Sensors

Repair kit

LIEBHERR

Contents

LIEBHERR

Meaning of terms

Meaning of terms

Temperature sensor

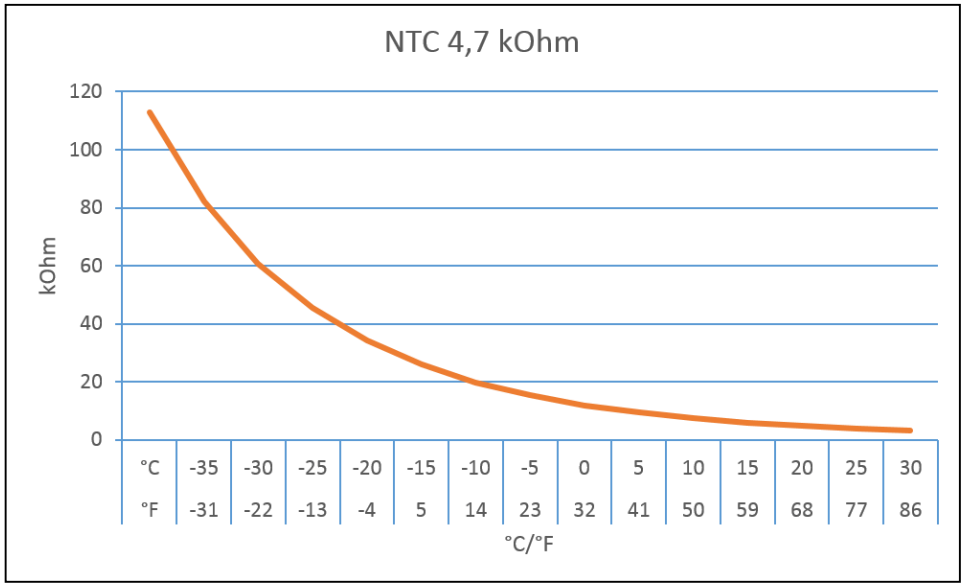
- NTC resistance
  (warmer temperature, lower resistance)
- Plastic-coated sensor bead

Function

Function

Sensor values, operating range, other

- Operating range: -50 °C to + 43 °C
- Sensor head dimensions: Length: 29.5 – 30 mm
  Ø: 8 mm
- Cross-section: 2 x 0.34 mm²



Temperature [°C]	Temperature [°F]	Resistance value [kOhm]
+35	95	3.1
+30	86	3.8
+25	77	4.7
+20	68	5.9
+15	59	7.3
+10	50	9.3
+5	41	11.9
0	32	15.3
-5	23	19.8
-10	14	25.9
-15	5	34.1
-20	-4	45.3
-25	-13	60.8
-30	-22	82.3
-35	-31	112.8

Function

Sensor fault

Until today	Freestanding appliances from 2016	
F0	BT001	BioFresh air sensor
F1	BT011	Refrigerator compartment air sensor defective
F2	BT021	Refrigerator compartment evaporator sensor defective
F3	BT031	Freezer compartment air sensor defective
F4	BT041	Freezer compartment evaporator sensor defective
rU	BT071	Room air (partly only via the Service Menu)

Set-up

Production period

Freestanding appliances

Foamed-in evaporator

- Air sensor-BioFresh 2016 -
- Air and evaporator sensors, Refrigerator compartment 2016 -
- Air and evaporator sensors, Refrigerator compartment with BioFresh 2016 -

Production period

Built-in appliances

Freely suspended evaporator

- Evaporator sensor 2013 - today
- Air and evaporator sensors 2013 - today

Foamed-in evaporator

- Evaporator sensor (BioFresh) 2013 - today
- Air and evaporator sensors 2013 - today

Production period

Freestanding appliances and built-in appliances

General repair kit

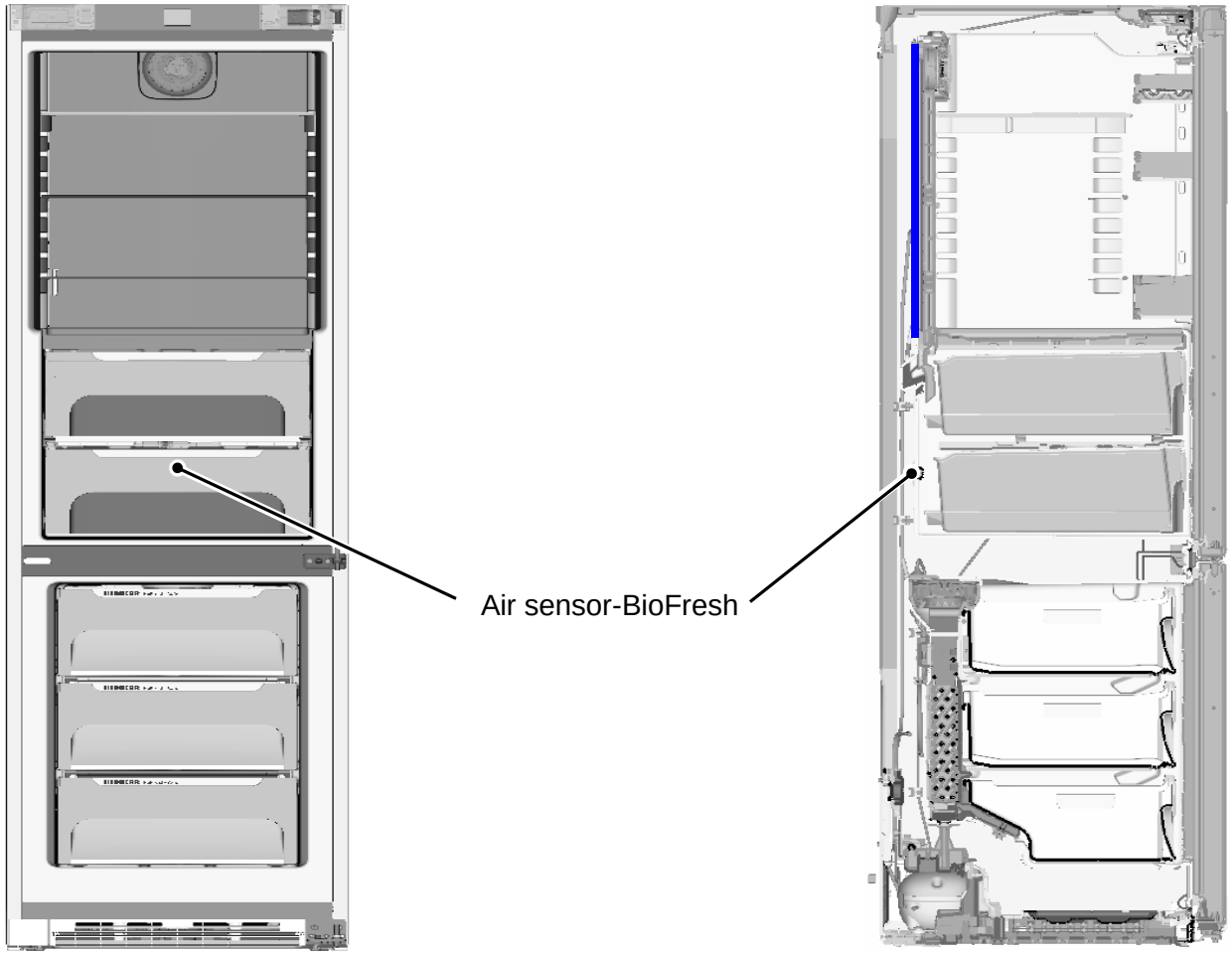
- Sensor repair kit 2008 - 2015
- Sensor repair kit 2015 2015 -

2016 -

Foamed-in evaporator

Air sensor-BioFresh

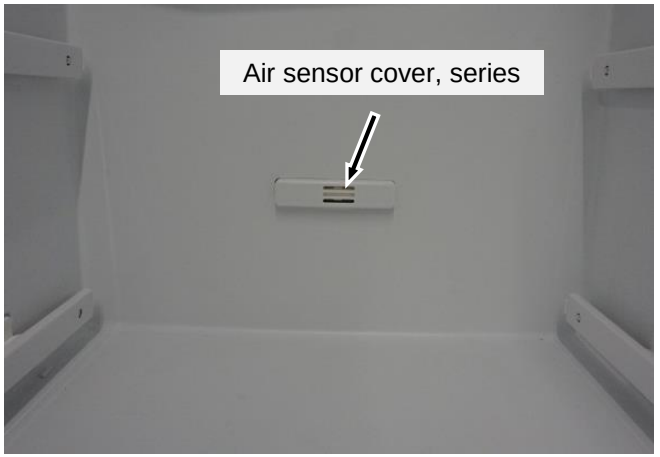
Example: Position in the device

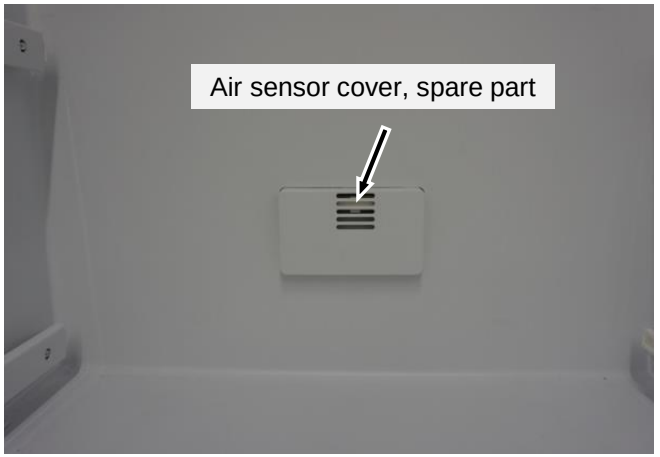


Installation situation

prior to and after repairs

New air sensor cover is used in case of repair so that the sensor housing of the repair kit can be used.





Parts:

1 BioFresh air sensor

2 Sensor housing for repair kit

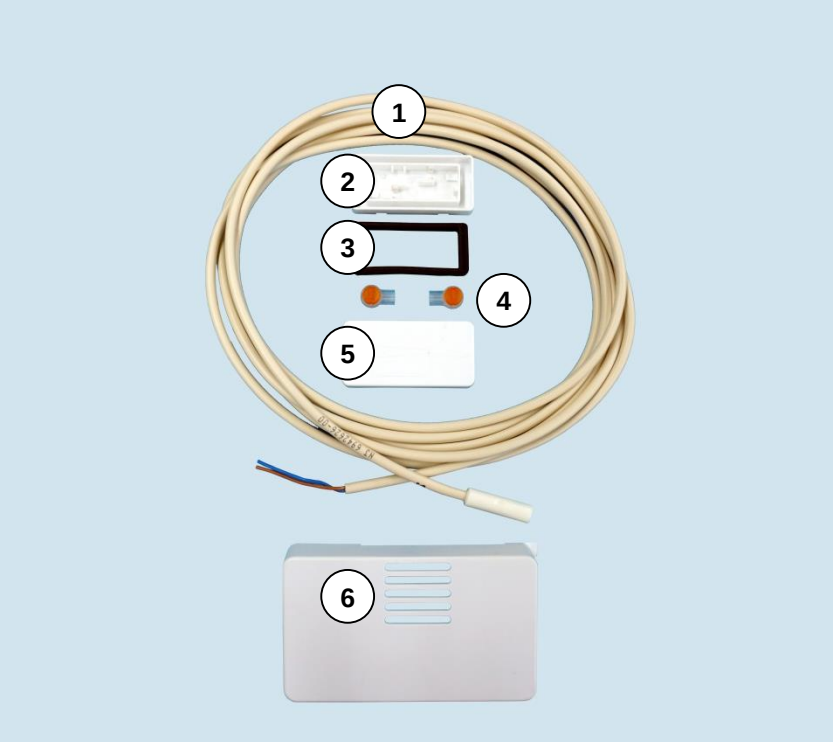
3 Seal for repair kit

4 Insulation displacement contact

5 Cover for repair kit

6 Cover

1x Repair instructions



Fitting:

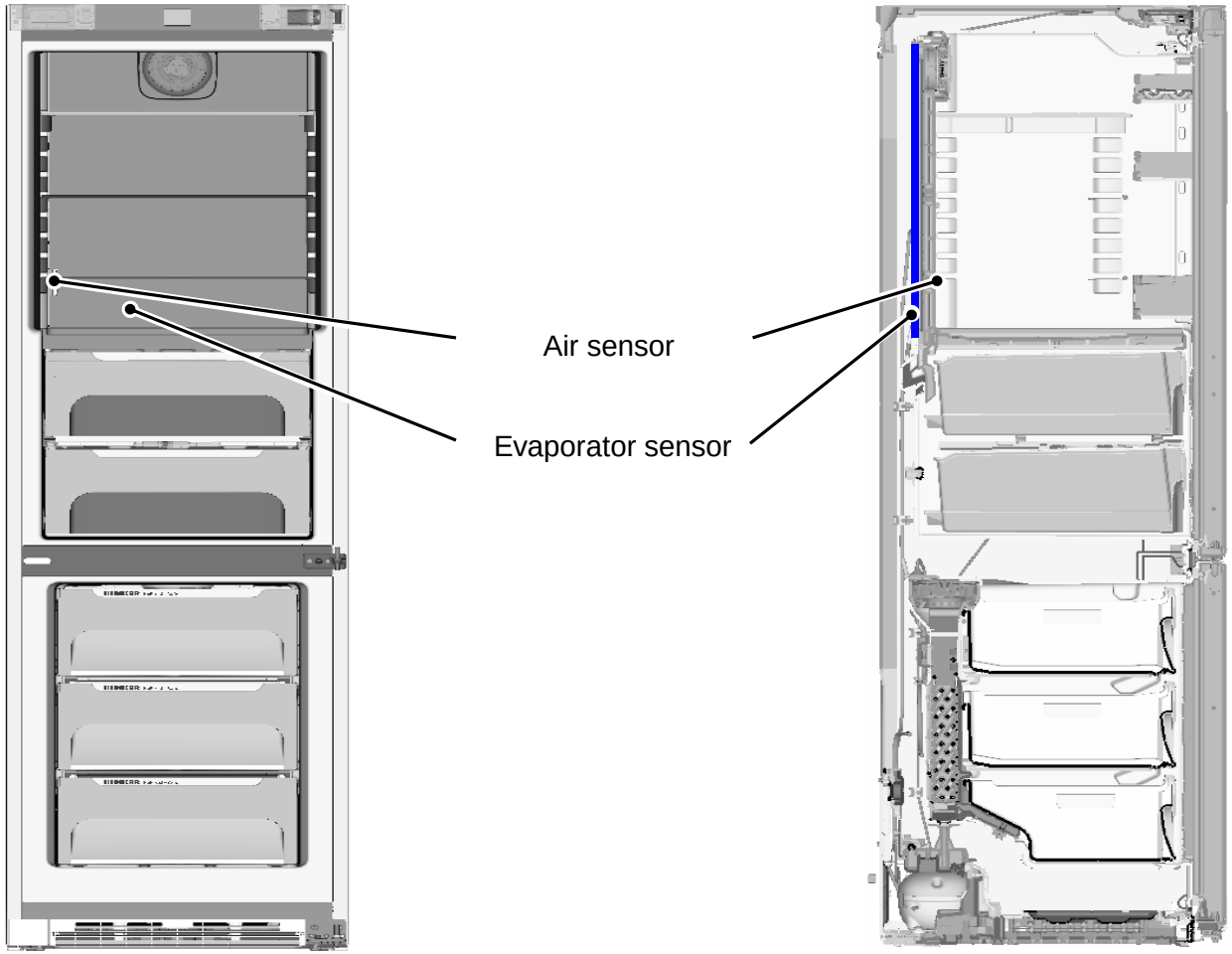
- Remove air sensor cover
- Cut off the sensor bead of the old sensor
- Cut new sensor to size
- Remove/cut back sheaths from cable ends (template on cover of sensor housing)
- Insert rubber seal in the sensor housing
- Insert cable ends into the sensor housing
- Connect cable ends
- Close sensor housing
- Insert new sensor cover

2016 -

Foamed-in evaporator

Air and evaporator sensor Refrigerator compartment

Example: Position in the device

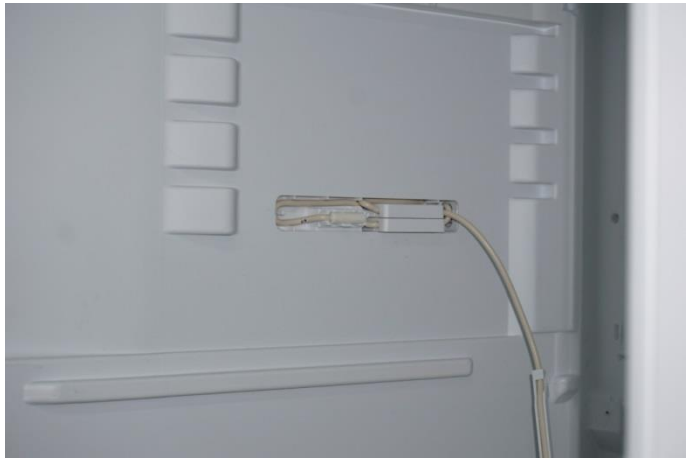


Set-up, freestanding appliances 9590 208

Installation situation
prior to and after repairs

If only the air sensor is repaired, previous air sensor covers can be re-applied.

If the evaporator sensor or the air and evaporator sensor are repaired, the repair kit cover must be used.



Parts:

1 Sensor (2x)

2 Sensor housing for repair kit (2x)

3 Seal for repair kit (2x)

4 Insulation displacement contact (2x)

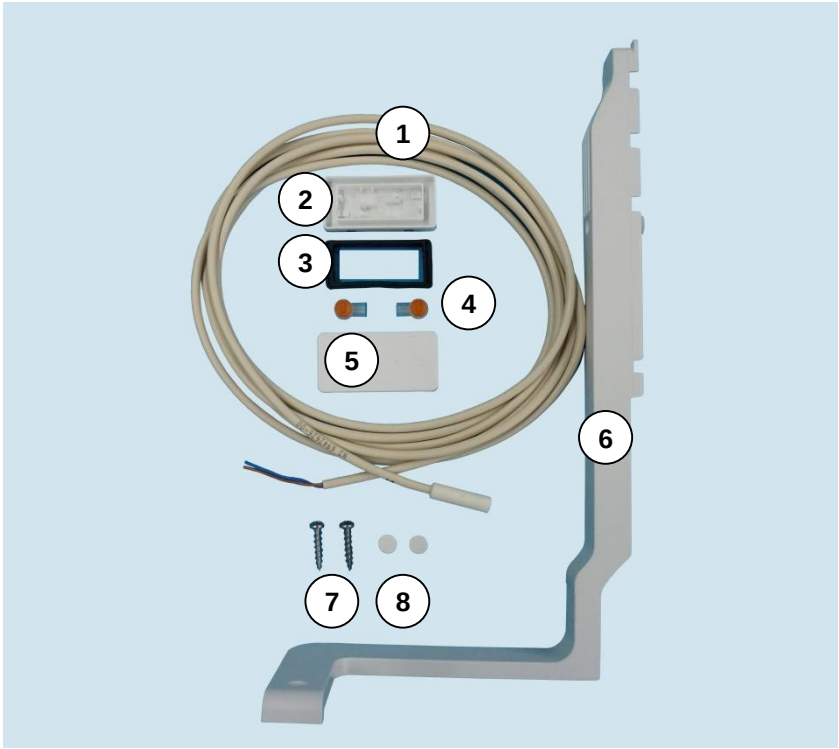
5 Cover for repair kit (2x)

6 Cover

7 Fastening screws

8 Stopper

1x Repair instructions



Fitting:

- Remove air sensor cover
- Cut off the sensor bead of the old sensor
- Cut new sensor to size
- Remove/cut back sheaths from cable ends (template on cover of sensor housing)
- Insert rubber seal in the sensor housing
- Insert cable ends into the sensor housing
- Connect cable ends
- Close sensor housing
- Insert new sensor cover

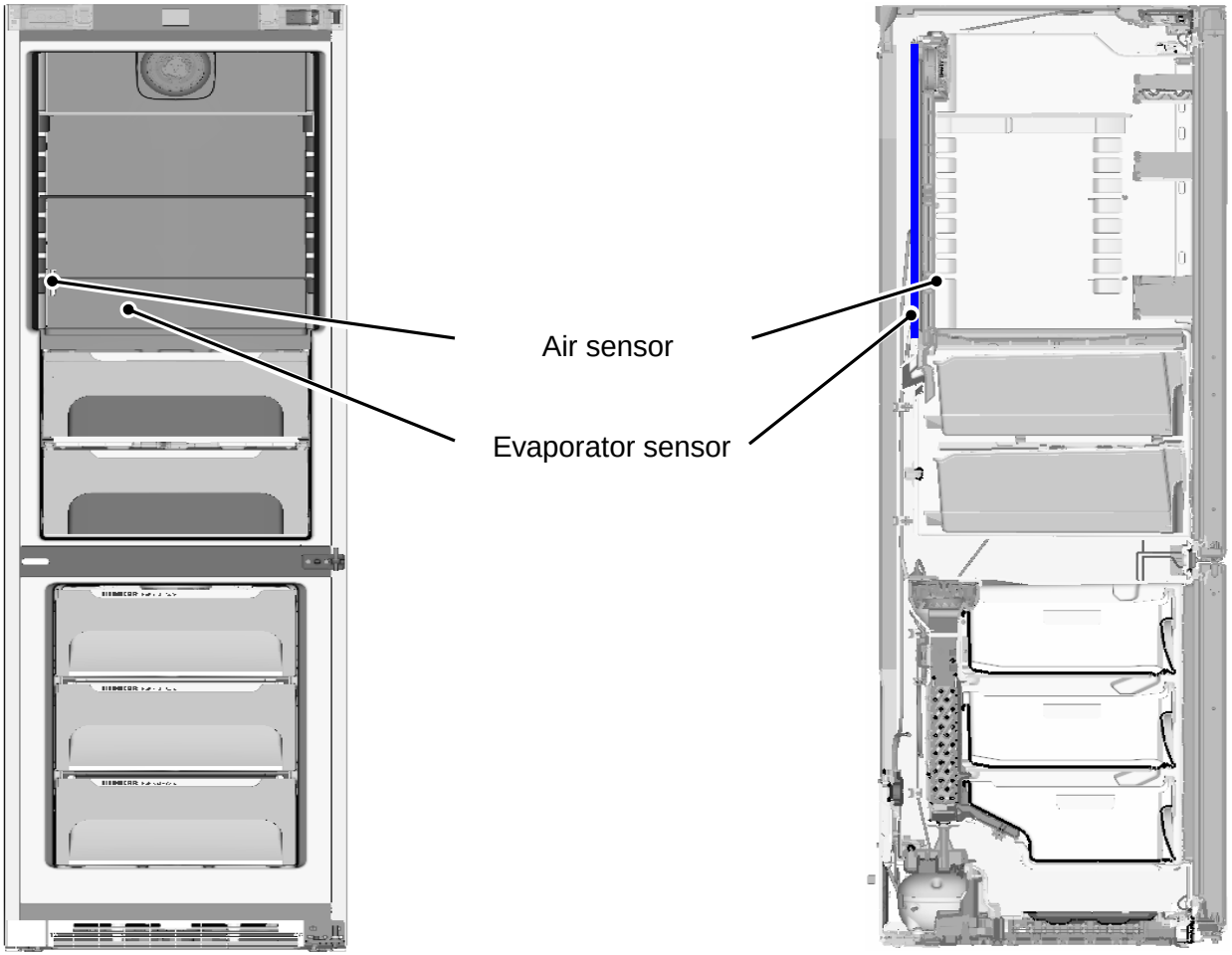
2016 -

Foamed-in evaporator

Air and evaporator sensor

Refrigerator compartment with BF

Example: Position in the device



Installation situation prior to and after repairs

If only the air sensor is repaired, previous air sensor covers can be re-applied.

If the evaporator sensor or air and evaporator sensors are repaired, the air sensor cover and the evaporator sensor holder of the repair kit must be used.

Parts:

1 Sensor (2x)

2 Sensor housing for repair kit (2x)

3 Seal for repair kit (2x)

4 Insulation displacement contact (2x)

5 Cover for repair kit (2x)

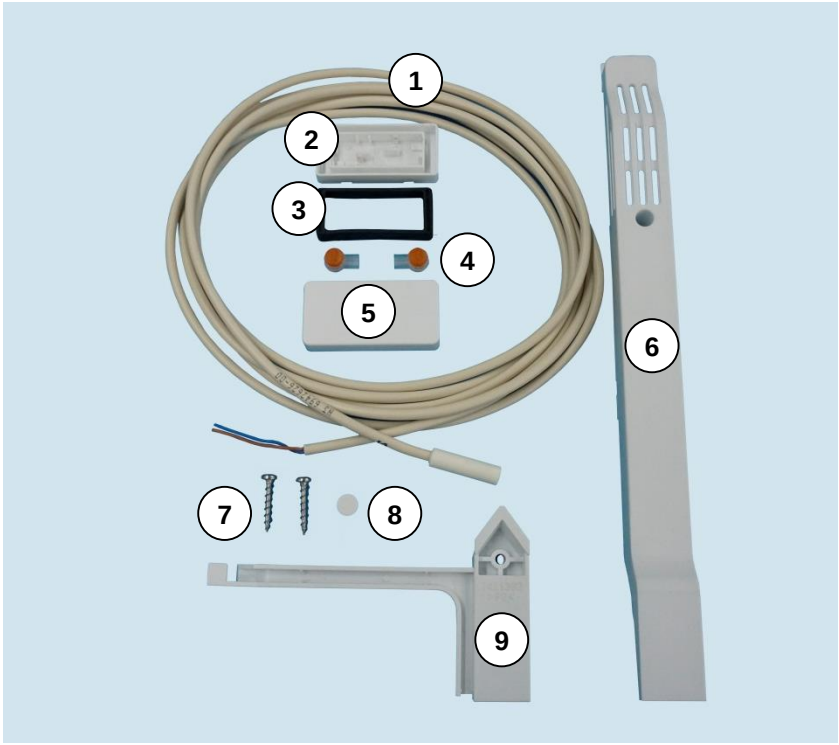
6 Cover

7 Fastening screws

8 Stopper

9 Evaporator sensor holder

1x Repair instructions



Fitting:

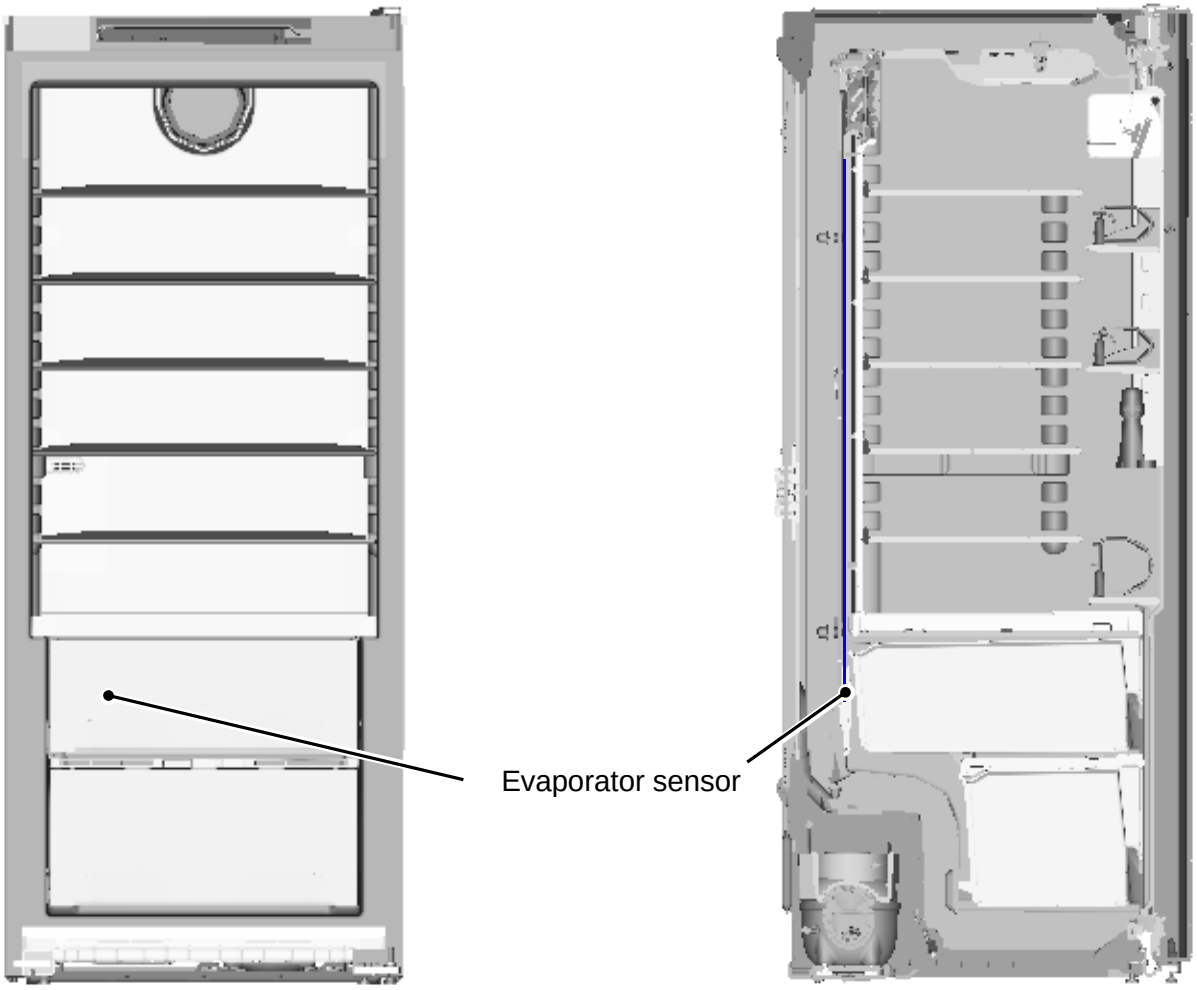
- Remove air sensor cover
- Cut off the sensor bead of the old sensor
- Cut new sensor to size
- Remove/cut back sheaths from cable ends (template on cover of sensor housing)
- Insert rubber seal in the sensor housing
- Insert cable ends into the sensor housing
- Connect cable ends
- Close sensor housing
- Insert new sensor cover

2013 - today

Freely suspended evaporator

evaporator sensor

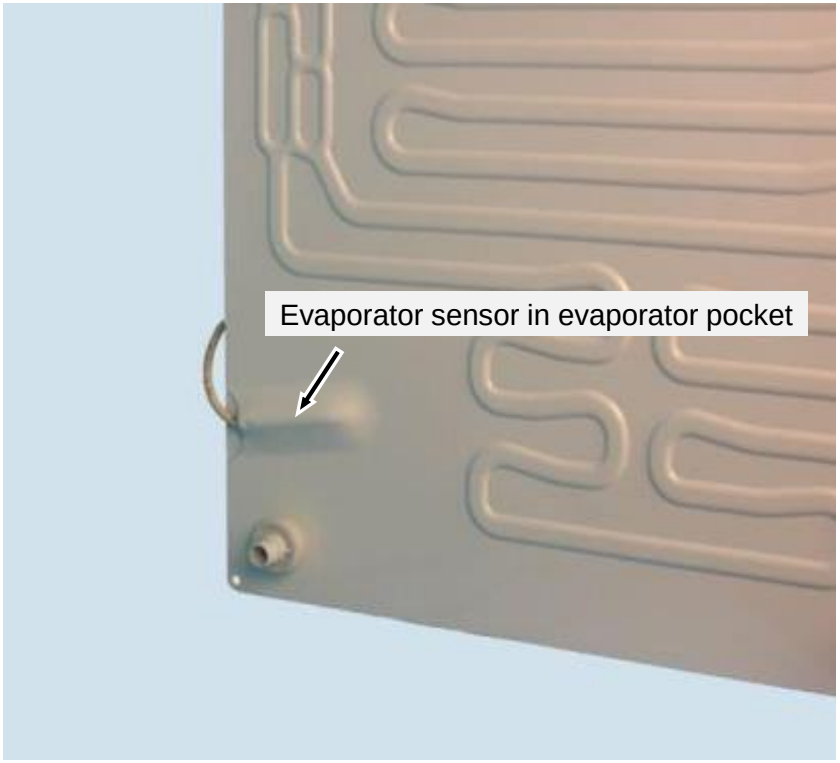
Example: Position in the device



Installation situation

prior to and after repairs

The evaporator sensor is inserted into the evaporator pocket in the freely suspended rear wall evaporator.



Parts:

1 Refrigerator compartment evaporator sensor

2 Strain relief lid

3 Terostat sealant

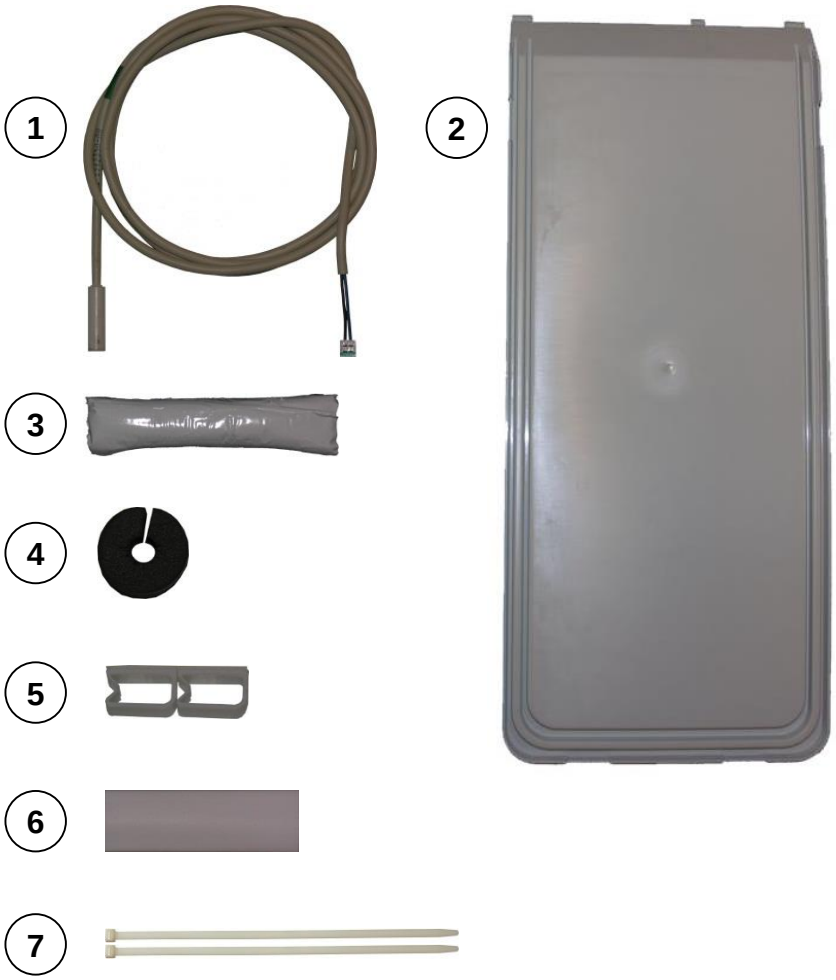
4 Seal for suction pipe feed-through

5 2x Cable holder

6 Shrink tube

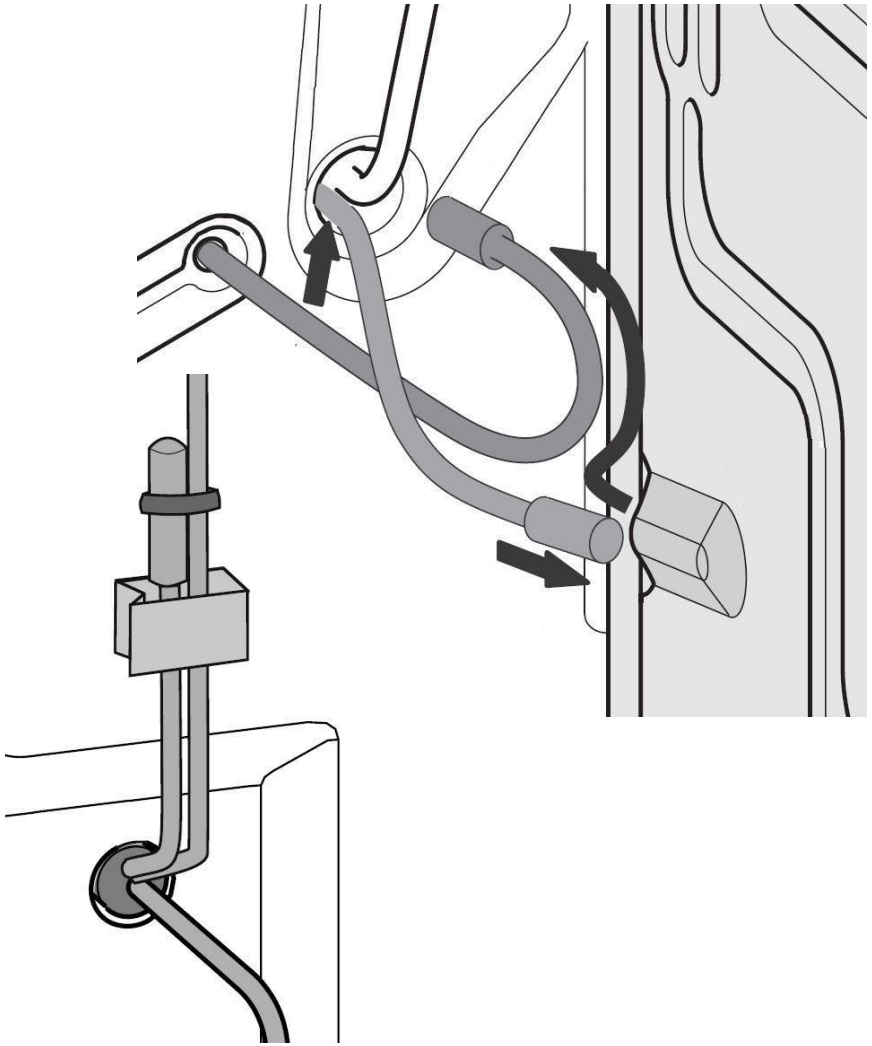
7 2x Cable tie

1x Repair instructions



Fitting:

- Insulate connector of old sensor with shrink tube
- Make rear wall accessible
- Place sensor through fold
- Fit sensor into evaporator pocket
- Fasten old sensor onto rear wall
- Connect sensor to appliance electronics
- Remount the equipment

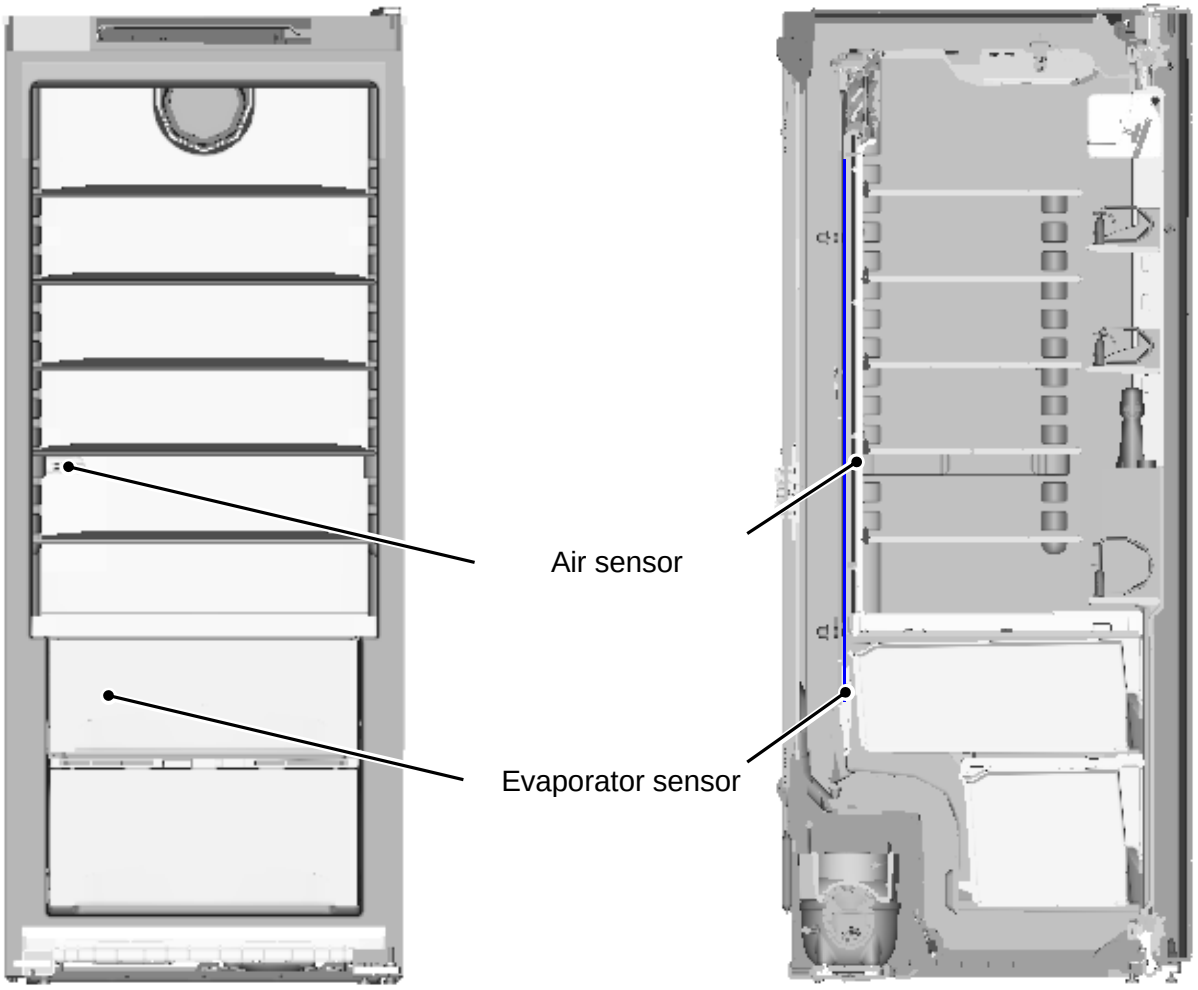


2013 - today

Freely suspended evaporator

air and evaporator sensors

Example: Position in the device



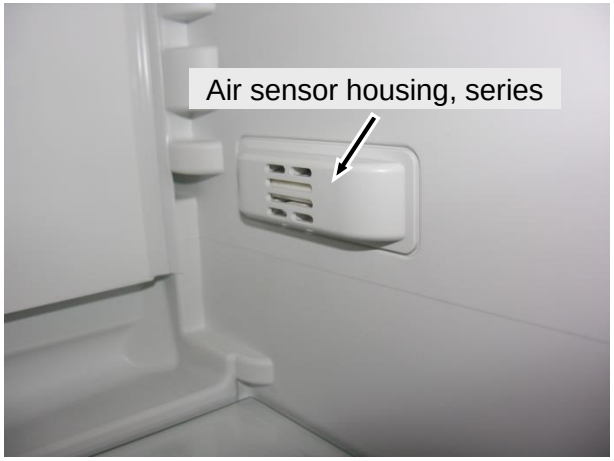
Installation situation

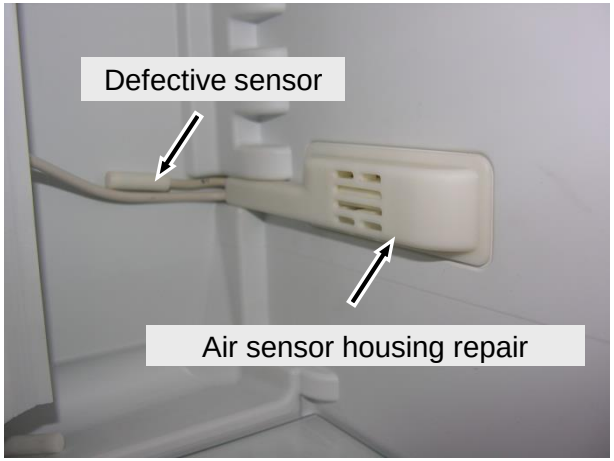
prior to and after repairs

Defective air sensor is not cut off.

Place on rear wall, non-visible area.

Insert new air sensor holder.





Parts:

1 Refrigerator compartment air sensor

2 Refrigerator compartment evaporator sensor

3 Sensor holder

4 Strain relief lid

5 Terostat sealant

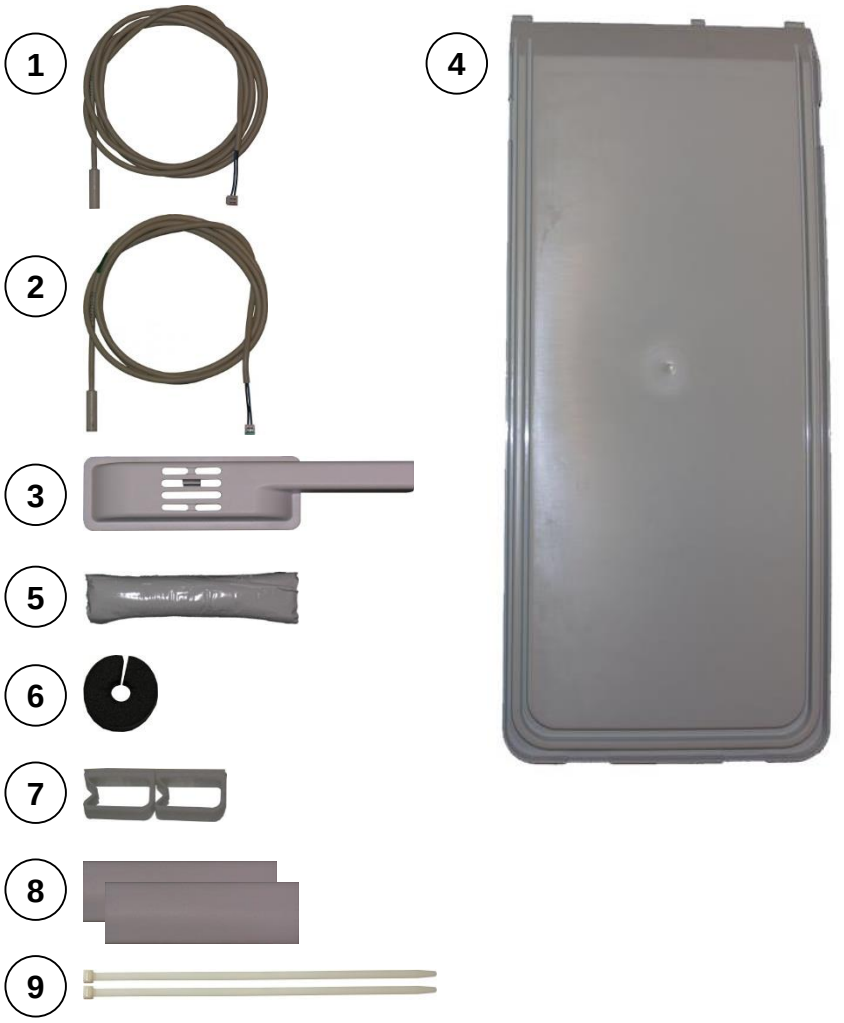
6 Seal for suction pipe feed-through

7 2x Cable holder

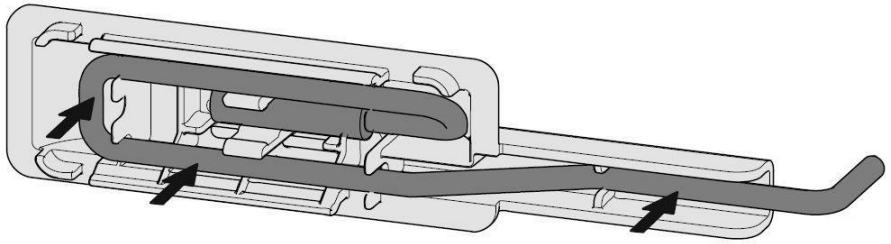
8 2x Shrink tube

9 2x Cable tie

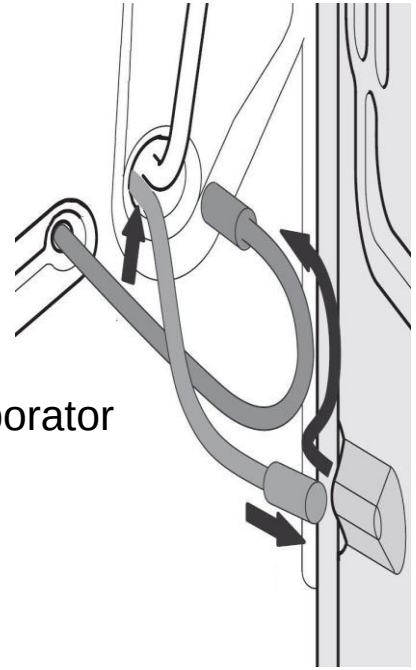
1x Repair instructions

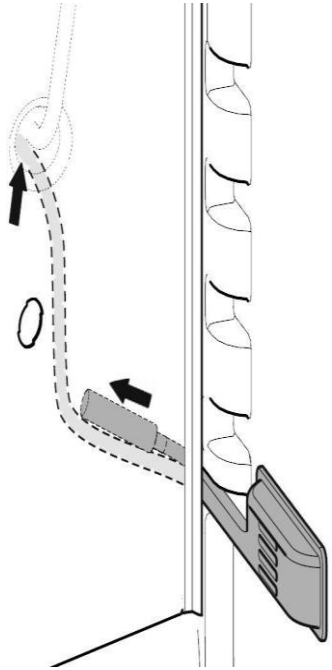


Fitting:



- Insulate connectors of old sensors with shrink tube
- Make rear wall accessible
- Place sensor through fold
- Fit air sensor into sensor holder, place old sensor behind evaporator, (old sensor holder can be disposed of)
- Install the sensor holder
- Push the new evaporator sensor into the evaporator pocket.
- Fasten old sensor onto rear wall
- Connect sensor to appliance electronics
- Remount the equipment





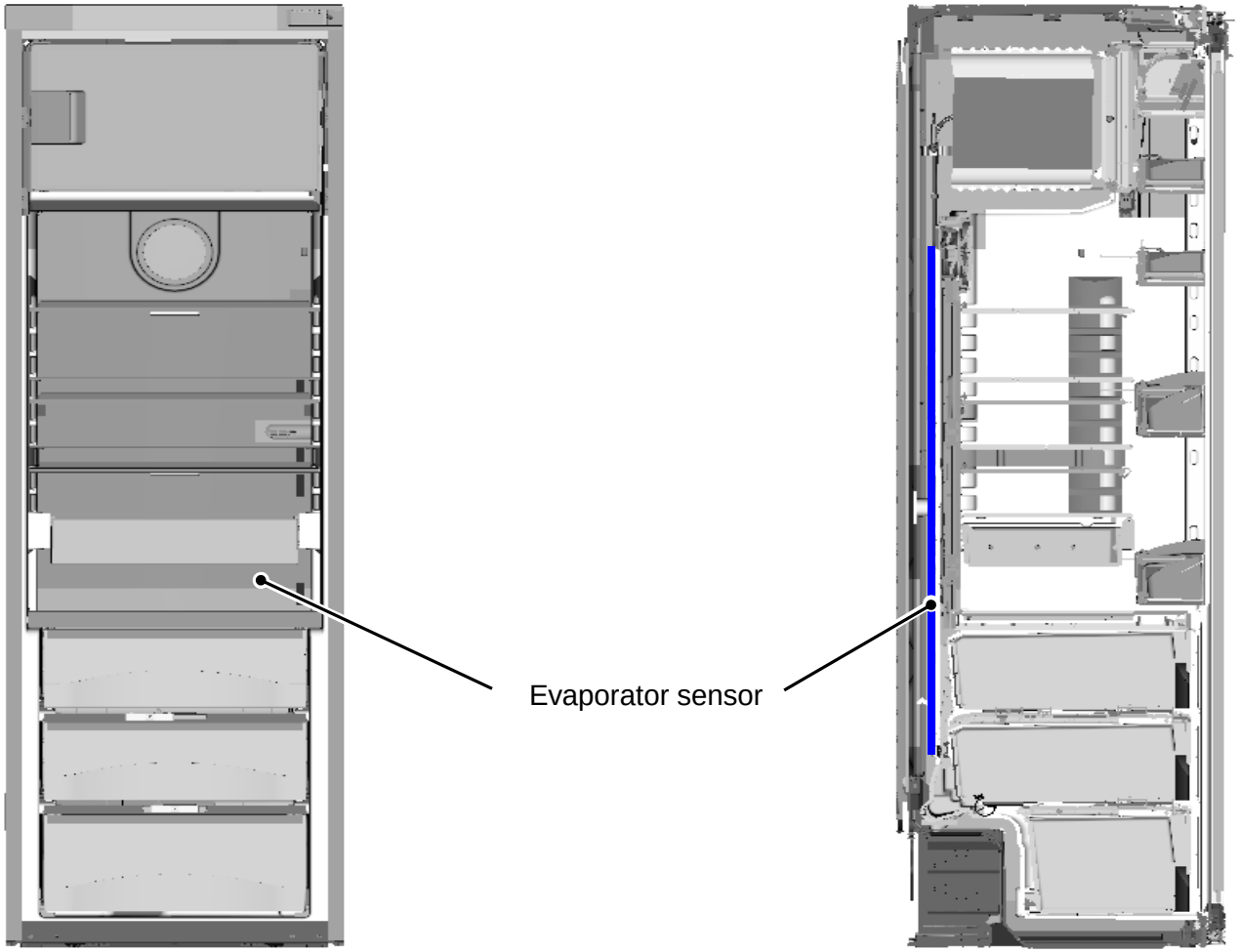
LIEBHERR

2013 - today

Foamed-in evaporator

Evaporator sensor (BioFresh)

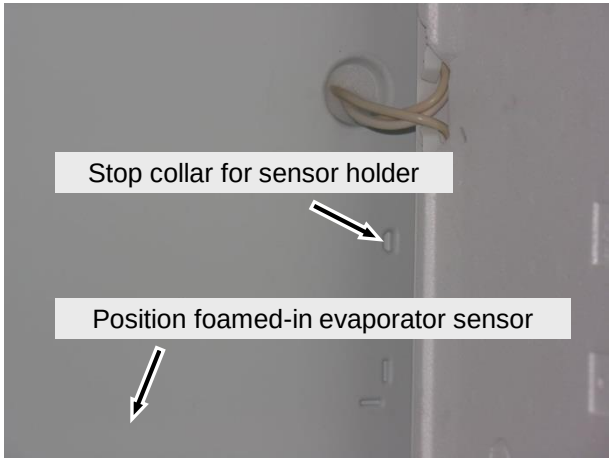
Example: Position in the device

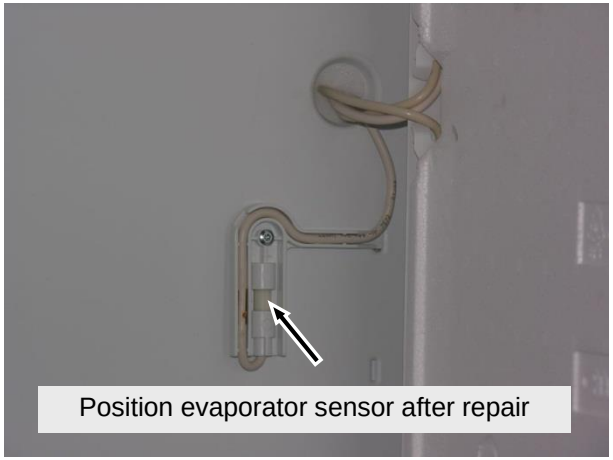


Installation situation

prior to and after repairs

Evaporator sensor repair kit for BioFresh appliances with 4* compartment.





Parts:

1 Refrigerator compartment evaporator sensor

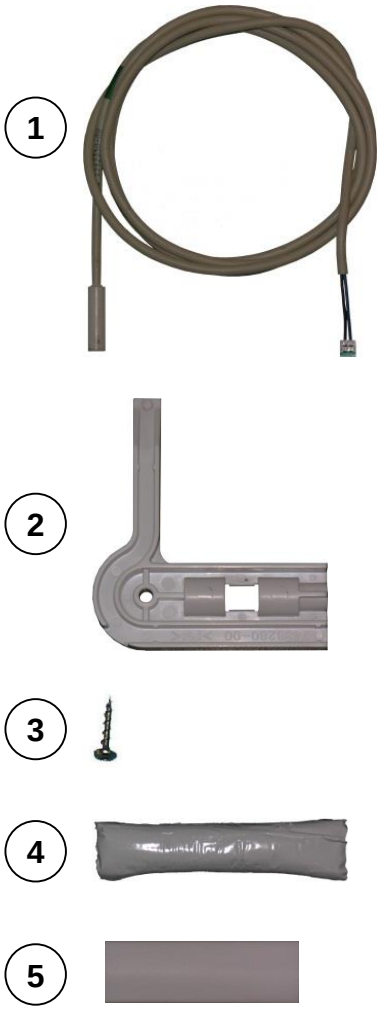
2 Sensor holder

3 Lens head screw

4 Terostat sealant

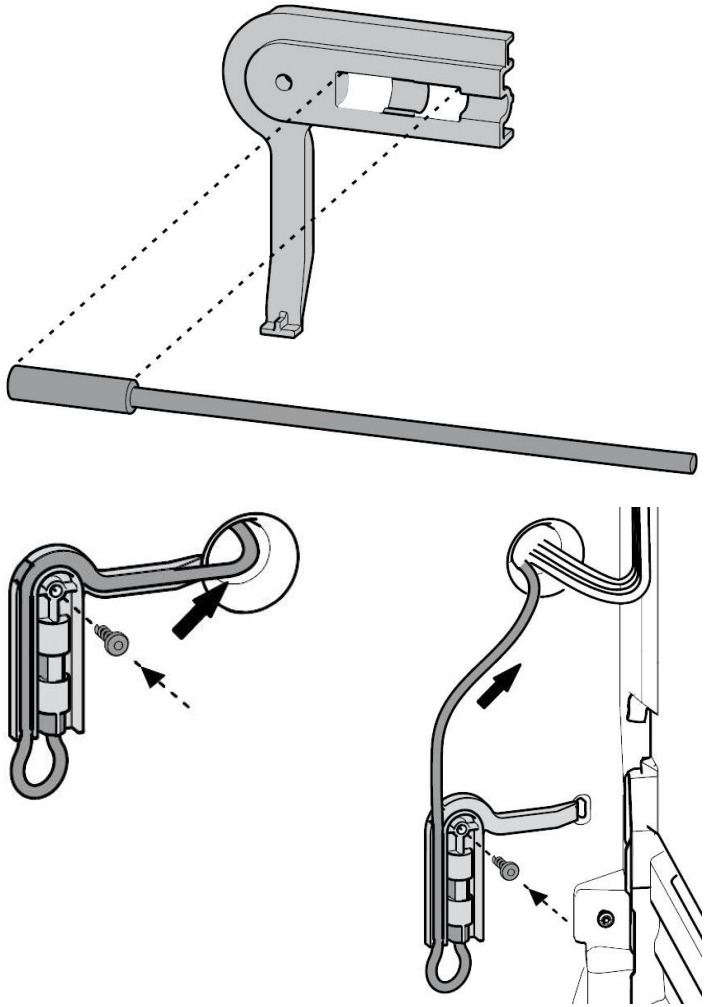
5 Shrink tube

1x Repair instructions



Fitting:

- Insulate connector of old sensor with shrink tube
- Make rear wall accessible
- Place sensor lead through fold
- Click sensor into sensor holder
- Position sensor holder and tighten screws
- Connect sensor to appliance electronics
- Remount the equipment



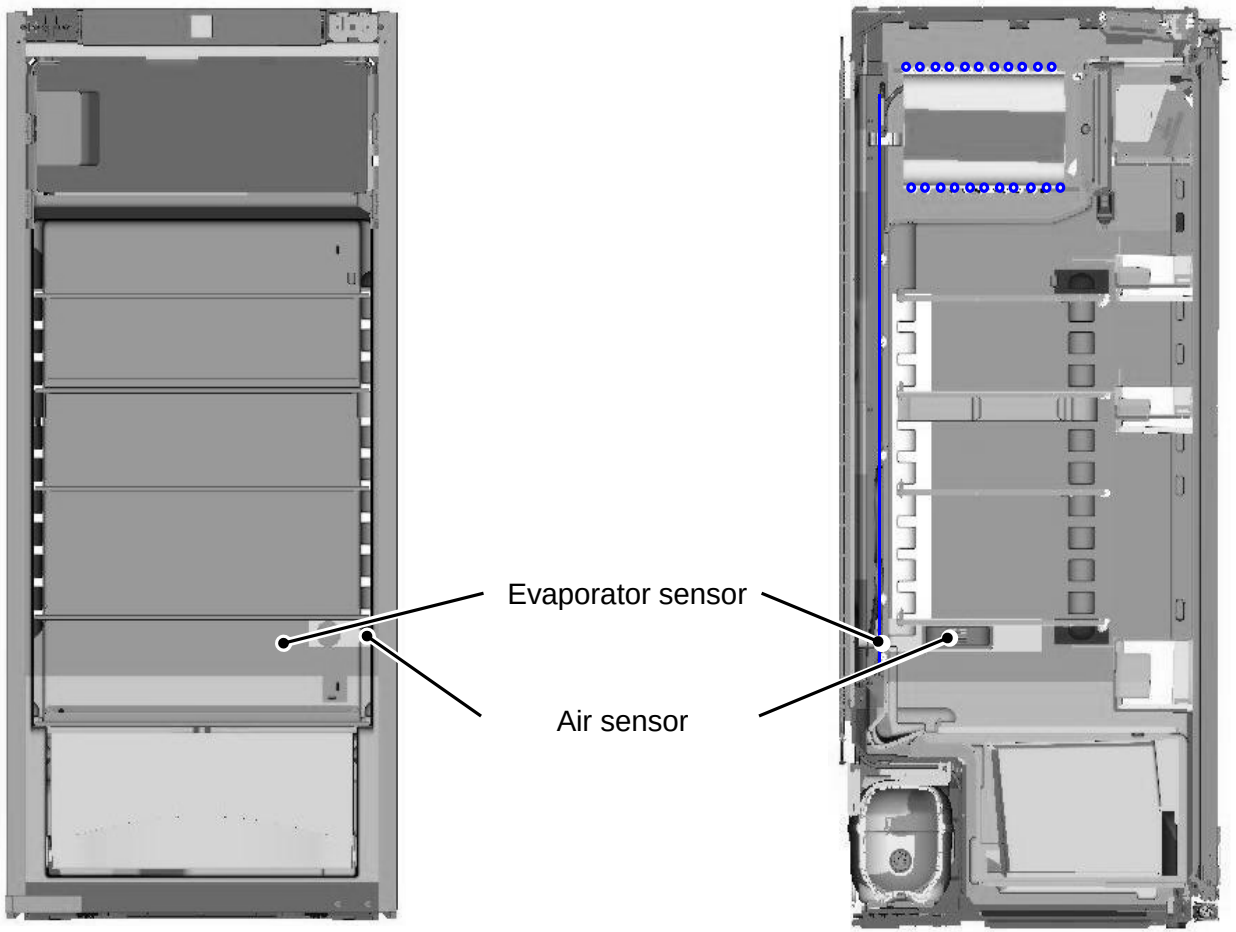
Note:
Sensor holder position may vary

2013 - today

Foamed-in evaporator

Air and evaporator sensors

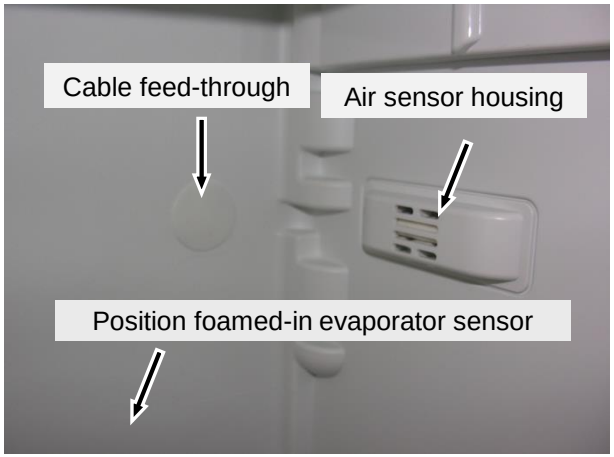
Example: Position in the device

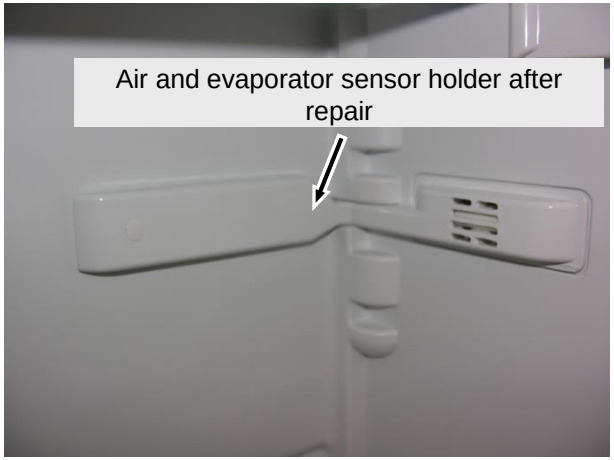


Installation situation

prior to and after repairs

New sensor holder covers the cable feed-through.





Parts:

1 Refrigerator compartment air sensor

2 Refrigerator compartment evaporator sensor

3 Sensor holder

4 Lens head screw

5 Stopper

6 Strain relief lid

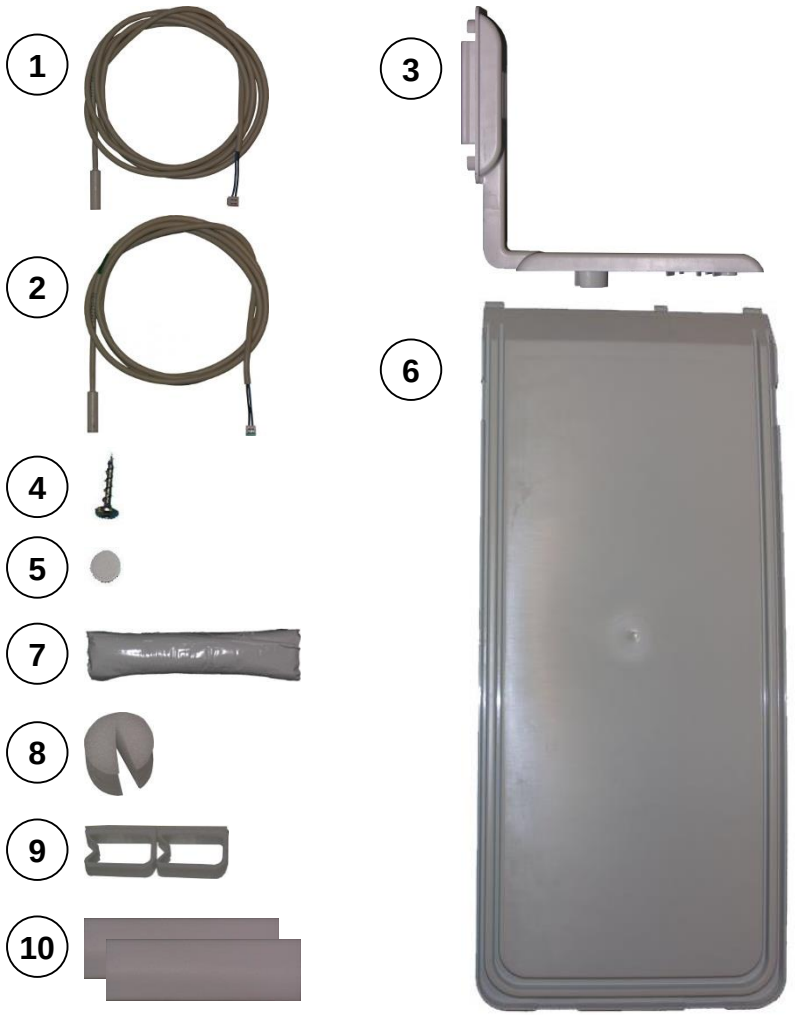
7 Terostat sealant

8 Seal for cable feed-through

9 2x Cable holder

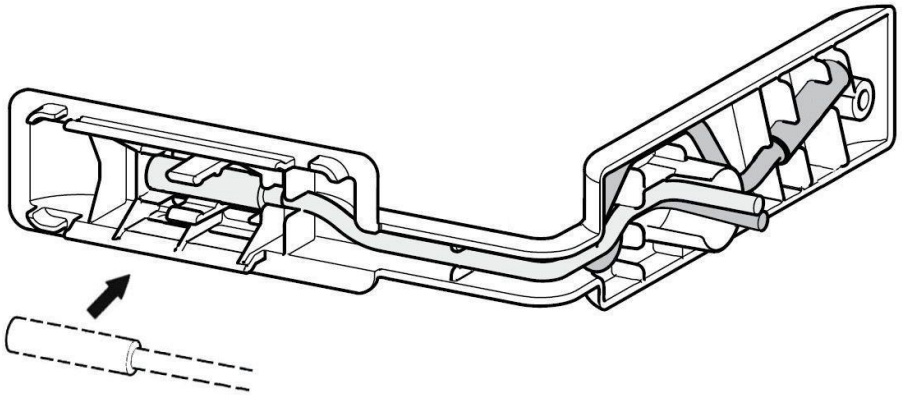
10 2x Shrink tube

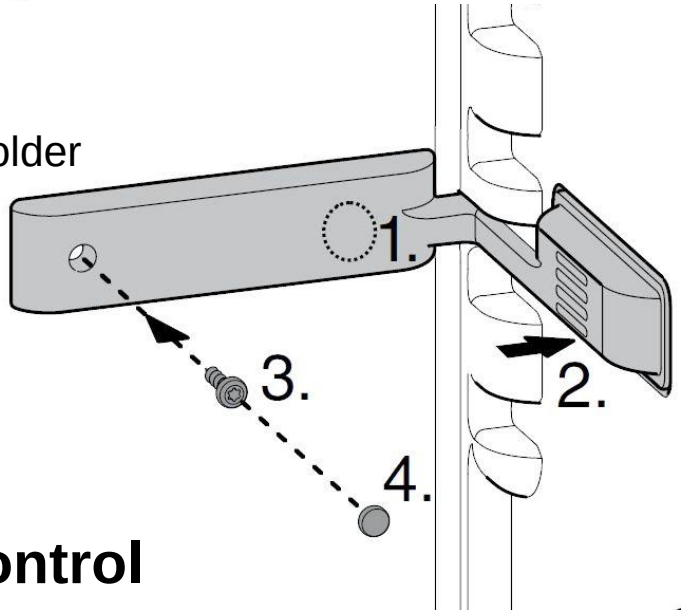
1x Repair instructions



Fitting:

- Insulate connector(s) of old sensor(s) with shrink tube
- Make rear wall accessible
- Place sensor through fold
- Fit sensor in sensor holder, if air sensor exists, install it also by fitting it on top of the new sensorin the sensor holder (old sensor holder can be disposed of)
- Install the sensor holder
- Connect sensor to appliance electronics
- Remount the equipment





Note:
Depending on appliance, a 1-sensor control may become a 2-sensor control

2008 - 2015

General repair kit

Sensor repair kit

Parts:

1 Sensor

2 QuickOn connector

1x Repair instructions

Fitting:

- With the help of the QuickOn connector, connect the new sensor to the old sensor lead on the appliance rear wall.

Note: **QuickOn connector may not be positioned in the inner area of the appliance.**

Minimum lead length of the new sensor 50 cm.

2015 -

General repair kit

Sensor repair kit 2015

Repair sensor

- Can be used as air sensor or evaporator sensor
- Can be used in the refrigerator compartment and in the freezer compartment

Parts:

1 Sensor

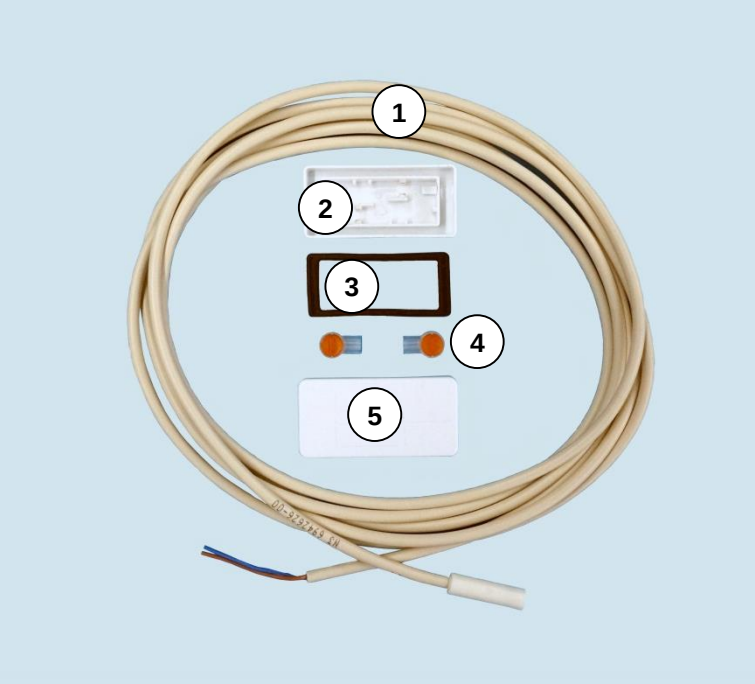
2 Sensor housing for repair kit

3 Seal for repair kit

4 Insulation displacement contact

5 Cover for repair kit

1x Repair instructions



Fitting:

- Remove/cut to length the cable ends
- Insert rubber seal in the sensor housing
- Insert cable ends into the sensor housing
- Connect cable ends
- Close sensor housing

Sensor housing can also be used inside the appliance!

Control

Control

Sensor

- Evaporator sensor
- Air sensor
- Ambient sensor

Evaporator sensor

Control

Evaporator sensor

- Refrigerator compartment: Refrigerating capacity switch-on after defrosting
  → Ends the defrost phase
- Switching the solenoid valve in the cooling circuit
- Enable for fan ON
- If there is a sensor error in the refrigerator compartment, the refrigerating capacity is switched on or off at defined, intervals
- In case of sensor error in the freezer compartment,
  the refrigerating capacity is switched to continuous running

Air sensor

Control

Air sensor

- Freezer compartment: Refrigerating capacity switch-on
- Switch-off of the refrigerating capacity, depending on the set target value
- Switching the solenoid valve in the cooling circuit
- Switches the fan ON and OFF
- Actual value display
- If there is a sensor error in the refrigerator compartment, the refrigerating capacity is switched on or off at defined, intervals
- In case of sensor error in the freezer compartment,
  the refrigerating capacity is switched to continuous running

Ambient sensor

Ambient sensor

- Compensation of the ambient temperature influences for the minimisation of temperature fluctuations

INFO

An ambient air sensor error is displayed only in the service menu

The power PCB must be replaced in case of a defect