Electrolux Distriparts

SERVICE MANUAL

COOKERS

Ovens
Compact Range

Microwave

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Index

1.1 Safety requirements

- Before and during a repair you must take precautionary measures in order to prevent that the service technician is possibly exposed to the microwave energy!

- Never put the appliance into operation with open door!

- Before putting an appliance to be repaired into operation, perform the previous safety tests:

Locking behaviour of door - sealings and surfaces - hinges and bolts - mechanical (foreign) interventions from the outside!

UNPLUG THE MAIN PLUG on measurements or repairs!

By all means discharge the high-voltage capacitor before. This must happen by suitable lines with insulated spits!

With any microwave oven, a high-frequency leakage test (measurement of radiation leakage) and the test according to VDE 0701 must be performed after a repair (this includes also the opening of the appliance).

Microwave ovens may only be repaired by technicians who have been trained and instructed correspondingly, who have the required tools, measurement devices and technical documents!

Extensive information on the basis of microwave, measurement technique and troubleshooting you can take from the Service Manual Microwave Ovens general, publ. No.: 599 510 968.

1.2 ESD=electrostatic discharge

As the single electronic interfaces are not protected internally against statical electricity and are partially open, you must pay attention to that, in case of a repair, there will be a potential compensation via the housing of the appliance (touch it) in order to neutralize a possible charging and to prevent a damaging of the affected electronic interface.

You also have to be careful with those electronics delivered as spare parts, which have to be put out of the ESD protective package only after a potential compensation (discharge of possible statical electricity).

If a potential compensation with an existing static electricity is not executed, it does not mean that the electronic is demaged directly. Consequential damages may result due to the damaging of internal structures which arise only in case of load through temperature and current.

Endangered are all assembly groups which are provided with control entries, wire paths lying open and free-accessible processors.

2. Software specifications, functions

2.1 Panel example (Electrolux CH)

2.2 Possible touch controls of all groups of appliances

2.2.1 Microwave Combi

AEG - D

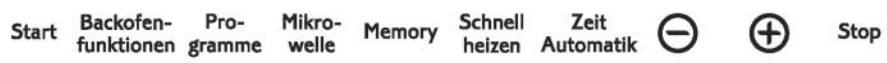
AEG - Intern.

AEG - CH

Electrolux - CH :

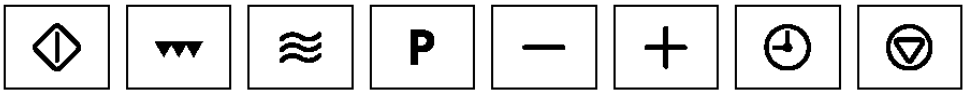
Electrolux - Intern.

Juno - Electrolux



AEG - D

AEG - Intern.+ CH



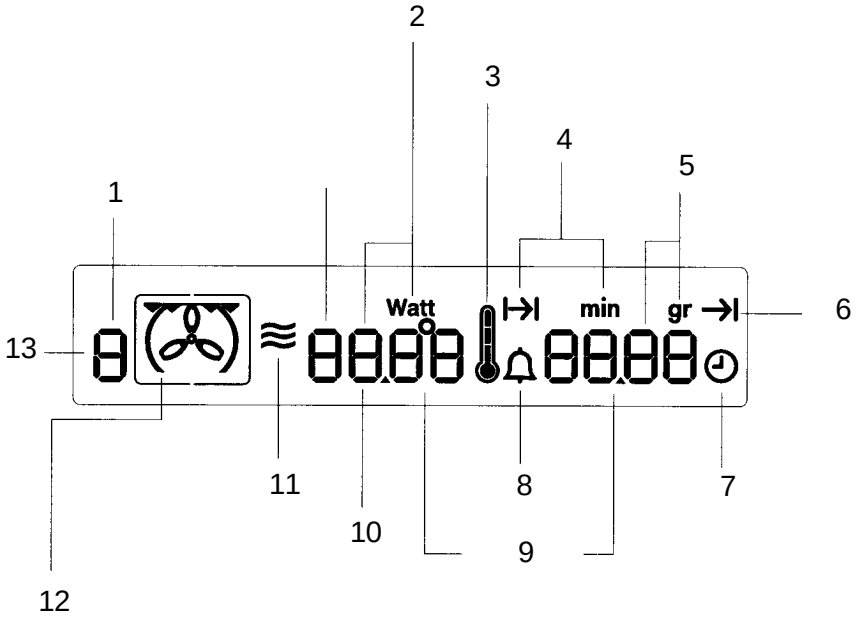
Electrolux - CH :

Electrolux - Intern.

Juno - Electrolux

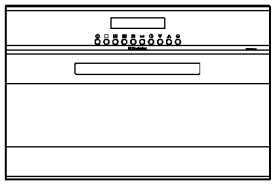
2.3 Symbol, explanation for display and keys

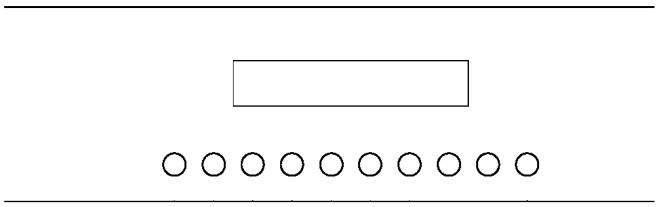
2.3.1 Display



symbol/indication no.	meaning/explanation
1	display baking/broiling programs and memory function
2	display microwave performance
3	thermometer symbol
4	duration
5	display weight
6	end
7	time of day
8	short time
9	display time of day
10	display temperature
11	display time of day
12	display oven functions
13	d=Demo-functions

2.3.2 Function touch keys





Depending on the appliance design it may be eight or ten touching keys. The functions of the several keys are also different depending on the brand.

Microwave Combi

	AEG	**AEG CH**	**Electrolux**	**Electrolux EU/JUNO**
1	Start			
2	To the bottom		Oven Functions	
3	To the top		Programs	
4	Microwave			
5	Programs		Memory Function	
6	High speed heating	Memory Function	Light	High speed heating
7	Minus		Clock Functions	
8	Plus		Minus	
9	Clock Functions		Plus	
10	Stop		Reset	

Microwave Solo

	AEG	**AEG CH**	**Electrolux**	**Electrolux EU/JUNO**
1				
2	Start			
3	Grill			
4	Microwave		Programs	
5	Programs		Microwave	
6	Minus		Clock Functions	
7	Plus		Minus	
8	Clock Functions		Plus	
9	Stop		Reset	
10				

2.4 Main features of operation

2.4.1 Set clock

Information: The oven functions only with a set time.

When the appliance must be connected again with the mains e.g. after a repair, you have to set the clock anew. Proceed as follows.

After the connection or a short circuit the symbol for „time of day“ is flashing. Use keys „+“ or „-“ to set the current time of day.

Wait 5 seconds

The flashing goes out and the clock shows the set time of day. The appliance is ready for operation.

Note: For detailed information on the operation/oven functions see **Service Manual 599 354 040**

2.4.2 Child-proof lock

When the child-proof lock has been activated, the appliance can not be put into operation.

Activate child-proof lock
- If necessary, switch off the appliance by the START key.
- Press and hold "program" and "-" keys simultaneously until the display indicates "SAFE" (approx. 2 seconds), until "SAFE" in the display goes out (approx. 2 seconds). Now the child-proof lock is deactivated and the oven is ready for operation again.

2.4.3 Key beep

Deactivate key beep:
- If necessary, switch off the appliance by the START key.
- Press and hold "+" and "-" simultaneously until a beep will sound (approx. 2 seconds). The key beep is now deactivated.

Activate key beep:
- Beep sounds (approx. 2 seconds). The key beep is activated again.

Microwave Combi		Capacity [W]	Hot air	GRILL	TURBO GRILL	Drying	MW
	Suggested temperature		Elux CH 170°C Other 150°C	250°C	180°C	30°C	1000W
	Max.		250°C	250°C	250°C	100°C	1000W
	Min.		30°C	30°C	30°C	30°C	100W
Consumer	Grill heating element	1500		X	X		
	Motor hot air	26	X		X	X	
	Ring-element	1650	X			X	
	Microwave	1750					X
	Motor wave agitator	4					X
	Motor cooling magnetron	30					X
	Coolingvan	19	X	X	X	X	X
	Oven light	26	X	X	X	X	X
ctive sensors/door switches	Oven sensor		X	X	X	X	X
	Sensor magnetron						X
	Door switch		X	X	X	X	X
Voltage cooling fan [%]			50	100	100	100	100
Microwave Solo		**Capacity [W]**		**GRILL**		**DEFROST**	**MW**
	Suggested temperature			250°C		30°C	1000W
	Max.			250°C		100°C	1000W
	Min.			30°C		30°C	100W
Consumer	Grill heating element	1500		X			
	Motor hot air	26				X	
	Microwave	1750					X
	Motor wave agitator	4					X
	Motor cooling magnetron	30					X
	Coolingvan	19		X		X	X
	Oven light	26		X		X	X
ctive sensors/door switches	Oven sensor			X		X	X
	Sensor magnetron						X
	Door switch			X		X	X

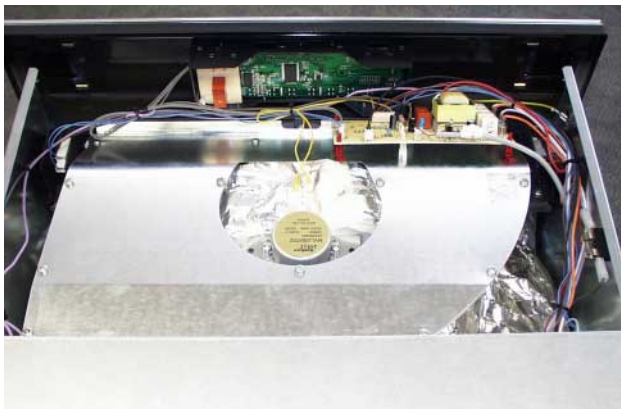
4. Data of components / assembly situation / disassembly

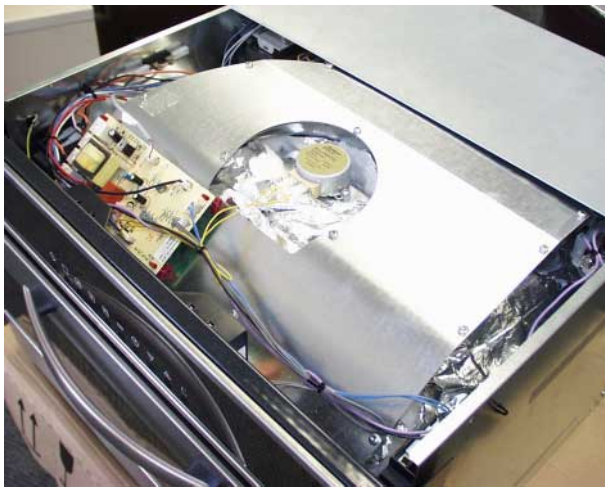
On principle the oven must be removed completely from the installation niche in case of service.

Note: 90% of all screws used in the appliance are Torx screws of size T20

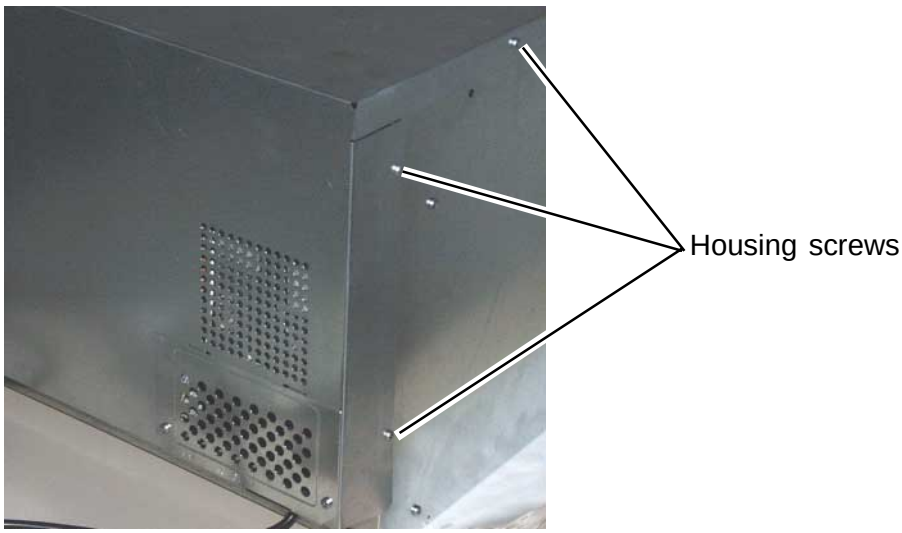
4.1 Opening the appliance

The housing lid is made of a front and a rear half. For opening the front half of the lid you first have to remove both Torx screws right and left.





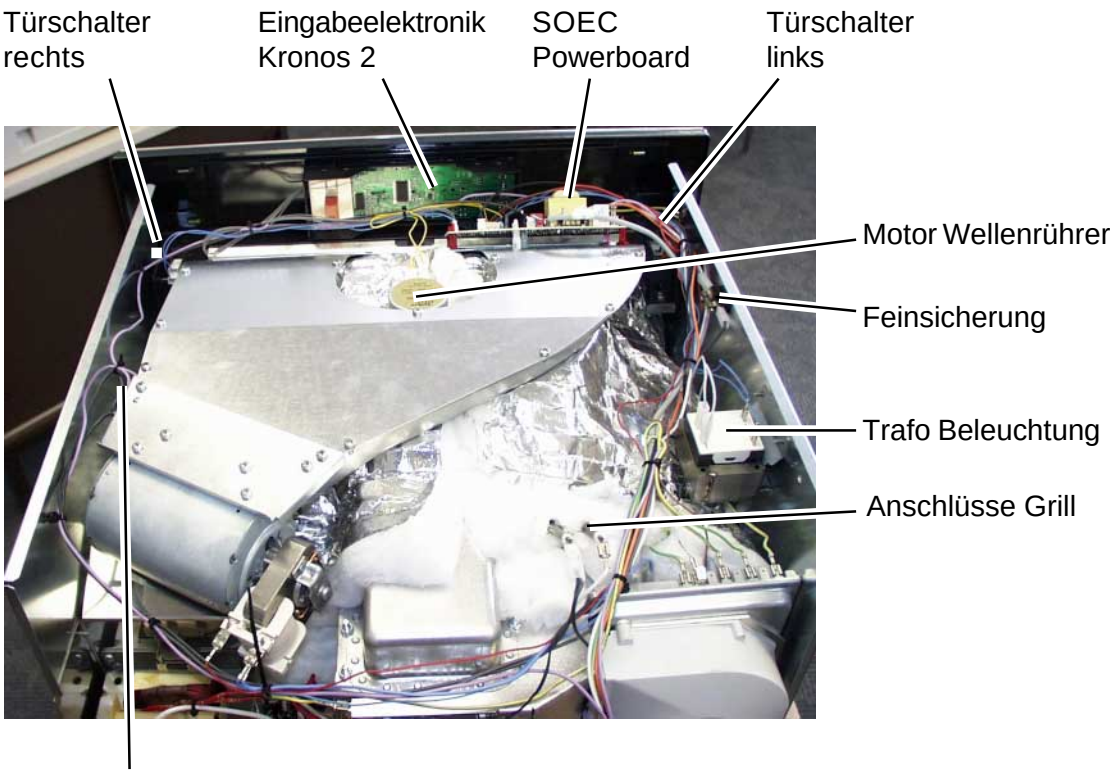
User interface, power board, cooling fan, safety thermostat and door switch light are accessible.



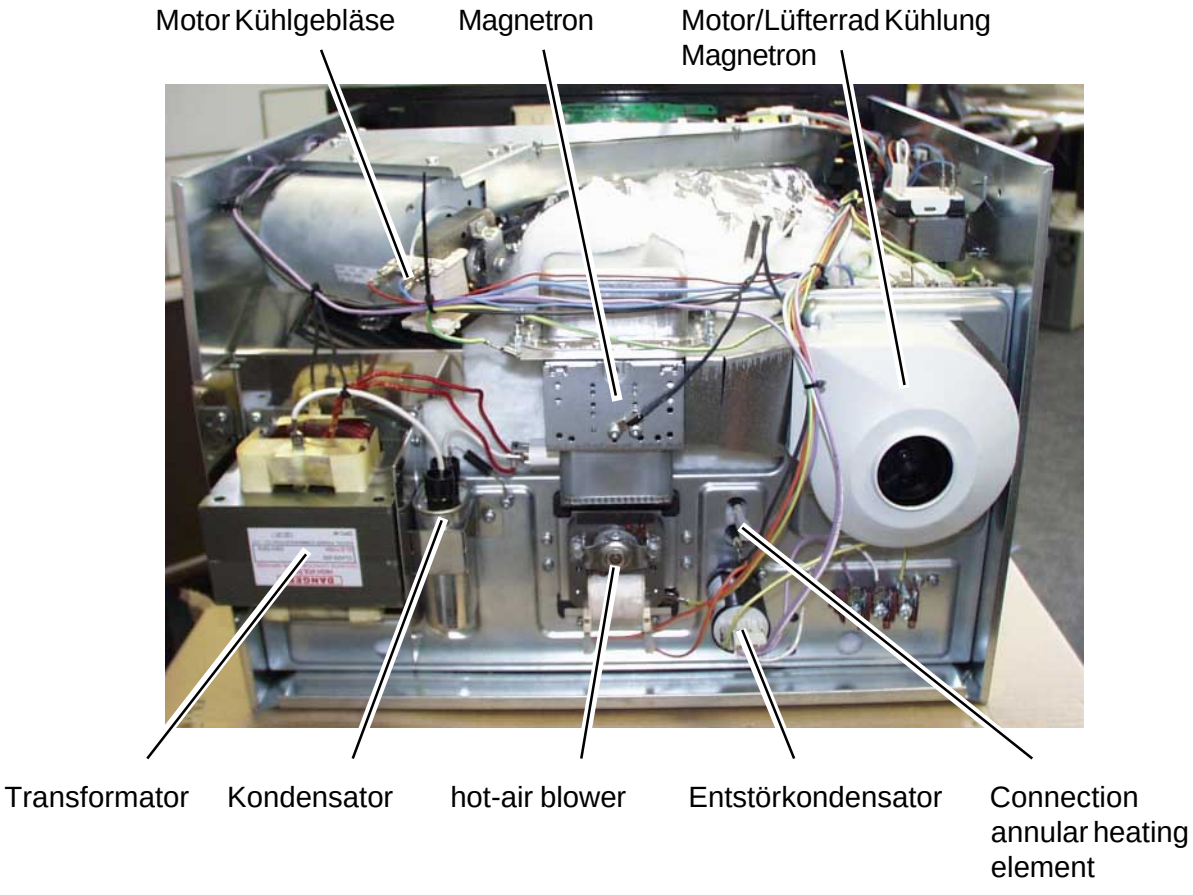
The rear upper half of the lid and the housing rear wall are one unit. For removing this unit unscrew three housing screws each at the right and the left side of the appliance.

4.2 View of open appliance

4.2.1 Top view



4.2.2 Rear view



4.3 Disassembly of Kronos 2 input electronic

Fig.: Switch panel after disassembly

Fig.: Support springs switch panel

The switch panel is adjusted and attached by four springs to the panel support. For disassembly you have to take off the switch panel from the panel support to the front.

Fig.: Touch board with data links

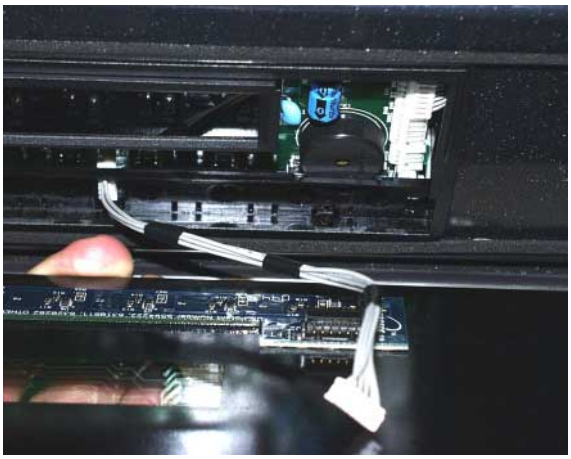


Fig.: Removed data link

Attention

At works the touch board is stuck directly onto the switch panel. Even in case of replacement, the switch panel and the Touch board form one unit. It is provided with sensors which transmit the received impulses to the user interface. This is realised via a data link. When disassembling the switch panel pay attention to that both data links touch board/user interface have to be taken off.

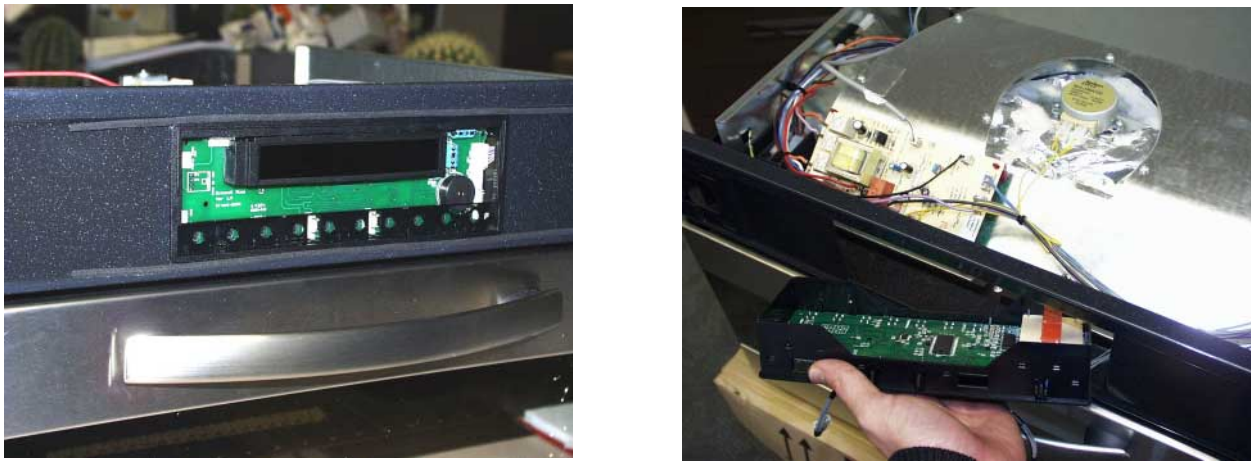
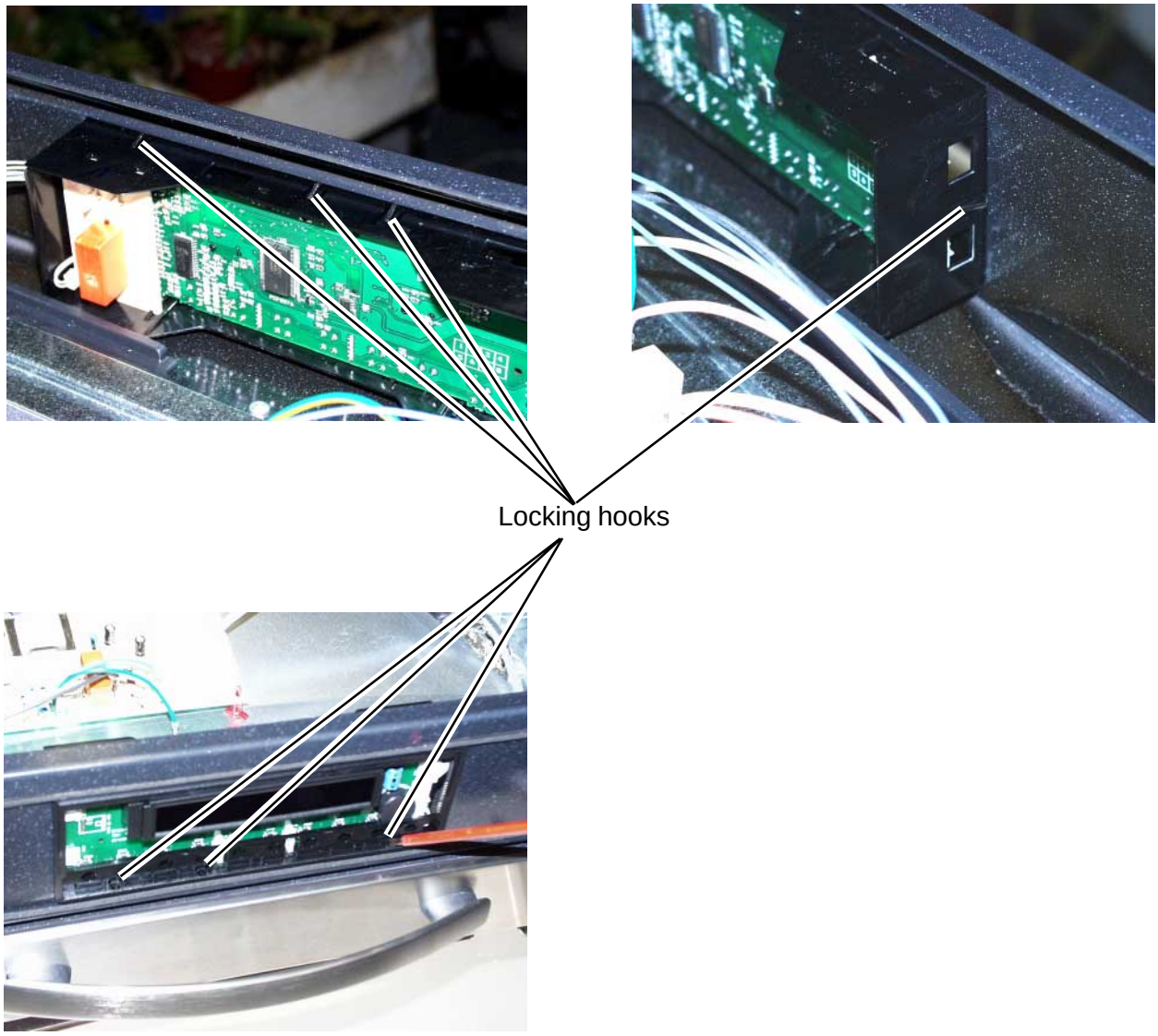
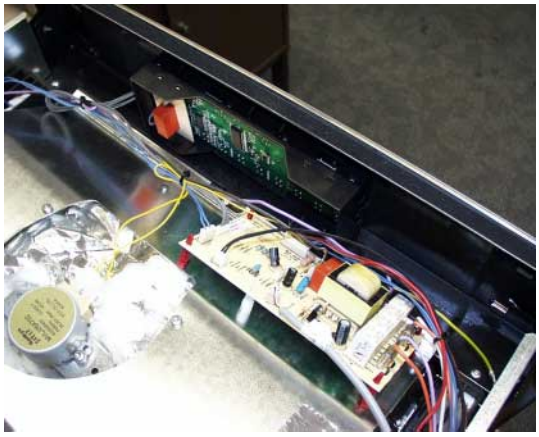


Fig.: Input electronic in installed condition and disassembling after unlocking

The input electronic is fixed by several locking hooks in the panel support. These must be unlocked before it is possible to remove the input electronic to the front side of the appliance.



4.4 Disassembly of SOEC power board



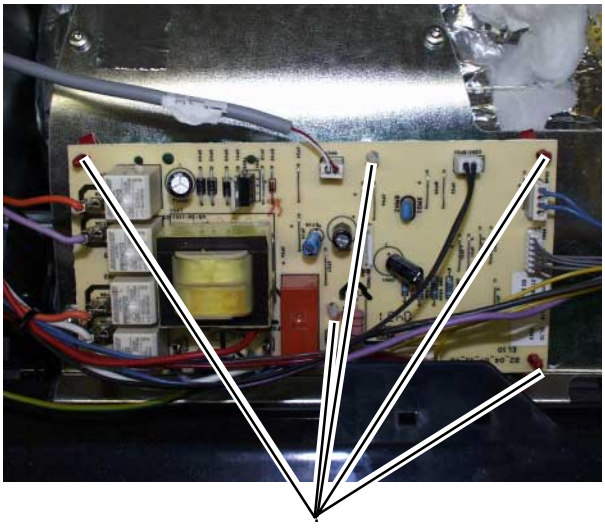


Fig.: Assembly position SOEC power board Fixing clips

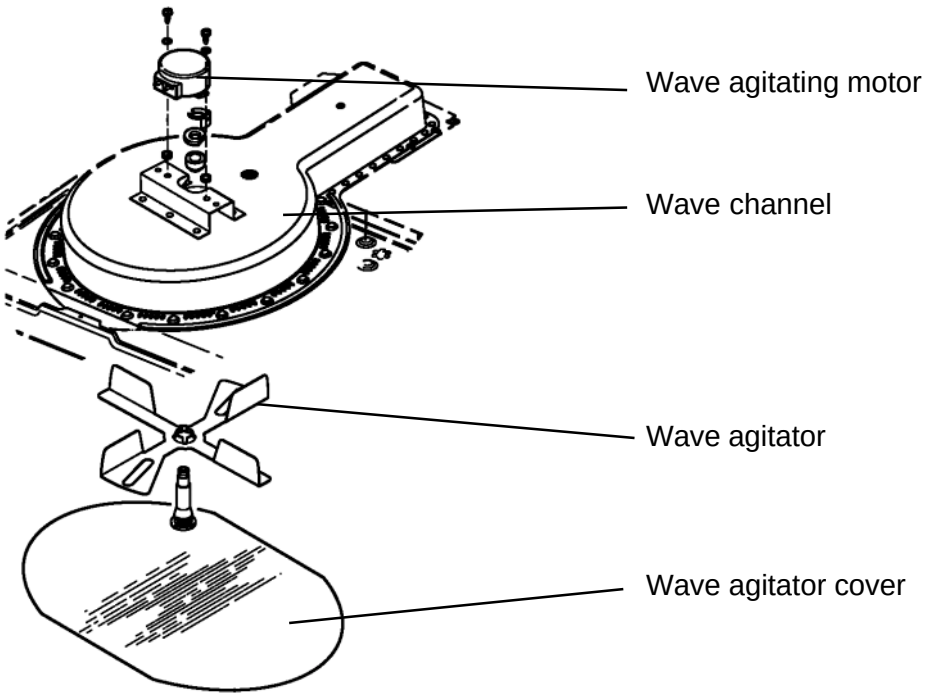
It is positioned by five fixing clips. These must be released to remove the power board.

Note: For technical description of the SOEC power board see Service Manual 599 354 040

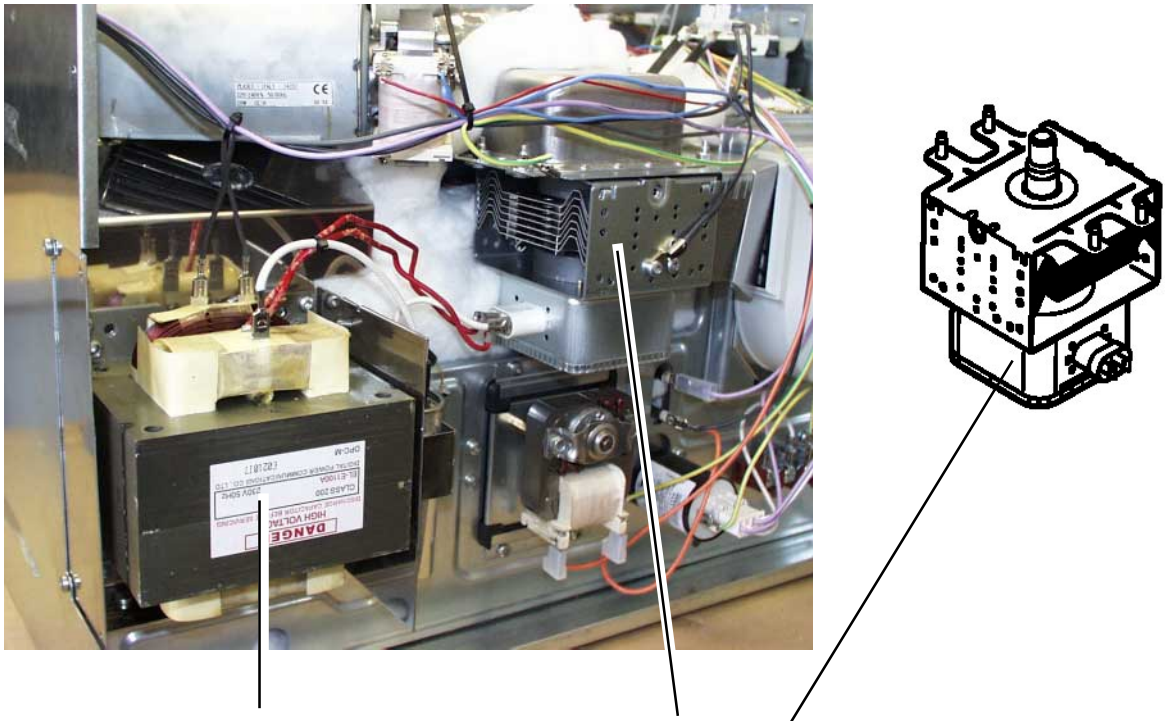
4.5 Wave agitating motor / wave distribution

The wave agitating motor is located in the center at the upper side of the appliance (see top view of the appliance). It can now be removed by unscrewing both fixing screws right and left.

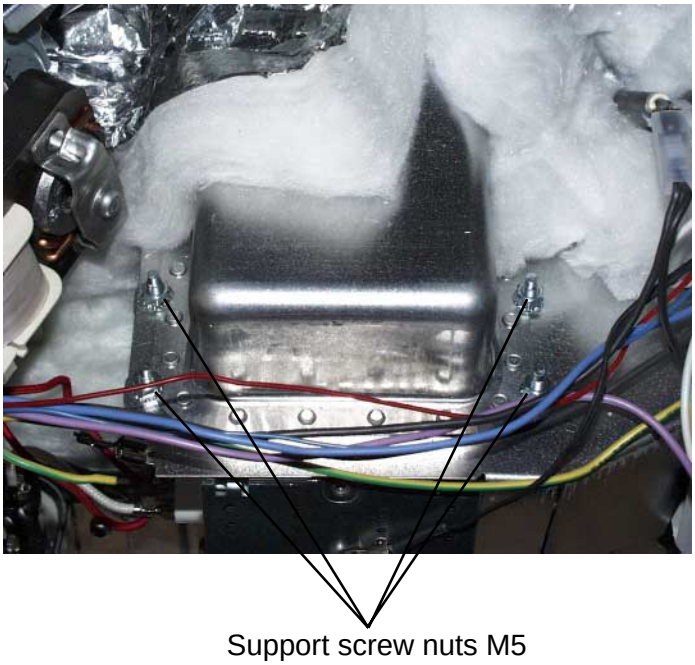
The task of the wave agitating motor is to impel the propeller-designed wave agitator made of reflecting metal. As the wave agitator is continuously in another position, the reflection and the wave distribution of the microwaves will also change continuously, which are guided to the oven cavity through a metallic wave duct.



4.6 Magnetron



The magnetron is the heart of the microwave. By means of the high-voltage transformer, the rectifier and a magnetic field it changes the mains voltage of 230 Volt 50 Hz into microwave energy with the frequency of 2450 Mhz.



The magnetron is kept to the wave duct with four screw nuts of M5 size. For removing the magnetron you have to unscrew these.

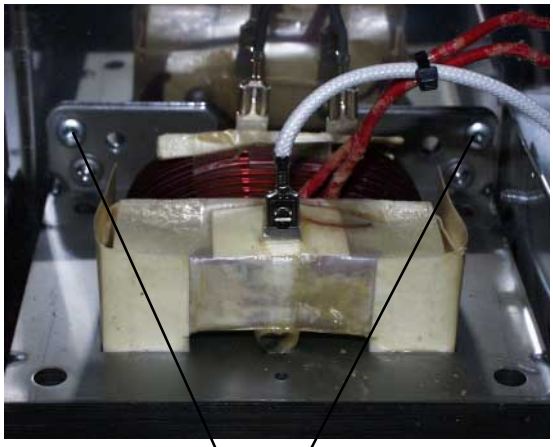
4.7 High-voltage transformer

The high-voltage transformer consists of three coils, a primary coil, a secondary high-voltage coil and a secondary low-voltage coil. If the primary coil is supplied with 230V mains voltage, following voltages are induced in the secondary coils:

- 3,1V as low voltage directly to the heating coil of the magnetron
- 2750V as high voltage

see also wiring diagrams Chapter 7

The transformer is installed at the rear side of the appliance. It is positioned to the support sheet by two Torx screws. If these are removed, it is possible to take the transformer out of the support at the lower side.



Holding screws

Fixture

4.8 Access to the Ring-heatingelement

Act as follows after removing the external sheet metal coverings (top/bottom):

1. Remove the wiring for the diverse connections and components and lay the cable upwards.
2. Remove the high-voltage components: magnetron, capacitor, diodes and transformer (the wire connections can remain (additional protection against an incorrect connection).
3. Remove the rear panel screws (4 items, see image 1).
4. Loosen the component plate (6 screws, 2 each at the side and bottom).
5. Allow the complete package to extend backwards.
6. Replace the defective component.
7. Reassemble in the reverse order.
8. **Important:** Do not squeeze the insulation when replacing the rear panel. The insulation should seal well again. At the top, the cooling fan can be loosened and folded up so that the insulation can be more easily positioned.

The ring-heatingelement can now be accessed.

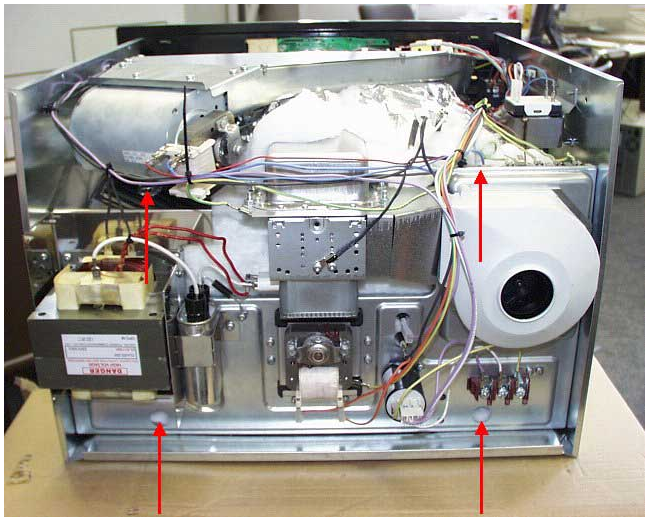
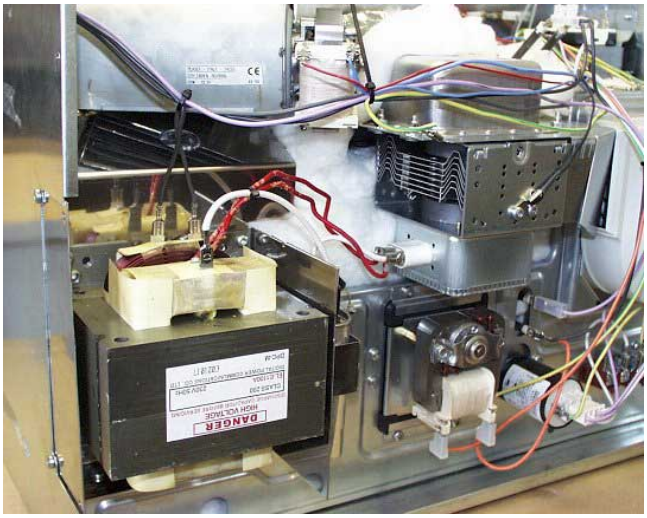
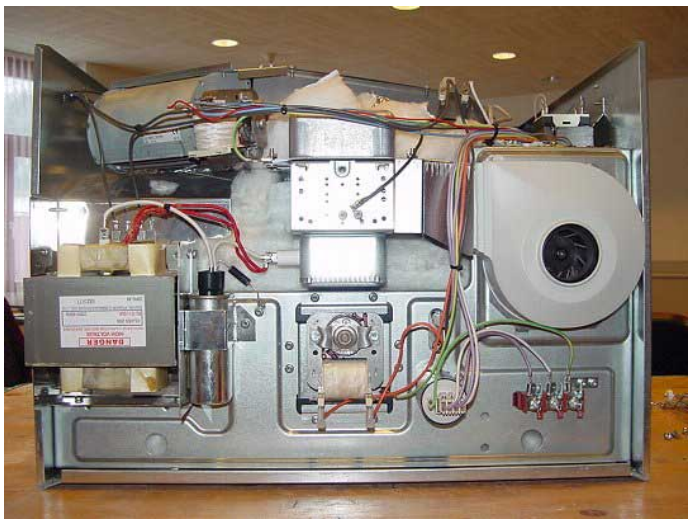
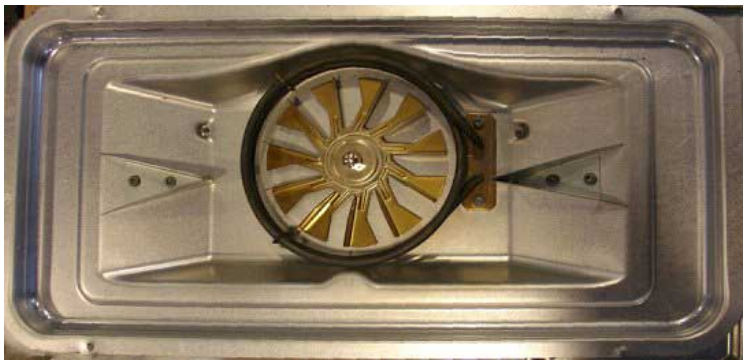


Fig. 1







5. Technical equipment

5.1 Fan after-running

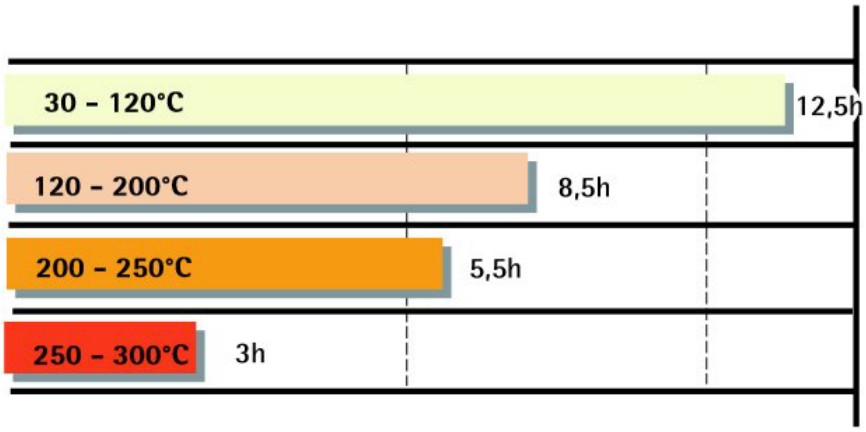
After switching off the appliance the cooling fan continues running until the centre of gravity temperature of the muffle has fallen below 140°C. In case of less than 140°C the cooling fan is running approx. 10 minutes. The residual heat will be indicated until the temperature has fallen down to 40°C.

5.2 Measure against wrong electrical connection

Not provided

5.3 Safety cutoff of oven

When setting function and temperature without a time limit, the safety cutoff of the oven switches off automatically, depending on the set temperature.



5.4 Temperature safety device

At the side of the air channel there is a double temperature safety device which will switch off all poles of the appliance in case of overheating. The measured temperature value during a cutoff is 150°C.

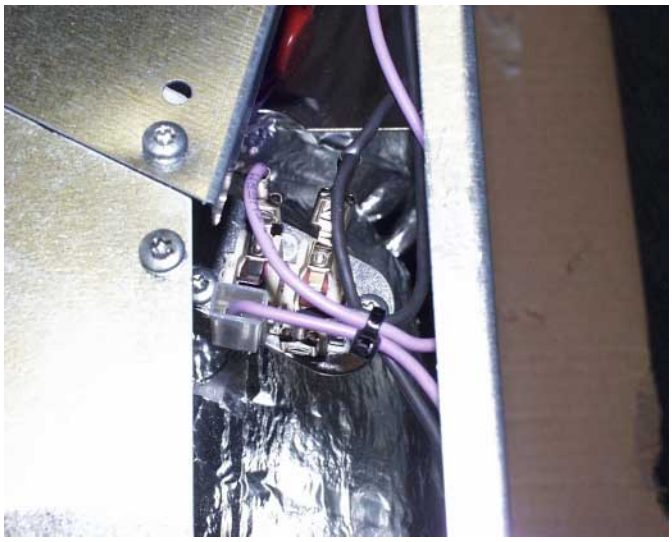
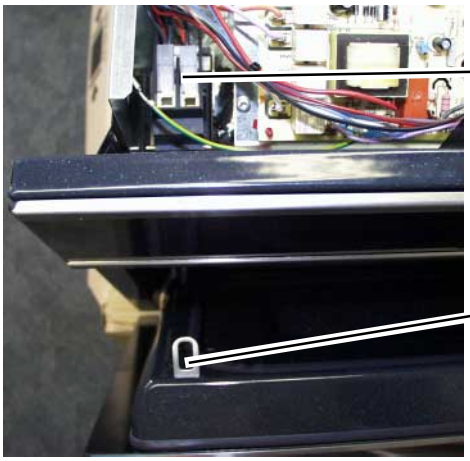


Fig.: assembling location temperature safety device

5.5 electronic safety system "Interlock" microswitch system

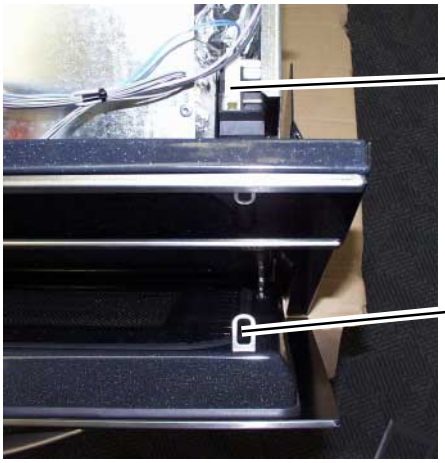
Opening the door activates all 3 microswitches via two mechanical systems. Primary and secondary switch interrupt the power supply. If one of these switches does not open, the monitor (surveillance) switch shorts the input circuit resp. the high-voltage transformer. In this connection it is accepted that the microfuse will trigger off (see wiring diagram Chapter 7).



Monitor switch "Q1" and primary switch "Q2"

Installation location: behind the knob panel, left at the side panel.

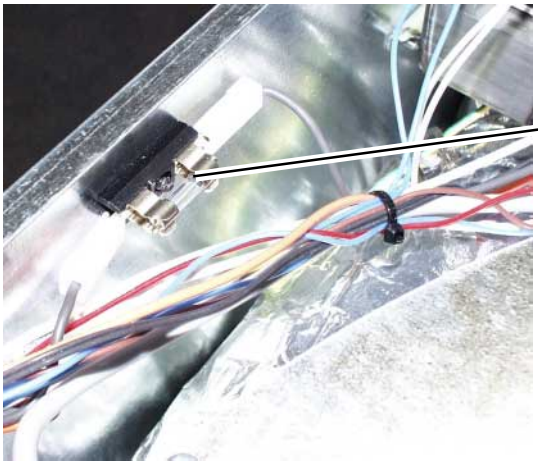
Actuating hook



Secondary switch "Q3"

Installation location: behind the knob panel, right at the side panel.

Actuating hook



Microfuse "fuse" in the wiring diagram

Installation location: at the left side panel.

6. Fault diagnosis/ What to do if ...?

6.1 Fault codes

Display	Fault	Cause/measure
E0020	oven lamp defect	Replace oven lamp
E0101	Internal electronic problem	Execute mains reset. Disconnect the appliance from the mains and put it into operation anew. If necessary, substitute electronic.
E0404		
E0808		
E0C0C		
E4444		
E4848		
E4C4C	No detection temperature sensor. Without contact or short circuit.	check sensor and lines If necessary, replace them.
E2020	Power board problem	Execute mains reset. Disconnect the appliance from the mains and put it into operation anew. If necessary, substitute powerboard.
E4040	Over-temperature	Replace stuck relay contacts of radiators power board

6.2 Demo mode ON/OFF

Key combination: Actuate „program“ and „+“ simultaneously 2 sec.

6.3 Measuring the temperature sensor

If a failure at the temperature sensor is assumed, the resistance can be checked by means of an ohmmeter.
The resistance of the temperature sensor should be 500 – 600 ohms at room temperature.
Make sure to measure the insulation resistance between the metallic housing and each connection terminal.
The resistance should be higher than 2 MOhms.

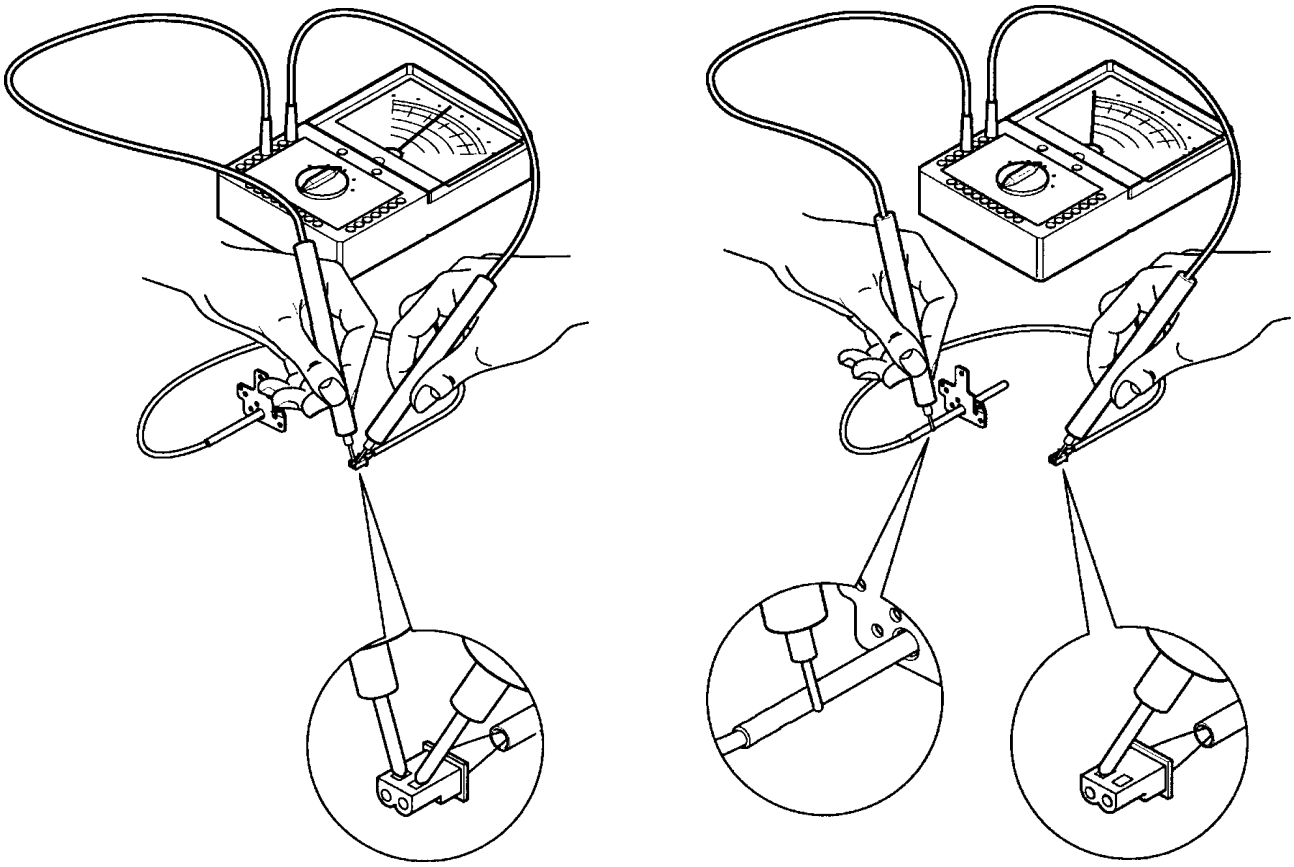
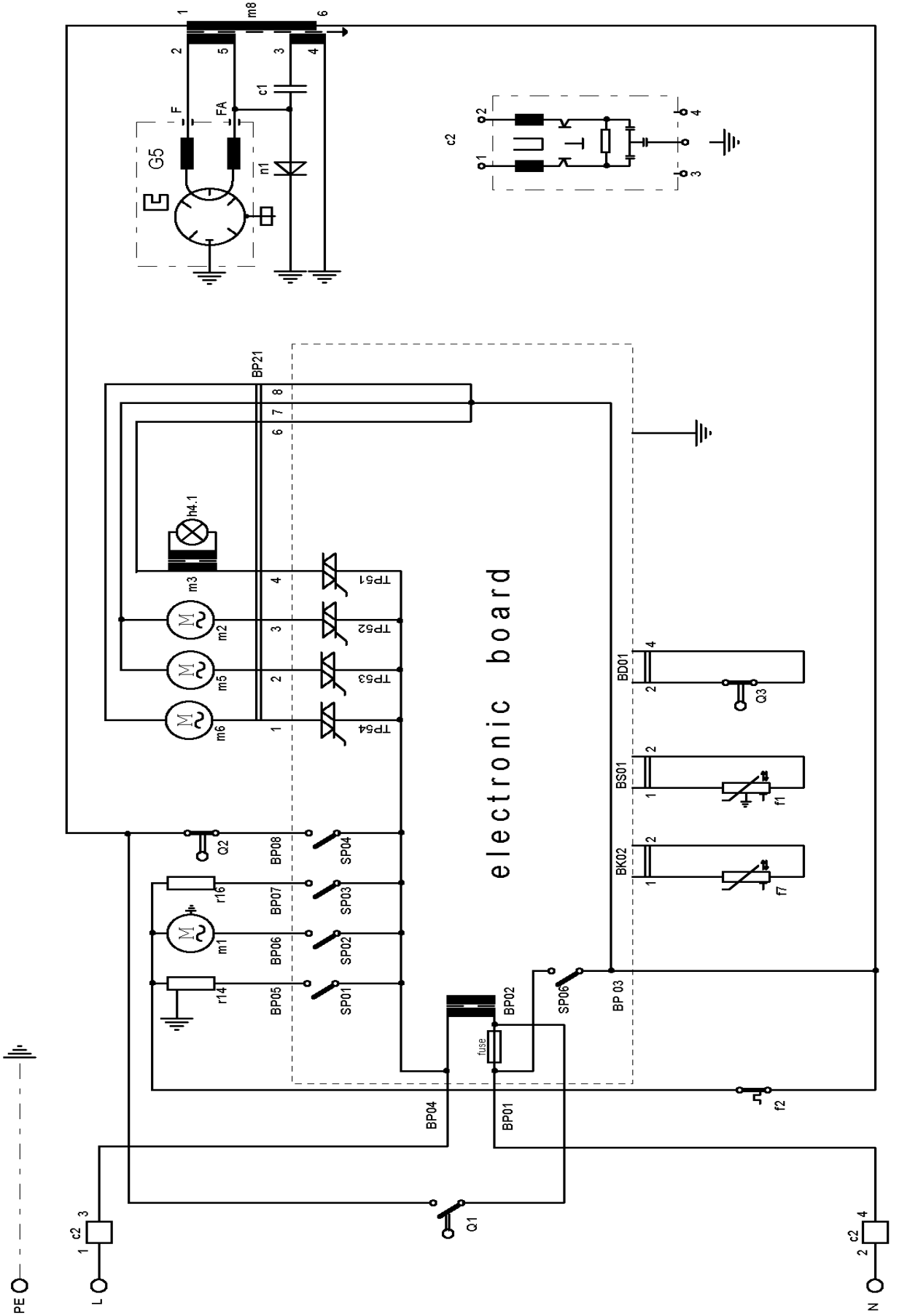


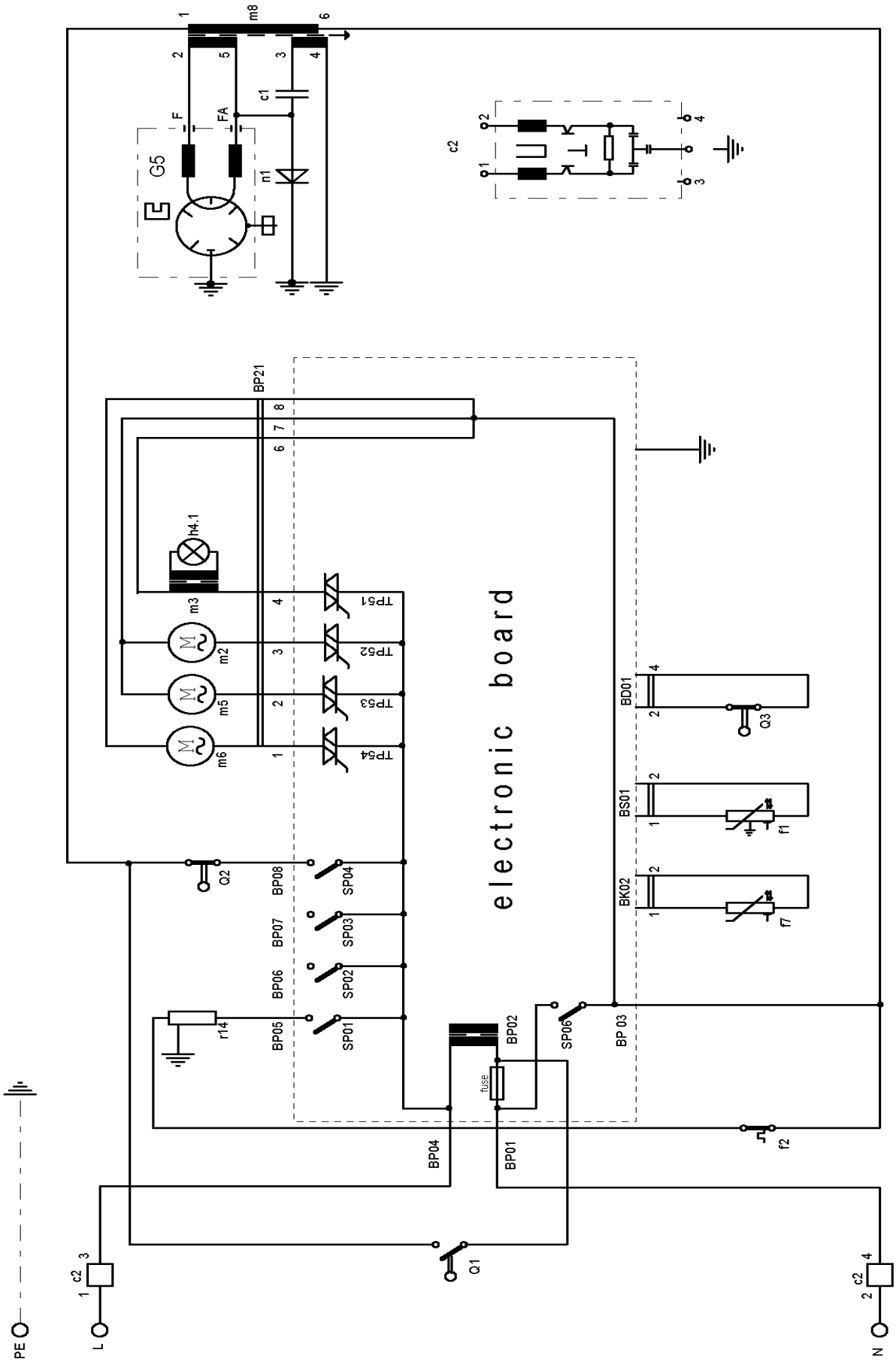
Abb. Measuring the temperature sensor

7. Wiring diagrams / measuring points

7.1 Diagram microwave combi



7.2 Diagram microwave solo



7.3 Legend to the wiring diagrams

c2	Netzfilter
electronic board	Leistungsplatine
f1	Regler Temperatur Hauptbratofen
f2	safety thermostat baking oven
f7	Magnetronsensor
fuse	Feinsicherung
G5	Magnetron
h4.1	oven lamp
Q1	Monitorschalter Öffner links
Q2	Primärschalter Schließer links
Q3	Sekundärschalter Schließer rechts
m1	fan hot-air blower
m2	cooling fan broiling oven
m3	Trafo Halogenlampe
m5	Kühlgebläse Magnetron
m6	Stirrer Motor
m8	Hochspannungstransformator
r14	grill
r16	annular heating element

8. Changes

Date	Page changed