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**Steam cooker  
with  
„Vision Cooking“  
input electronics**

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## 1. ESD=electrostatic discharge

As the single electronic interfaces are not protected internally against static 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.

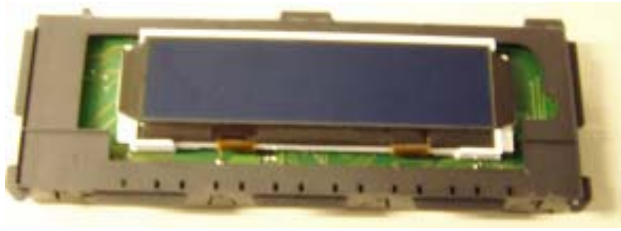
You also have to be careful with those electronics delivered as spare parts, which have to be put out of the ESD protective package only after a potential compensation (discharge of possible static electricity).

If a potential compensation with an existing static electricity is not executed, it does not mean that the electronic is damaged 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.

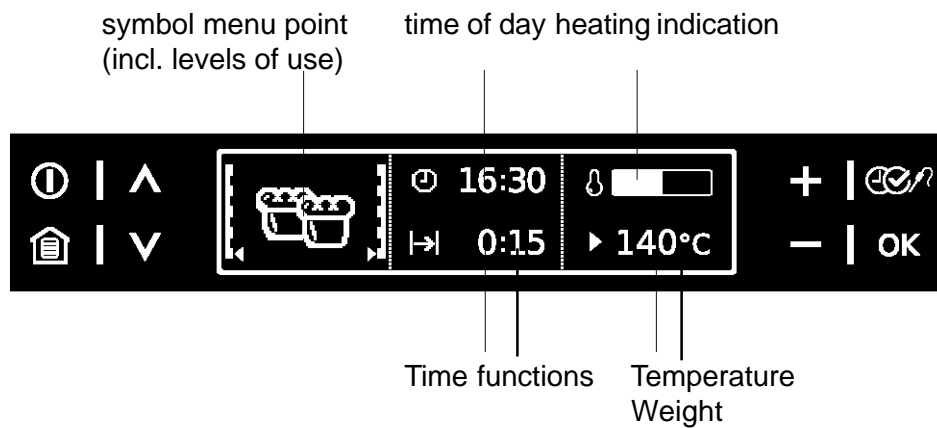
## 2. Software specifications, Functions

### 2.1 Illustration of the input electronics (UI) Vision Cooking



### 2.2 Button / and display layouts of all appliance groups, countries and brand

#### Displays



#### Symbol

#### Display (examples)

#### Functions

	Timer	4:30	Timer is active.
	<b>time of day</b>	10:00	<b>Indicates the set time of day.</b>
	duration	1:00	Indicates the required time for the boiling process.
	<b>End</b>	14:05 	<b>Indicates the time when the boiling process will be finished.</b>
	Start	0:45 	<i>End with plugged-in meat probe is being calculated.</i> Indicates the time since when the boiling process has been running.
	<b>Temperature</b>	1,5 kg 	<b>Indicates the extent of oven heating.</b> <b>Fast heating is active (reduced heating time).</b>
	Weight	75°C	Possibilities: -Weight automatic system is active. -Weight can be modified.
	<b>Fleischsonde</b>		<b>Possibilities:</b> <b>-Meat probe is inserted.</b>
	Heat+Hold	80°C	<b>-Meat probe automatic system is active.</b> <b>-Core temperature can be modified.</b>
	<b>Odour filter</b>		Heat + Hold is active. <b>The odour filter has been activated.</b>

## Touch control sensor fields



<u>Sensor field</u>	<u>Function</u>	<u>Remark</u>
^, v	to the top/to the bottom above in the menu	With an active function: - Press 1 x: Change to superior menu (function remains active), after 5 seconds again. Change into active menu point. - Press 2 x: In the superior menu downward and upward (function is deactivating).
🏠	<b>Display main menu</b>	<b>Set functions are deactivating (besides timer).</b>
OK	Confirm	
⏻	<b>Switch on or off appliance</b>	
🔍	Time functions, Select additional functions and meat probe.	
+ , -	<b>Set values (e.g. temperature, time, weight, boiling level)</b>	<b>*Activate value:</b> <b>-press 1 x: symbol standing in front is flashing.</b> <b>-2press 2 x: value can be set.</b> <b>*Activate value:</b> <b>-press 1 x: set value in single steps.</b> <b>-Keep key pressed: set value in fast steps.</b> <b>*When setting a period and time respectively you can reset the display to zero by pressing + and - simultaneously.</b>

## 2.3 Main features of operation

### 2.3.1 Clock setting following network reset

Information: The oven only functions with set time!

When connecting the appliance again, e.g. after a repair, you need not set the time anew, as the electronic remember the time even for a longer period of time because of its technology (condenser).

If a new input electronic is installed, or if the appliance is disconnected from power supply for a longer time, you have to proceed as follows for setting the time:

#### Set language

1. After electric connection the display indicates the following:
  - the company logo
  - the software version and working time
  - the display "set language"
2. Select the desired language by "-" and "+" respectively
3. Confirm the selected language by "OK".

Immediately you can see the texts in the set language in the display .

#### Set contrast and brightness

After setting the language you can see the displays "set contrast" and "set brightness". Contrast and brightness are set according to the language (see section "Set language").

#### Set clock

After setting contrast and brightness, the display indicates "set time of day".

1. Set the hour of the current time by "-" and "+" respectively.
2. Confirm by "OK".
3. Set the current time by "-" and "+" respectively.
4. Confirm by "OK".

### 2.3.2 Child-proof lock

The key block does not protect against unintentional switching off. After switching off the appliance the key block is canceled again.

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

#### **Activate child-proof lock**

No function may be selected.

1. Touch "selection options" and "-" simultaneously until you can see a message. Child safety function is active.

#### **Child safety function switch off**

1. Touch "selection options" and "-" simultaneously until you can see a message. Deactivate the child lock. Now the child lock is deactivated and the oven is in operation again.





## Steam cooking - detailed explanation

The information ... (50/50) and ... (25/75) with regard to the steaming function are time-related information at a 42 sec. Interval.

### Steaming function 50/50

Ring and steam generator, each being active for 50% of the set time. 21 sec. Each at intervals.

### Steaming function 25/75

Ring active 25% of the set time and steam generator active 75% of the set time. Each alternately, ring 10.5 sec. And steam generator 31.5 sec.

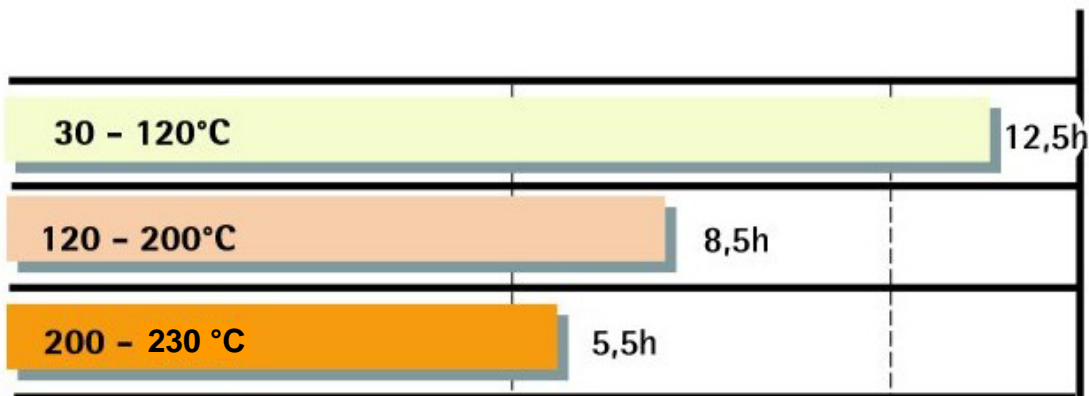
## 3.2 Legend for the function summary

<b>EN - Legendary</b>
Boost functions
Bottom
Cleaning functions
Cooling fan
Cooking fan
Def_dur
Def_ost
Exhaust actuator
Grill
Heating elements
High
Lamp back wall
Lamp side wall
Low
LTC
Maximal current (Ampere)
Maximal power (Watt)
Max_ost
Min_ost
More description
No
Oven functions
Phase
ResH.
Ring
Slow cook functions
Small loads
Special funtions
Steam element
Steam functions
REL ...
Top
Waste air actuator
Watt

### 3.3 Safety function safety cutoff of oven

If the oven is not switched off after a specific period of time or if the temperature is not changed, then it switches off automatically.

The oven switches off at an oven temperature of:



Putting into operation after a safety cutoff:

In the display you can see the indication „automatic safety disconnection system active“. Continue by OK.

Note: The safety cutoff is cancelled, when the clock function „duration“ or „end“ has been set. Furthermore, it is not active with the functions, low-temperature cooking and Pyrolyse.

## 4. Functional parts - Component data, installation situation, dismantling

### 4.1 Functional parts - Oven control

#### 4.1.1 Input electronic (UI) Vision Cooking

In addition to diverse semi-conductor modules, the Vision Cooking input electronics mainly includes a LCD display and a microprocessor. This controls the electronic control unit via a personalised program. The desired oven functions are set by a so-called touch board which is a common spare part with the control panel.



Fig.: user interface in built-in condition



Fig. 1



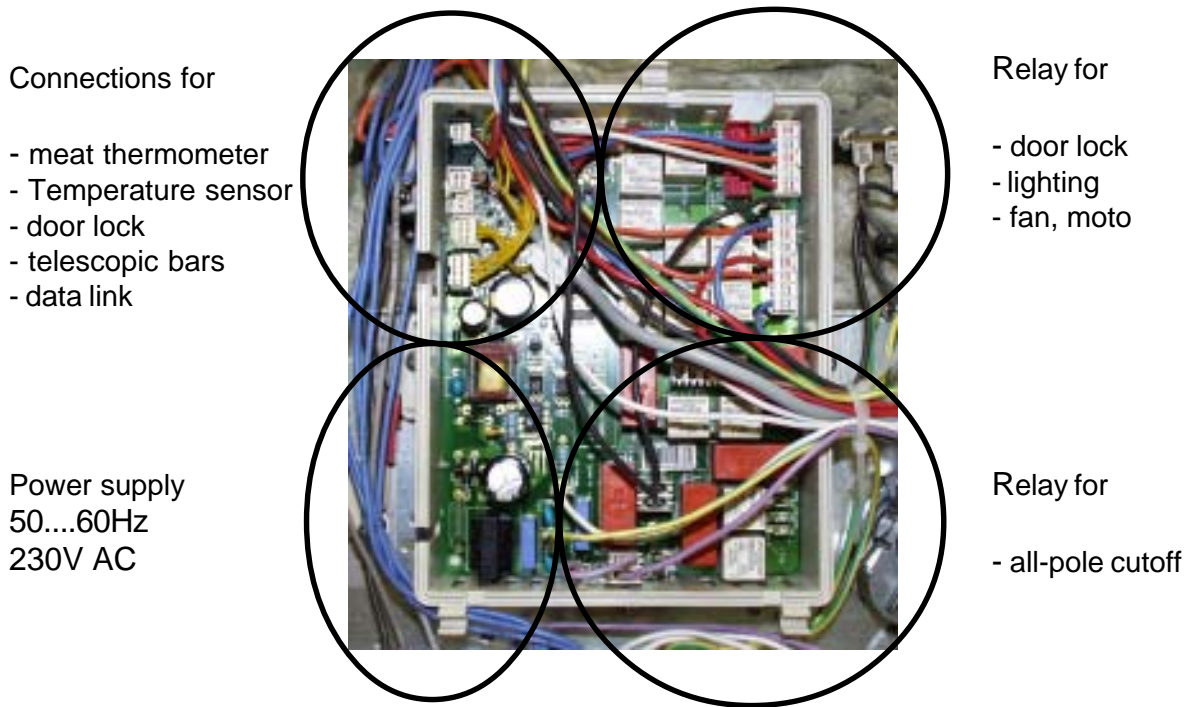
Fig. 2



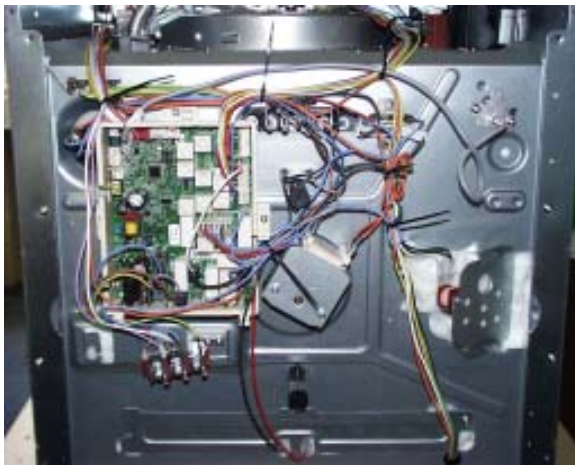
Fig. 3

The user interface is positioned firmly in a plastic housing (E-box). The whole unit is locked in the panel support. When opening the appliance please pay attention to that the control board for the luminous bar is fixed in the control panel from below to the front housing lid (figure 1). After drawing off the lines you can disassemble the front cover lid. After pressing in the four hooking noses at the bottom side of the plastic housing (figure 2) you can remove the user interface to the back, in direction of the interior of the appliance (figure 3). With upright stoves, there may be different scenarios of fitting positions.

#### 4.1.2 Power electronic OVC2000



**Fig.: Powerboard OVC2000 wired in the appliance**



**Fig.: assembly situation**



**Fig.: Spare part OVC2000**

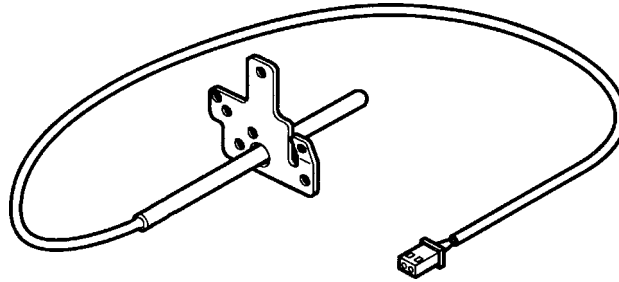
The power electronics are located on the rear side of the appliance and are accessible after removing the housing rear panel. The power board is installed in a so-called „functions box“ made of plastic. These two components, power electronics and plastic box, are also a replacement part unit (see III.)

Please refer to Chapter 7 for connection designations and possible measuring points.

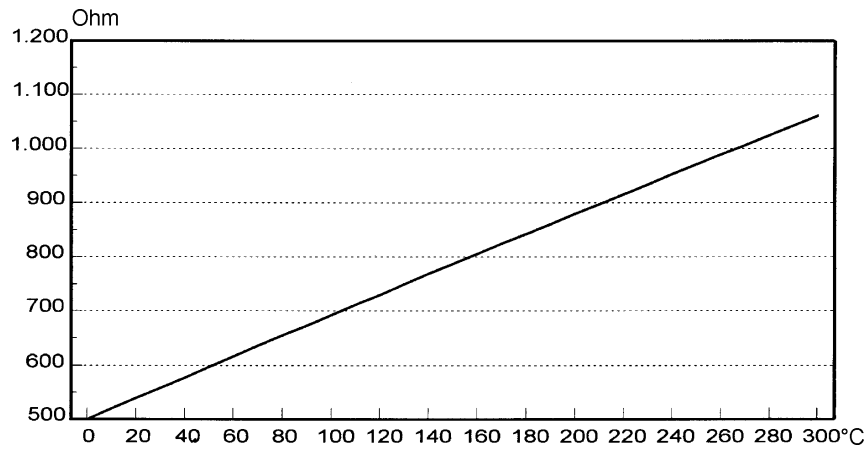
### 4.1.3 Temperatursensor PT500

The temperature in the baking oven is measured by a temperature sensor (type PT 500) for appliances with control board. The sensor is provided at the rear of the appliance. It is used to transmit to the electronic systems the values for:

- cyclic heating the radiators until the selected temperature is reached;
- switch off the radiators in case of overheating of defective sensor;
- switching ON/OFF the cooling fan.



**Fig. Temperature sensor**



**Fig. Electrical resistance of sensor depending on the ambient temperature**

## 4.2 Thermal trigger (actuators) with steam thermostat

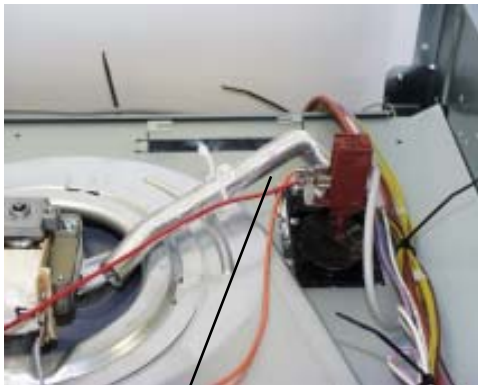
The actuators serve the control of steam and vapour. Depending on the selected oven function, the respective „valves“ are open or closed. The nominal lifting distance is 6 mm with both actuators. Please conclude from chapter 3 which actuator is when active.



assembly situation thermal trigger

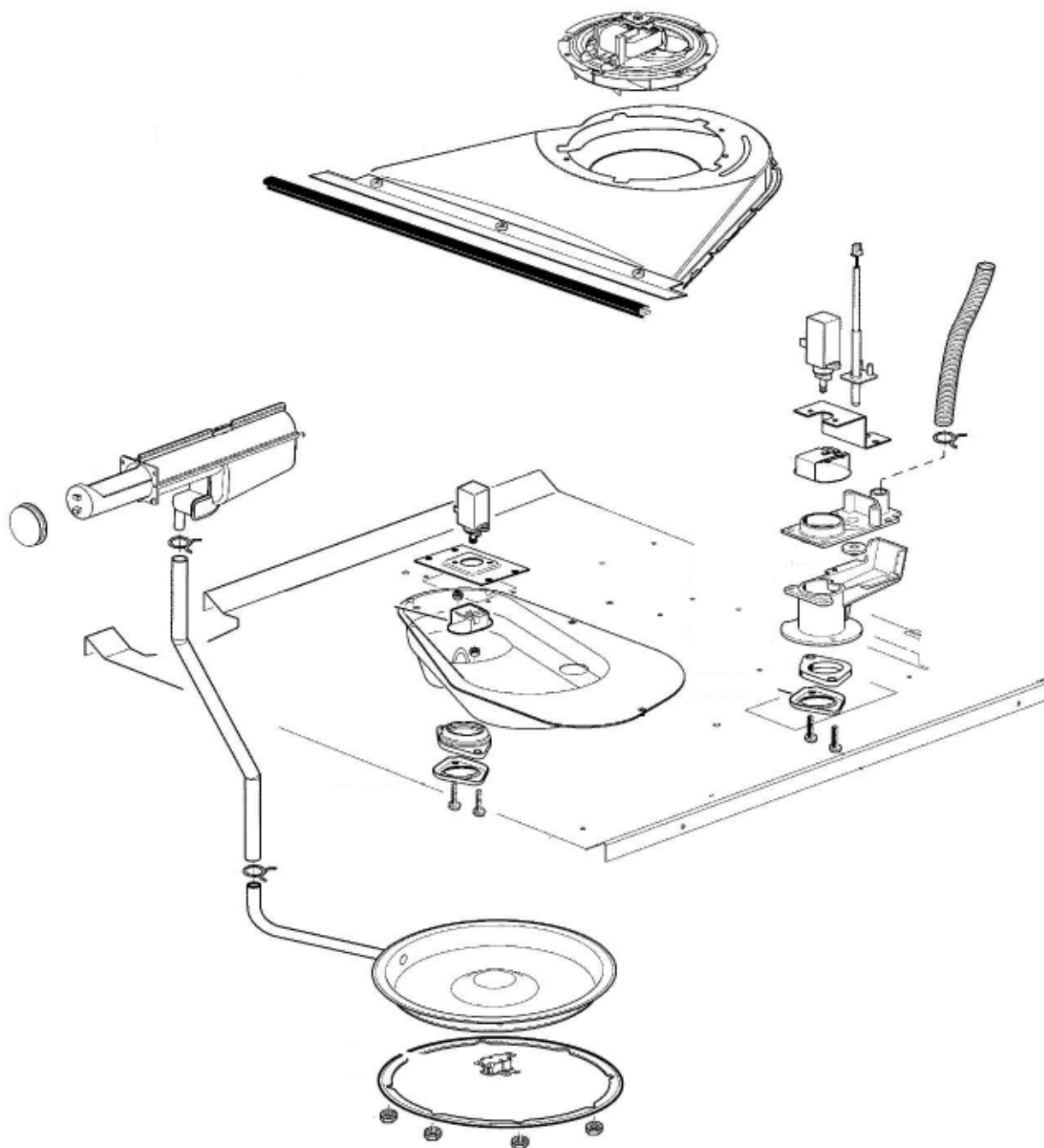


thermal trigger steaming



Excess pressure thermal trigger with stem thermostat for temperature control of the oven function steaming (oven function 11).

### 4.3 Detailed presentation of the steam system



#### 4.4 The steam generator



Fig. 1



Fig. 2

The steam generator is situated in the centre of the oven floor (fig. 1). To remove the steam generator, the appliance must be laid onto the side panel. There is a cover on the housing floor (service opening, fig. 2), which is screwed in position with six screws. These screws must be loosened in order to access the steam generator and the two temperature sensors.



Fig. 3



Fig. 4



Fig. 5

The steam generator/temperature controller 120/170°C unit (figs. 3/4) is held with eight hexagon nuts (fig. 5) which must be loosened before the component can be removed in the direction of the appliance interior.

Temperature controller 120°C -  
Temperature controller 170°C -

Signal tone lack of water (f3.2 in the circuit diagram)  
Deactivation steam generator (f3.1 in the circuit diagram)

Heating element performance  
Water capacity

1500W  
0,7l



#### 4.5 Luminous bar in the control panel



Figures show the luminous bar as a separate component and the electric terminals from the sight of the interior of the appliance, each at the left and at the right. The assembly situation is in the switch panel support. For disassembling the luminous bar you have to remove the switch panel.



The luminous bar is selected by a selection electronic system which is mounted at the bottom side to the front cover of the appliance. It supplies the luminous bar with the supply voltage of 7 V / 18 mA.

## 5. Technical equipment

### 5.1 Fan after-running

The cooling fan switches on automatically when putting the appliance into operation. First it is in operation to keep cool the appliance surfaces. After the oven was switched off, the fan continues running to cool the appliance and then switches off automatically at a centre of gravity temperature of the muffle of approx. 120°C-130°C. The post-operative ventilation is controlled via the electronics.

**Note:** - for wiring diagram see chapter 7

### 5.2 Temperature safety device



temperature safety device

The double temperature fuse which deactivates all of the poles in case of overheating is situated next to the OVC2000 powerboard. The measured temperature value upon deactivation amounts to 220°C (f2.1 and f2.2 in the circuit diagram).

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

### 6.1 Alarmmanagement (Faultcodes)

#### Alarmmanagement Powerboards Prisma, OVC1000 und OVC2000

Display	Description of fault	Fault repair
F0	Internal error	replace power electronics
F1	door cannot be locked	Test door locking system
F2	door cannot be unlocked	Test door locking system and unlocking thermostat f11
F3	software error	Execute network reset by disconnecting the appliance from the electricity supply and restarting
F94	Temperature sensor alarm - resulting in F4	Test temperature sensor, replace if necessary
F4	Temperature sensor without contact or short circuit	Test temperature sensor, replace if necessary
F5	Clotted heating element relay contacts on the power electronics	Replace power electronics
F95	Temperature alarm at power electronics - resulting in F6	Test built-in situation of the ventilation channel and the function of the cooling fan
F96	Temperature alarm at power electronics - resulting in F6	Test built-in situation of the ventilation channel and the function of the cooling fan
F6	Power electronics temperature too high	Test built-in situation of the ventilation channel and the function of the cooling fan
F7	Faulty electrical connection (only in appliances with Prisma power electronics)	Correctly connect the appliance and re-start
F8	No connection between power electronics and input electronics	Check connection line - replace electronic systems if necessary
F9	Micro processor resets itself independently (= Reset)	Execute network reset by disconnecting the appliance from the electricity supply and restarting
F10	Triac on power electronics defect	Activate Main Button, select an operation modus with hot air, wait for cooling ventilation start, replace power electronics again in the event of an error report following approximately 20 seconds
F11	Meat skewer sensor without contact or short-circuited	Check meat thermometer, also check bushing and wiring if necessary; if all this OK replace power electronics
F91	Temperature sensor alarm for steam generator - resulting in F12	Test temperature sensor, replace if necessary
F12	Temperature sensor of steam generator without contact or short-circuited	Test temperature sensor, replace if necessary
F13	Internal electronics error	Replace power electronics
F14	software error	Replace input electronics
F15	Internal electronics error	Replace input electronics
F16	Combined alarm Pyrolytic cleaning/cooking zone	Replace input electronics

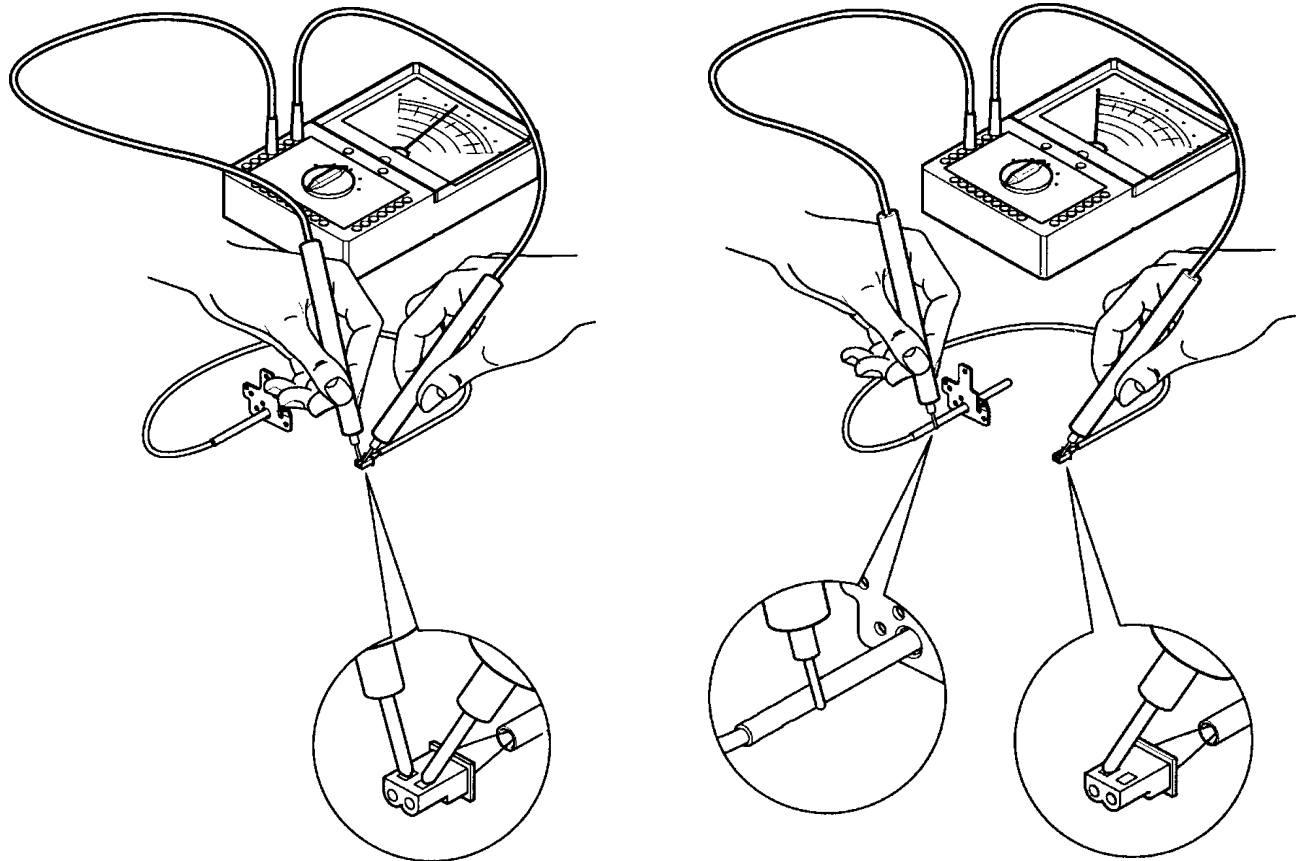
## 6.2 Measuring the temperature sensor

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**

## 6.3 Demo Mode Input electronic Vision Cooking

Both demo mode versions possible.

### 6.3.1 Activating / deactivating Version a

The following steps (1-3) should be done within 10 sec.

1. Oven in OFF state
2. Keep pressed Mainswitch for 5 seconds until oven switches OFF again.  
A signal is audible



3. Keep pressed "Timer-" and "Minus-" key simultaneously for 1 second.  
Sound: beep, beep, beep...confirms



4. Once oven is switched ON "DEMO" is displayed.



Deactivation vice versa

After 10 sec. or once another key has been pushed Demo Mode can't be activated anymore, but procedure can be started from the beginning.

### 6.3.2 Activating / deactivating Version b



Fig. 1

Start position: The appliance must be switched off.

Display: "Time" (fig. 1).

Operating step 1: Press the main switch for 5 seconds (fig. 1), the appliance switches itself "ON" and then "OFF" again.

Display: "Standby" (fig. 2) ---> "Time" (fig. 3).

Acoustic signal: 1x "Beep" as confirmation.



Fig. 2



Fig. 3

Operating step 2: Simultaneous pressing of the two buttons "Timer" and "Minus" for 2 seconds (fig. 4).

Acoustic signal: 3 x "Beep" as confirmation.

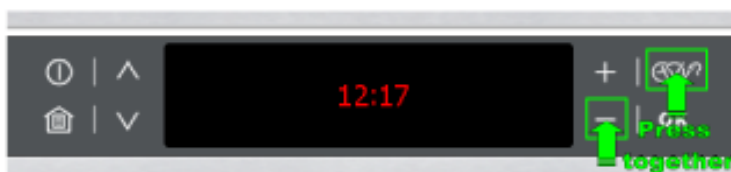


Fig. 4

Operating step 3: Switching the appliance on with the main switch

Display: active Demo Mode ---> "DEMO" (fig. 5).  
deactivated Demo Mode ---> none (fig. 6)



Fig. 5



Fig. 6

## 6.4 Factory test

The factory test can only be activated during the display of the brand logo, after the appliance has been connected anew!



Actuate the touch pads simultaneously until you can hear a signal (beep). The factory test starts with the

---> **consumer test**



Depending on the appliance group (see tables) you can switch through various consumers in five steps and check them for function by using the touch pad. This cycle can be repeated as often as desired.

appliance group	Step	symbol is indicated in the display								Cooling fan	Oven lamp	Wrasenventil
		Grill heater element	Lower heat	Upper heat	Annular heating element	Steam generator.	Hot air motor	Turnspit motor	electric odour filter			
without Pyrolyse	1	x								slowly	x	
	2*		x						x	slowly		
	3			x						slowly	x	
	4				x		x			slowly	x	
	5								x	slowly		
Steam	1	x								slowly	x	x
	2*		x							fast		
	3			x						slowly	x	x
	4				x		x			slowly	x	x
	5					x				slowly	x	x
with Pyrolyse	1	x								slowly	x	
	2*		x						x	fast		
	3			x						slowly	x	
	4				x		x			slowly	x	
	5								x	fast		
with Pyrolyse and spit	1	x						x		slowly	x	
	2*		x						x	fast		
	3			x						slowly	x	
	4				x		x			slowly	x	
	5								x	fast		

**OK**

Continue by using the touch pad

---> **temperature sensor test**

The current oven temperature is measured and indicated in the display.

---> **meat thermometer test**

Insert the meat spit into the respective plug socket,

- the currently measured temperature of the meat thermometer is indicated.

**OK**

Continue by using the touch pad

---> **information on the input electronic version**

Following information is indicated one after the other:

- firmware version of input electronic
- configuration version of input electronic
- working time of oven

Example  
EBAIB205  
V02IB012  
0

**OK**

Continue by using the touch pad

---> **display Test**

- complete indication of display
- display completely dark
- complete display in checker pattern
- indication of single pixels

**OK**

Continue by using the touch pad

---> **display brightness**

By the touch pads "+" and "-" you can set the brightness of the display.



OK

Continue by using the touch pad

---> door locking test

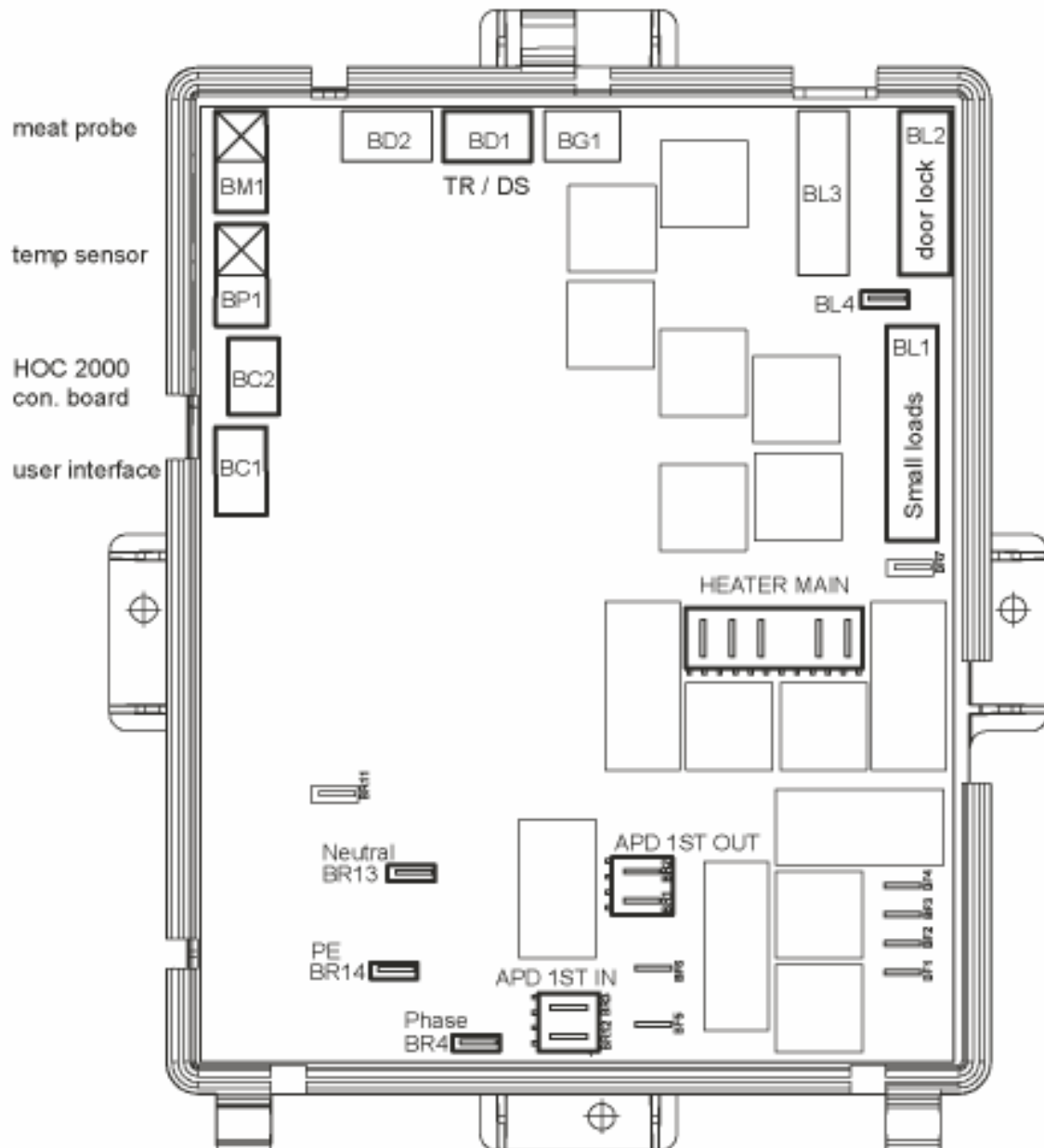
- is automatically started with appliances with pyrolysis.

In order to operate the appliance normal again and to leave the factory test respectively you must disconnect it from the mains and connect it again!

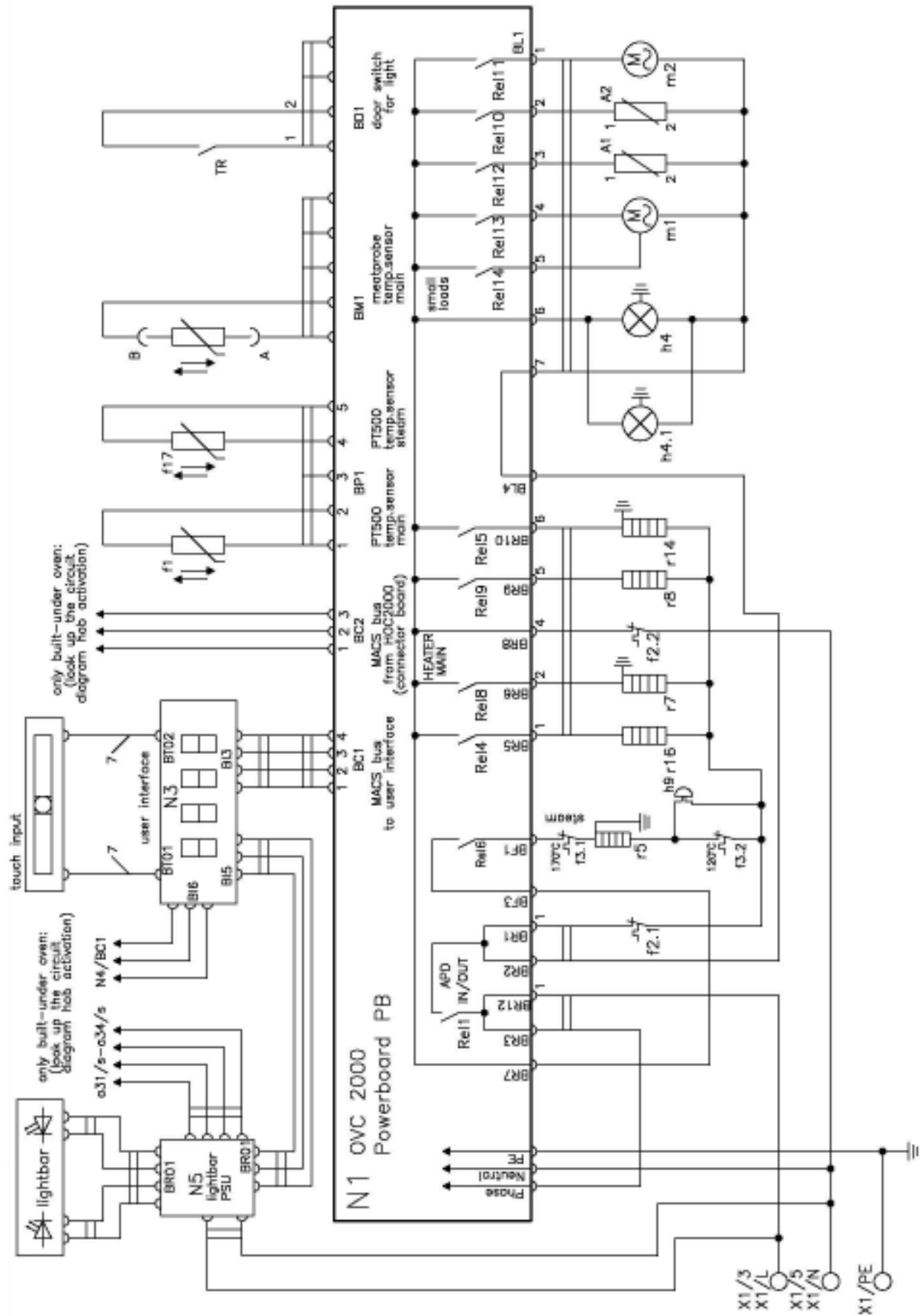
## 7. Wiring diagram / measuring points

### 7.1 Connection Point Overview

#### OVC 2000



## 7.2 Example circuit diagram steam cooker with OVC 2000



### 7.3 Operative Equipment Overview

Kennzeichen	Description
a1	Switch 7-step front left
A1	actuator exhaust
a15	Touch electronic switch warming zone
a2	Switch 7-step rear left
A2	Actuator desteam
a3	Switch 7-step rear right
a31	energy regulator front left
a32	energy regulator rear left
a33	energy regulator rear right
a34	energy regulator front right
a4	switch 7-step front right
a61	touch electronic switch front left
a62	touch electronic switch rear left
a7	Heating mode selector main oven
a7.1	Heating mode selector top oven
a73	touch electronic switch rear right
a8	LTC(Low Temp. Cooking) switch
a84	touch electronic switch front right
b3	Socket meatprobe
BOF	mode selector function
BOT	mode selector temperature
c4	interference filter
D	hob connector 12-pol.
DS	door switch
E	hob connector 8-pol.
e1	Door look pyro
e11	Distributor plate pot detection
F	hob connector 21pol
f1	Main oven thermostat
f1.1	Top oven thermostat
f11	Thermostat unlock pyro
f12	Thermostat cooling fan delay
f15	2. safety temp. limiter oven
f16	thermostat overheating warning

Kennzeichen	Description
f19	rack thermostat
f2	safety temp. limiter main oven
f2.1	safety temp. limiter top oven
f21	safety temp. limiter grill
f22	safety temp. limiter fryer
f31	residual contact front left
f32	residual contact rear left
f33	residual contact rear right
f34	residual contact front right
f5	Thermostat cooling fan delay
f6	Thermostat fast run cooling fan pyro
f7	sensor to magnetron
f8	LTC(Low Temp. Cooking) thermostat
G5	magnetron
h1	Lamp working
h1.1	lamp working top oven
h1.4	lamp working hot plate front left
h1.5	lamp working hot plate rear left
h1.6	lamp working hot plate rear right
h1.7	lamp working hot plate front right
h10	analog timer
h11	electronic timer
h12	6-push electronic timer
h20	timer primary code hob
h3	lamp heating main oven
h3.1	lamp heating top oven
h30	residual lamp
h4	oven lamp main oven

Kennzeichen	Description
h4.1	oven lamp side main oven
h4.6	lamp halogen
h40	display board
h5	oven lamp top oven
h5.1	oven lamp side top oven
h52	display oven
h7	meatprobe display
h9	lamp overheating
K	clutch
k1	LTC(Low Temp. Cooking) relay
KS	switch child safety
KS1	rotary hot plate front left
KS2	rotary hot plate rear left
KS3	rotary hot plate rear right
KS4	rotary hot plate front right
M1	Hob connector 14-pol. 1+2
m1	fan hot air
m12	turnspit motor
m13	Ignition coil gas
M2	Hob connector 14-pol. 3+4
m2	fan cooling
m20	cooling fan, L3
M3	Connector 11-pol.
m3	transformer halogen lamp
M4	Connector 7-pol.
m4	transformer timer
M5	Connector 3-pol.
m5	transformer electronic
m6	motor stirrer
m8	transformer high voltage
N1	electronic powerboard
N2	modul of induction
N3	electronic board Rhea
N4	connector board
N5	Power supply unit lightbar
PE/1b	ground point component plate

Kennzeichen	Description
PE3	ground point front frame left
PE4	ground point front frame right
Q1	quick start module top oven
r11	fat and smell
r12	thermal switch
r14	main oven grill heating element
r14.1	top oven grill heating element
r15	warming zone
r16	rear
r19	rack heating
r20	preresistor cooling fan
r21	heater grill
r22	heater fryer
r27	preresistor oven lamp
r27.1	preresistor oven lamp side
r31	cooking plate front left
r32	cooking plate rear left
r33	cooking plate rear right
r34	cooking plate front right
r35	cooking plate middle
r6	top heating/grill combination
r7	main oven top heating element
r7.1	top oven top heating element
r8	main oven bottom heating element
r8.1	top oven bottom heating element
s1	sensor pot detection front left
s11	micro switch gas to electro
s12	micro switch grill to fryer
s13	micro switch grill socket
s14	micro switch sensor
s19	rack switch
s2	sensor pot detection rear left
s21	sensor grill
s22	sensor fryer
s23	Sensor wok (middle)
s3	sensor pot detection rear right
s31	Ignition switch front left
s32	Ignition switch rear left
s33	Ignition switch rear right
s34	Ignition switch front right
s4	sensor pot detection front right
TR	telescopic runner switch
X1	main terminal
X10	tandem pin shells 6-pol.
X11	tandem pin shells 8-pol.
X12	connector hob
x20	frame connector, L3

## Changes

Pages 19, Chapter 6.1 changed