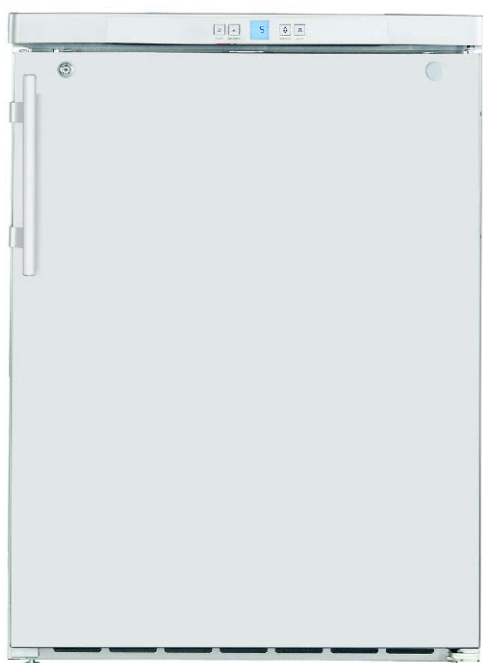


Appliance Documentation

FKUv 16.. from Index 22

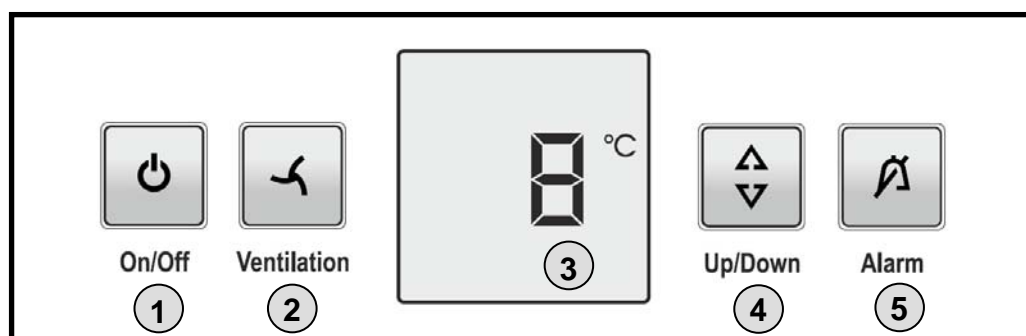
Drinks refrigerator, ventilated, suitable for under-worktop installation



Contents

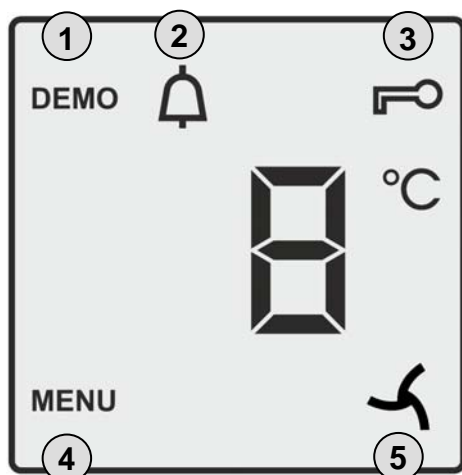
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1.0 Operating and control elements



- 1 ON/OFF button
- 2 Ventilation function
- 3 Temperature display
- 4 Temperature setting button
- 5 Alarm OFF button for audible alarm

1.1 Control elements



- 1 Demo mode active
- 2 Temperature alarm active
- 3 Child lock active
- 4 Service mode active
- 5 Ventilation switched on

2.0 Functions at a glance

Control:	Electronics
Temperature display:	Actual value
Temperature range:	+1°C to +15°C
Temperature alarm:	Visual and audible
Door alarm:	Audible
Fan:	Featured
Defrosting:	Automatic
Interior light:	Featured (only for FKUv 16.3)
Service menu:	Featured
Compressor:	Standard
Solenoid valve cooling circuit:	Not featured

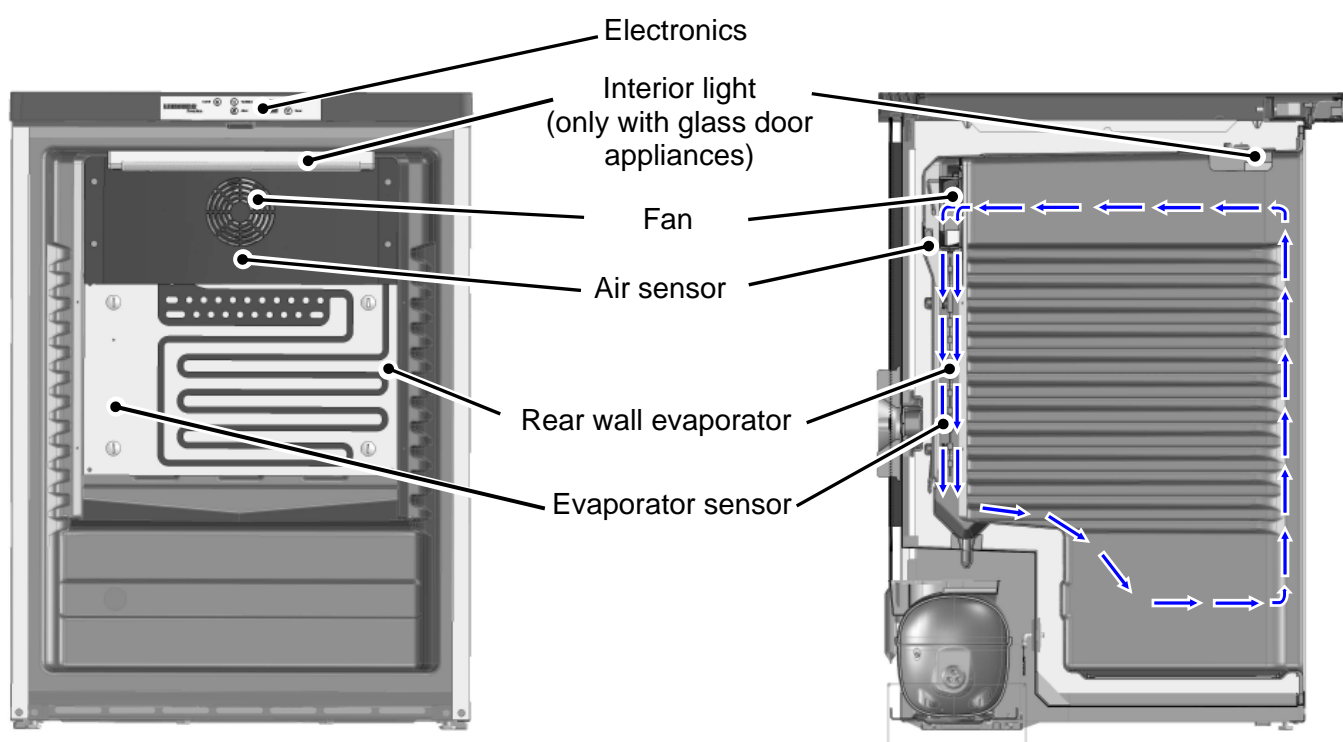
3.0 Description of appliance

The **FKUv 16..** is a dynamically cooled drinks refrigerator with a freely suspended rear wall evaporator.

The worktop is not removable. However, because of the appliance height of 83 cm, the appliance is still suitable for under-worktop installation. A closing mechanism is integrated into the door.

Control is carried out via a Series 6 electronic control with actual value display. Defrosting is automatic.

3.1 Sensor position, schematic diagrams



4.0 Main components and their functions

4.1 Electrical components and functions

Electronics		
Type:	Series 6 electronic control system	
Components:	Integral PCB	
Setting range:	+1°C to +15°C	
Display range:	0°C to 48°C Values outside this range are indicated by a crossbar.	
Functions		
Temperature alarm:	Alarm value:	4K higher or 1K lower than target value.
	Delay:	Alarm delay = display delay I.e. as soon as the displayed value exceeds or falls short of the alarm threshold, the alarm is activated
	Visual:	flashing temperature display
	Audible:	4 beeps (suppressed upon start-up)
Ventilation:	<u>Ventilation activated:</u>	Fan runs continuously
	<u>Ventilation deactivated:</u>	Fan runs in parallel with the compressor
Door alarm:	When:	after 3 minutes when the door is open.
	Audible:	3 beeps.
Defrosting:	<ul style="list-style-type: none">- During every dwell time- Additionally, after a cumulative compressor running time of 12 hours there is a forced dwell time until the evaporator sensor reaches +10°C (but up to a maximum of 40 minutes). During this time, the fan will run (whether “Ventilation” is on or off).	
Child lock:	Activation is via the customer menu.	
	<ul style="list-style-type: none">- When the child lock is activated, the ON/OFF button and the temperature setting button are inactive.- The remaining functions are available for unrestricted use.	
Sensors		
Air sensor:	Position:	On the inner liner behind the fan cover
	Function:	<ul style="list-style-type: none">- Switches the compressor OFF.- Generates the display value.
Evaporator sensor:	Position:	On the back of the evaporator
	Function:	<ul style="list-style-type: none">- Switches the compressor ON.- Ends the defrosting phase.

Switches

Door switch:	Position:	In the centre underneath the worktop.	
	Type:	Semi-conductor component on the PCB	
	Contact type:	Closing mechanism	
	Function:	<u>Activation via:</u> Magnet on the door, magnet is interchangeable.	
		<u>Switching signal when:</u>	
		Door closed:	Fan
	Door open:	Fan	OFF
		Door alarm	ON
Light switch (for FKUv 16.3):	Position:	Directly on the light housing.	
	Function:	Activates interior light. This will also remain on if the door is closed.	

Consumers / Loads

Fan:

Position:

Rear centre in the fan cover.

Function:

Ventilation	Compressor	Door	Fan
ON	ON	CLOSE D	ON
ON	OFF	CLOSE D	ON
OFF	ON	CLOSE D	ON
		CLOSE	

Interior light (for FKUv 16.3):	Position:	On the compartment liner ceiling
	Function:	Continuously illuminated as soon as switch is set to ON.

Compressor:	Type:	Standard
	Function:	ON: Evaporator sensor switch-on value. Note: On delay time (8 minutes) must have elapsed. OFF: Air sensor switch-off value

4.2 Refrigeration components and functions**Compressor**

Type of appliance:	Standard, R600a
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Evaporator

Type of appliance:	Rear wall evaporator
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Type of installation:	Suspended freely
------------------------------	------------------

Injection point:	Top
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Flow sequence:	From top to bottom
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5.0 Assembly instructions / Parts replacement

5.1 Electronics

Front panel: - Remove screws (Fig. 5.1/ 1).



- Pull down front panel and disconnect cables (Fig. 5.1/ 2 and Fig. 5.1/ 3).

Fig. 5.1/ 1



Fig. 5.1/ 2



Fig. 5.1/ 3

PCB holder: - Unclip PCB holder from front panel.

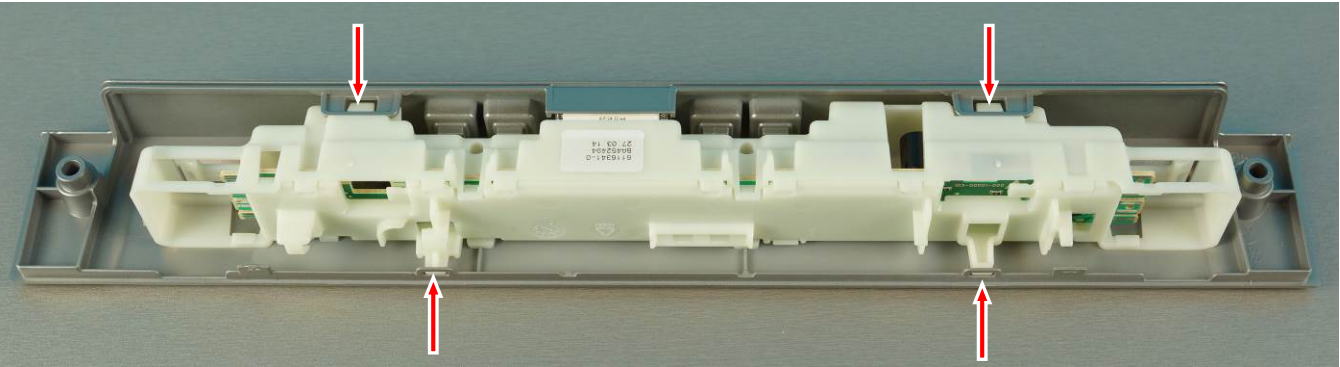


Fig. 5.1/ 4

Cover: - Unclip cover.

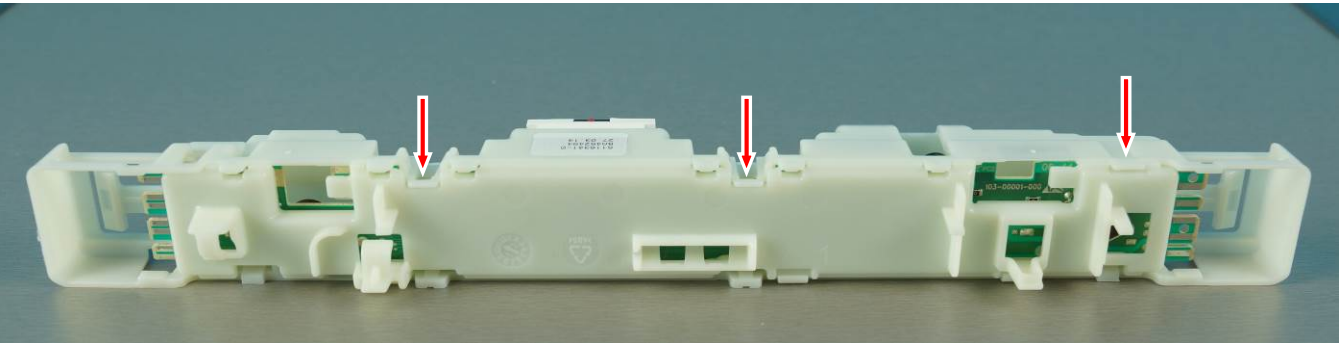


Fig. 5.1/ 5

PCB: - Unclip PCB from holder.

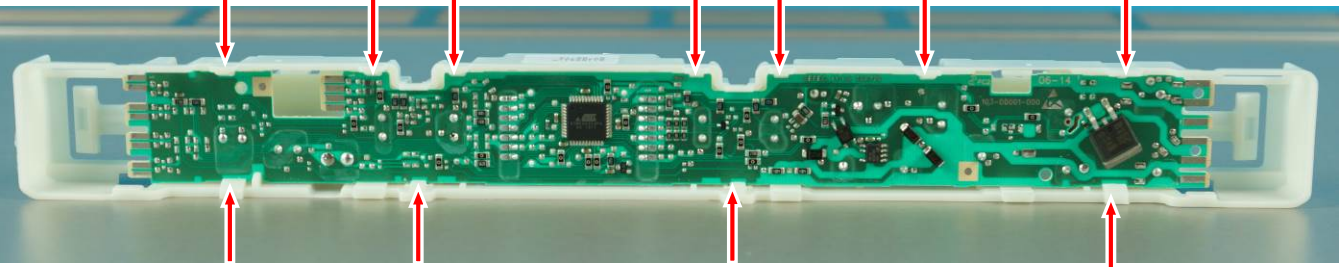


Fig. 5.1/ 6

All individual parts:



Fig. 5.1/ 7

5.2 Air sensor

Fan cover:

- Remove plugs and screws and fold away fan cover.
- Pull the sensor out of the holder.
- Pull the sensor out through the rear wall and replace with universal sensor (original sensor cable is foamed into the worktop)



Fig. 5.2/ 1

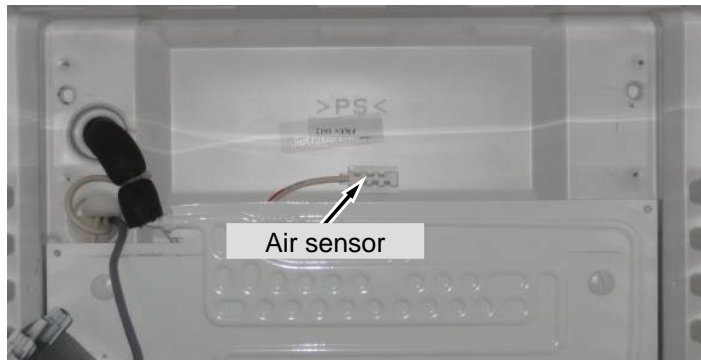


Fig. 5.2/ 2

5.3 Evaporator sensor

Evaporator:

- Undo bayonet screws
- Carefully swivel evaporator upwards or to the left.



Fig. 5.3/ 1



Evaporator sensor:

- Pull the sensor through the rear wall and replace with universal sensor. (original sensor cable is foamed into the worktop).



Fig. 5.3/ 2

5.4 Fan

Fan:

- Remove stoppers and screws and fold away fan cover.
- Disconnect cables and unclip fan together with the absorber from the cover.

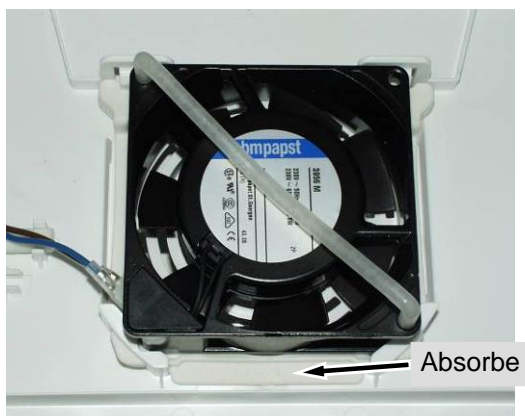


Fig. 5.4/ 1



Fig. 5.4/ 2

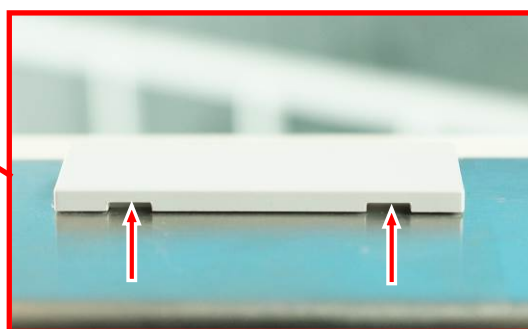
5.5 Door magnet

Cover:

- Unclip the cover.



Fig. 5.5/ 1



Magnet:

- Pull out magnet.



Fig. 5.5 / 2

5.6 Interior light (for FKUv 16.3)

Interior light:

- Disconnect the interior light cable from the compressor connection.
- Remove both fastening screws and tilt interior light downwards.
- Pull the cable through the foamed-in hose and remove interior light.



Fig. 5.6/ 1

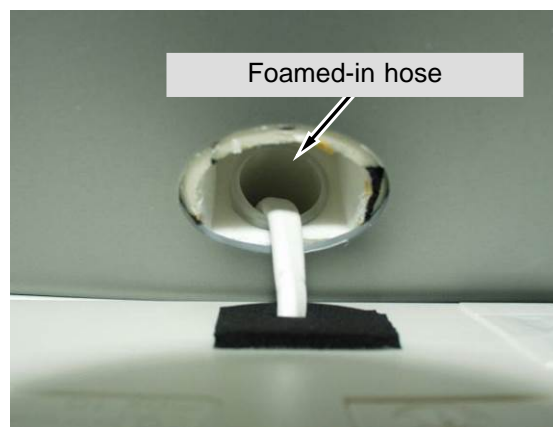


Fig. 5.6/ 2

5.7 Door closing mechanism

Housing with spring:

- Changing the door hinges is described in the operating manual.
- The ends of the spring must be inserted in the housing or turn hinges so that when mounting with the door closed, the turn hinges must be pre-tensioned by 90° (in the closing direction).



Fig. 5.7/ 1

6.0 Technical data

Interior light
(for FKUv 16.3): Output: approx. 2 watt
 Type: LED

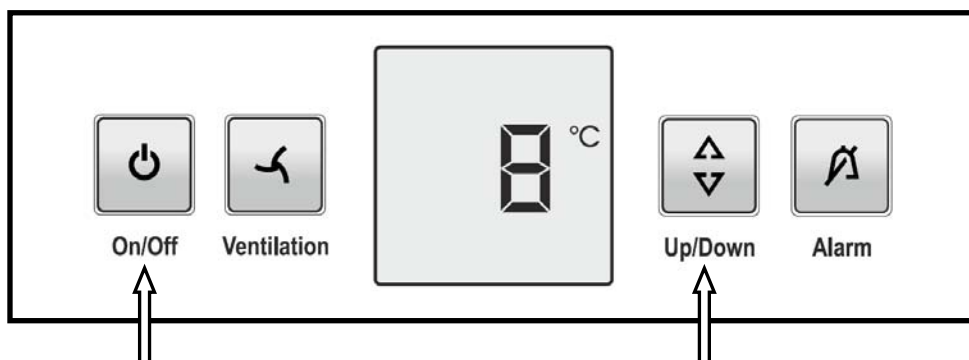
Fan: Output: approx. 6 watt
 Voltage: 230 V
 Speed: 2150 U/min
 Direction of rotation: Clockwise (with view of lettering)

Sensor values:

Temperature [°C]	Resistance value [kOhm]
+35	3.1
+30	3.8
+25	4.7
+20	5.9
+15	7.3
+10	9.3
+5	11.9
0	15.3
-5	19.8
-10	25.9
-15	34.1
-20	45.3
-25	60.8
-30	82.3
-35	112.8

7.0 Service menu

The service menu may only be used by service technicians.







Activating the service menu: Appliance must be switched ON.
Press “ON/OFF” + “Up/Down” simultaneously for approx. 5 seconds

7.1 Brief overview of service menu





Service menu		Menu	Action	Submenu	Action	Function elements selection
Demo mode	Up/Down button ↓/↑	d	1x Ventilation	d0 d1	1x Ventilation	Demo mode OFF
						Demo mode ON
Panel test (operating element test)		P	1x Ventilation	P1	1x Ventilation	Press buttons
Sensor test		E-	1x Ventilation	E1	1x Ventilation	Up-/Down Button ↓/↑ 1 : Air sensor 2 : Evaporator sensor A : Door contact
Service mode		L-	1x Ventilation	L1	1x Ventilation	Up-/Down Button ↓/↑ 0 : All OFF 1 : Compressor 5 : Interior light 7 : Fan

7.2 Demo mode



Step	Display	Action	Display following action	Testing option / Info
Start service menu --Demo mode ON--				
1	Actual value	Press "Up/Down" and "ON/OFF" simultaneously for 5 seconds	 flashes	Demo mode selected
2	 flashes	Press "Ventilation" once	 static	Demo mode ON selected
3	 static	Press "Ventilation" once	Set target value and "Demo"	Demo mode ON

Start service menu --Demo mode OFF--

1	Target value and "Demo"	Press "Up/Down" and "ON/OFF" simultaneously for 5 seconds	 flashes and "Demo"	Service menu active
2	 flashes and "Demo"	Press "Ventilation" once	 static and "Demo"	Demo mode OFF selected
3	 static and "Demo"	Press "Ventilation" once	Actual value	Demo mode OFF







The text **"Demo"** in the display indicates the **activated demo mode**.

Demo mode can only be deactivated via the service menu, not by OFF/ON or disconnection from the power supply.




















Operation switches to the desired mode, either demo mode or normal mode, as soon as "SuperFrost" has been pressed.

7.3 Panel test

















Step	Display	Action	Display following action	Testing option / Info
Start service menu				
1	Actual value	Press "Up/Down" and "ON/OFF" simultaneously for 5 seconds	 flashes	Service menu active
Operating element test -- test of sensor buttons, display elements, door sensor and beep --				
2	 flashes	Press "Up/Down" once	 flashes	Operating element test selected
3	 flashes	Press "Ventilation" once	 static	Panel test activated
4	 static	Press "Ventilation" once	All symbols/segments	Display elements/ More symbols are displayed than are used by the respective electronic control system!
5	All symbols/segments	- Press all buttons one after the other (each operation is confirmed by beep) - Door open/closed	- Beep for 2 seconds - Appliance switches OFF	Beep sounds only when test was successful.
Termination	Operating element test cannot be terminated, e.g. in step 2, it has to be performed in full. If a button is defective , no beep is output for 2 sec and the appliance does not switch off . The appliance then has to be unplugged and plugged back in again.			

7.4 Sensor test (temperature display)

Step	Display	Action	Display following action	Testing option / Info
Start service menu				
1	Actual value	Press " Up/Down " and " ON/OFF " simultaneously for 5 seconds	 flashes	Service menu active
Sensor test and door contact test (sensor values without offset, appliance in control mode)				
2	 flashes	Press "Up/Down" twice	 flashes	Sensor test mode selected
3	 flashes	Press "Ventilation" once	 static	Sensor test mode activated
4	 static	Press "Ventilation" once	 Flashes alternately with sensor temperature	Air sensor
4	 Flashes alternately with sensor temperature	Press "Up/Down" once	 Flashes alternately with sensor temperature	Evaporator sensor
4	 Flashes alternately with sensor temperature	Press "Up/Down" once	 Flashes alternately  or 	Door contact (oP=Door open, cL=Door closed)
Termination	Press " ON/OFF " once: Return to level 2  . No further items are selectable with this appliance. Press " ON/OFF " twice: Return to level 1  . Points:  ,  ,  ,  selectable Press " ON/OFF " three times: Return to normal/control mode			

7.5 Service mode

Step	Display	Action	Display following action	Testing option / Info	
Start service menu					
1	Actual value	Press “ Up/Down ” and “ ON/OFF ” simultaneously for 5 seconds	 flashes	Service menu active	
Service mode -- testing electric loads--					Power input
2	 flashes	Press “Up/Down” three times	 flashes	Service mode selected	
3	 flashes	Press “Ventilation” once	 static	Service mode activated	
4	 static	Press “Ventilation” once	 static	All OFF	--
5	 static	Press “Up/Down” once	 static	Compressor ON	approx. 55 W
6	 static	Press “Up/Down” once	 static	Interior light ON	approx. 3 W
7	 static	Press “Up/Down” once	 static	Fan ON	approx. 10 W
Termination	Press “ ON/OFF ” once: Return to level 2  . No further items are selectable with this appliance. Press “ ON/OFF ” twice: Return to normal/control mode				

8.0 Table of error codes

Error code	Defective component	Emergency mode
F1	Refrigerator compartment air sensor	Compressor 5 minutes ON – 20 minutes OFF
F2	Refrigerator compartment evaporator sensor	Compressor 5 minutes ON – 20 minutes OFF