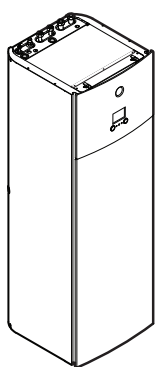




# Installation manual

## Daikin Altherma 3 R F



EHVH04SU18DA6V7  
EHVH04SU23DA6V7

EHVH08SU18DA6V7  
EHVH08SU23DA6V7

Installation manual  
Daikin Altherma 3 R F

English

CE - DECLARACION-DE-CONFORMIDAD  
CE - KONFORMITÄTSEKLERUNG  
CE - DECLARAZIONE-DI-CONFORMITA  
CE - ΔΗΛΩΣΗ ΣΥΜΠΛΗΡΩΣΤΗΣ  
CE - DECLARACION-DE-CONFORMIDAD  
CE - KONFORMITÄTSEKLERUNG  
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CE - ΔΗΛΩΣΗ ΣΥΜΠΛΗΡΩΣΤΗΣ

CE - DECLARACIÓN-DE-CONFORMIDADE  
CE - ЗАЯВЛЕНИЕ О СООТВЕТСТВИИ  
CE - OVERENSTEMMELSESVERKLARING  
CE - FÖRSÄKRAN OM ÖVERENSÄMMELSE

CE - ERKLÄRUNG OM SAMSVAR  
CE - ЛАВОНУС, ҲАММУКУЛАСИДУСТА  
CE - PROHLÁŠENÍ SOHODĚ

CE - IZJAVA O SKLADNOSTI  
CE - VASTAVUSDEKLARACIJA  
CE - Декларация о соответствии  
CE - DECLARAȚIE DE CONFORMITATE

CE - ATTIKITES-DEKLARACIJA  
CE - ATILAIŠTAS-DEKLARACIJA  
CE - VYHLÁŠENIE ZHODY  
CE - UYGUNLUK-BEYANI

Daikin Europe N.V.

01 (en) declares under its sole responsibility that the equipment to which this declaration relates:  
02 (en) erklärt auf seine alleinige Verantwortung, dass die Ausrüstung für die diese Erklärung bestmmt ist:  
03 (en) déclare sous sa seule responsabilité que l'équipement visé par la présente déclaration:  
04 (en) verklaart hierbij op eigen oorspronkelijke verantwoordelijkheid dat de apparatuur waaraan deze verklaring betrekking heeft:  
05 (en) declara a bajo su única responsabilidad que el equipo al que hace referencia la declaración:  
06 (en) δηλώνει με αποκλειστική του απόκριση ότι η εν λόγω αusrüstωση:  
07 (en) объявляет на основании своей ответственности, что оборудование:  
08 (en) declara sub sua exclusiva responsabilidade que os equipamentos a que esta declaração se refere:

EHVH04SU18DA6V7, EHVH04SU23DA6V7,  
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01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions:  
02 derenden (volgende) Norm(en) onder andere anderen Normdocument(en) -documenten en/of andere document(en), op voorwaarde dat deze gebruikt overeenkomstig onze instructies:  
03 sont conformes à la(s) norm(e) (ou autre(s) document(s) normatif(s)), pour autant qu'ils soient utilisés conformément à nos instructions:  
04 conform de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze instructies:  
05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones:  
06 sono conformi ai (seguenti) standard(s) o altro(i) document(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni:  
07 ёвно соотвoрствую(т) (одину(му) или нескольк(им) нормативн(ым) документам), при условии, что они будут использованы в соответствии с нашими инструкциями:  
08 ஒப்புமையுடைய (அல்லது) ஒன்று(அல்லது) அமைதி(கள்) நியமன(ப)ப் புத்தக(ம்) இன் பின்பற்றலுடன், அதன் வழிமுறைகளை நாம் கடைபிடிக்க வேண்டும்.

EN60335-2-40,

01 following the provisions of:  
02 gemäß den Vorschriften der:  
03 conformément aux stipulations des:  
04 overeenkomstig de bepalingen van:  
05 σύμφωνα με τις διατάξεις των:  
06 secondo le prescrizioni per:  
07 по требованиям (предписаниям) к:  
08 de acordo com o preito etc.  
09 в соответствии с положениями:

19 do upostrovanju dobilo:  
20 vastavalt tulele:  
21 oesavast kravayve na:  
22 lakentis nusstali, oalekiam:  
23 eakot prasibas, kas notiekas:  
24 orfovalu, ustanoviaz:  
25 būvini taisyklama ygtini oarak:

enligt <A> och godkänts av <B> enligt  
Certifikat <C>  
som det i en konformitets  
beskrivelse av <B> följde  
pöta om eslely asatirassa <A> ja jöta <B>  
on hyväksynyt Sertifikaatti <C> mukaisesti.  
jak bylo uvedeno v <A> a pozitivně zjiřeno  
v souladu s <B> a pozitivně osvědčením <C>.  
kako je izloženo u <A> pozitivno odgojenno od strane  
<B> prema Certifikatu <C>.

Low Voltage 2014/35/EU  
Electromagnetic Compatibility 2014/30/EU

01 Directives as amended:  
02 Direktiven, med senere ændringer:  
03 Direktiven, met frezelen ändringar:  
04 Richtlijnen, met latere ändringar:  
05 Richtlinien, zoals geamendard:  
06 Directives, según lo emendado:  
07 Direktive, come da modifika:  
08 Dyrklyv, otus qvon izmnozheni:  
09 Direktivas, conforme alteração etc.  
10 Direktiva, met senere ändringar:  
11 Direktiv, med frezelen ändringar:  
12 Direktiv, met latere ändringar:  
13 Direktiv, selaisna kun ne oia muutettuna:  
14 v rioleni zrieni:  
15 Spmenia, c reure reuevnia:  
16 řany(e)k, es nřodlaski endekzešeti:  
17 z pżeszyym poprawkam:  
18 Direktiv, med senere ændringer:  
19 Direktiv, med frezelen ändringar:  
20 Direktiv, som modifiseres:  
21 Direktiv, selaisna kun ne oia muutettuna:  
22 Direktiv, según lo emendado:  
23 Direktiva, como se modificou:  
24 Smernice, v platnosti zmeny:  
25 Dgajimās iatērijes ioremeleer.

16 Megjegyzés\*  
az/ <A> alapján, az/ <B> igazolta a megfelelést, az/ <C> tanúsítvány szerint.  
22 Paritā\*  
koprusiņa <A> ir kopā iegūti nusiasta <B> pagal  
Sertifikā <C>.  
23 Pziņmes\*  
ka nodots <A> un atbilstoš <B> pozitīvam vērtējumam  
saskaā ar sertifikātu <C>.  
24 Pozīvnia\*  
ako bolo uvedeno v <A> a pozitívne zistené <B> v súlade  
s osvedčením <C>.  
25 Not\*  
latārdam olumi oarak degērtinādi gēti.

18 Direktiv, med senere ændringer:  
19 Direktiv, med frezelen ändringar:  
20 Direktiv, som modifiseres:  
21 Direktiv, selaisna kun ne oia muutettuna:  
22 Direktiv, según lo emendado:  
23 Direktiva, como se modificou:  
24 Smernice, v platnosti zmeny:  
25 Dgajimās iatērijes ioremeleer.

09 (en) заверяет, исключительно под свою ответственность, что оборудование, к которому относится настоящее заявление:  
10 (en) verklaart onder eenaansiglig, aldusijnet, som er ontstet af denne erklring:  
11 (en) déclare sous sa seule responsabilité que l'équipement visé par la présente déclaration:  
12 (en) verklaart hierbij op eigen oorspronkelijke verantwoordelijkheid dat de apparatuur waaraan deze verklaring betrekking heeft:  
13 (en) declara a bajo su única responsabilidad que el equipo al que hace referencia la declaración:  
14 (en) δηλώνει με αποκλειστική του απόκριση ότι η εν λόγω αusrüstωση:  
15 (en) объявляет на основании своей ответственности, что оборудование:  
16 (en) declara sub sua exclusiva responsabilidade que os equipamentos a que esta declaração se refere:

08 esle en conformidade con al(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de acordo com as nossas instruções:  
09 соответствует следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям:  
10 overholder (volgende) standard(en) eller andre bindende dokument(er) eller andre normgivende dokument, under forutsetning at anvindning af disse i overensstemmelse med det tilgængelige standard(er) eller andre normgivende dokument, under forutsetning at anvindning af disse i overensstemmelse med våra instruktioner:  
12 respektive listy er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forudsættelse af at disse bruges i henhold til våre instruktioner:  
13 vastavast seavaaven standardien ja muiden oheistelsten vaatimusteks eidevaiden etia nita kaydaään oheidemme mukaisesti:  
14 za predpokladu, že jsou využíány v souladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům:  
15 u skladu sa slijedom standardom(i)na ili drugim normativnim dokumentom(i)na, uz uvjet da se oni koriste u skladu s našim uputama:

18 megjelenek az alábbi szabvány(ok)nak vagy egy-egy társított dokumentum(ok)nak, ha azokat előírás szerint használják:  
17 szintin conforme aux normes (ou autres) document(s) normatifs, sous réserve que ceux-ci soient utilisés conformément à nos instructions:  
18 skindin u konformitet med (en eller flere) dokument(er) (normativ(e) eller andre dokument(er)), cu condiția ca acestea să fie utilizate în conformitate cu instrucțiunile noastre:  
19 skindin u konformitet med (en eller flere) dokument(er) (normativ(e) eller andre dokument(er)), cu condiția ca acestea să fie utilizate în conformitate cu instrucțiunile noastre:  
20 on vastavast järgmistele standarditele ja või teiste normatiivsete dokumentidega, kui need kasutatakse vastavalt meie ühendittele:  
21 sootvastavast na oheiteve traatvartiri või dritu normatiivsete dokumentu, pri uslovie, ve se koristat sootvaste naitene instruktiumi:  
22 atitika žemai, nurodyti standart ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:  
23 tad, ja tebtis atbilsti ražojumiem, atbilst sekšošiem standartiem un otiem normatiivem dokumentiem:  
24 su i zibide s nāsēdošaj(y)mi) normot(ām) (jābo nūym(i) normatiivny(i) dokumentot(ām)), za predpokrati, že sa požiřtaji v silade s našim naidotim:  
25 ūdutin, ūatmatlaimza gēre ūalānaimasi kořuļvija asgūdiati standartiar ve norm bēliten bēļeļeie ūyūmūdūr:

01 Directives as amended:  
02 Direktiven, med senere ændringer:  
03 Direktiven, met frezelen ändringar:  
04 Richtlijnen, met latere ändringar:  
05 Richtlinien, zoals geamendard:  
06 Directives, según lo emendado:  
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24 Smernice, v platnosti zmeny:  
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23 Direktiva, como se modificou:  
24 Smernice, v platnosti zmeny:  
25 Dgajimās iatērijes ioremeleer.

DAIKIN

DAIKIN EUROPE N.V.

Zandvoordstraat 300, B-8400 Oostende, Belgium

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## 2 About the box

### Technical engineering data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of latest technical data is available on the Daikin Business Portal (authentication required).

## 2 About the box

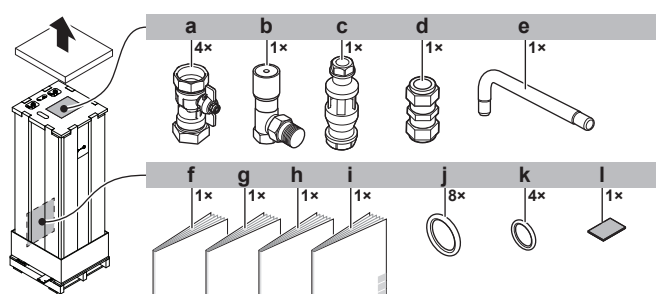
### 2.1 Indoor unit



#### INFORMATION

This unit has been tested and approved according to BS EN12897:2016

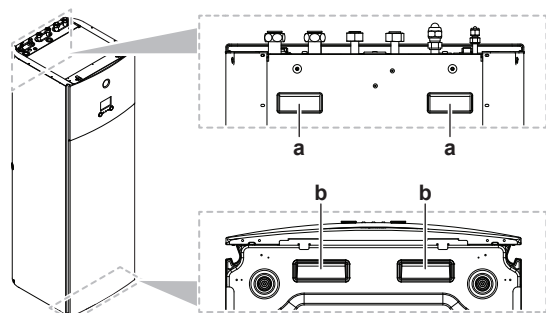
#### 2.1.1 To remove the accessories from the indoor unit



- a Shut-off valves for water circuit
- b Overpressure bypass valve
- c Tundish (to mount onto the pressure relief valve discharge pipe)
- d Brass compression coupler
- e Discharge pipe (for pressure relief valve)
- f General safety precautions
- g Addendum book for optional equipment
- h Indoor unit installation manual
- i Operation manual
- j Sealing rings for shut-off valves (space heating water circuit)
- k Sealing rings for field-supplied shut-off valves (domestic hot water circuit)
- l Sealing tape for low voltage wiring intake

#### 2.1.2 To handle the indoor unit

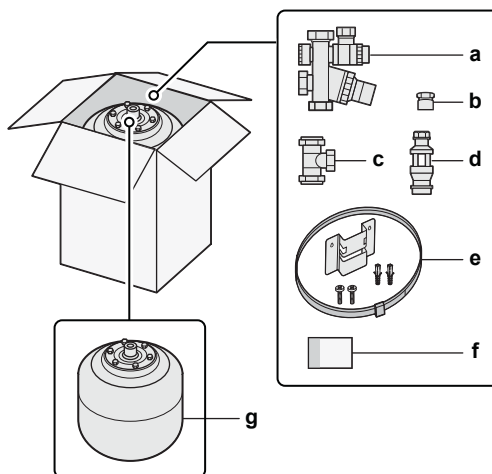
Use the handles at the back and at the bottom to carry the unit.



- a Handles at the back of the unit
- b Handles at the bottom of the unit. Carefully tilt the unit to the back so that the handles become visible.

### 2.2 Domestic hot water tank kit

#### 2.2.1 To remove the accessories from the domestic hot water tank kit



- a Pressure reducing valve/pressure relief valve combination. Water inlet and water outlet 22 mm connection, discharge piping connection 15 mm
- b Adaptor 22 mm×3/4" Female BSP
- c T-piece 22 mm×22 mm×22 mm
- d Tundish 15 mm inlet, 22 mm outlet
- e Wall mounting set for expansion vessel
- f Instruction sheet
- g Expansion vessel of 18 l – 3/4" Male BSP



#### NOTICE

All piping **MUST** be installed according to section G3 of the Building Regulations.

### 2.3 Checklist for the required DHW accessories

For installation compliant with section G3 of the Building Regulations, you must verify that the following accessories are present.

#### Delivered with indoor unit:

<input type="checkbox"/>	Tundish 15 mm inlet, 22 mm outlet
--------------------------	-----------------------------------

#### Delivered with domestic hot water tank kit:

<input type="checkbox"/>	Pressure reducing valve/pressure relief valve combination
<input type="checkbox"/>	Adaptor 22 mm×3/4" Female BSP
<input type="checkbox"/>	T-piece 22 mm×22 mm×22 mm
<input type="checkbox"/>	Tundish 15 mm inlet, 22 mm outlet
<input type="checkbox"/>	Wall mounting set for expansion vessel
<input type="checkbox"/>	Instruction sheet
<input type="checkbox"/>	Expansion vessel of 18 L – 3/4" Male BSP

## 3 Preparation

### 3.1 Preparing the installation site



#### WARNING

The appliance shall be stored in a room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater).

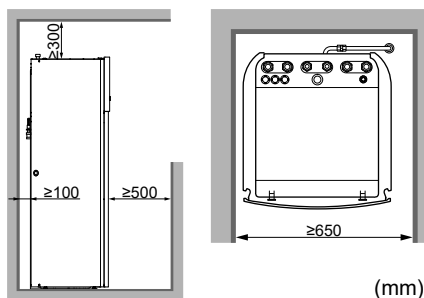


#### WARNING

DO NOT reuse refrigerant piping that has been used with any other refrigerant. Replace the refrigerant pipes or clean thoroughly.

#### 3.1.1 Installation site requirements of the indoor unit

- The indoor unit is designed for indoor installation only and for the following ambient temperatures:
  - Space heating operation: 5~30°C
  - Space cooling operation: 5~35°C
  - Domestic hot water production: 5~35°C
- Mind the following spacing installation guidelines:



#### INFORMATION

If you have limited installation space, do the following before installing the unit in its final position: ["4.2.2 To connect the drain hose to the drain"](#) [▶ 9]. It requires to remove one or both side panels.

#### Special requirements for R32



#### WARNING

- Do NOT pierce or burn.
- Do NOT use means to accelerate the defrosting process or to clean the equipment, other than those recommended by the manufacturer.
- Be aware that R32 refrigerant does NOT contain an odour.



#### WARNING

The appliance shall be stored so as to prevent mechanical damage and in a well-ventilated room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater) and have a room size as specified below.



#### NOTICE

- Do NOT re-use joints which have been used already.
- Joints made in installation between parts of refrigerant system shall be accessible for maintenance purposes.



#### WARNING

Make sure installation, servicing, maintenance and repair comply with instructions from Daikin and with applicable legislation (for example national gas regulation) and are executed only by authorised persons.



#### NOTICE

- Pipework shall be protected from physical damage.
- Installation of pipework shall be kept to a minimum.

### 3 Preparation

If the total refrigerant charge in the system is  $\geq 1.84$  kg (i.e. if the piping length is  $\geq 27$  m), you need to comply with the minimum floor area requirements as described in the following flow chart. The flow chart uses the following tables: "8.3 Table 1 – Maximum refrigerant charge allowed in a room: indoor unit" [p 31], "8.4 Table 2 – Minimum floor area: indoor unit" [p 31] and "8.5 Table 3 – Minimum venting opening area for natural ventilation: indoor unit" [p 31].



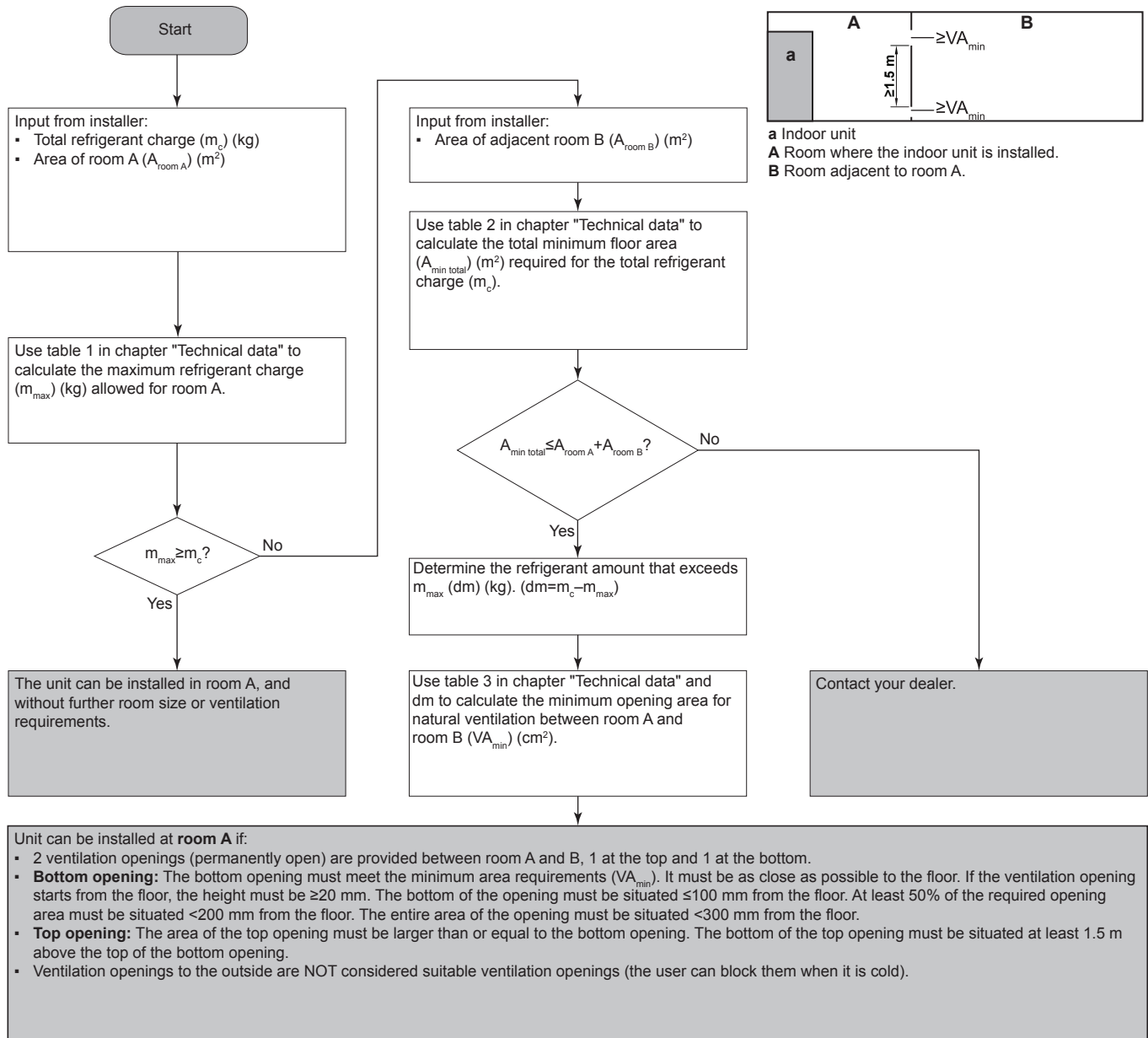
#### INFORMATION

Systems with a total refrigerant charge ( $m_c$ )  $< 1.84$  kg (i.e. if the piping length is  $< 27$  m) are NOT subjected to any requirements to the installation room.



#### INFORMATION

**Multiple indoor units.** If two or more indoor units are installed in a room, you must consider the maximum refrigerant charge that can be released in the room when a SINGLE leak occurs. **Example:** If two indoor units are installed in the room, each with its own outdoor unit, then you have to consider the refrigerant charge of the largest indoor-outdoor combination.





## 3.2 Preparing water piping



### NOTICE

In case of plastic pipes, make sure they are fully oxygen diffusion tight according to DIN 4726. The diffusion of oxygen into the piping can lead to excessive corrosion.

- **Valve towards expansion vessel.** The valve towards the expansion vessel (if equipped) **MUST** be open.

### 3.2.1 To check the water volume and flow rate

#### Minimum water volume

For EHVH\*, there are no requirements for the minimum water volume.

For EHVX\*, check that the total water volume in the installation is minimum 10 litres.



### NOTICE

When circulation in each space heating/cooling loop is controlled by remotely controlled valves, it is important that the minimum water volume is guaranteed, even if all of the valves are closed.

#### Minimum flow rate

Check that the minimum flow rate in the installation is guaranteed in all conditions. This minimum flow rate is required during defrost/backup heater operation. For this purpose, use the overpressure bypass valve delivered with the unit.



### NOTICE

When circulation in each or certain space heating loops is controlled by remotely controlled valves, it is important that the minimum flow rate is guaranteed, even if all valves are closed. In case the minimum flow rate cannot be reached, a flow error 7H will be generated (no heating or operation).

See the installer reference guide for more information.

Minimum required flow rate
12 l/min

See the recommended procedure as described in "6.2 Checklist during commissioning" [p. 24].

## 3.3 Preparing electrical wiring

### 3.3.1 Overview of electrical connections for external and internal actuators

Item	Description	Wires	Maximum running current
<b>Outdoor unit and indoor unit power supply</b>			
1	Power supply for outdoor unit	2+GND	(a)
2	Power supply and interconnection cable to indoor unit	3	(b)
3	Power supply for backup heater	See table below.	—
4	Preferential kWh rate power supply (voltage free contact)	2	(c)
5	Normal kWh rate power supply	2	6.3 A
<b>Optional equipment</b>			

Item	Description	Wires	Maximum running current
6	User interface used as room thermostat	2	(d)
7	Room thermostat	3 or 4	100 mA <sup>(e)</sup>
8	Outdoor ambient temperature sensor	2	(e)
9	Indoor ambient temperature sensor	2	(e)
10	Heat pump convector	2	100 mA <sup>(e)</sup>
<b>Field supplied components</b>			
11	Shut-off valve	2	100 mA <sup>(e)</sup>
12	Electricity meter	2 (per meter)	(e)
13	Domestic hot water pump	2	(e)
14	Alarm output	2	(e)
15	Changeover to external heat source control	2	(e)
16	Space cool/heat operation control	2	(e)
17	Power consumption digital inputs	2 (per input signal)	(e)
18	Safety thermostat	2	(c)

(a) Refer to the nameplate of the outdoor unit.

(b) Cable section 1.5 mm<sup>2</sup>.

(c) Cable section 0.75 mm<sup>2</sup> till 1.25 mm<sup>2</sup>; maximum length: 50 m. Voltage-free contact shall ensure the minimum applicable load of 15 V DC, 10 mA.

(d) Cable section 0.75 mm<sup>2</sup> till 1.25 mm<sup>2</sup>; maximum length: 500 m.

(e) Minimum cable section 0.75 mm<sup>2</sup>.



### NOTICE

More technical specifications of the different connections are indicated on the inside of the indoor unit.

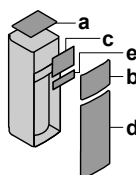
Backup heater type	Power supply	Required number of conductors
*6V	1N~ 230 V (6V)	2+GND
	3~ 230 V (6T1)	3+GND

## 4 Installation

### 4.1 Opening the units

#### 4.1.1 To open the indoor unit

##### Overview

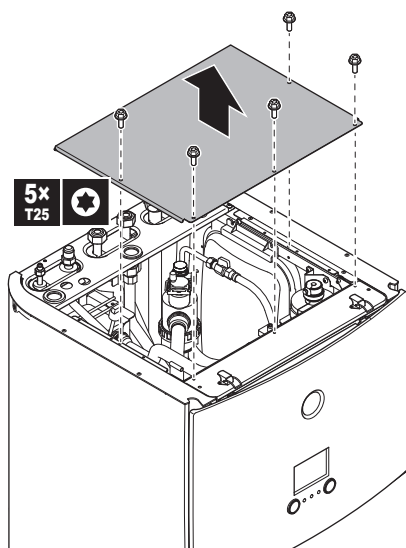


- a Top panel
- b User interface panel
- c Switch box cover
- d Front panel
- e High voltage switch box cover

##### Open

- 1 Remove the top panel.

## 4 Installation

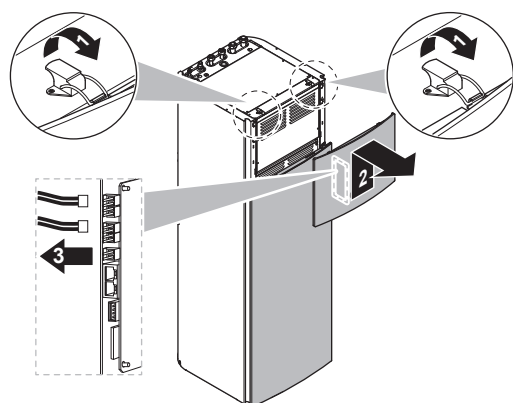


- 2 Remove the user interface panel. Open the hinges at the top and slide the top panel upwards.

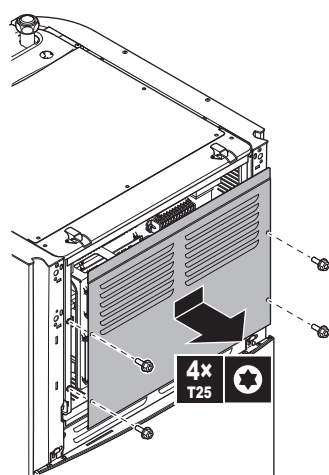


### NOTICE

If you remove the user interface panel, also disconnect the cables from the back of the user interface panel to prevent damage.

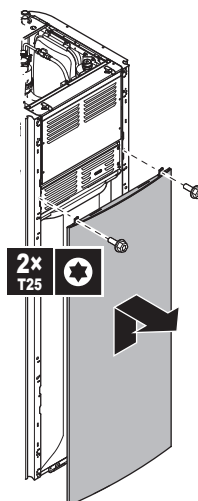


- 3 Remove the switch box cover.

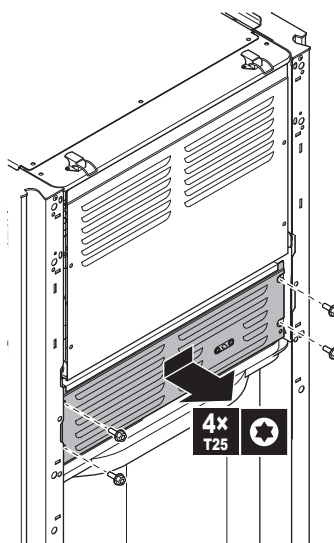


- 4 If necessary, remove the front plate. This is, for example, necessary in the following cases:

- "4.1.2 To lower the switch box on the indoor unit" ► 8]
- "4.2.2 To connect the drain hose to the drain" ► 9]
- When you need access to the high voltage switch box



- 5 If you need access to the high voltage components, remove the high voltage switch box cover.

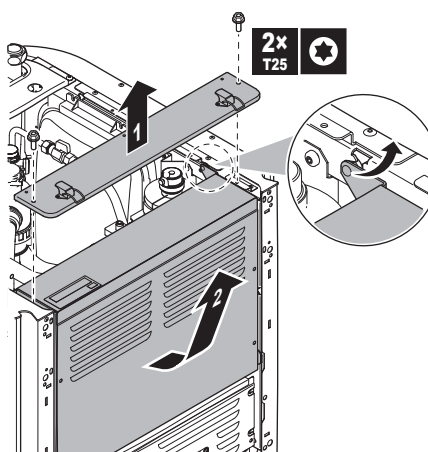


### 4.1.2 To lower the switch box on the indoor unit

During the installation, you will need access to the inside of the indoor unit. To have easier front access, put the switch box lower on the unit as follows:

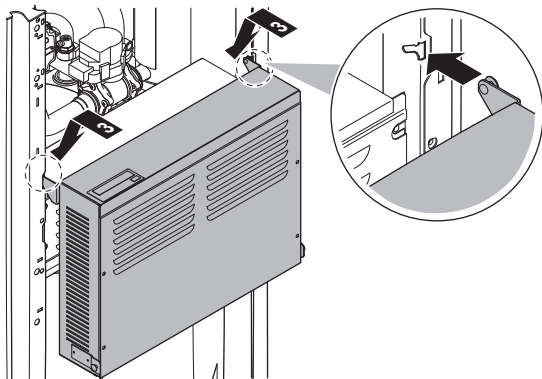
**Prerequisite:** The user interface panel and front panel have been removed.

- 1 Remove the fixing plate at the top of the unit.
- 2 Tilt the switch box to the front and lift it out of its hinges.





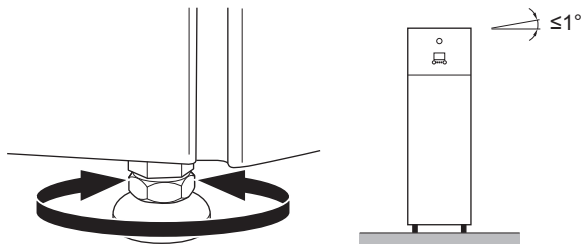
- Place the switch box lower on the unit. Use the 2 hinges located lower on the unit.



## 4.2 Mounting the indoor unit

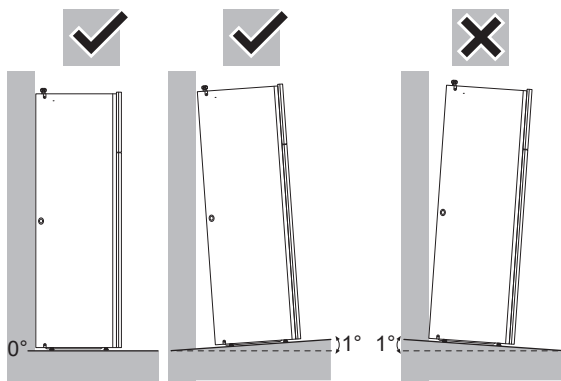
### 4.2.1 To install the indoor unit

- Lift the indoor unit from the pallet and place it on the floor. Also see "2.1.2 To handle the indoor unit" [p 4].
- Connect the drain hose to the drain. See "4.2.2 To connect the drain hose to the drain" [p 9].
- Slide the indoor unit into position.
- Adjust the height of the leveling feet to compensate for floor irregularities. The maximum allowed deviation is 1°.



#### NOTICE

Do NOT tilt the unit forwards:



### 4.2.2 To connect the drain hose to the drain

Water coming from the pressure relief valve is collected in the drain pan. The drain pan is connected to a drain hose inside the unit. You must connect the drain hose to an appropriate drain according to the applicable legislation. You can route the drain hose through the left or right side panel.

**Prerequisite:** The user interface panel and front panel have been removed.

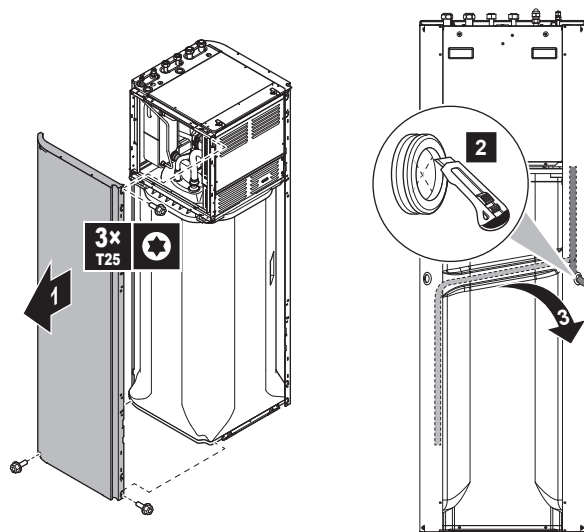
- Remove one of the side panels.
- Cut out the rubber grommet.

- Pull the drain hose through the hole.

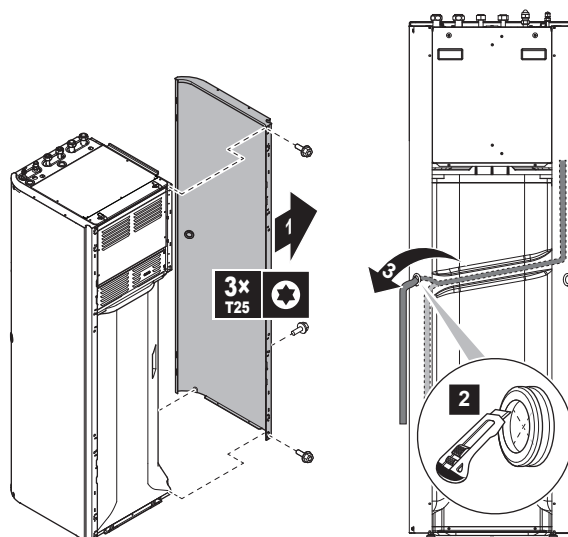
- Reattach the side panel. Ensure the water can flow through the drain tube.

It is recommended to use a tundish to collect the water.

#### Option 1: Through the left side panel



#### Option 2: Through the right side panel

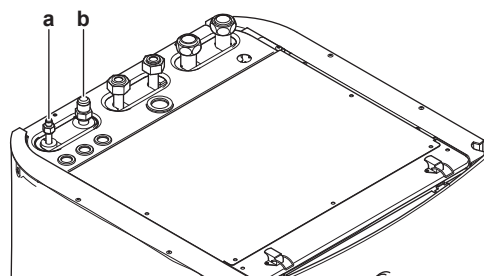


## 4.3 Connecting refrigerant piping

See the installation manual of the outdoor unit for all guidelines, specifications and installation instructions.

### 4.3.1 To connect the refrigerant piping to the indoor unit

- Connect the liquid stop valve from the outdoor unit to the refrigerant liquid connection of the indoor unit.



## 4 Installation

- a Refrigerant liquid connection
- b Refrigerant gas connection

- 2 Connect the gas stop valve from the outdoor unit to the refrigerant gas connection of the indoor unit.



### INFORMATION

When the indoor unit is installed in a place with limited space, an optional pipe bend (EKHVTC) kit can be installed to facilitate the connection to the refrigerant gas and liquid connections of the indoor unit. For installation instructions, see the instruction sheet of the pipe bend kit.

## 4.4 Connecting water piping

### 4.4.1 To connect the water piping

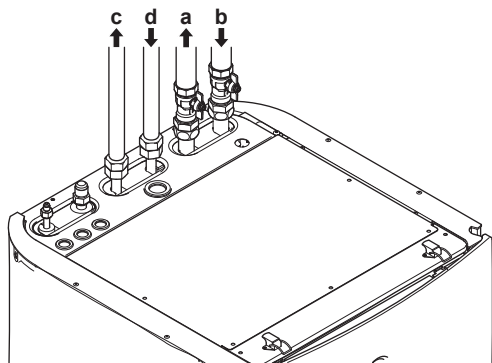


#### NOTICE

Do NOT use excessive force when connecting the piping. Deformation of the piping can cause malfunctioning of the unit.

To facilitate service and maintenance, 2 shut-off valves and 1 overpressure bypass valve are provided. Mount the shut-off valves on the space heating water inlet and space heating water outlet. To ensure the minimum flow rate (and prevent overpressure), install the overpressure bypass valve on the space heating water outlet.

- 1 Install the shut-off valves on the space heating water pipes.
- 2 Screw the indoor unit nuts on the shut-off valve.
- 3 Connect the domestic hot water in and out pipes to the indoor unit.
- 4 Connect the domestic hot water in and out pipes to the indoor unit. It is obligatory to use the accessory G3 kit EKHUWG3D to comply with UK legislation. See "4.4.2 To connect the water piping for domestic hot water" [p 10].



- a Space heating/cooling water out
- b Space heating/cooling water in
- c Domestic hot water out
- d Domestic cold water in (cold water supply)



#### NOTICE

It is recommended to install shut-off valves to domestic cold water in and domestic hot water out connections. These shut-off valves are field supplied.



#### NOTICE



**Overpressure bypass valve** (delivered as accessory). We recommend to install the overpressure bypass valve in the space heating water circuit.

Mind the minimum flow rate when adjusting the overpressure bypass valve setting. See "3.2.1 To check the water volume and flow rate" [p 7] and "6.2.1 To check the minimum flow rate" [p 24].



#### NOTICE

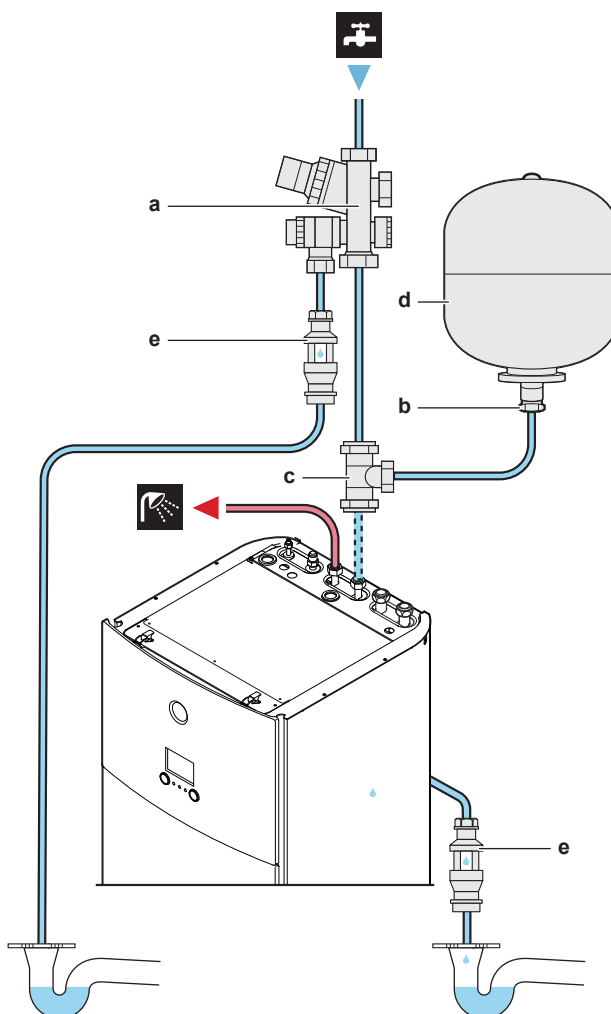
Install air purge valves at all local high points.



#### NOTICE

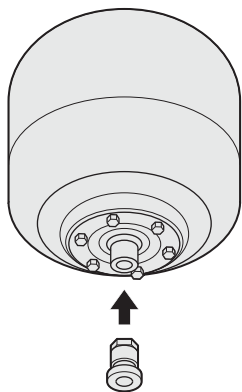
A pressure relief valve (field supply) with an opening pressure of maximum 10 bar (=1 MPa) must be installed on the domestic cold water inlet connection in accordance with the applicable legislation.

### 4.4.2 To connect the water piping for domestic hot water

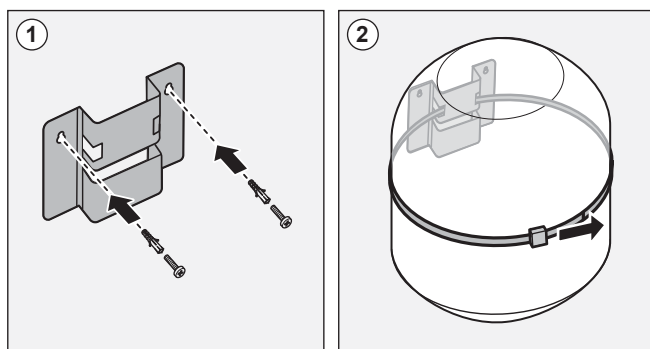


- a Pressure reducing valve/pressure relief valve combination. Water inlet and water outlet 22 mm connection, discharge piping connection 15 mm
- b Adaptor 22 mm×3/4" Female BSP
- c T-piece 22 mm×22 mm×22 mm
- d Expansion vessel of 18 L – 3/4" Male BSP
- e Tundish 15 mm inlet, 22 mm outlet

- 1 Pre-assemble the adaptor and expansion vessel so that the expansion vessel is ready for installation.



- 2 Mount the expansion vessel to the wall.



- 3 Fit the T-piece (part of the kit) to the domestic hot water cold water IN pipe of the unit.
- 4 Connect the pressure reducing valve/pressure relief valve combination (part of the kit) to the T-piece with a length of copper tube Ø22 mm (field supply).
- 5 Connect the expansion vessel to the T-piece with a length of copper tube Ø22 mm (field supply).
- 6 Connect the pressure reducing valve/pressure relief valve combination to the water mains inlet.
- 7 Install the tundish (part of the kit) in a vertical position within a maximum of 600 mm away from the pressure reducing valve/pressure relief valve combination.



## WARNING

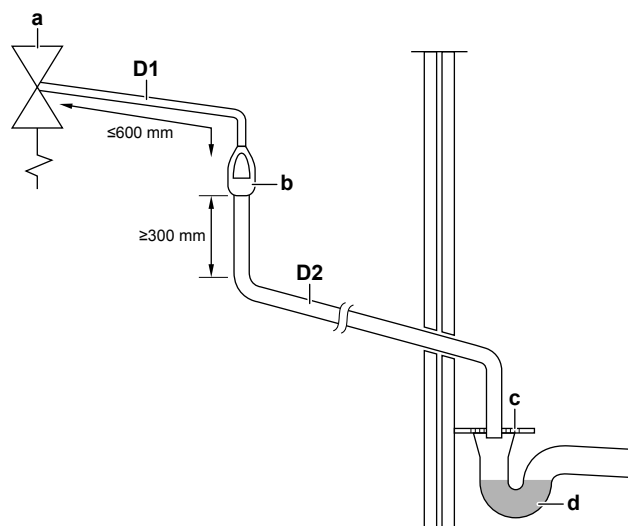
Install the tundish away from any electrical device.  
**Possible consequence:** Electric shock or fire.



## NOTICE

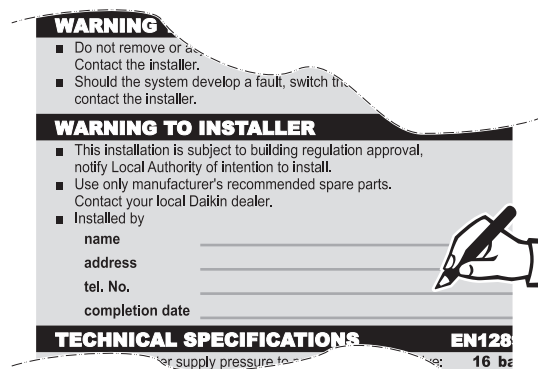
To ensure a free water flow through the discharge pipe, manually operate the pressure relief valve by turning its knob left.

- 8 Using the accessory brass compression coupler, connect the accessory pipe (see "2.2.1 To remove the accessories from the domestic hot water tank kit" [p 4]) to the pipe connection located at the back of the unit. This pipe starts at the pressure relief valve of the domestic hot water tank.
- 9 Connect the 2 tundishes (1 from the pressure relief valve of the domestic hot water tank, and 1 from the pressure relief valve of the domestic hot water tank kit) to an appropriate drain according to the applicable legislation. The following example shows discharge below fixed grating (Building Regulation G3 section 3.61 gives alternative points of discharge):



- a Safety device (pressure and temperature relief valve of domestic hot water tank; pressure relief valve of domestic hot water tank kit)
- b Tundish
- c Fixed grating
- d Trapped gully
- D1 Metal discharge pipe from safety device to tundish
- D2 Discharge pipe from tundish, with continuous fall. See Building Regulation G3 section 3.56, Table 03 and worked example.

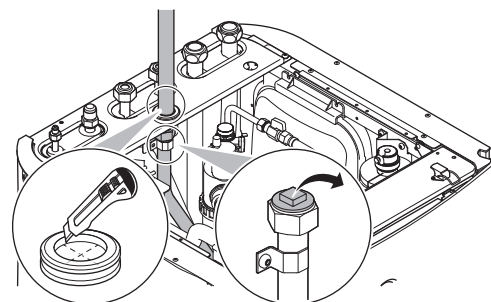
- 10 After completing the installation, the installer has to fill out the warning label on the tank with indelible ink. The warning label can be found on the unit top plate.



## 4.4.3 To connect the recirculation piping

**Prerequisite:** Only required if you need recirculation in your system.

- 1 Remove the top panel from the unit, see "4.1.1 To open the indoor unit" [p 7].
- 2 Cut out the rubber grommet on top of the unit, and remove the stop. The recirculation connector is placed below the hole.
- 3 Route the recirculation piping through the grommet and connect it to the recirculation connector.



- 4 Reattach the top panel.

## 4 Installation

### 4.4.4 To fill the water circuit

To fill the water circuit, use a field supply filling kit. Make sure you comply with the applicable legislation.



#### INFORMATION

Make sure both air purge valves (one on the magnetic filter and one on the backup heater) are open.

### 4.4.5 To fill the domestic hot water tank

- 1 Open every hot water tap in turn to purge air from the system pipe work.
- 2 Open the cold water supply valve.
- 3 Close all water taps after all air is purged.
- 4 Check for water leaks.
- 5 Manually operate the field-installed pressure relief valve to ensure a free water flow through the discharge pipe.

### 4.4.6 To insulate the water piping

The piping in the complete water circuit **MUST** be insulated to prevent condensation during cooling operation and reduction of the heating and cooling capacity.

If the temperature is higher than 30°C and the humidity is higher than RH 80%, the thickness of the insulation materials should be at least 20 mm to prevent condensation on the surface of the insulation.

## 4.5 Connecting the electrical wiring



#### DANGER: RISK OF ELECTROCUTION



#### WARNING

ALWAYS use multicore cable for power supply cables.

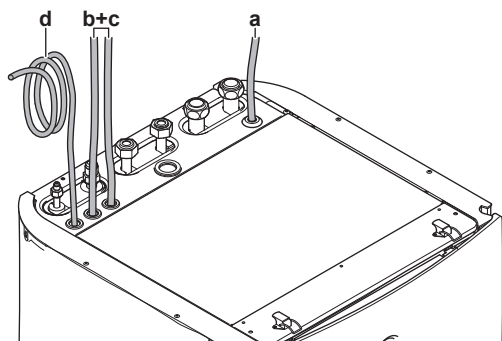
### 4.5.1 About electrical compliance

Only for the backup heater of the indoor unit

See "4.5.4 To connect the backup heater power supply" [p 13].

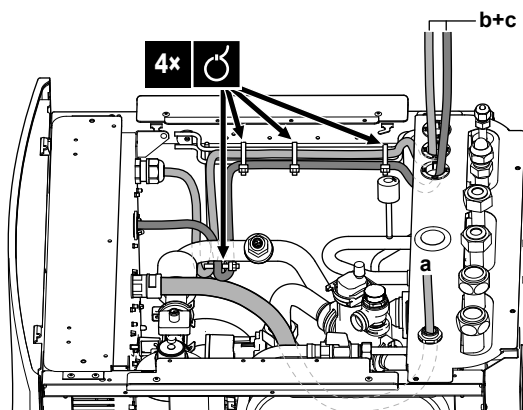
### 4.5.2 To connect the electrical wiring to the indoor unit

- 1 To open the indoor unit, see "4.1.1 To open the indoor unit" [p 7].
- 2 The wiring enters the unit from the top:



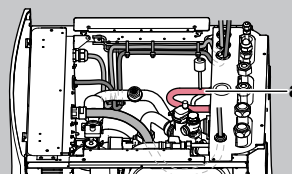
- a, b, c Field wiring (see table below)  
d Factory-mounted cable for power supply of backup heater

- 3 Routing of the wiring inside the unit should be as follows. Fix the cable to the cable rail using cable ties:



#### WARNING

Make sure that the electrical wiring does NOT touch the refrigerant gas pipe, which can be very hot.



a Refrigerant gas pipe

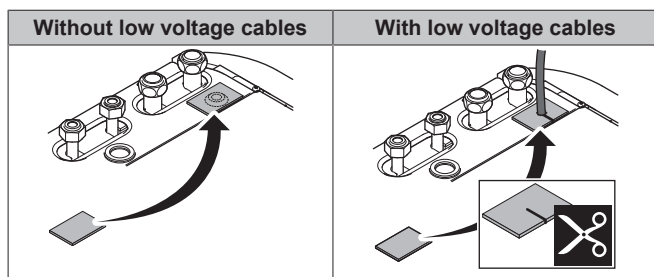
Routing	Possible cables (depending on unit type and installed options)
a Low voltage	<ul style="list-style-type: none"> <li>▪ Preferential power supply contact</li> <li>▪ User interface used as room thermostat (option)</li> <li>▪ Power consumption digital inputs (field supply)</li> <li>▪ Outdoor ambient temperature sensor (option)</li> <li>▪ Indoor ambient temperature sensor (option)</li> <li>▪ Electrical meters (field supply)</li> <li>▪ Safety thermostat (field supply)</li> </ul>
b High voltage power supply	<ul style="list-style-type: none"> <li>▪ Interconnection cable</li> <li>▪ Normal kWh rate power supply</li> <li>▪ Preferential kWh rate power supply</li> </ul>
c High voltage control signal	<ul style="list-style-type: none"> <li>▪ Heat pump convector (option)</li> <li>▪ Room thermostat (option)</li> <li>▪ Shut-off valve (field supply)</li> <li>▪ Domestic hot water pump (field supply)</li> <li>▪ Alarm output</li> <li>▪ Changeover to external heat source control</li> <li>▪ Space cool/heat operation control</li> </ul>
d High voltage power supply (factory-mounted cable)	<ul style="list-style-type: none"> <li>▪ Power supply for backup heater</li> </ul>



#### CAUTION

Do NOT push or place redundant cable length in the unit.

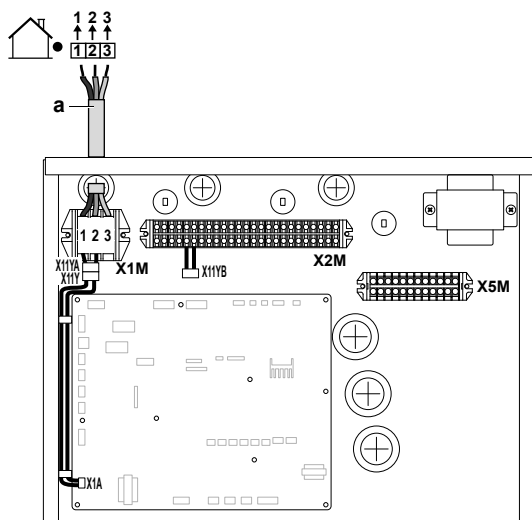
- 4 Seal the low voltage wiring intake using the sealing tape (delivered as accessory).



## 4.5.3 To connect the main power supply

- 1 Connect the main power supply.

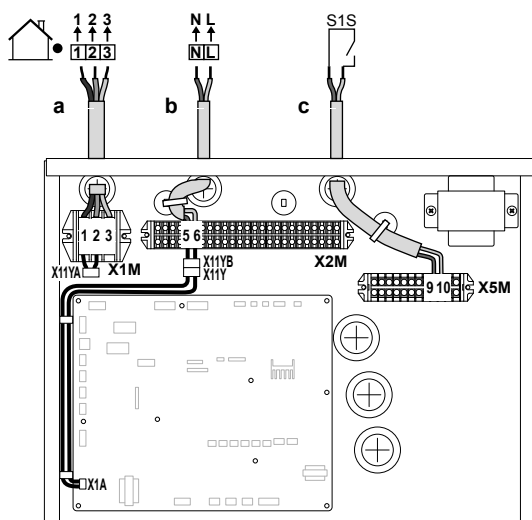
### In case of normal kWh rate power supply



a Interconnection cable (=main power supply)

### In case of preferential kWh rate power supply

Connect X11Y to X11YB.



a Interconnection cable (=main power supply)  
b Normal kWh rate power supply  
c Preferential power supply contact

- 2 Fix the cables with cable ties to the cable tie mountings.

## INFORMATION

In case of preferential kWh rate power supply, connect X11Y to X11YB. The necessity of separate normal kWh rate power supply to indoor unit (b) X2M/5+6 depends on the type of preferential kWh rate power supply.

Separate connection to the indoor unit is required:

- if preferential kWh rate power supply is interrupted when active, OR
- if no power consumption of the indoor unit is allowed at the preferential kWh rate power supply when active.

## INFORMATION

The preferential kWh rate power supply contact is connected to the same terminals (X5M/9+10) as the safety thermostat. Thus, the system can have EITHER preferential kWh rate power supply OR a safety thermostat.

## 4.5.4 To connect the backup heater power supply

### WARNING

The backup heater **MUST** have a dedicated power supply and **MUST** be protected by the safety devices required by the applicable legislation.

### CAUTION

To guarantee the unit is completely earthed, always connect the backup heater power supply and the earth cable.

The backup heater capacity can vary, depending on the indoor unit model. Make sure that the power supply is in accordance with the backup heater capacity, as listed in the table below.

Backup heater type	Backup heater capacity	Power supply	Maximum running current	Z <sub>max</sub>
*6V	2 kW	1N~ 230 V <sup>(a)</sup>	9 A	—
	4 kW	1N~ 230 V <sup>(a)</sup>	17 A <sup>(b)(c)</sup>	0.22 Ω
	6 kW	1N~ 230 V <sup>(a)</sup>	26 A <sup>(b)(c)</sup>	0.22 Ω
	2 kW	3~ 230 V <sup>(d)</sup>	5 A	—
	4 kW	3~ 230 V <sup>(d)</sup>	10 A	—
	6 kW	3~ 230 V <sup>(d)</sup>	15 A	—

<sup>(a)</sup> 6V

<sup>(b)</sup> Electrical equipment complying with EN/IEC 61000-3-12 (European/International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase).

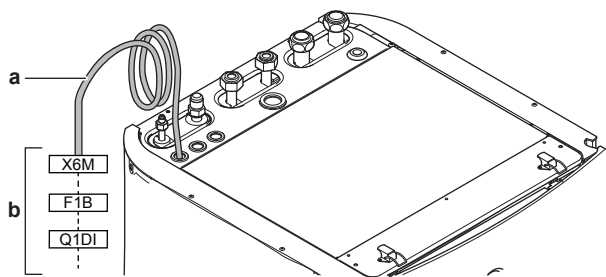
<sup>(c)</sup> This equipment complies with EN/IEC 61000-3-11 (European/International Technical Standard setting the limits for voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current ≤75 A) provided that the system impedance Z<sub>sys</sub> is less than or equal to Z<sub>max</sub> at the interface point between the user's supply and the public system. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected to a supply with a system impedance Z<sub>sys</sub> less than or equal to Z<sub>max</sub>.

<sup>(d)</sup> 6T1

Connect the backup heater power supply as follows:



## 4 Installation



- a Factory-mounted cable connected to the contactor of the backup heater, inside the switch box (K1M for \*3V models, K5M for \*6V and \*9W models)  
b Field wiring (see table below)

Model (power supply)	Connections to backup heater power supply
*6V (6V: 1N~ 230 V)	
*6V (6T1: 3~ 230 V)	

F1B Overcurrent fuse (field supply). Recommended fuse: 4-pole; 20 A; curve 400 V; tripping class C.

K5M Safety contactor (in the lower switch box)

Q1DI Earth leakage circuit breaker (field supply)

SWB Switch box

X6M Terminal (field supply)



### NOTICE

Do NOT cut or remove the backup heater power supply cable.

### 4.5.5 To connect the shut-off valve



#### INFORMATION

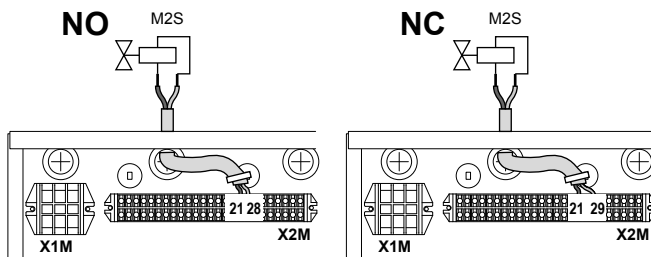
**Shut-off valve usage example.** In case of one LWT zone, and a combination of underfloor heating and heat pump convectors, install a shut-off valve before the underfloor heating to prevent condensation on the floor during cooling operation. For more information, see the installer reference guide.

- 1 Connect the valve control cable to the appropriate terminals as shown in the illustration below.



#### NOTICE

Wiring is different for a NC (normally closed) valve and a NO (normally open) valve.



- 2 Fix the cable with cable ties to the cable tie mountings.

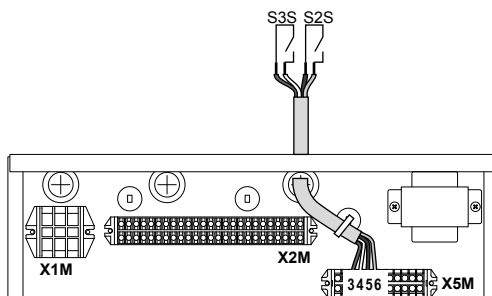
### 4.5.6 To connect the electricity meters



#### INFORMATION

In case of an electricity meter with transistor output, check the polarity. The positive polarity MUST be connected to X5M/6 and X5M/4; the negative polarity to X5M/5 and X5M/3.

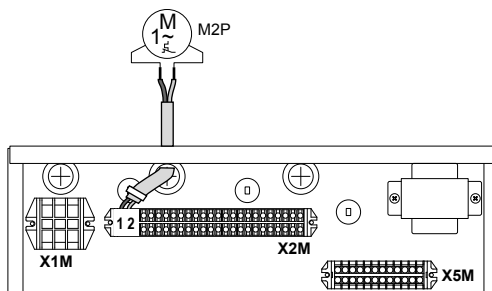
- 1 Connect the electricity meters cable to the appropriate terminals as shown in the illustration below.



- 2 Fix the cable with cable ties to the cable tie mountings.

### 4.5.7 To connect the domestic hot water pump

- 1 Connect the domestic hot water pump cable to the appropriate terminals as shown in the illustration below.

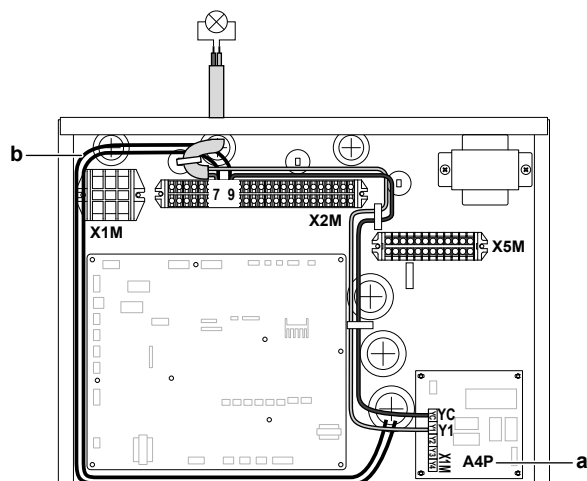


- 2 Fix the cable with cable ties to the cable tie mountings.



### 4.5.8 To connect the alarm output

- 1 Connect the alarm output cable to the appropriate terminals as shown in the illustration below.

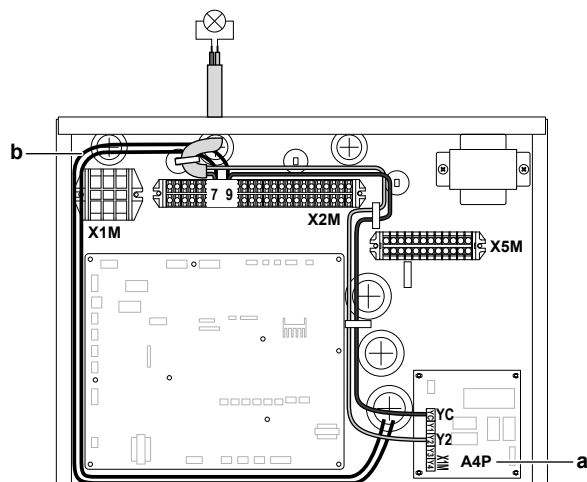


- a Installation of EKR1HBAA is required.  
b Prewiring between X2M/7+9 and Q1L (= thermal protector backup heater). Do NOT change.

- 2 Fix the cable with cable ties to the cable tie mountings.

### 4.5.9 To connect the space cooling/heating ON/OFF output

- 1 Connect the space cooling/heating ON/OFF output cable to the appropriate terminals as shown in the illustration below.

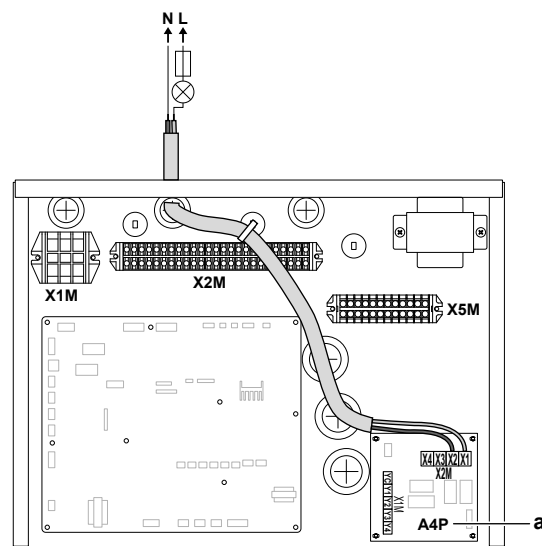


- a Installation of EKR1HBAA is required.  
b Prewiring between X2M/7+9 and Q1L (= thermal protector backup heater). Do NOT change.

- 2 Fix the cable with cable ties to the cable tie mountings.

### 4.5.10 To connect the changeover to external heat source

- 1 Connect the changeover to external heat source cable to the appropriate terminals as shown in the illustration below.

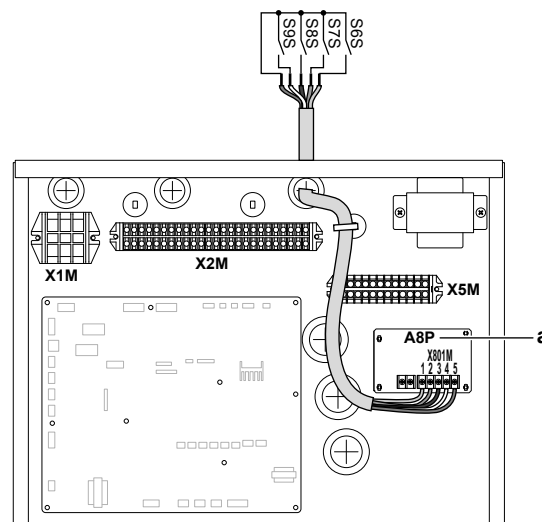


- a Installation of EKR1HBAA is required.

- 2 Fix the cable with cable ties to the cable tie mountings.

### 4.5.11 To connect the power consumption digital inputs

- 1 Connect the power consumption digital inputs cable to the appropriate terminals as shown in the illustration below.

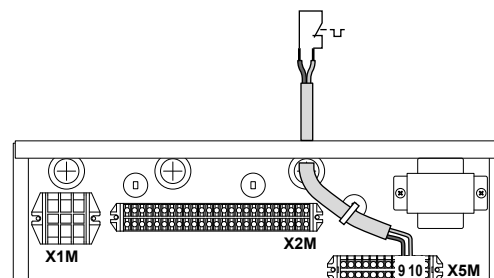


- a Installation of EKR1AHTA is required.

- 2 Fix the cable with cable ties to the cable tie mountings.

### 4.5.12 To connect the safety thermostat (normally closed contact)

- 1 Connect the safety thermostat (normally closed) cable to the appropriate terminals as shown in the illustration below.



- 2 Fix the cable with cable ties to the cable tie mountings.

## 5 Configuration



### NOTICE

Make sure to select and install the safety thermostat according to the applicable legislation.

In any case, to prevent unnecessary tripping of the safety thermostat, we recommend the following:

- The safety thermostat is automatically resettable.
- The safety thermostat has a maximum temperature variation rate of 2°C/min.
- There is a minimum distance of 2 m between the safety thermostat and the 3-way valve.



### INFORMATION

ALWAYS configure the safety thermostat after it is installed. Without configuration, the unit will ignore the safety thermostat contact.



### INFORMATION

The preferential kWh rate power supply contact is connected to the same terminals (X5M/9+10) as the safety thermostat. Thus, the system can have EITHER preferential kWh rate power supply OR a safety thermostat.

## 4.6 Finishing the indoor unit installation

### 4.6.1 To close the indoor unit

- 1 Close the cover of the switch box.
- 2 Put the switch box back into place.
- 3 Reinstall the top panel.
- 4 Reinstall the side panels.
- 5 Reinstall the front panel.
- 6 Reconnect the cables to the user interface panel.
- 7 Reinstall the user interface panel.



### NOTICE

When closing the indoor unit cover, make sure that the tightening torque does NOT exceed 4.1 N•m.

## 5 Configuration

### 5.1 Overview: Configuration

This chapter describes what you have to do and know to configure the system after it is installed.



### NOTICE

This chapter explains only the basic configuration. For more detailed explanation and background information, see the installer reference guide.

#### Why

If you do NOT configure the system correctly, it might NOT work as expected. The configuration influences the following:

- The calculations of the software
- What you can see on and do with the user interface

#### How

You can configure the system via the user interface.

- **First time – Configuration wizard.** When you turn ON the user interface for the first time (via the unit), the configuration wizard starts to help you configure the system.
- **Restart the configuration wizard.** If the system is already configured, you can restart the configuration wizard. To restart the configuration wizard, go to **Installer settings > Configuration wizard**. To access **Installer settings**, see ["5.1.1 To access the most used commands"](#) [▶ 16].
- **Afterwards.** If necessary, you can make changes to the configuration in the menu structure or the overview settings.



### INFORMATION

When the configuration wizard is finished, the user interface will show an overview screen and request to confirm. When confirmed, the system will restart and the home screen will be displayed.

#### Accessing settings – Legend for tables

You can access the installer settings using two different methods. However, NOT all settings are accessible via both methods. If so, the corresponding table columns in this chapter are set to N/A (not applicable).

Method	Column in tables
Accessing settings via the breadcrumb in the <b>home menu screen</b> or the <b>menu structure</b> . To enable breadcrumbs, press the ? button in the home screen.	<b>#</b> For example: [9.1.5.2]
Accessing settings via the code in the <b>overview field settings</b> .	<b>Code</b> For example: [C-07]

See also:

- ["To access the installer settings"](#) [▶ 17]
- ["5.4 Menu structure: Overview installer settings"](#) [▶ 23]

#### 5.1.1 To access the most used commands

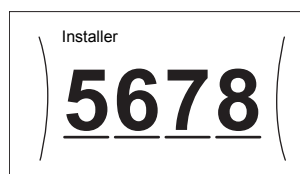
##### To change the user permission level

You can change the user permission level as follows:

1	Go to [B]: User profile.	
2	Enter the applicable pin code for the user permission level.	—
	▪ Browse through the list of digits and change the selected digit.	
	▪ Move the cursor from left to right.	
	▪ Confirm the pin code and proceed.	

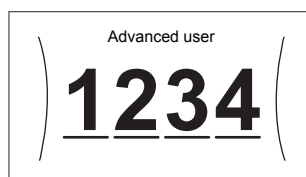
##### Installer pin code

The Installer pin code is **5678**. Additional menu items and installer settings are now available.



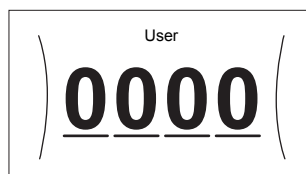
### Advanced user pin code

The Advanced user pin code is **1234**. Additional menu items for the user are now visible.



### User pin code

The User pin code is **0000**.



### To access the installer settings

- 1 Set the user permission level to Installer.
- 2 Go to [9]: Installer settings.

### To modify an overview setting

**Example:** Modify [1-01] from 15 to 20.

Most settings can be configured via the menu structure. If for any reason it is required to change a setting using the overview settings, then the overview settings can be accessed as follows:

1	Set the user permission level to Installer. See " <a href="#">To change the user permission level</a> " [p 16].	—
2	Go to [9]: Installer settings > Overview field settings.	
3	Turn the left dial to select the first part of the setting and confirm by pressing the dial.	
4	Turn the left dial to select the second part of the setting	
5	Turn the right dial to modify the value from 15 to 20.	
6	Press the left dial to confirm the new setting.	
7	Press the center button to go back to the home screen.	



### INFORMATION

When you change the overview settings and you go back to the home screen, the user interface will show a popup screen and request to restart the system.

When confirmed, the system will restart and recent changes will be applied.

## 5.2 Configuration wizard

After first power ON of the system, the user interface will guide you using the configuration wizard. This way you can set the most important initial settings. This way the unit will be able to run properly. Afterwards, more detailed settings can be done via the menu structure if required.

### 5.2.1 Configuration wizard: Language

#	Code	Description
[7.1]	N/A	Language

### 5.2.2 Configuration wizard: Time and date

#	Code	Description
[7.2]	N/A	Set the local time and date



### INFORMATION

By default, daylight savings time is enabled and clock format is set to 24 hours. If you want to change these settings, you can do this in the menu structure (User settings > Time/date) once the unit is initialised.

### 5.2.3 Configuration wizard: System

#### Indoor unit type

The indoor unit type is displayed, but cannot be adjusted.

#### Backup heater type

The backup heater is adapted to be connected to most common European electricity grids. The type of backup heater must be set on the user interface. For units with a built-in backup heater, the type of heater can be viewed but not changed.

#	Code	Description
[9.3.1]	[E-03]	<ul style="list-style-type: none"> <li>2: 3V</li> <li>3: 6V</li> <li>4: 9W</li> </ul>

#### Domestic hot water

The following setting determines if the system can prepare domestic hot water or not, and which tank is used. This setting is read only.

#	Code	Description
[9.2.1]	[E-05] <sup>(a)</sup> [E-06] <sup>(a)</sup> [E-07] <sup>(a)</sup>	<ul style="list-style-type: none"> <li>Integrated</li> <li>The backup heater will also be used for domestic hot water heating.</li> </ul>

- <sup>(a)</sup> Use the menu structure instead of the overview settings. Menu structure setting [9.2.1] replaces the following 3 overview settings:
- [E-05]: Can the system prepare domestic hot water?
  - [E-06]: Is a domestic hot water tank installed in the system?
  - [E-07]: What kind of domestic hot water tank is installed?

#### Emergency

When the heat pump fails to operate, the backup heater can serve as an emergency heater. It then takes over the heat load either automatically or by manual interaction.

## 5 Configuration

- When Emergency is set to Automatic and a heat pump failure occurs, the backup heater automatically takes over the domestic hot water production and space heating.
- When Emergency is set to Manual and a heat pump failure occurs, the domestic hot water heating and space heating stops. To manually recover it via the user interface, go to the Malfunctioning main menu screen and confirm whether the backup heater can take over the heat load or not.

We recommend to set Emergency to Automatic if the house is unattended for longer periods.

#	Code	Description
[9.5]	N/A	<ul style="list-style-type: none"> <li>0: Manual</li> <li>1: Automatic</li> </ul>



### INFORMATION

The auto emergency setting can be set in the menu structure of the user interface only.

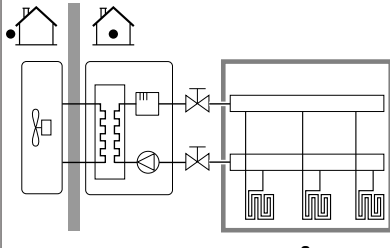


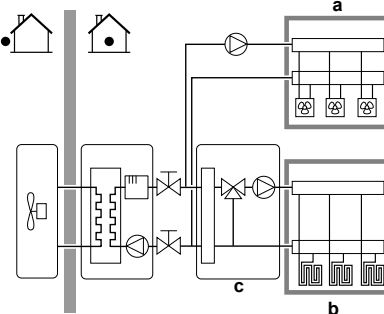
### INFORMATION

If a heat pump failure occurs and Emergency is set to Manual, the room frost protection function, the underfloor heating screed dryout function, and the water pipe antifreeze function will remain active even if the user does NOT confirm emergency operation.

### Number of zones

The system can supply leaving water to up to 2 water temperature zones. During configuration, the number of water zones must be set.

#	Code	Description
[4.4]	[7-02]	<ul style="list-style-type: none"> <li>0: Single zone Only one leaving water temperature zone:</li> </ul>  <p><b>a</b> Main LWT zone</p>

#	Code	Description
[4.4]	[7-02]	<ul style="list-style-type: none"> <li>1: Dual zone Two leaving water temperature zones. The main leaving water temperature zone consists of the higher load heat emitters and a mixing station to achieve the desired leaving water temperature. In heating:</li> </ul>  <p><b>a</b> Additional LWT zone: Highest temperature <b>b</b> Main LWT zone: Lowest temperature <b>c</b> Mixing station</p>



### CAUTION

NOT configuring the system in the following way can cause damage to the heat emitters. If there are 2 zones, it is important that in heating:

- the zone with the lowest water temperature is configured as the main zone, and
- the zone with the highest water temperature is configured as the additional zone.



### CAUTION

If there are 2 zones and the emitter types are wrongly configured, water of high temperature can be sent towards a low temperature emitter (underfloor heating). To avoid this:

- Install an aquastat/thermostatic valve to avoid too high temperatures towards a low temperature emitter.
- Make sure you set the emitter types for the main zone [2.7] and for the additional zone [3.7] correctly in accordance with the connected emitter.



### NOTICE

An overpressure bypass valve can be integrated in the system. Keep in mind that this valve might not be shown on the illustrations.

### 5.2.4 Configuration wizard: Backup heater

The backup heater is adapted to be connected to most common European electricity grids. If the backup heater is available, the voltage, configuration and capacity must be set on the user interface.

The capacities for the different steps of the backup heater must be set for the energy metering and/or power consumption control feature to work properly. When measuring the resistance value of each heater, you can set the exact heater capacity and this will lead to more accurate energy data.

#### Voltage

This can be set to:

- 230V, 1ph
- 230V, 3ph

#	Code	Description
[9.3.2]	[5-0D]	<ul style="list-style-type: none"> <li>0: 230V, 1ph</li> <li>1: 230V, 3ph</li> </ul>

### Configuration

The backup heater can be configured in different ways. It can be chosen to have a 1-step only backup heater or a backup heater with 2 steps. If 2 steps, the capacity of the second step depends on this setting. It can also be chosen to have a higher capacity of the second step in emergency.

#	Code	Description
[9.3.3]	[4-0A]	<ul style="list-style-type: none"> <li>1: Relay 1 / Relay 1+2</li> <li>2: Relay 1 / Relay 2</li> <li>3: Relay 1 / Relay 2 Emergency Relay 1+2</li> </ul>



#### INFORMATION

Settings [9.3.3] and [9.3.5] are linked. Changing one setting influences the other. If you change one, check if the other is still as expected.



#### INFORMATION

During normal operation, the capacity of the second step of the backup heater at nominal voltage is equal to [6-03]+[6-04].



#### INFORMATION

If [4-0A]=3 and emergency mode is active, the power usage of the backup heater is maximal and equal to 2×[6-03]+[6-04].



#### INFORMATION

Only for systems with integrated domestic hot water tank: If the storage temperature setpoint is higher than 50°C, Daikin recommends NOT to disable the backup heater second step because it will have a big impact on the required time for the unit to heat up the domestic hot water tank.

### Capacity step 1

#	Code	Description
[9.3.4]	[6-03]	<ul style="list-style-type: none"> <li>The capacity of the first step of the backup heater at nominal voltage.</li> </ul>

### Additional capacity step 2

#	Code	Description
[9.3.5]	[6-04]	<ul style="list-style-type: none"> <li>The capacity difference between the second and first step of the backup heater at nominal voltage. Nominal value depends on backup heater configuration.</li> </ul>

## 5.2.5 Configuration wizard: Main zone

The most important settings for the main leaving water zone can be set here.

### Emitter type

Heating up or cooling down the main zone can take longer. This depends on:

- The water volume of the system
- The heater emitter type of the main zone

The setting Emitter type can compensate for a slow or a quick heating/cooling system during the heat up/cool down cycle. In room thermostat control, Emitter type influences the maximum

modulation of the desired leaving water temperature, and the possibility for usage of the automatic cooling/heating changeover based on the indoor ambient temperature.

It is important to set Emitter type correctly and in accordance with your system layout. The target delta T for the main zone depends on it.

#	Code	Description
[2.7]	[2-0C]	<ul style="list-style-type: none"> <li>0: Underfloor heating</li> <li>1: Fancoil unit</li> <li>2: Radiator</li> </ul>

The setting of the emitter type has an influence on the space heating setpoint range and the target delta T in heating as follows:

Description	Space heating setpoint range	Target delta T in heating
0: Underfloor heating	Maximum 55°C	Variable
1: Fancoil unit	Maximum 55°C	Variable
2: Radiator	Maximum 65°C	Fixed 10°C



#### NOTICE

For radiators, the average emitter temperature will be lower compared to underfloor heating, due to the fixed delta T of 10°C. To compensate, you can:

- Increase the weather dependent curve desired temperatures [2.5].
- Enable leaving water temperature modulation and increase the maximum modulation [2.C].

### Control

Define how the operation of the unit is controlled.

Control	In this control...
Leaving water	Unit operation is decided based on the leaving water temperature regardless the actual room temperature and/or heating or cooling demand of the room.
External room thermostat	Unit operation is decided by the external thermostat or equivalent (e.g. heat pump convector).
Room thermostat	Unit operation is decided based on the ambient temperature of the user interface used as a room thermostat.

#	Code	Description
[2.9]	[C-07]	<ul style="list-style-type: none"> <li>0: Leaving water</li> <li>1: External room thermostat</li> <li>2: Room thermostat</li> </ul>

### Setpoint mode

Define the setpoint mode:

- Fixed: the desired leaving water temperature does not depend on the outdoor ambient temperature.
- In WD heating, fixed cooling mode, the desired leaving water temperature:
  - depends on the outdoor ambient temperature for heating
  - does NOT depend on the outdoor ambient temperature for cooling
- In Weather dependent mode, the desired leaving water temperature depends on the outdoor ambient temperature.

## 5 Configuration

#	Code	Description
[2.4]	N/A	Setpoint mode: <ul style="list-style-type: none"> <li>Fixed</li> <li>WD heating, fixed cooling</li> <li>Weather dependent</li> </ul>

When weather dependent operation is active, low outdoor temperatures will result in warmer water and vice versa. During weather dependent operation, the user can shift the water temperature up or down by a maximum of 10°C.

### Schedule

Indicates if the desired leaving water temperature is according to a schedule. Influence of the LWT setpoint mode [2.4] is as follows:

- In Fixed LWT setpoint mode, the scheduled actions consist of desired leaving water temperatures, either preset or custom.
- In Weather dependent LWT setpoint mode, the scheduled actions consist of desired shift actions, either preset or custom.

#	Code	Description
[2.1]	N/A	<ul style="list-style-type: none"> <li>0: No</li> <li>1: Yes</li> </ul>

### 5.2.6 Configuration wizard: Additional zone

The most important settings for the additional leaving water zone can be set here.

#### Emitter type

For more info about this functionality, see ["5.2.5 Configuration wizard: Main zone" \[p 19\]](#).

#	Code	Description
[3.7]	[2-0D]	<ul style="list-style-type: none"> <li>0: Underfloor heating</li> <li>1: Fancoil unit</li> <li>2: Radiator</li> </ul>

#### Control

The control type is displayed here, but cannot be adjusted. It is determined by the control type of the main zone. For more info about the functionality, see ["5.2.5 Configuration wizard: Main zone" \[p 19\]](#).

#	Code	Description
[3.9]	N/A	<ul style="list-style-type: none"> <li>0: Leaving water if the control type of the main zone is Leaving water.</li> <li>1: External room thermostat if the control type of the main zone is External room thermostat or Room thermostat.</li> </ul>

#### Setpoint mode

For more info about this functionality, see ["5.2.5 Configuration wizard: Main zone" \[p 19\]](#).

#	Code	Description
[3.4]	N/A	<ul style="list-style-type: none"> <li>0: Fixed</li> <li>1: WD heating, fixed cooling</li> <li>2: Weather dependent</li> </ul>

If you choose WD heating, fixed cooling or Weather dependent, the next screen will be the detailed screen with weather-dependent curves. Also see ["5.2.7 Detailed screen with weather-dependent curve" \[p 20\]](#).

#### Schedule

Indicates if the desired leaving water temperature is according to a schedule. Also see ["5.2.5 Configuration wizard: Main zone" \[p 19\]](#).

#	Code	Description
[3.1]	N/A	<ul style="list-style-type: none"> <li>0: No</li> <li>1: Yes</li> </ul>

### 5.2.7 Detailed screen with weather-dependent curve

When weather-dependent (WD) operation is active the desired leaving water or tank temperature is determined automatically depending on the averaged outdoor temperature. When the outdoor temperature is lower the leaving water or tank temperature will need to be higher as the water pipes will be colder and vice versa.

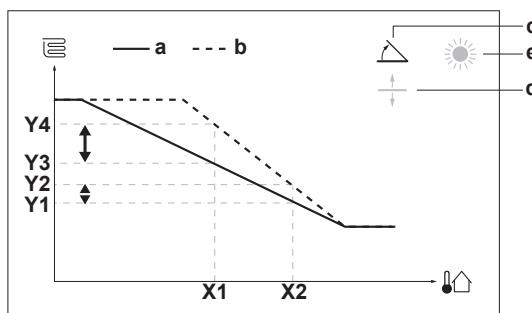
#### Slope and offset

Define the weather-dependent curve by its slope and offset:

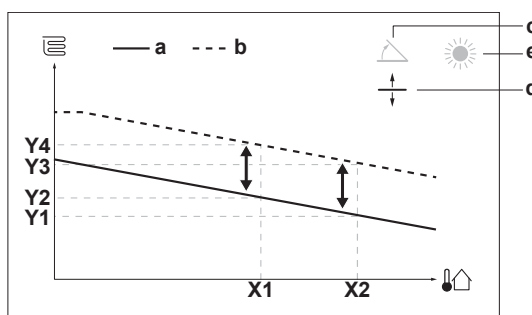
- Change the **slope** to differently increase or decrease the temperature of the leaving water for different ambient temperatures. For example, if leaving water temperature is in general fine but at low ambient temperatures too cold, raise the slope so that leaving water temperature is heated increasingly more at decreasingly lower ambient temperatures.
- Change the **offset** to equally increase or decrease the temperature of the leaving water for different ambient temperatures. For example, if leaving water temperature is always a bit too cold at different ambient temperatures, shift the offset up to equally increase the leaving water temperature for all ambient temperatures.

#### Examples

Weather-dependent curve when slope is selected:



Weather-dependent curve when offset is selected:



Item	Description
a	WD curve before changes.
b	WD curve after changes (as example): <ul style="list-style-type: none"> <li>When slope is changed, the new preferred temperature at X1 is unequally higher than the preferred temperature at X2.</li> <li>When offset is changed, the new preferred temperature at X1 is equally higher as the preferred temperature at X2.</li> </ul>
c	Slope
d	Offset



Item	Description
<b>e</b>	Selected weather dependent zone: <ul style="list-style-type: none"> <li>☀: Main zone or additional zone heating</li> <li>❄: Main zone or additional zone cooling</li> <li>🏠: Domestic hot water</li> </ul>
<b>X1, X2</b>	Examples of outdoor ambient temperature
<b>Y1, Y2, Y3, Y4</b>	Examples of desired tank temperature or leaving water temperature. The icon corresponds to the heat emitter for that zone: <ul style="list-style-type: none"> <li>🛏: Underfloor heating</li> <li>📄: Fan coil unit</li> <li>🔥: Radiator</li> <li>🏠: Domestic hot water tank</li> </ul>

Possible actions on this screen	
🔍...	Select slope or offset.
○...➡	Increase or decrease the slope/offset.
○...🏠	When slope is selected: set slope and go to offset. When offset is selected: set offset.
🏠...	Confirm changes and return to the submenu.

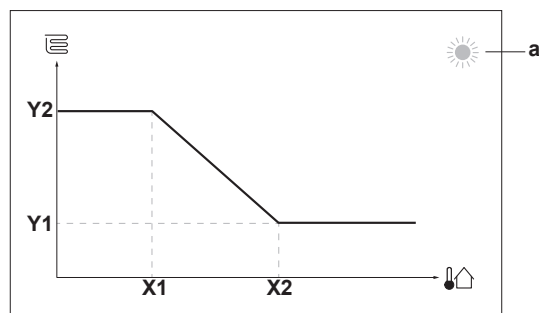
Item	Description
<b>a</b>	WD curve before changes.
<b>b</b>	WD curve after changes (as example): <ul style="list-style-type: none"> <li>When slope is changed, the new preferred temperature at X1 is unequally higher than the preferred temperature at X2.</li> <li>When offset is changed, the new preferred temperature at X1 is equally higher as the preferred temperature at X2.</li> </ul>
<b>c</b>	Slope
<b>d</b>	Offset
<b>e</b>	Selected weather dependent zone: <ul style="list-style-type: none"> <li>☀: Main zone or additional zone heating</li> <li>❄: Main zone or additional zone cooling</li> <li>🏠: Domestic hot water</li> </ul>
<b>X1, X2</b>	Examples of outdoor ambient temperature
<b>Y1, Y2, Y3, Y4</b>	Examples of desired tank temperature or leaving water temperature. The icon corresponds to the heat emitter for that zone: <ul style="list-style-type: none"> <li>🛏: Underfloor heating</li> <li>📄: Fan coil unit</li> <li>🔥: Radiator</li> <li>🏠: Domestic hot water tank</li> </ul>

### 2-points WD curve

The weather-dependent curve is defined by two setpoints:

- Setpoint (X1, Y2)
- Setpoint (X2, Y1)

Weather-dependent curve:



Possible actions on this screen	
🔍...	Go through the temperatures.
○...➡	Change the temperature.
○...🏠	Go to the next temperature.
🏠...	Confirm changes and proceed.

Item	Description
<b>a</b>	Selected weather dependent zone: <ul style="list-style-type: none"> <li>☀: Main zone or additional zone heating</li> <li>❄: Main zone or additional zone cooling</li> <li>🏠: Domestic hot water</li> </ul>
<b>X1, X2</b>	Examples of outdoor ambient temperature
<b>Y1, Y2</b>	Examples of desired tank temperature or leaving water temperature. The icon corresponds to the heat emitter for that zone: <ul style="list-style-type: none"> <li>🛏: Underfloor heating</li> <li>📄: Fan coil unit</li> <li>🔥: Radiator</li> <li>🏠: Domestic hot water tank</li> </ul>

### 5.2.8 Configuration wizard: Tank

#### Heat up mode

The domestic hot water can be prepared in 3 different ways. They differ from each other by the way the desired tank temperature is set and how the unit acts upon it.

#	Code	Description
[5.6]	[6-0D]	Heat up mode: <ul style="list-style-type: none"> <li>0: Reheat only: Only reheat operation is allowed.</li> <li>1: Schedule + reheat: The domestic hot water tank is heated according to a schedule and between the scheduled heat up cycles, reheat operation is allowed.</li> <li>2: Schedule only: The domestic hot water tank can ONLY be heated according to a schedule.</li> </ul>

See the operation manual for more details.

#### Comfort setpoint

Only applicable when domestic hot water preparation is Schedule only or Schedule + reheat. When programming the schedule, you can make use of the comfort setpoint as a preset value. When you later want to change the storage setpoint, you only have to do it in one place.

The tank will heat up until the **storage comfort temperature** has been reached. It is the higher desired temperature when a storage comfort action is scheduled.

## 5 Configuration

Additionally, a storage stop can be programmed. This feature puts a stop to tank heating even if the setpoint has NOT been reached. Only program a storage stop when tank heating is absolutely undesirable.

#	Code	Description
[5.2]	[6-0A]	Comfort setpoint: <ul style="list-style-type: none"><li>▪ 30°C~[6-0E]°C</li></ul>

### Eco setpoint

The **storage economic temperature** denotes the lower desired tank temperature. It is the desired temperature when a storage economic action is scheduled (preferably during day).

#	Code	Description
[5.3]	[6-0B]	Eco setpoint: <ul style="list-style-type: none"><li>▪ 30°C~min(50,[6-0E])°C</li></ul>

### Reheat setpoint

**Desired reheat tank temperature**, used:

- in Schedule + reheat mode, during reheat mode: the guaranteed minimum tank temperature is set by the Reheat setpoint minus the reheat hysteresis. If the tank temperature drops below this value, the tank is heated up.
- during storage comfort, to prioritize the domestic hot water preparation. When the tank temperature rises above this value, domestic hot water preparation and space heating/cooling are executed sequentially.

#	Code	Description
[5.4]	[6-0C]	Reheat setpoint: <ul style="list-style-type: none"><li>▪ 30°C~min(50,[6-0E])°C</li></ul>

## 5.3 Settings menu

You can set additional settings using the main menu screen and its submenus. The most important settings are presented here.

### 5.3.1 Main zone

#### Thermostat type

Only applicable in external room thermostat control.



#### NOTICE

If an external room thermostat is used, the external room thermostat will control the room frost protection. However, the room frost protection is only possible if [C.2] Space heating/cooling=On.

#	Code	Description
[2.A]	[C-05]	External room thermostat type for the main zone: <ul style="list-style-type: none"><li>▪ 1: 1 contact: The used external room thermostat can only send a thermo ON/OFF condition. There is no separation between heating or cooling demand.</li><li>▪ 2: 2 contacts: The used external room thermostat can send a separate heating/cooling thermo ON/OFF condition.</li></ul>

### 5.3.2 Additional zone

#### Thermostat type

Only applicable in external room thermostat control. For more info about the functionality, see ["5.3.1 Main zone"](#) ► 22].

#	Code	Description
[3.A]	[C-06]	External room thermostat type for the additional zone: <ul style="list-style-type: none"><li>▪ 1: 1 contact</li><li>▪ 2: 2 contacts</li></ul>

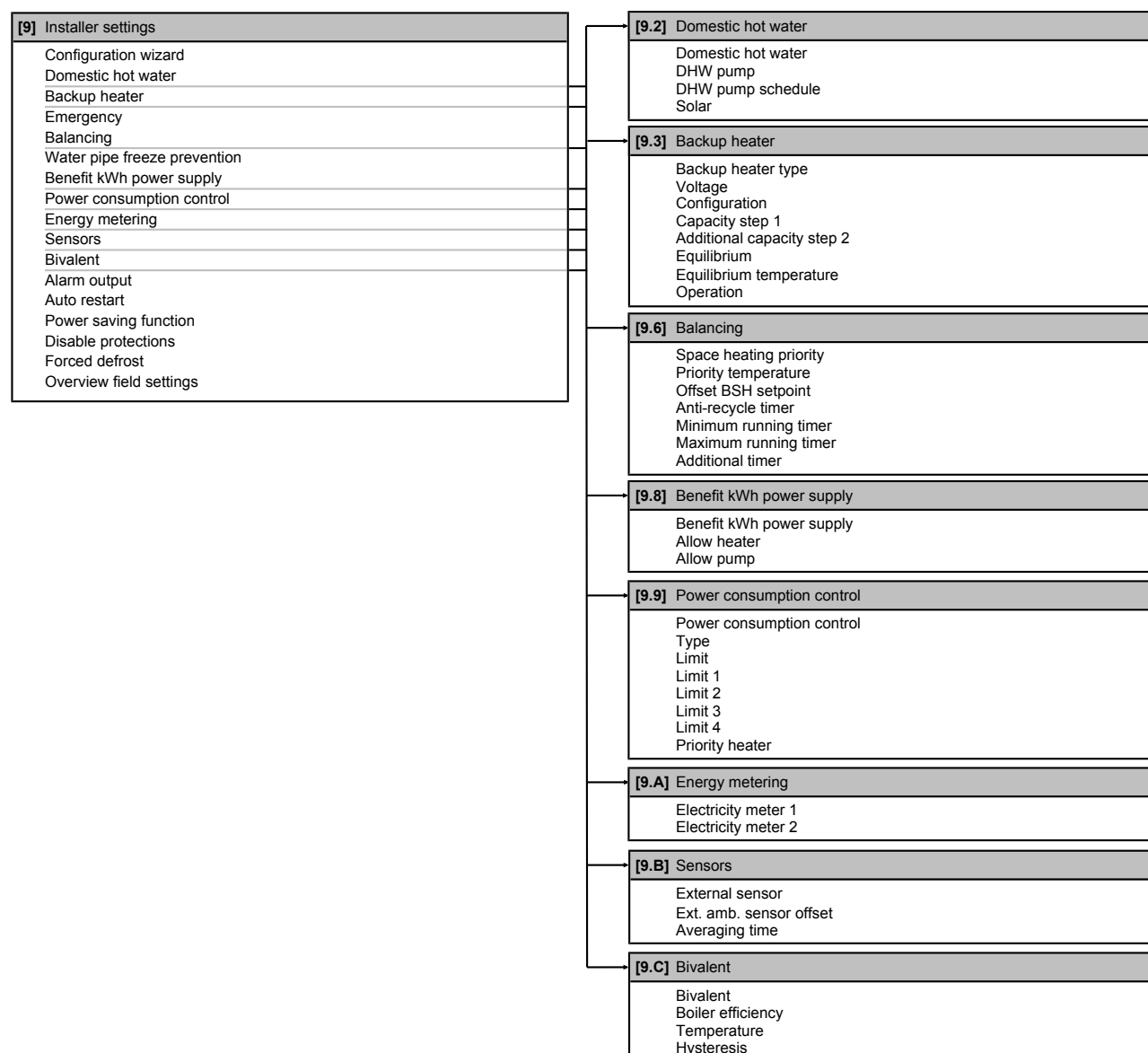
### 5.3.3 Information

#### Dealer information

The installer can fill in his contact number here.

#	Code	Description
[8.3]	N/A	Number that users can call in case of problems.

## 5.4 Menu structure: Overview installer settings



### INFORMATION

Solar kit settings are shown but are NOT applicable for this unit. Settings shall NOT be used or changed.



### INFORMATION

Depending on the selected installer settings and unit type, settings will be visible/invisible.

## 6 Commissioning



### NOTICE

ALWAYS operate the unit with thermistors and/or pressure sensors/switches. If NOT, burning of the compressor might be the result.



### INFORMATION

**Protective functions – "Installer-on-site mode".** The software is equipped with protective functions, such as room antifrost. The unit automatically runs these functions when necessary.

During installation or service this behaviour is undesired. Therefore, the protective functions can be disabled:

- **At first power-on:** The protective functions are disabled by default. After 36 h they will be automatically enabled.
- **Afterwards:** An installer can manually disable the protective functions by setting [9.G]: Disable protections=Yes. After his work is done, he can enable the protective functions by setting [9.G]: Disable protections=No.

### 6.1 Checklist before commissioning

After the installation of the unit, first check the items listed below. Once all checks are fulfilled, the unit must be closed. Power-up the unit after it is closed.

<input type="checkbox"/>	You read the complete installation instructions, as described in the <b>installer reference guide</b> .
<input type="checkbox"/>	The <b>indoor unit</b> is properly mounted.
<input type="checkbox"/>	The <b>outdoor unit</b> is properly mounted.
<input type="checkbox"/>	The following <b>field wiring</b> has been carried out according to this document and the applicable legislation: <ul style="list-style-type: none"> <li>▪ Between the local supply panel and the outdoor unit</li> <li>▪ Between indoor unit and outdoor unit</li> <li>▪ Between the local supply panel and the indoor unit</li> <li>▪ Between the indoor unit and the valves (if applicable)</li> <li>▪ Between the indoor unit and the room thermostat (if applicable)</li> </ul>
<input type="checkbox"/>	The system is properly <b>earthed</b> and the earth terminals are tightened.
<input type="checkbox"/>	The <b>fuses</b> or locally installed protection devices are installed according to this document, and have NOT been bypassed.
<input type="checkbox"/>	The <b>power supply voltage</b> matches the voltage on the identification label of the unit.
<input type="checkbox"/>	There are NO <b>loose connections</b> or damaged electrical components in the switch box.
<input type="checkbox"/>	There are NO <b>damaged components</b> or <b>squeezed pipes</b> on the inside of the indoor and outdoor units.
<input type="checkbox"/>	<b>Backup heater circuit breaker</b> F1B (field supply) is turned ON.
<input type="checkbox"/>	There are NO <b>refrigerant leaks</b> .
<input type="checkbox"/>	The <b>refrigerant pipes</b> (gas and liquid) are thermally insulated.
<input type="checkbox"/>	The correct pipe size is installed and the <b>pipes</b> are properly insulated.
<input type="checkbox"/>	There is NO <b>water leak</b> inside the indoor unit.

<input type="checkbox"/>	The <b>shut-off valves</b> are properly installed and fully open.
<input type="checkbox"/>	The <b>stop valves</b> (gas and liquid) on the outdoor unit are fully open.
<input type="checkbox"/>	The <b>air purge</b> valve is open (at least 2 turns).
<input type="checkbox"/>	The <b>pressure relief valve</b> purges water when opened. Clean water must come out.
<input type="checkbox"/>	The <b>domestic hot water tank</b> is filled completely.

### 6.2 Checklist during commissioning

<input type="checkbox"/>	The <b>minimum flow rate</b> during backup heater/defrost operation is guaranteed in all conditions. See "To check the water volume and flow rate" in <a href="#">"3.2 Preparing water piping"</a> [p 7].
<input type="checkbox"/>	To perform an <b>air purge</b> .
<input type="checkbox"/>	To perform a <b>test run</b> .
<input type="checkbox"/>	To perform an <b>actuator test run</b> .
<input type="checkbox"/>	<b>Underfloor screed dryout function</b> The underfloor screed dryout function is started (if necessary).

#### 6.2.1 To check the minimum flow rate

1	Check the hydraulic configuration to find out which space heating loops can be closed by mechanical, electronic, or other valves.	—
2	Close all space heating loops that can be closed.	—
3	Start the pump test run (see <a href="#">"6.2.4 To perform an actuator test run"</a> [p 25]).	—
4	Read out the flow rate <sup>(a)</sup> and modify the bypass valve setting to reach the minimum required flow rate + 2 l/min.	—

<sup>(a)</sup> During pump test run, the unit can operate below the minimum required flow rate.

Minimum required flow rate	
12 l/min	

#### 6.2.2 To perform an air purge



**Conditions:** Make sure all operation is disabled. Go to [C]: Operation and turn off Room, Space heating/cooling and Tank operation.

1	Set the user permission level to Installer. See <a href="#">"To change the user permission level"</a> [p 16].	—
2	Go to [A.3]: Commissioning > Air purge.	
3	Select OK to confirm.  <b>Result:</b> The air purge starts. It stops automatically when air purge cycle is finished.  To stop the air purge manually:	
1	Go to Stop air purge.	
2	Select OK to confirm.	

#### Air purging heat emitters or collectors

We recommend to purge air with the unit's air purge function (see above). However, if you purge air from the heat emitters or collectors, mind the following:





**WARNING**

**Air purging heat emitters or collectors.** Before you purge air from heat emitters or collectors, check if  or  is displayed on the home screen of the user interface.

- If not, you can purge air immediately.
- If yes, make sure that the room where you want to purge air is sufficiently ventilated. **Reason:** Refrigerant might leak into the water circuit, and subsequently into the room when you purge air from the heat emitters or collectors.

**6.2.3 To perform an operation test run**

**Conditions:** Make sure all operation is disabled. Go to [C]: Operation and turn off Room, Space heating/cooling and Tank operation.

1	Set the user permission level to Installer. See " <a href="#">To change the user permission level</a> " ▶ 16].	—
2	Go to [A.1]: Commissioning > Operation test run.	
3	Select a test from the list. <b>Example:</b> Heating.	
4	Select OK to confirm. <b>Result:</b> The test run starts. It stops automatically when ready (±30 min). To stop the test run manually:	
1	In the menu, go to Stop test run.	—
2	Select OK to confirm.	



**INFORMATION**

If the outdoor temperature is outside the range of operation, the unit may NOT operate or may NOT deliver the required capacity.

**To monitor leaving water and tank temperatures**

During test run, the correct operation of the unit can be checked by monitoring its leaving water temperature (heating/cooling mode) and tank temperature (domestic hot water mode).

To monitor the temperatures:





1	In the menu, go to Sensors.	
2	Select the temperature information.	

**6.2.4 To perform an actuator test run**

**Conditions:** Make sure all operation is disabled. Go to [C]: Operation and turn off Room, Space heating/cooling and Tank operation.

**Purpose**

Perform an actuator test run to confirm the operation of the different actuators. For example, when you select Pump, a test run of the pump will start.

1	Set the user permission level to Installer. See " <a href="#">To change the user permission level</a> " ▶ 16].	—
2	Go to [A.2]: Commissioning > Actuator test run.	
3	Select a test from the list. <b>Example:</b> Pump.	
4	Select OK to confirm. <b>Result:</b> The actuator test run starts. It stops automatically when ready (±30 min). To stop the test run manually:	
1	In the menu, go to Stop test run.	—
2	Select OK to confirm.	

**Possible actuator test runs**

- Backup heater 1 test
- Backup heater 2 test
- Pump test





**INFORMATION**

Make sure that all air is purged before executing the test run. Also avoid disturbances in the water circuit during the test run.

- Shut off valve test
- Diverter valve test (3-way valve for switching between space heating and tank heating)
- Bivalent signal test
- Alarm output test
- C/H signal test
- DHW pump test

**6.2.5 To perform an underfloor heating screed dryout**

**Conditions:** Make sure all operation is disabled. Go to [C]: Operation and turn off Room, Space heating/cooling and Tank operation.

1	Set the user permission level to Installer. See " <a href="#">To change the user permission level</a> " ▶ 16].	—
2	Go to [A.4]: Commissioning > UFH screed dryout.	
3	Set a dryout program: go to Program and use the UFH screed dryout programming screen.	
4	Select OK to confirm. <b>Result:</b> The underfloor heating screed dryout starts. It stops automatically when done. To stop the test run manually:	
1	Go to Stop UFH screed dryout.	—
2	Select OK to confirm.	

**NOTICE**

To perform an underfloor heating screed dryout, room frost protection needs to be disabled ([2-06]=0). By default, it is enabled ([2-06]=1). However, due to the "installer-on-site" mode (see "Commissioning"), room frost protection will be automatically disabled for 36 hours after the first power-on.

If the screed dryout still needs to be performed after the first 36 hours of power-on, manually disable room frost protection by setting [2-06] to "0", and KEEP it disabled until the screed dryout has finished. Ignoring this notice will result in cracking of the screed.

**NOTICE**

For the underfloor heating screed dryout to be able to start, make sure the following settings are met:

- [4-00]=1
- [C-02]=0
- [D-01]=0
- [4-08]=0
- [4-01]≠1

**7 Hand-over to the user**

Once the test run is finished and the unit operates properly, please make sure the following is clear for the user:

## 7 Hand-over to the user

---

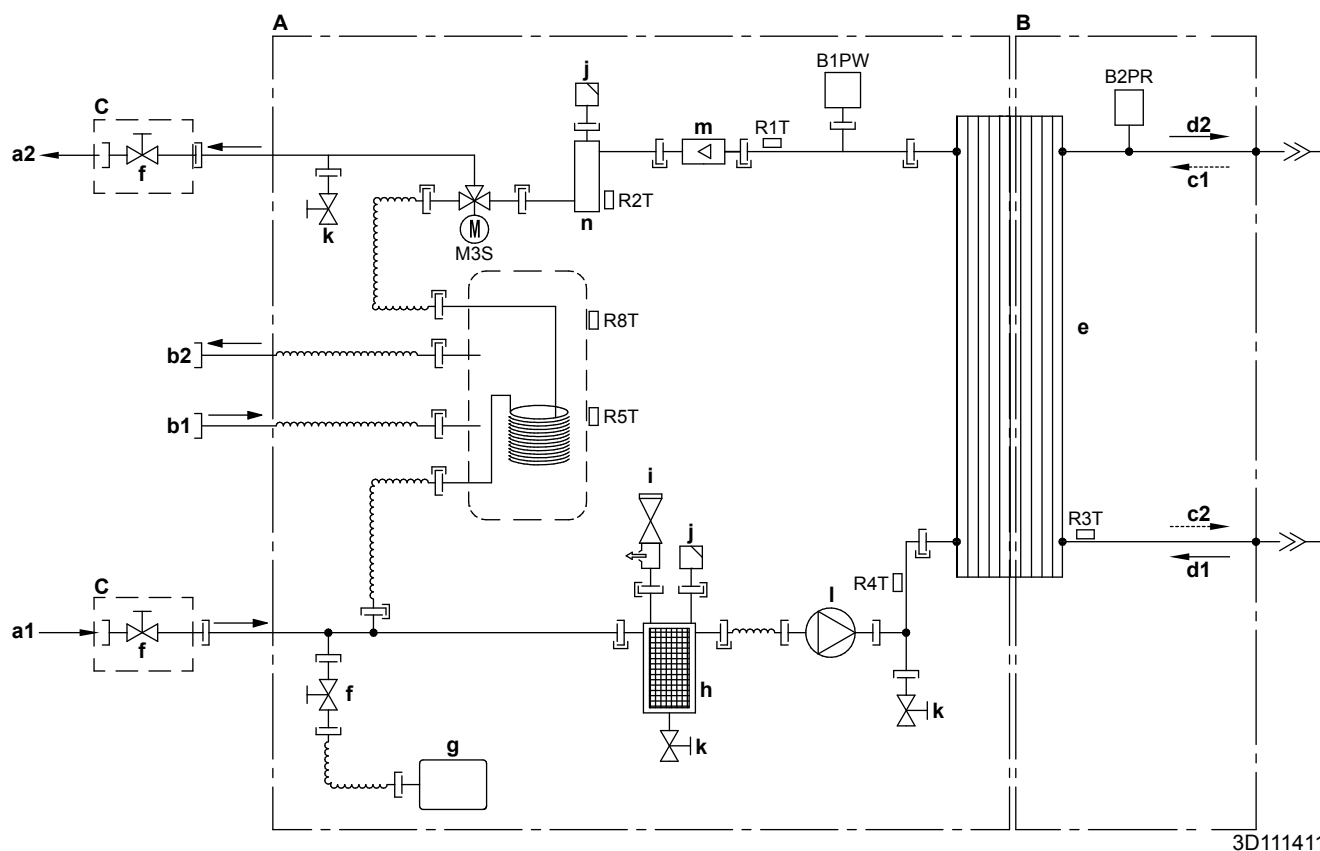
- Fill in the installer setting table (in the operation manual) with the actual settings.
- Make sure that the user has the printed documentation and ask him/her to keep it for future reference. Inform the user that he can find the complete documentation at the URL mentioned earlier in this manual.
- Explain the user how to properly operate the system and what to do in case of problems.
- Show the user what to do for the maintenance of the unit.
- Explain the user about energy saving tips as described in the operation manual.



## 8 Technical data

A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible). The **full set** of latest technical data is available on the Daikin Business Portal (authentication required).

### 8.1 Piping diagram: Indoor unit



- A** Water side  
**B** Refrigerant side  
**C** Field installed  
**a1** Space heating water IN  
**a2** Space heating water OUT  
**b1** Domestic hot water: cold water IN  
**b2** Domestic hot water: hot water OUT  
**c1** Gas refrigerant IN (heating mode; condenser)  
**c2** Liquid refrigerant OUT (heating mode; condenser)  
**d1** Liquid refrigerant IN (cooling mode; evaporator)  
**d2** Gas refrigerant OUT (cooling mode; evaporator)  
**e** Plate heat exchanger  
**f** Shut-off valve for service (if equipped)  
**g** Expansion vessel  
**h** Magnetic filter/dirt separator  
**i** Safety valve  
**j** Air purge  
**k** Drain valve  
**l** Pump  
**m** Flow sensor  
**n** Backup heater

- B1PW** Space heating water pressure sensor  
**B2PR** Refrigerant pressure sensor  
**M3S** 3-way valve (space heating/domestic hot water)  
**R1T** Thermistor (heat exchanger – water OUT)  
**R2T** Thermistor (backup heater – water OUT)  
**R3T** Thermistor (liquid refrigerant)  
**R4T** Thermistor (heat exchanger – water IN)  
**R5T, R8T** Thermistor (tank)  
 —|— Screw connection  
 >>> Flare connection  
 —|— Quick coupling  
 —●— Brazed connection

3D111411

## 8 Technical data

### 8.2 Wiring diagram: Indoor unit

See the internal wiring diagram supplied with the unit (on the inside of the indoor unit switch box cover). The abbreviations used are listed below.

#### Notes to go through before starting the unit

English	Translation
Notes to go through before starting the unit	Notes to go through before starting the unit
X1M	Main terminal
X2M	Field wiring terminal for AC
X5M	Field wiring terminal for DC
X6M	Backup heater power supply terminal
-----	Earth wiring
-----	Field supply
①	Several wiring possibilities
	Option
	Not mounted in switch box
	Wiring depending on model
	PCB
Note 1: Connection point of the power supply for the BUH/BSH should be foreseen outside the unit.	Note 1: Connection point of the power supply for the backup heater/booster heater should be foreseen outside the unit.
<b>Backup heater power supply</b>	<b>Backup heater power supply</b>
<input type="checkbox"/> 1N~, 230 V	<input type="checkbox"/> 1N~, 230 V
<input type="checkbox"/> 3~, 230 V	<input type="checkbox"/> 3~, 230 V
<input type="checkbox"/> 3N~, 400 V	<input type="checkbox"/> 3N~, 400 V
<b>User installed options</b>	<b>User installed options</b>
<input type="checkbox"/> LAN adapter	<input type="checkbox"/> LAN adapter
<input type="checkbox"/> Remote user interface	<input type="checkbox"/> User interface used as room thermostat
<input type="checkbox"/> Ext. indoor thermistor	<input type="checkbox"/> External indoor thermistor
<input type="checkbox"/> Ext outdoor thermistor	<input type="checkbox"/> External outdoor thermistor
<input type="checkbox"/> Digital I/O PCB	<input type="checkbox"/> Digital I/O PCB
<input type="checkbox"/> Demand PCB	<input type="checkbox"/> Demand PCB
<b>Main LWT</b>	<b>Main leaving water temperature</b>
<input type="checkbox"/> On/OFF thermostat (wired)	<input type="checkbox"/> On/OFF thermostat (wired)
<input type="checkbox"/> On/OFF thermostat (wireless)	<input type="checkbox"/> On/OFF thermostat (wireless)
<input type="checkbox"/> Ext. thermistor	<input type="checkbox"/> External thermistor
<input type="checkbox"/> Heat pump convector	<input type="checkbox"/> Heat pump convector
<b>Add LWT</b>	<b>Additional leaving water temperature</b>
<input type="checkbox"/> On/OFF thermostat (wired)	<input type="checkbox"/> On/OFF thermostat (wired)
<input type="checkbox"/> On/OFF thermostat (wireless)	<input type="checkbox"/> On/OFF thermostat (wireless)
<input type="checkbox"/> Ext. thermistor	<input type="checkbox"/> External thermistor
<input type="checkbox"/> Heat pump convector	<input type="checkbox"/> Heat pump convector

#### Position in switch box

English	Translation
Position in switch box	Position in switch box

#### Legend

A1P	Main PCB
A2P	* On/OFF thermostat (PC=power circuit)
A3P	* Heat pump convector
A4P	* Digital I/O PCB
A8P	* Demand PCB

A9P	Status indicator
A10P	MMI (= user interface connected to the indoor unit) – Power supply unit PCB
A11P	MMI (= user interface connected to the indoor unit) – Main PCB
A12P	MMI display PCB
A13P	* LAN adapter
A14P	* User interface used as room thermostat – PCB
A15P	* Receiver PCB (wireless On/OFF thermostat)
B1L	Flow sensor
B1PR	Refrigerant pressure sensor
B1PW	Water pressure sensor
CN* (A4P)	* Connector
DS1(A8P)	* DIP switch
E1H	Backup heater element (1 kW)
E2H	Backup heater element (2 kW)
E3H	Backup heater element (3 kW)
E*P (A9P)	Indication LED
F1B	# Overcurrent fuse backup heater
F1T	Thermal fuse backup heater
F1U, F2U (A4P)	* Fuse 5 A 250 V for digital I/O PCB
FU1 (A1P)	Fuse T 5 A 250 V for PCB
FU2 (A10P)	Fuse T 1.6 A 250 V for PCB
K1M, K2M	Contact backup heater
K5M	Safety contact backup heater
K*R (A1P-A4P)	Relay on PCB
M1P	Main supply pump
M2P	# Domestic hot water pump
M2S	# 2-way valve for cooling mode
M3S	3-way valve for floorheating/domestic hot water
P1M	MMI display
PC (A15P)	* Power circuit
PHC1 (A4P)	* Optocoupler input circuit
Q1L	Thermal protector backup heater
Q4L	# Safety thermostat
Q*DI	# Earth leakage circuit breaker
R1H (A2P)	* Humidity sensor
R1T (A1P)	Outlet water heat exchanger thermistor
R1T (A2P)	* Ambient sensor On/OFF thermostat
R1T (A14P)	* Ambient sensor user interface
R2T (A1P)	Outlet backup heater thermistor
R2T (A2P)	* External sensor (floor or ambient)
R3T	Refrigerant liquid side thermistor
R4T	Inlet water thermistor
R5T, R8T	Domestic hot water thermistor
R6T	* External indoor or outdoor ambient thermistor
S1S	# Preferential kWh rate power supply contact
S2S	# Electrical meter pulse input 1
S3S	# Electrical meter pulse input 2

S6S~S9S	*	Digital power limitation inputs
SS1 (A4P)	*	Selector switch
SW1+SW2 (A12P)		Turn buttons
SW3~SW5 (A12P)		Push buttons
TR1		Power supply transformer
X6M	#	Backup heater power supply terminal strip
X*, X*A, X*Y, Y*		Connector
X*M		Terminal strip

\* Optional

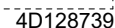
# Field supply

## Translation of text on wiring diagram

English	Translation
(1) Main power connection	(1) Main power connection
For preferential kWh rate power supply	For preferential kWh rate power supply
Indoor unit supplied from outdoor	Indoor unit supplied from outdoor
Normal kWh rate power supply	Normal kWh rate power supply
Only for normal power supply (standard)	Only for normal power supply (standard)
Only for preferential kWh rate power supply (outdoor)	Only for preferential kWh rate power supply (outdoor)
Outdoor unit	Outdoor unit
Preferential kWh rate power supply contact: 16 V DC detection (voltage supplied by PCB)	Preferential kWh rate power supply contact: 16 V DC detection (voltage supplied by PCB)
SWB	Switch box
Use normal kWh rate power supply for indoor unit	Use normal kWh rate power supply for indoor unit
(2) Backup heater power supply	(2) Backup heater power supply
Only for ***	Only for ***
(3) User interface	(3) User interface
Only for LAN adapter	Only for the LAN adapter
Only for remote user interface	Only for the user interface used as room thermostat
(5) Ext. thermistor	(5) External thermistor
SWB	Switch box
(6) Field supplied options	(6) Field supplied options
12 V DC pulse detection (voltage supplied by PCB)	12 V DC pulse detection (voltage supplied by PCB)
230 V AC supplied by PCB	230 V AC supplied by PCB

English	Translation
Continuous	Continuous current
DHW pump output	Domestic hot water pump output
DHW pump	Domestic hot water pump
Electrical meters	Electrical meters
For safety thermostat	For safety thermostat
Inrush	Inrush current
Max. load	Maximum load
Normally closed	Normally closed
Normally open	Normally open
Safety thermostat contact: 16 V DC detection (voltage supplied by PCB)	Safety thermostat contact: 16 V DC detection (voltage supplied by PCB)
Shut-off valve	Shut-off valve
SWB	Switch box
(7) Option PCBs	(7) Option PCBs
Alarm output	Alarm output
Changeover to ext. heat source	Changeover to external heat source
Max. load	Maximum load
Min. load	Minimum load
Only for demand PCB option	Only for demand PCB option
Only for digital I/O PCB option	Only for digital I/O PCB option
Options: ext. heat source output, alarm output	Options: external heat source output, alarm output
Options: On/OFF output	Options: On/OFF output
Power limitation digital inputs: 12 V DC / 12 mA detection (voltage supplied by PCB)	Power limitation digital inputs: 12 V DC / 12 mA detection (voltage supplied by PCB)
Space C/H On/OFF output	Space cooling/heating On/OFF output
SWB	Switch box
(8) External On/OFF thermostats and heat pump convector	(8) External On/OFF thermostats and heat pump convector
Additional LWT zone	Additional leaving water temperature zone
Main LWT zone	Main leaving water temperature zone
Only for external sensor (floor/ambient)	Only for external sensor (floor or ambient)
Only for heat pump convector	Only for heat pump convector
Only for wired On/OFF thermostat	Only for wired On/OFF thermostat
Only for wireless On/OFF thermostat	Only for wireless On/OFF thermostat

For more details, please check the unit wiring.



### 8.3 Table 1 – Maximum refrigerant charge allowed in a room: indoor unit

$A_{\text{room}}$ (m <sup>2</sup> )	Maximum refrigerant charge in a room (m <sub>max</sub> ) (kg)
	H=600 mm
1	0.138
2	0.276
3	0.414
4	0.553
5	0.691
6	0.829
7	0.907
8	0.970
9	1.028
10	1.084
11	1.137
12	1.187
13	1.236
14	1.283
15	1.328
16	1.371
17	1.413
18	1.454
19	1.494
20	1.533
21	1.571
22	1.608
23	1.644
24	1.679
25	1.714
26	1.748
27	1.781
28	1.814
29	1.846
30	1.877
31	1.909



#### INFORMATION

- For floorstanding models, the value of "Installation height (H)" is considered 600 mm to comply to IEC 60335-2-40:2013 A1 2016 Clause GG2.
- For intermediate  $A_{\text{room}}$  values (i.e. when  $A_{\text{room}}$  is between two values from the table), consider the value that corresponds to the lower  $A_{\text{room}}$  value from the table. If  $A_{\text{room}}=12.5$  m<sup>2</sup>, consider the value that corresponds to " $A_{\text{room}}=12$  m<sup>2</sup>".

### 8.4 Table 2 – Minimum floor area: indoor unit

$m_c$ (kg)	Minimum floor area (m <sup>2</sup> )
	H=600 mm
1.84	28.81
1.86	29.44
1.88	30.08
1.90	30.72



#### INFORMATION

- For floorstanding models, the value of "Installation height (H)" is considered 600 mm to comply to IEC 60335-2-40:2013 A1 2016 Clause GG2.
- For intermediate  $m_c$  values (i.e. when  $m_c$  is between two values from the table), consider the value that corresponds to the higher  $m_c$  value from the table. If  $m_c=1.87$  kg, consider the value that corresponds to " $m_c=1.88$  kg".
- Systems with a total refrigerant charge ( $m_c$ ) <1.84 kg (i.e. if the piping length is <27 m) are NOT subjected to any requirements to the installation room.
- Charges >1.9 kg are NOT allowed in the unit.

### 8.5 Table 3 – Minimum venting opening area for natural ventilation: indoor unit

$m_c$	$m_{\text{max}}$	$dm=m_c-m_{\text{max}}$ (kg)	Minimum venting opening area (cm <sup>2</sup> )
			H=600 mm
1.9	0.1	1.80	729
1.9	0.3	1.60	648
1.9	0.5	1.40	567
1.9	0.7	1.20	486
1.9	0.9	1.00	418
1.9	1.1	0.80	370
1.9	1.3	0.60	301
1.9	1.5	0.40	216
1.9	1.7	0.20	115



#### INFORMATION

- For floorstanding models, the value of "Installation height (H)" is considered 600 mm to comply to IEC 60335-2-40:2013 A1 2016 Clause GG2.
- For intermediate  $dm$  values (i.e. when  $dm$  is between two  $dm$  values from the table), consider the value that corresponds to the higher  $dm$  value from the table. If  $dm=1.55$  kg, consider the value that corresponds to " $dm=1.6$  kg".

### 8.6 Technical specifications: Domestic hot water tank

#### 8.6.1 Test results in accordance with EN12897 (2016)



#### INFORMATION

This unit has been tested and approved according to BS EN12897:2016

Description	Hot water capacity	Reheat time
EHVH04SU18DA6V7	145 l	15 min 26 sec
EHVH04SU23DA6V7	195 l	20 min 06 sec
EHVH08SU18DA6V7	145 l	15 min 26 sec
EHVH08SU23DA6V7	195 l	20 min 06 sec

## 8 Technical data

### 8.6.2 Warning label

#### WARNING TO USER

- Do not remove or adjust any component part of this installation. Contact the installer.
- Should the system develop a fault, switch the system off and contact the installer.

#### WARNING TO INSTALLER

- This installation is subject to building regulation approval, notify Local Authority of intention to install.
- Use only manufacturer's recommended spare parts. Contact your local Daikin dealer.
- Installed by  
name .....  
address .....  
tel. No. ....  
completion date .....

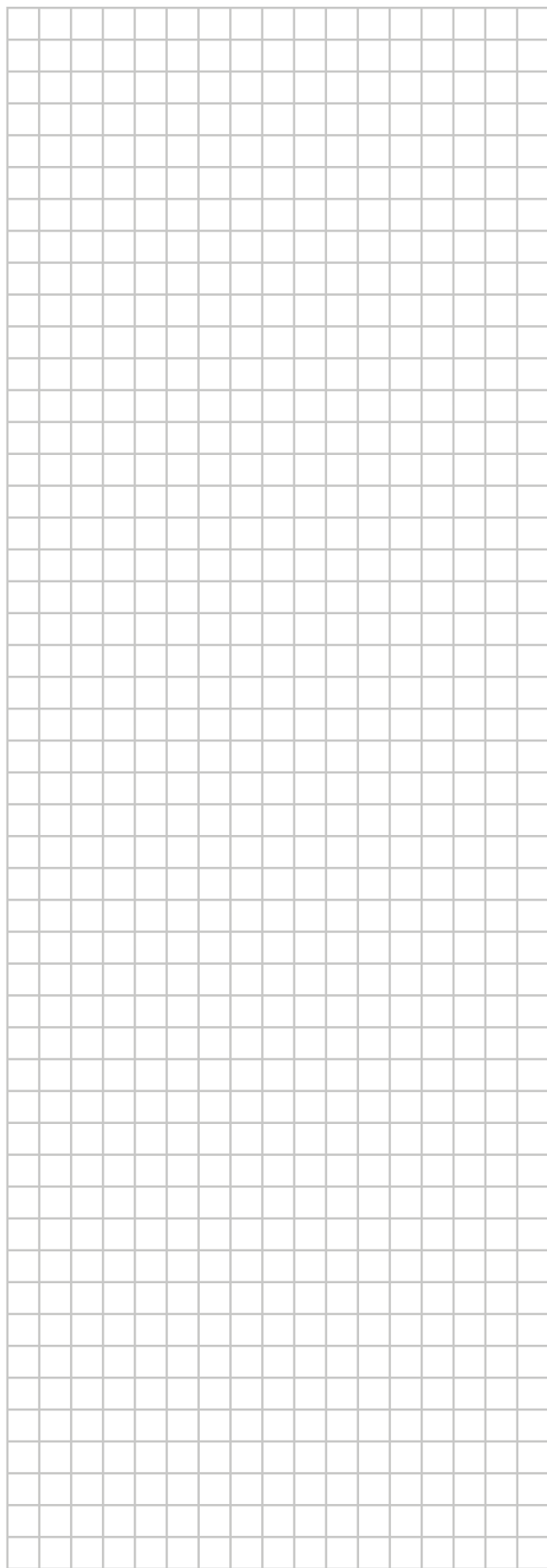
#### TECHNICAL SPECIFICATIONS EN12897: 2016

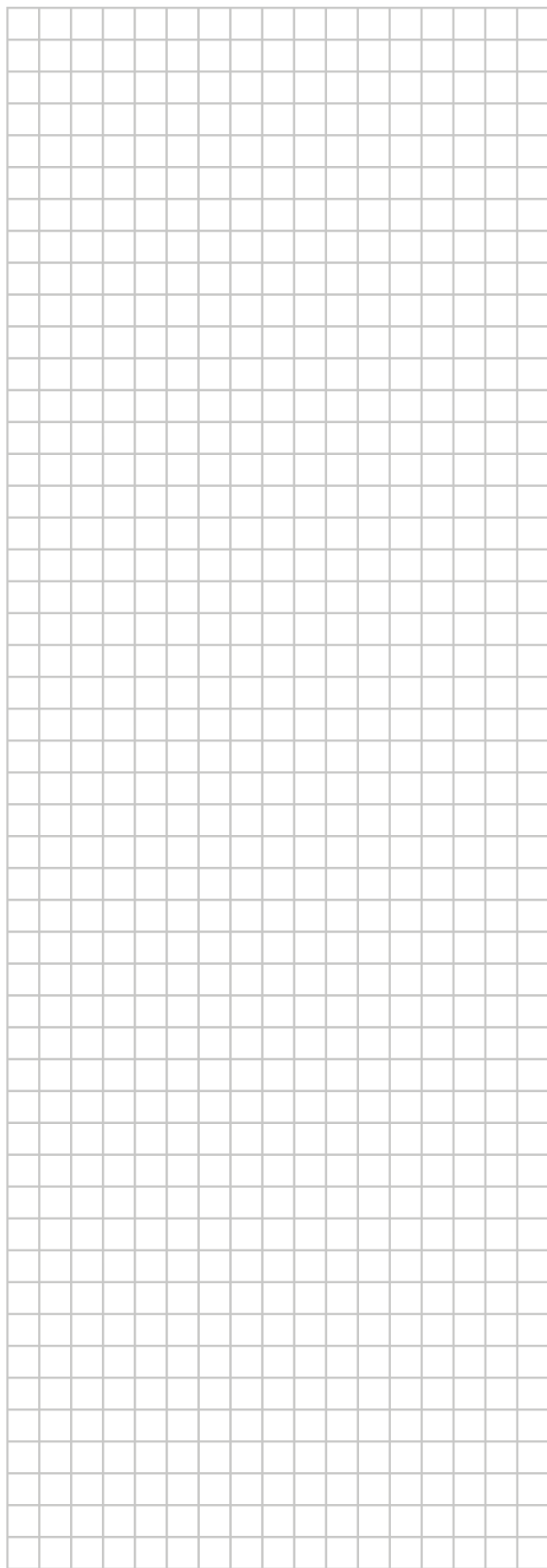
- Maximum water supply pressure to pressure reducing valve: **16 bar**
- Operating pressure/set pressure of pressure reducing valve: **3.5 bar**
- Maximum primary working pressure (heating): **2.5 bar**
- Maximum flow temperature: **65 °C**
- Expansion vessel pre-charge pressure: **3.5 bar**
- Expansion valve setting: **8 bar**
- Temperature and pressure relief valve replacement part No.: **302810P**
- Operating pressure of temperature and pressure relief valve: **10 bar**
- Operating temperature of temperature and pressure relief valve: **95 °C**
- Operating temperature of thermal cut-out (2 pieces): **89 °C**
- Primary heating power input:  
EHVH04SU18DA6V7 **3.7 kW**  
EHVH04SU23DA6V7 **4.2 kW**  
EHVH08SU18DA6V7 **3.7 kW**  
EHVH08SU23DA6V7 **4.2 kW**
- Primary flow rate to reach primary heating power input: **15 l/min**
- Standing heat loss:  
EHVH04SU18DA6V7 **1.35 kWh/24h**  
EHVH04SU23DA6V7 **1.76 kWh/24h**  
EHVH08SU18DA6V7 **1.35 kWh/24h**  
EHVH08SU23DA6V7 **1.76 kWh/24h**
- Model storage capacity mass of unit when full  
EHVH04SU18DA6V7 **180 l 299 kg**  
EHVH04SU23DA6V7 **220 l 348 kg**  
EHVH08SU18DA6V7 **180 l 299 kg**  
EHVH08SU23DA6V7 **220 l 348 kg**
- Maximum design pressure: **10 bar**
- Rated volume heat exchanger: **9.1 l**

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