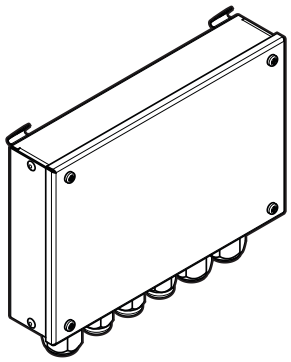
# Installation manual

## Floor cooling connection kit



EKRK

Installation manual
Floor cooling connection kit

English

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# 1 About this document

**Target audience**

Authorised installers

**Documentation set**

This document is part of a documentation set. The complete set consists of:

- **General safety precautions:**
  - Safety instructions that you must read before installing
  - Format: paper (in the box of the indoor unit)
- **Installation manual:**
  - Installation instructions
  - Format: paper (supplied in the kit)

**INFORMATION**

For details on specifications, setting methods, FAQ, troubleshooting tips and the latest version of this manual, visit app.daikineurope.com.

Latest revisions of the supplied documentation may be available on the regional Daikin website or via your dealer.

The original documentation is written in English. All other languages are translations.

# 2 Specific installer safety instructions

Always observe the following safety instructions and regulations.

**General**

**DANGER**

All wiring MUST be performed by an authorised electrician and MUST comply with the applicable national wiring regulation. **Possible consequence:** property damage and electrocution.

**WARNING**

Make sure installation, servicing, maintenance and repair comply with instructions from Daikin and with applicable legislation and are executed ONLY by authorised persons.

**Installation (see "5 Installation" [▶ 3])**

**DANGER: RISK OF ELECTROCUTION**

- Turn off the indoor unit's power supply before installing the kit.
- Do NOT handle the kit with wet hands.
- Do NOT let the kit get wet.
- Do NOT disassemble, modify or repair the kit.
- Turn OFF the indoor unit's power supply if the kit is damaged.
- **Possible consequence:** electrocution.

**DANGER: RISK OF ELECTROCUTION**

Do NOT turn on the indoor unit's power supply before you have mounted the kit onto a DIN rail, connected the electrical wiring and closed the kit. **Possible consequence:** electrocution.

**DANGER: RISK OF ELECTROCUTION**

Tighten the cable glands properly. **Possible consequence:** electrocution.

**DANGER: RISK OF ELECTROCUTION**

Connect the earth wires correctly. **Possible consequence:** electrocution.

# 3 About the kit

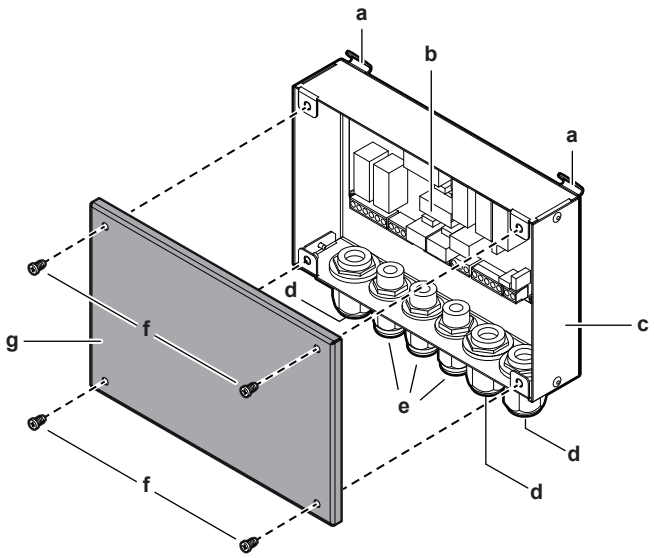
The floor cooling connection kit is an electrical connection interface between the Daikin Altherma unit, the DHC Multi IO Box and an air dehumidifier.

When floor cooling is active and the air humidity is high, condensation easily builds up on the floor. The floor cooling connection kit transfers signals between the 3 devices to avoid condensation and to achieve a comfortable indoor climate.

## 3.1 Components

**INFORMATION**

The following figure is an example and may NOT completely match your system layout.




**a** DIN rail clip (2x)
**b** PCB
**c** Enclosure
**d** Cable gland M20 (10–14 mm) (3x)
**e** Cable gland M16 (5–10 mm) (3x)
**f** Cover screw M4x8 (4x)
**g** Cover

## 3.2 Basic parameters

| Parameter | Value |
|---|---|
| Output power | 230V–50Hz |
| Power supply | 230V–50Hz (through the Daikin Altherma unit) |
| IP class | 20 |

## 3.3 Compatibility

Make sure the indoor unit is compatible for use with the kit. Respect the following requirements:

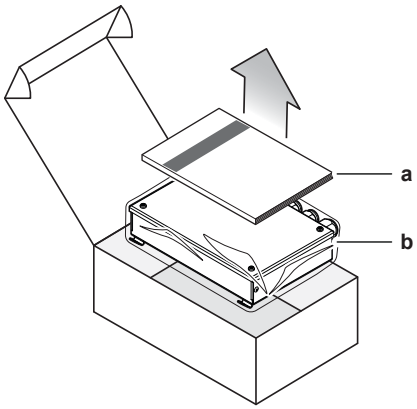
| Device | Parameter | Value |
|---|---|---|
| Daikin Altherma unit (only with WLAN) | MMI2 version | 6.9.0 or higher |
| | Type | See "9.1 Wiring diagram" [▸ 7] |
| Dehumidifier | Type | RER<br>REV<br>RSO<br>RSV<br>RSE<br>RSVE |
| ON/OFF valve | Power | Maximum 10 W |
| Pump | Power | Maximum 100 W |
| | Inrush current | Maximum 4 A |

# 4 About the box

Keep the following in mind:

- At delivery, the unit MUST be checked for damage and completeness. Any damage or missing parts MUST be reported immediately to the claims agent of the carrier.
- Bring the packed unit as close as possible to its final installation position to prevent damage during transport.
- Prepare in advance the path along which you want to bring the unit to its final installation position.

## 4.1 To unpack the kit




**a** Installation manual
**b** Floor cooling connection kit

# 5 Installation

## 5.1 Precautions when installing the kit

**DANGER: RISK OF ELECTROCUTION**

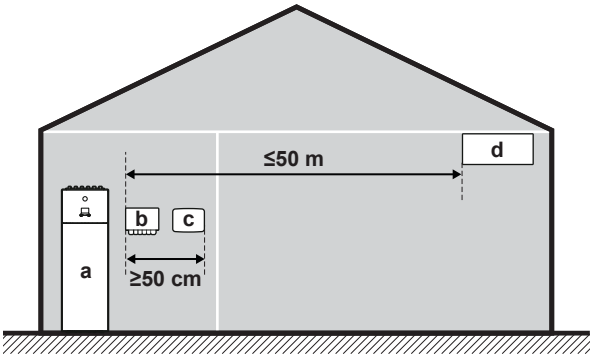
- Turn off the indoor unit's power supply before installing the kit.
- Do NOT handle the kit with wet hands.
- Do NOT let the kit get wet.
- Do NOT disassemble, modify or repair the kit.
- Turn OFF the indoor unit's power supply if the kit is damaged.
- **Possible consequence:** electrocution.

## 5.2 Preparing the installation site

### 5.2.1 Installation site requirements

Always follow the installation site requirements:

- Only install the floor cooling connection kit in a dry indoor location.
- The maximum allowed length between the floor cooling connection kit and the dehumidifier is 50 m.
- Install the kit next to the Daikin Altherma unit, in the same room.
- The floor cooling connection kit must be mounted onto a DIN rail 35mm (according to DIN EN 60715).
- If you install the floor cooling connection kit and the DHC Multi IO Box on the same DIN rail, the minimum length of the DIN rail must be 50 cm.




**a** Daikin Altherma unit
**b** Floor cooling connection kit
**c** DHC Multi IO Box
**d** Dehumidifier

## 5.3 To mount the kit

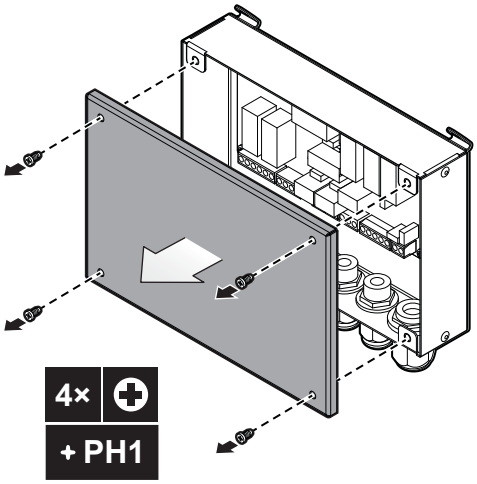
Mount the floor cooling connection kit onto a DIN rail (field supply), as close as possible to the DHC Multi IO Box.

**NOTICE**

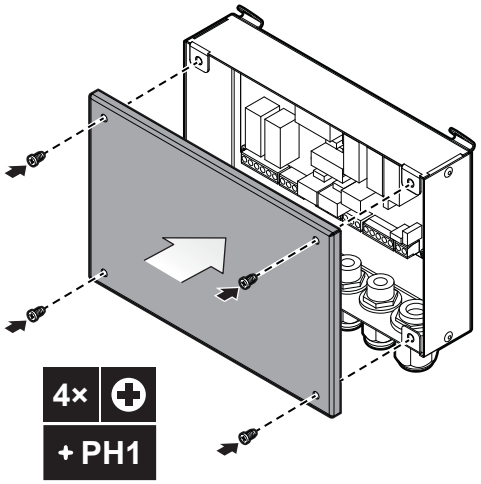
If you mount the floor cooling connection kit on the same DIN rail as the DHC Multi IO Box, keep a minimum distance of 40 mm between both devices.

## 5.4 Opening and closing

### 5.4.1 To open the kit




### 5.4.2 To close the kit




## 5.5 Connecting the electrical wiring

**DANGER: RISK OF ELECTROCUTION**

Do NOT turn on the indoor unit's power supply before you have mounted the kit onto a DIN rail, connected the electrical wiring and closed the kit. **Possible consequence:** electrocution.

**NOTICE**

The wiring for connection is NOT included.

### 5.5.1 Overview of electrical connections

For the wiring diagram, see "9.1 Wiring diagram" [▸ 7].

**Dehumidifier**

| | |
|---|---|
| | Connector J6 |
| | See the manual of the dehumidifier (field supplied) |
| | Only use harmonised wire providing double insulation suitable for 220–240 V.<br>6–core cable: 0.75–1.5 mm²<br>Maximum length: 50 m<br>Cable gland 1: M20 (10–14 mm) |
| | Voltage: 5 V DC |

**DHC Multi IO Box - low voltage**

| | |
|---|---|
| | Connector J3 |
| | See the installation manual of the DHC Multi IO Box |
| | Only use harmonised wire providing double insulation suitable for 220–240 V.<br>4–core cable: 0.75–1.5 mm²<br>Cable gland 2: M16 (5–10 mm) |
| | Voltage: 5 V DC |

**ON/OFF valve**

| | |
|---|---|
| | Connector J5 |
| | See the manual of the ON/OFF valve (field supplied) |

| | |
|---|---|
| | Only use harmonised wire providing double insulation and suitable for the applicable voltage.<br>2–core cable: 0.75–1.5 mm²<br>Cable gland 3: M16 (5–10 mm) |
| | Voltage: 230 V AC |

**Floor cooling pump**

| | |
|---|---|
| | Connector J4 |
| | See the manual of the pump (field supplied) |
| | Only use harmonised wire providing double insulation and suitable for the applicable voltage.<br>3–core cable (2 signal cables and 1 grounding cable): 0.75–1.5 mm²<br>Cable gland 4: M16 (5–10 mm) |
| | Voltage: 230 V AC |

**DHC Multi IO Box – high voltage**

| | |
|---|---|
| | Connector J2 |
| | See the installation manual of the DHC Multi IO Box |
| | Only use harmonised wire providing double insulation and suitable for the applicable voltage.<br>6–core cable (5 signal cables and 1 grounding cable): 0.75–1.5 mm²<br>Cable gland 5: M20 (10–14 mm) |
| | Voltage: 230 V AC |

**Daikin Altherma unit**

| | |
|---|---|
| | Connector J1 |
| | See the installation manual and the reference guide of the Daikin Altherma unit |
| | Only use harmonised wire providing double insulation and suitable for the applicable voltage.<br>6–core cable (5 signal cables and 1 grounding cable): 0.75–1.5 mm²<br>Cable gland 6: M20 (10–14 mm) |
| | Voltage: 230 V AC |

### 5.5.2 To connect the kit

**NOTICE**

We recommend using solid (single-core) wires.

If stranded wires are used, slightly twist the strands to consolidate the end of the conductor for either direct use in the terminal clamp or insertion in a round crimp-style terminal. Details are described in "Guidelines when connecting the electrical wiring" in the installer reference guide of the Daikin Altherma unit.

1 Open the kit. See "5.4.1 To open the kit" [▸ 4].

2 Insert the cables (field supplied) entering the kit through cable glands.

- Open the cable glands. You might not need all available connections. Only open the cable glands where you need to insert cables.
- Slide the removed part of the cable gland over the cable end that will be connected to the kit.
- Insert that same cable end through the cable gland from the outside of the kit to the inside.
- Tighten the cable gland. Leave enough cable slack before tightening.

**DANGER: RISK OF ELECTROCUTION**

Tighten the cable glands properly. **Possible consequence:** electrocution.

3 Connect the earth wires. See "5.5.3 To connect the earth wires" [▸ 5].

4 Connect the wires to the PCB.

- Strip the wire ends over a length of 7 mm.
- Install the wires into the connector pins with a flat screwdriver. See "9.1 Wiring diagram" [▸ 7] for the correct connections.

5 Close the kit. See "5.4.2 To close the kit" [▸ 4].

### 5.5.3 To connect the earth wires

**DANGER: RISK OF ELECTROCUTION**

Connect the earth wires correctly. **Possible consequence:** electrocution.

**NOTICE**

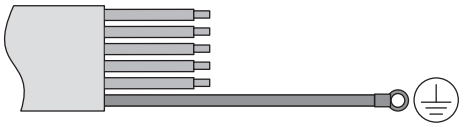
We recommend using solid (single-core) wires.

If stranded wires are used, slightly twist the strands to consolidate the end of the conductor for insertion in a round crimp-style terminal. Details are described in "Guidelines when connecting the electrical wiring" in the installer reference guide of the Daikin Altherma unit.

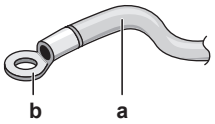
We recommend using a 6-core cable for connectors J1 and J2 and a 3-core cable for connector J4. Use the earth wire to earth the floor cooling connection kit through the different devices.

1 Insert the cable with the earth wire (field supply) through the appropriate cable gland. See "5.5.1 Overview of electrical connections" [▸ 4] and "5.5.2 To connect the kit" [▸ 5].

2 Cut the wires for the connector pins shorter than the earth wire. In case strain relief fails, the connector pin wires have to disconnect before the earth connection breaks. Therefore, provide a lot more slack for the earth wire than for the connector pin wires.



3 Install an insulated crimp ring terminal (field supply) at the end of the earth wire.




**a** Earth wire
**b** Insulated crimp ring terminal

4 Connect the crimp ring terminal to the earth screw of the enclosure, The screw is marked with the following symbol:

.

**NOTICE**

Do NOT connect the earth wires from the external devices to the PCB earth screw.

### 5.5.4 To connect the indoor unit

Inside the Daikin Altherma unit, route the cable along the path for external thermostats. See the installer reference guide of the Daikin Altherma unit.

# 6 Starting up the system

The floor cooling connection kit gets its power from the indoor unit. For the kit to function, make sure it is correctly connected to the indoor unit, and the indoor unit is powered. For more information, see the Daikin Home Controls Application Guide.

# 7 Configuration

The customer is responsible for providing:

- Smartphone or tablet with minimum supported version of Android or iOS (specified on app.daikineurope.com) and with ONECTA app installed (see "7.1 To install the ONECTA app" [▶ 6]).
- Internet line and communication device, such as a modem, router, etc.
- Daikin Home Controls Access Point (EKRACPUR1PA)

## 7.1 To install the ONECTA app

1 Go to Google Play (for Android devices) or the App Store (for iOS devices) and search for "ONECTA".

2 Follow the directions on the screen to install the ONECTA app.

**INFORMATION**

Scan the QR code to download and install the ONECTA app on your mobile phone or tablet:

## 7.2 To configure the kit

1 Turn ON the power of the Daikin Altherma unit.

2 Activate the DHC Multi IO Box.

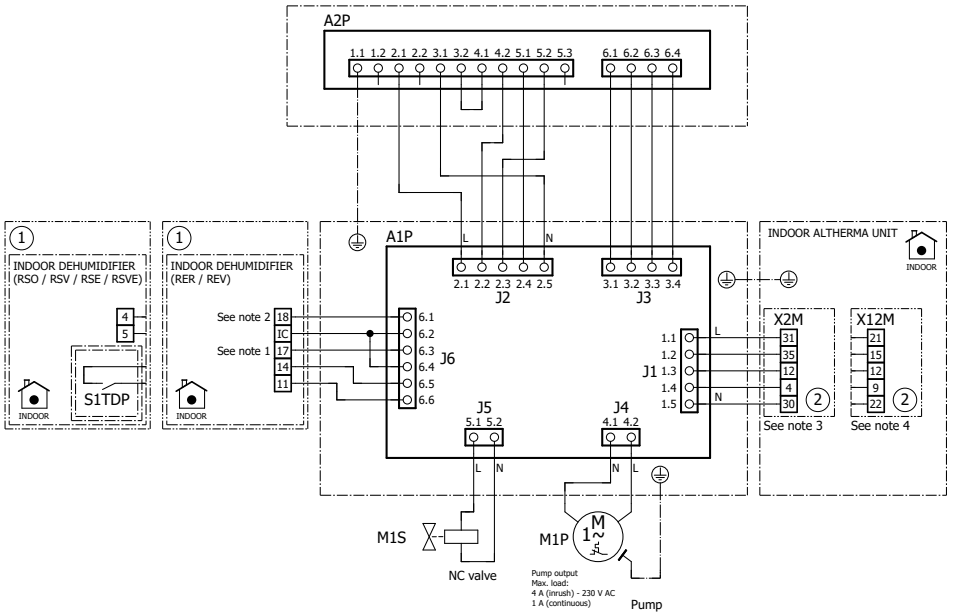
3 Configure the Daikin Altherma unit and the DHC Multi IO Box as indicated in their manuals.

# 8 Hand-over to the user

After having installed and configured the kit, hand over this installation manual to the user and make him/her aware of the safety precautions.

# 9 Technical data

## 9.1 Wiring diagram




4D142778-A

**A1P** Printed circuit board (connection)
**A2P** Printed circuit board (DHC Multi IO Box)
**J*** Connector
**Note 1** Configure as season input with no invert logic
**Note 2** Configure as treatment input with no invert logic
**Note 3** Only for
EBBX*D*
EB/DLA*D*
EBSX*D*
EBVX/Z*D*
EHBX*E*
EHVX/Z*E*
ETBX*D*
ETSX(B)*PE*
ETSX(B)*P*E3
ETVX/Z*E*
**Note 4** Only for
EBSX*
EHSX*
ETSX*
**M1P** Pump
**M1S** 2-way valve for dehumidification
**S1TDP** Dew sensor (ON/OFF)
**X*M** Terminal strip

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