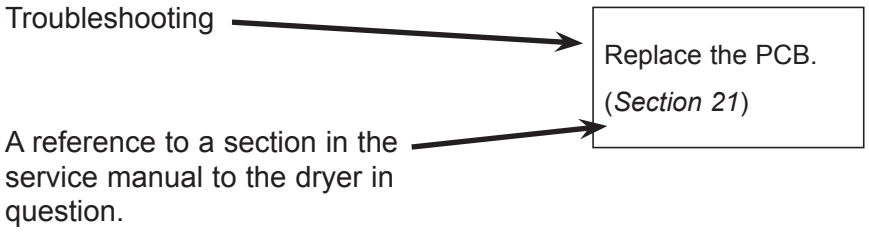
Operating problems are displayed as blinking error codes. Whenever an error occurs, the dryer stops operating.

Except where noted, error codes are cleared by disconnecting the power or by entering the service program.

Error analysis

A diagnostic procedure is provided for each error code. If an error has not been corrected after the procedure, please contact the manufacturer for additional assistance.

Explanation to error analyses



Check list - error codes related to overheating

General note regarding error codes related to overheating:

Before troubleshooting the electronic systems of the machine, examine the dryer to determine if the airflow is normal.

Insufficient airflow due to over-filling the machine, lint-obstructed screens, air passages and ducts, or improper exhaust venting are all possible causes of various errors.

Items concerning the necessary air flow

1. Check that the fresh-air intake to the room and the exhaust ducts/pipes from the room are not clogged by lint/dust or blocked in any other way.
2. Check that the dryer receives the necessary quantity of fresh air. (*See installation manual*).
3. Check that the fresh-air intake preasure drop does not exceed 10 Pa (applies only to air-intake duct kit, if installed - *See installation manual*).
4. Check that the pressure drop in the air outlet ducts does not exceed the value printed on the data sheet in the Service Manual for the specific dryer. (Measurement is done with cold air (20°C/ 68°F).
5. Check that the air inlet screen on the rear of the dryer is not clogged by lint or dust (*See Section 11*).
6. Check that the lint screen is clean and in good condition *(See Section 11)*.
7. Check the door gasket and internal sealing against the drum are defective/ missing/ dirty.
8. Check that the blower compartment and fan wheel have not become blocked with lint or other debris (*See Section 11*).
9. Check that the fan wheel is in good condition, and that it is tightly secured to the motor shaft.
10. Check for severely overloaded dryer. Remove some items as appropriate.

Items concerning gas connection

1. Check that the gas type corresponds with the dryer’s data plate.
2. Check gas inlet and nozzle pressures.

Error code	Description
E 03	**Inlet air - Sensor has short-circuited** The thermistor element measuring the air inlet temperature to the drum, or the wiring to the sensor has shorted.
E 04	**Outlet air - Sensor has short-circuited** The thermistor element measuring the air outlet temperature from the drum, or the wiring to the sensor has shorted.
E 05	**Fan motor** Motor 1: The thermal protection switch in the motor, or its harness, is open.
E 06	**Drum motor** – Motor 2: The thermal protection switch in the motor, or its harness, is open.
E 07	**Option**
E 08	**Inlet and Outlet air protection thermostats** One of the proctection thermostats has opened due to overheating.
E 09	**Option**
E 10	**Setting** Programming error / incorrect or missing parameter(s).
E 11	**Drying error** Maximum allowable RMC time exceeded (non-coin operated models only).
E 12	**Drying error** Maximum allowable Autostop time exceeded (non-coin operated models only).
E 13	**Drying error -** Requested drying time is longer than maximum allowed.(dryer connected to a payment system).
E 14	**Gas error** - A flame was not detected on gas heated dryers.
E 15	**Vacuum switch** The vacuum switch/pressostat does not shut within 12 seconds after the dryer is started.
E 16	**Vacuum switch** The vacuum switch/pressostat was already closed when an attempt to start the dryer was made.
E 17	**Input sensor disconnected** The inlet thermistor or wiring to the thermistor is open.
E 18	**Output sensor disconnected** The outlet thermistor or wiring to the thermistor is open.
E 19	**Option** Not in use.
E 20	**CMIS out of operation** The dryer is put out of order in the PC programme.
E 21	**CMIS com board poll error** The PC does not poll the dryer within the time out.
E 22	**LM10 com board poll error** The PC does not poll the dryer within the time out.

All error codes are registered in the error log.

E 03 - Inlet air - Sensor has short-circuited

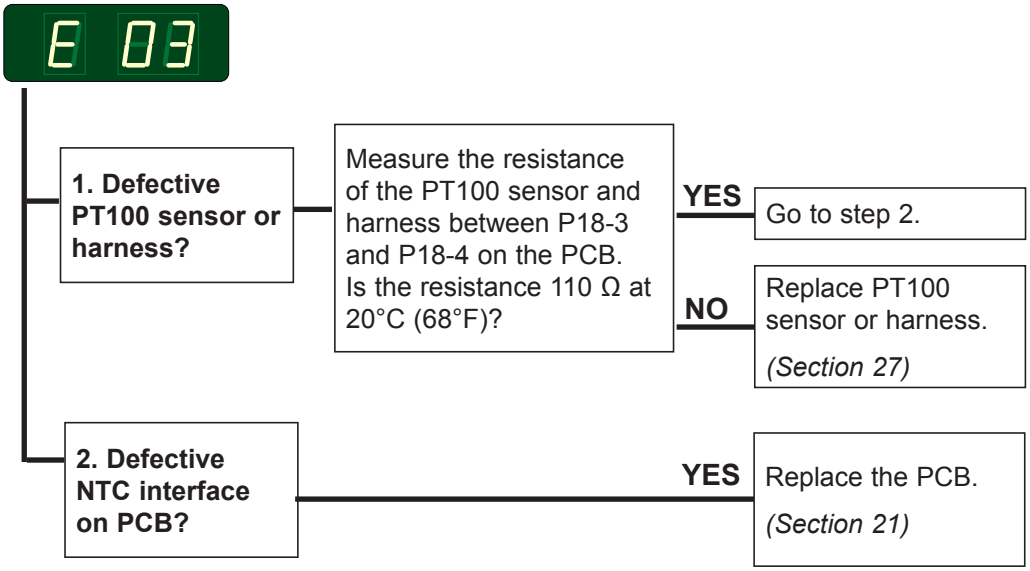
Error description

This error code indicates that the inlet air thermistor connected to the PCB or the harness from the PCB to the thermistor, has short circuited.

A defective detection circuit in the PCB can also cause this error.

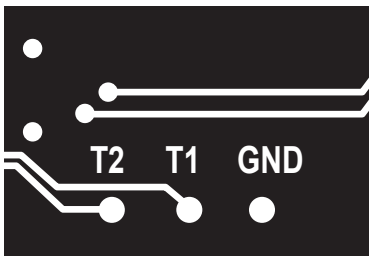
The dryer stops operating.

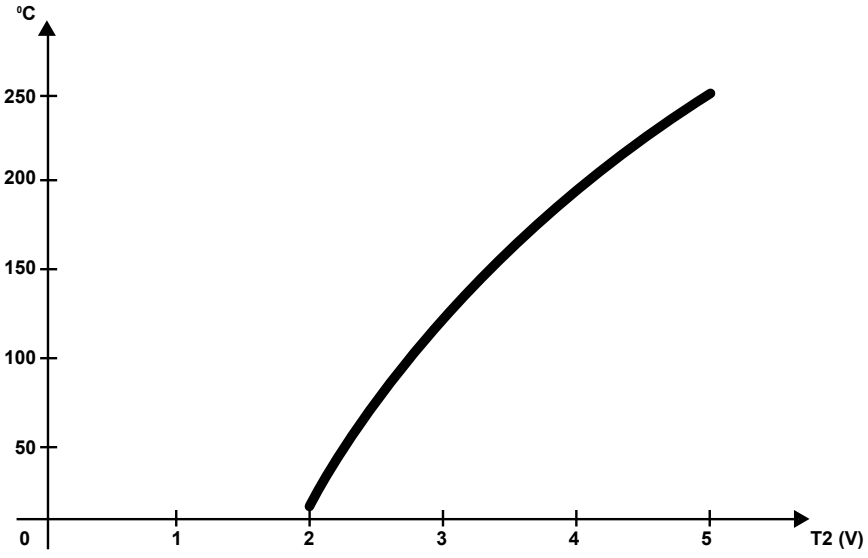
Error analysis



Alternativ

Measure voltage on T2



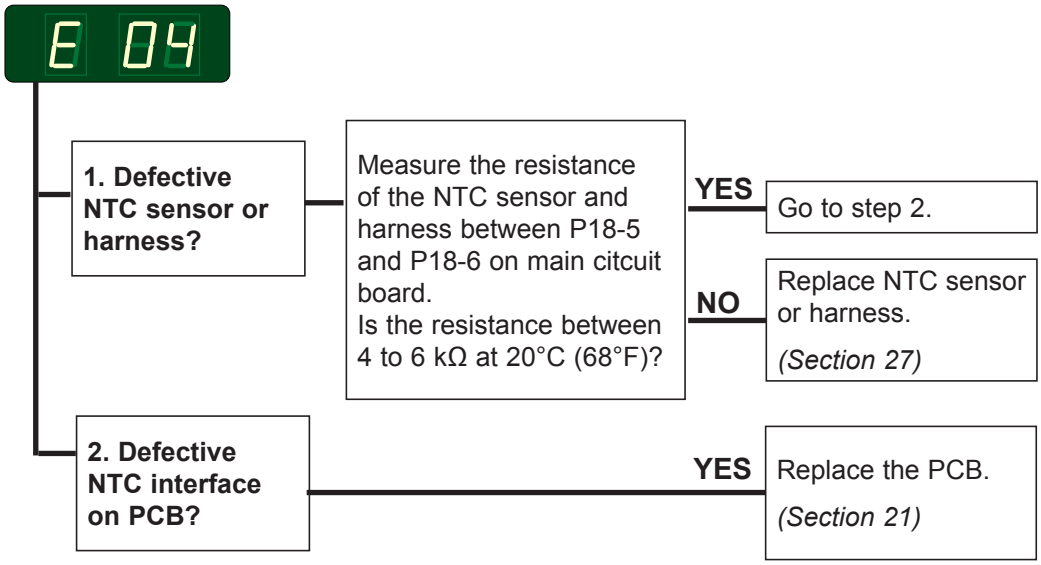


E 04 - Outlet air - Sensor has short-circuited

Error description

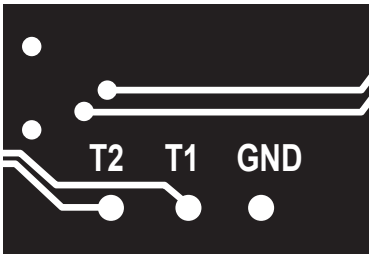
This error code indicates that the outlet air thermistor, connected to the PCB, or the harness from the board to the thermistor, has short circuited.
A defective PCB can also cause this error.
The dryer stops operating.

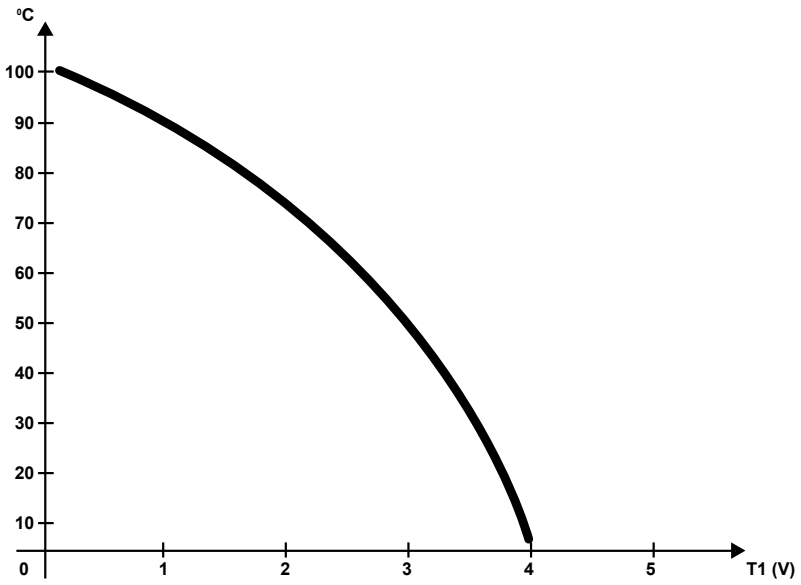
Error analysis



Alternativ

Measure voltage on PCB-T1



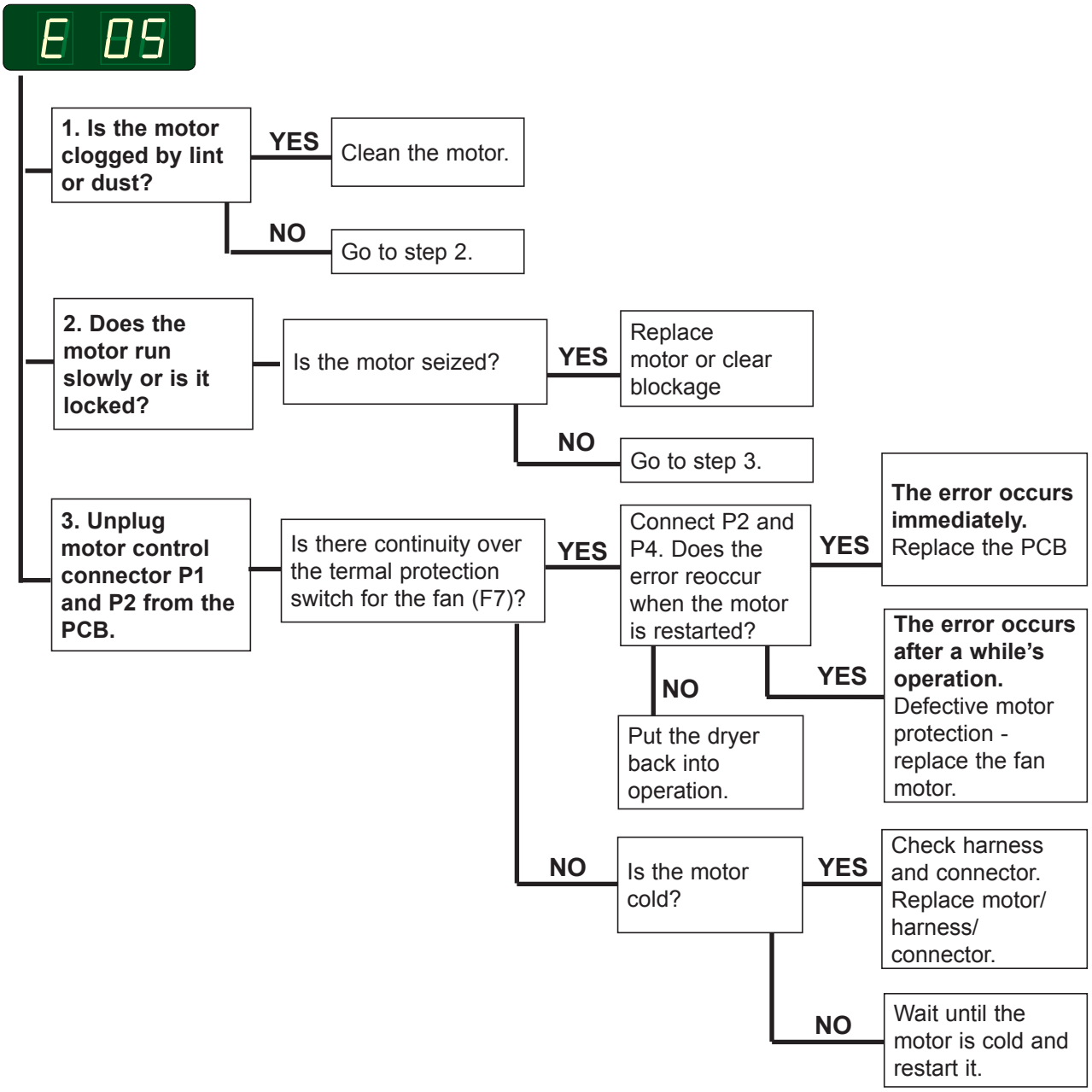


E 05 - Fan motor - Overheating protection (motor 1) Only in machines with 2 motors

Error description

The thermal protection switch inside the fan motor is connected to the PCB.
This error indicates that the thermal protection switch, or the harness between the board and the switch, has opened.
A defective PCB can also cause this error.
The dryer stops operating.

Error analysis

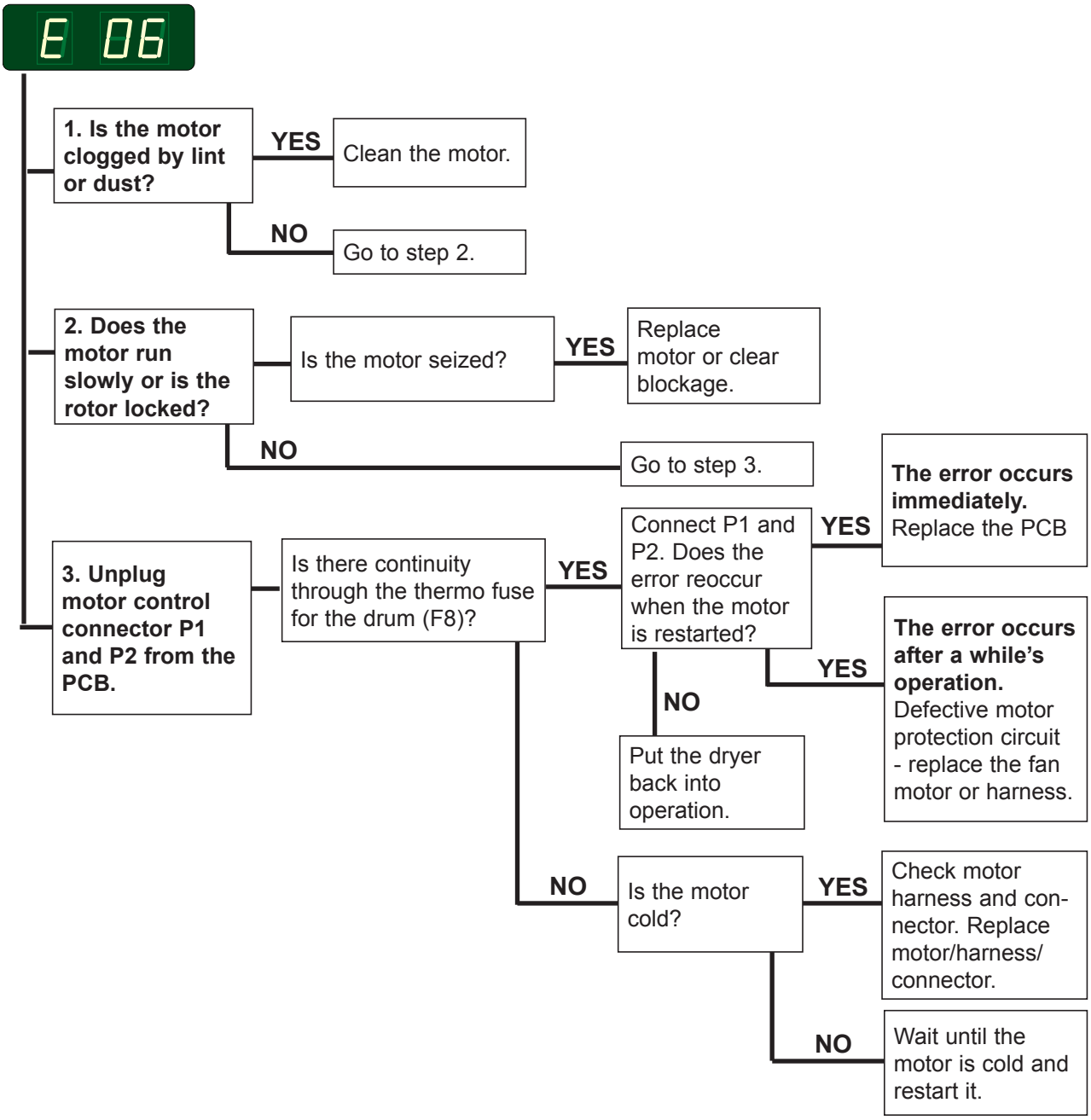


E 06 - Drum motor - Overheating protection (motor 2)

Error description

The thermal protection switch inside the drum motor is connected to the PCB.
This error indicates that the thermal protection switch, or the harness between the board and the switch, has opened.
A defective PCB can also cause this error.
The dryer stops operating.

Error analysis



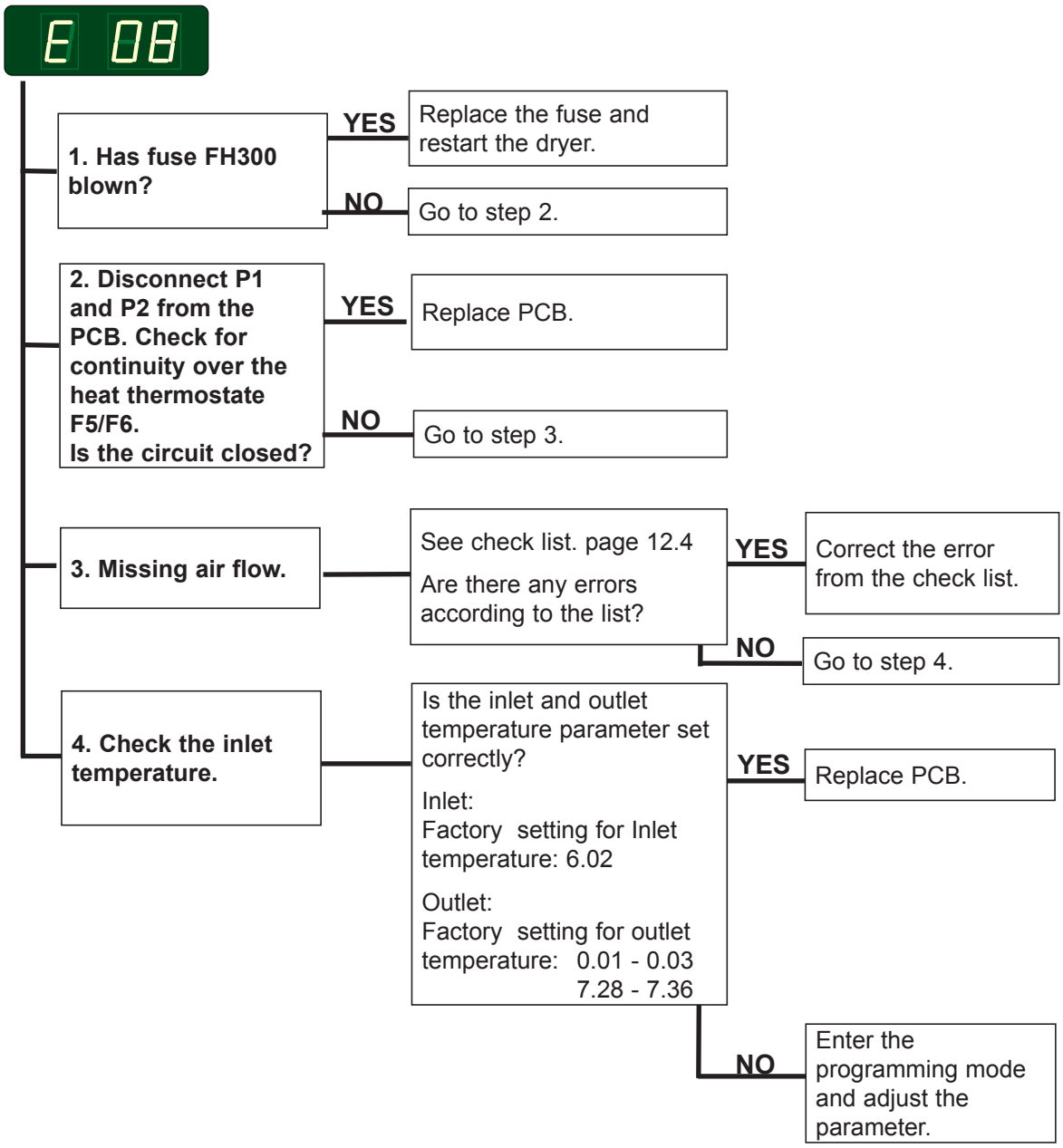
E 07 - Option

E 08 - Inlet air/outlet air - Overheating thermostat

Error description

A normally-closed, manual-reset high limit thermostat measuring the inlet air temperature. The thermostat is connected in series with the overheating thermostat for outlet air on the PCB.
This error indicates that one of the two thermostats, or the connecting harness has opened.
A defective PCB can also cause this error.
The dryer stops operating.

Error analysis



E 09 - Option

Not in use!

E 10 - Programming errors - (Settings)

Error description

This error occurs when the parameter set-up is inconsistent.

Note! When resetting the circuit board the user adjusted programs disappear and need reprogramming.

The dryer stops operating.

Error analysis

1. Enter the service program.
Set parameter 4.06 to "1" to restore all factory settings.
Alle user-desired programing will be overwrighted.
Exit programming mode and attempt to operate the dryer.

Does the E10 return?

YES → Replace the PCB

NO → Re-enter user-desired parameter settings (time per push/coin, for example). These are erased when factory defaults are restored.

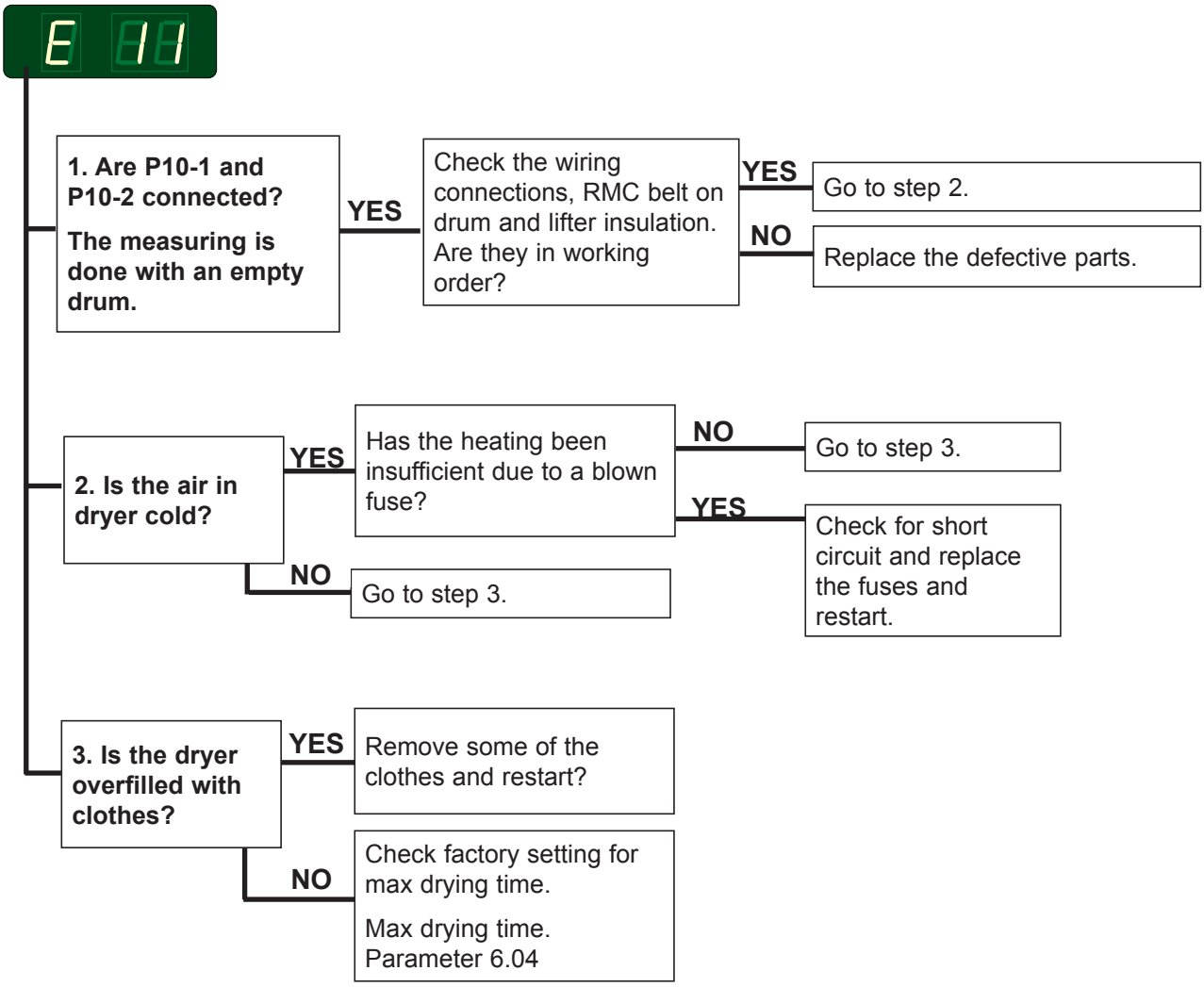
E 11 - Drying error with RMC

Error description

Error code E11 occurs if the RMC system does not register that the clothes are dry within 90 minutes (factory setting).

The dryer stops automatically when the clothes have the chosen residual moisture.

Error analysis



Resetting

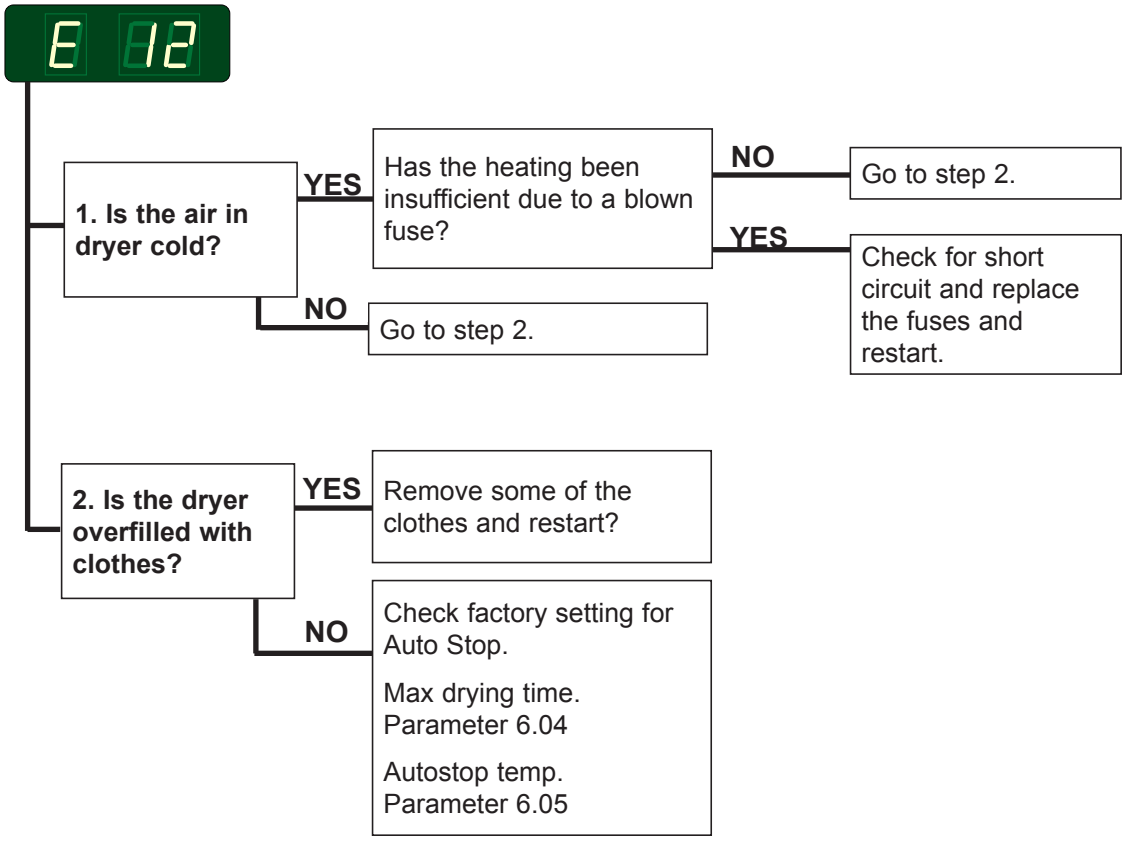
Resetting is done by opening/closeing the door to the dryer and pressing the start button

E 12 - Drying error with Auto Stop system

Error description

Error code E12 occurs if the Auto Stop system does not register that the clothes are dry within 90 minutes (factory setting).

Error analysis



Resetting

Resetting is done by opening/closeing the door to the dryer and pressing the start button

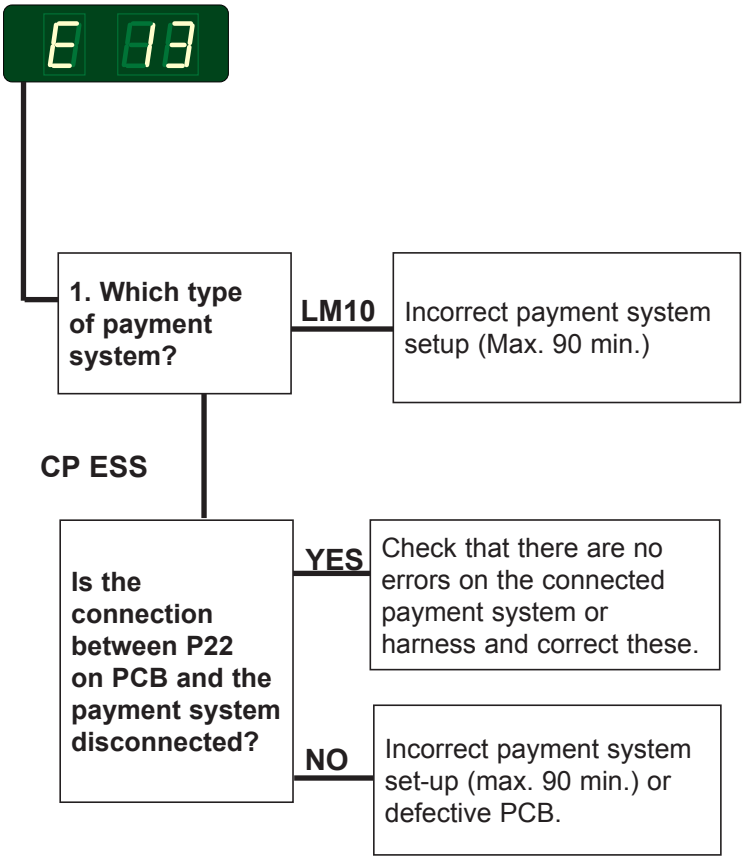
E 13 - Drying error, dryer connected to a payment system

Error description

Error code E13 occurs with Payment systems where the customer or system has requested a longer drying time than the allowed 90 minutes (factory setting on the dryer).

Error code is not displayed but is registered in the error log.

Error analysis



E 14 - Gas error

Error description

When the ignition control fails to detect a flame, a signal is sent to the PCB, and error code E14 is displayed.

The metal probe of the flame sensor generates an electrical current when exposed to the burner's flame.
This signal is detected by the ignition control module which, in turn, cuts off the gas valve immediately if the sensor does not indicate flame within 5 sec.

The integrity of the sensor's electrical connection is, therfore, critical to proper operation of this system.

Displaying error code E14

USA and Japan: The error code is not displayed until the 3rd unsuccessful ignition attempt.

Europe: The error code is displayed at the 1st unsuccessful ignition attempt.

Error analysis

See next page.

Resetting

Resetting is done by pushing the gas reset button on the circuit board.

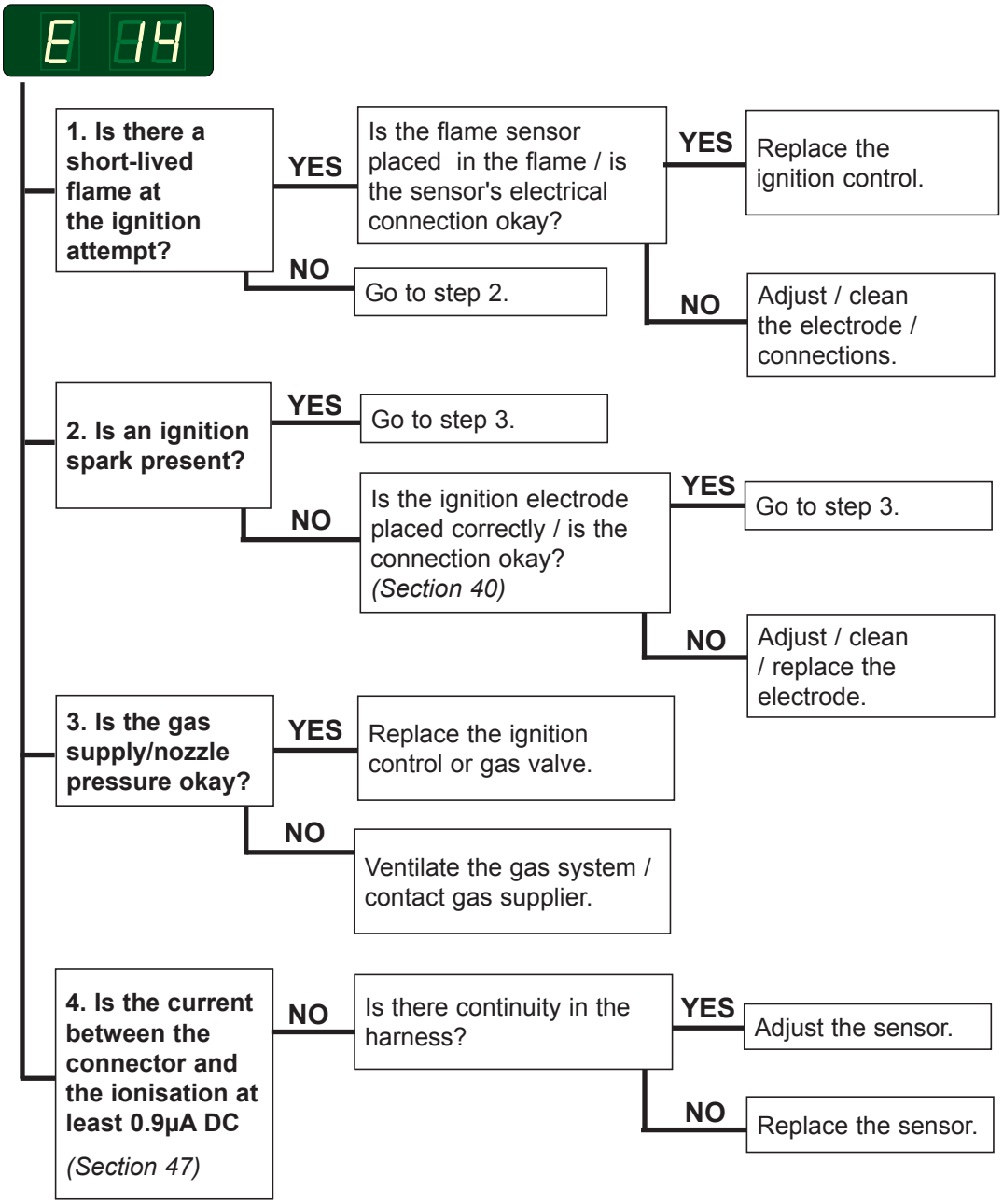
Japan only: By opening and closing the door (coin operated dryers only).

E 14 - Gas error

Gas resetting

See on the preprevious page.

Error analysis

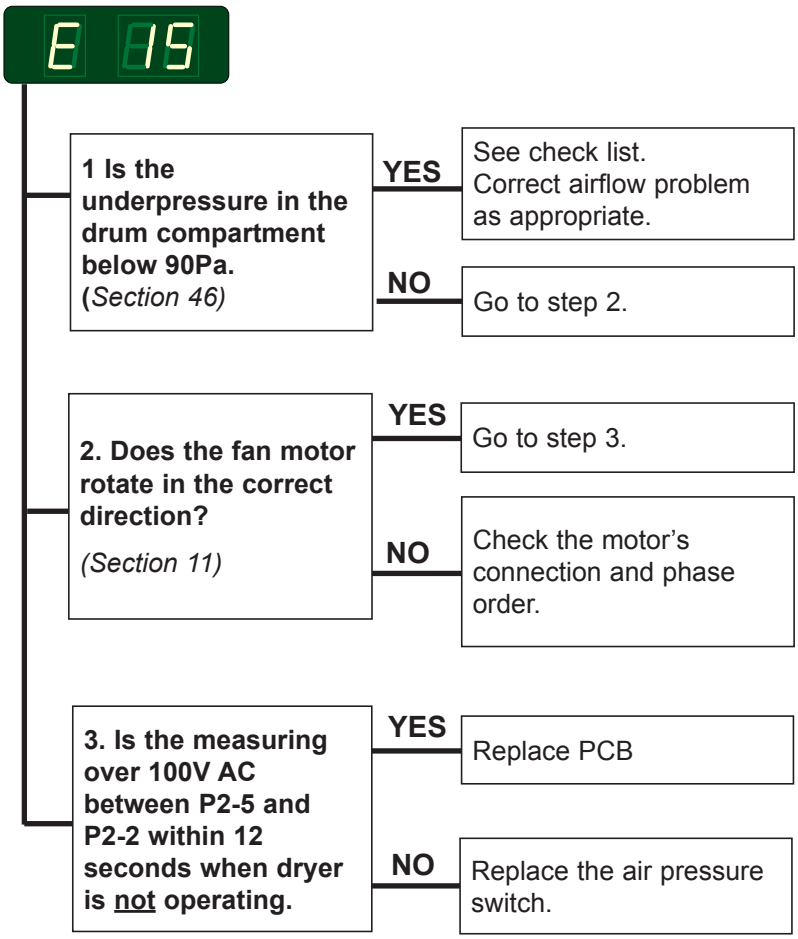


E 15 - Air pressure switch or vacuum switch

Error description

The air pressure switch or the vacuum switch does not shut within 12 seconds after the fan has started.

Error analysis



Resetting

Resetting is done by opening/closeing the door to the dryer and pressing the start button

E 16 - Pressostat or vacuum switch does not open

Error description

The error occurs if the vacuum switch / pressostat is already closed when an attempt to start the dryer is made.

Error analysis

1. Is heat setting in 4.02 connected?

(Some type of heat system do not have pressostat or vacuum switch mounted).

YES → Go to step 2.

NO → Changes heat setting.

2. Is the measuring over 100V AC between P2-5 and P2-2 within 12 seconds when dryer is <u>not</u> operating.

YES → Replace the air pressure switch.

NO → Go to step 3.

3. Are harness defective?

YES → Replace the harness.

NO → Replace the PCB.

Resetting

Resetting is done by opening/closeing the door to the dryer and pressing the start button

E 17 - Input sensor disconnected

Error description

This error is displayed when the inlet PT100 sensor is disconnected.

Error analysis

1. Defective PT100 sensor/ harness?

Measure the resistance on thePT100 sensor between P18-4 and P18-3 on PCB. Is the resistance 110 Ω at 20°C (68°F)?

YES → Go to step 2.

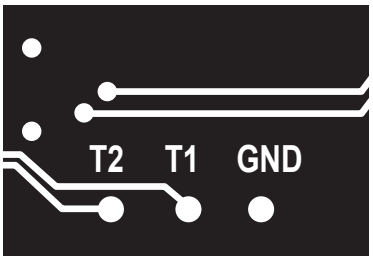
NO → Replace PT100 sensor or harness. *(Section 27)*

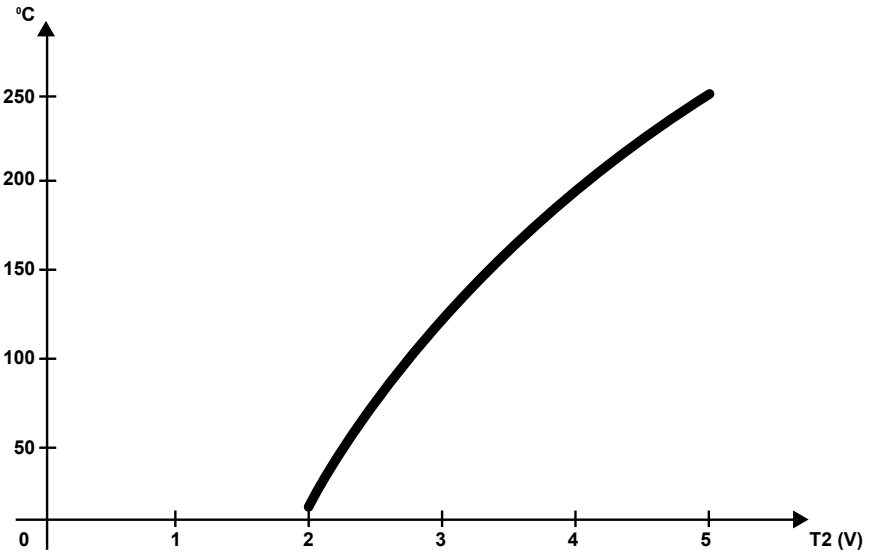
2. Defective PT100 interface on PCB.

YES → Replace the PCB.

Alternativ

Measure voltage on T2





Resetting

Resetting is done by opening/closeing the door to the dryer and pressing the start button

E 18 - Output sensor disconnected

Error description

This error is displayed when the outlet NTC sensor is disconnected.

Error analysis

1. Defective NTC sensor/harness?

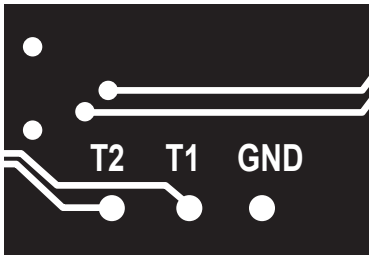
Measure the resistance on the NTC sensor between P18-5 and P18-6 on PCB. Is the resistance between 4kΩ and 6kΩ at 20°C (68°F)?

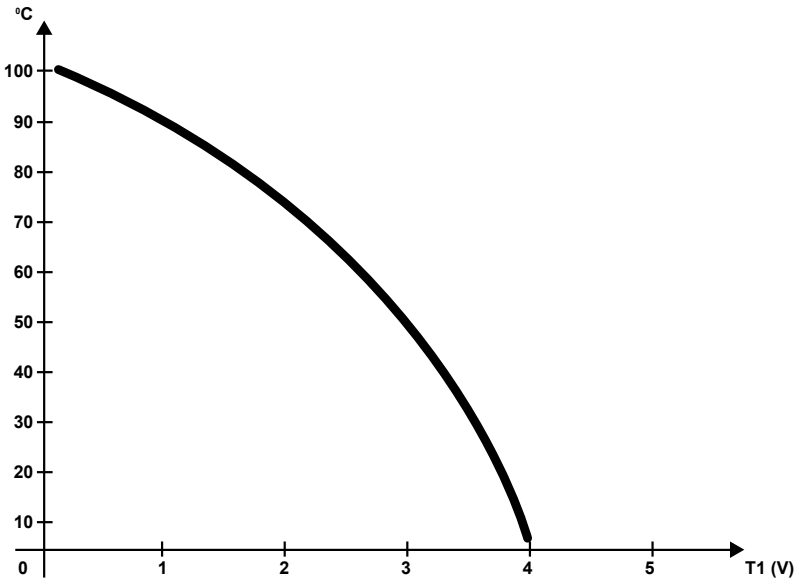
YES — Go to step 2.

NO — Replace NTC sensor or harness. *(Section 27)*

Alternativ

Measure voltage on PCB-T1





Resetting

Resetting is done by opening/closeing the door to the dryer and pressing the start button

E 19 - Option

Not in use!

E 20 - CMIS out of operation

Error description

This error is displayed if the dryer is put out of order in the CMIS program.

Error analysis

See separate manual.

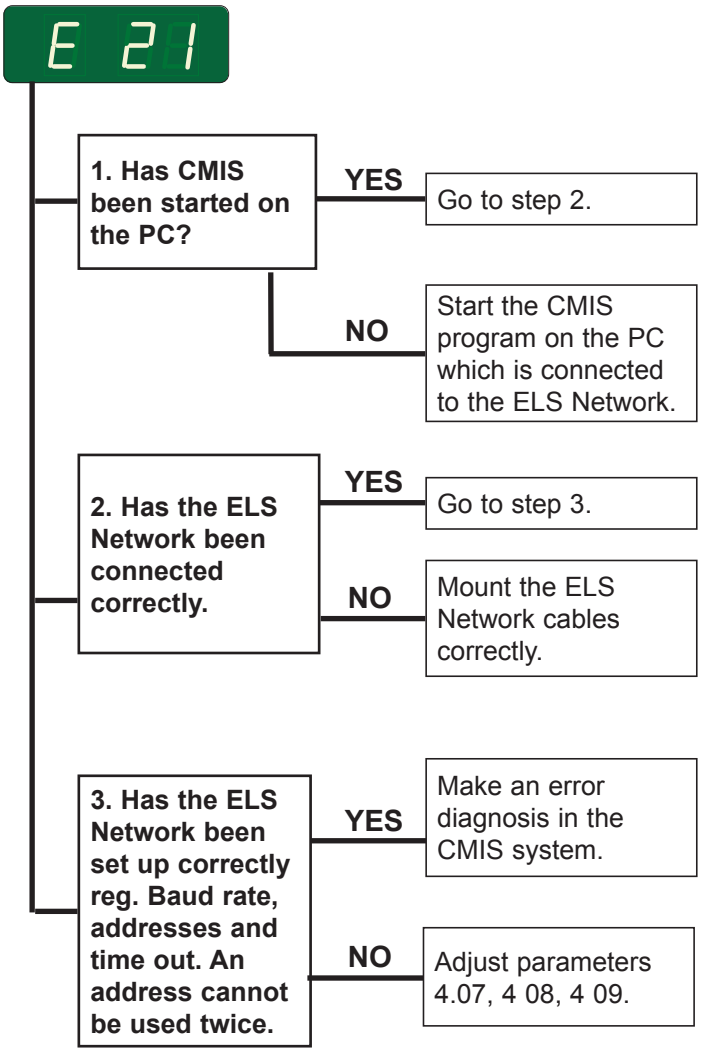
E 21 - CMIS

Error description

This error is displayed if the dryer is connected in a CMIS system and the PC does not communicate with the dryer (no polling) within 10 sec (time out factory setting). The error is displayed the 10 first times the dryer is started and after this it will not reappear.

Note! This is a warning and the dryer will operate even though the error has been activated

Error analysis



E 22 - LM10

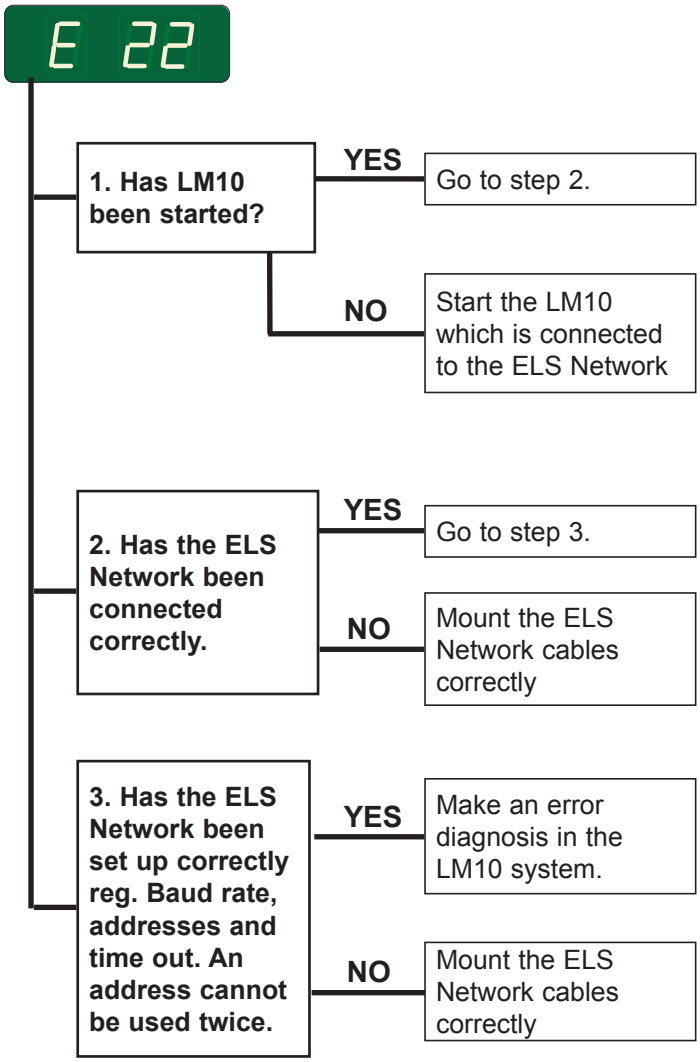
Error description

This error is displayed if the dryer is connected in a LM10 system and the PC does not communicate with the dryer (no polling) within 90 sec (time out factory setting).

The error can only be removed, if communiction is re-established.

Note! It is not possible to use the dryer, however, it can be done by means of the “free of charge key”.

Error analysis



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