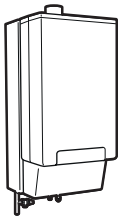
Installation manual

Daikin Altherma hybrid heat pump – heat pump module



EHYHBH05AF
EHYHBH08AF
EHYHBX08AF

CE - DECLARATION-OF-CONFORMITY
CE - KONFORMITÄTSERKLÄRUNG
CE - DECLARATION-DE-CONFORMITE
CE - CONFORMITEITSVERKLARING

CE - DECLARACION-DE-CONFORMIDAD
CE - DICHIARAZIONE-DI-CONFORMITA
CE - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ

CE - DECLARAÇÃO-DE-CONFORMIDADE
CE - ЗАЯВЛЕНИЕ-О-СООТВЕТСТВИИ
CE - OVERENSSTEMMELSESERKLÆRING
CE - FÖRSÄKRAN-OM-ÖVERENSTÄMMELSE

CE - ERKLÆRING OM-SAMSVAR
CE - ILMOITUS-YHDENMUKAISUUDESTA
CE - PROHLÁŠENÍ-O-SHODĚ

CE - IZJAVA-O-USKLAĐENOSTI
CE - MEGFELELŐSÉGI-NYILATKOZAT
CE - DEKLARACJA-ZGODNOŚCI
CE - DECLARAŢIE-DE-CONFORMITATE

CE - IZJAVA O SKLADNOSTI
CE - VASTAVUSDEKLARATSIOON
CE - ДЕКЛАРАЦИЯ-ЗА-СЪОТВЕТСТВИЕ

CE - ATITIKTIES-DEKLARACIJA
CE - ATBILSTĪBAS-DEKLARĀCIJA
CE - VYHLÁSENIE-ZHODY
CE - UYGUNLUK-BEYANI

Daikin Europe N.V.

01 declares under its sole responsibility that the equipment to which this declaration relates:
02 erklärt auf seine alleinige Verantwortung daß die Ausrüstung für die diese Erklärung bestimmt ist:
03 déclare sous sa seule responsabilité que l'équipement visé par la présente déclaration:
04 verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de apparatuur waarop deze verklaring betrekking heeft:
05 declara bajo su única responsabilidad que el equipo al que hace referencia la declaración:
06 dichiara sotto la propria responsabilità che gli apparecchi a cui è riferita questa dichiarazione:
07 δηλώνει με αποκλειστική της ευθύνη ότι ο εξοπλισμός στον οποίο αναφέρεται η παρούσα δήλωση:
08 declara sob sua exclusiva responsabilidade que os equipamentos a que esta declaração se refere:
09 заявляет, исключительно под свою ответственность, что оборудование, к которому относится настоящее заявление:
10 erklærer under eneansvarlig, at udstyret, som er omfattet af denne erklæring:
11 deklarerar i egenskap av huvudansvarig, att utrustningen som berörs av denna deklaration innebär att:
12 erklærer et fullstendig ansvar for at det utstyr som berøres av denne deklarasjon innebærer at:
13 ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoittamat laitteet
14 prohlašuje ve své plné odpovědnosti, že zařízení, k němuž se toto prohlášení vztahuje:
15 izjavljuje pod isključivo vlastitom odgovornošću da oprema na koju se ova izjava odnosi:
16 teljes felelőssége tudatában kijelenti, hogy a berendezések, melyekre e nyilatkozat vonatkozik:
17 deklaruje na własną i wyłączną odpowiedzialność, że urządzenia, których ta deklaracja dotyczy:
18 declară pe proprie răspundere că echipamentele la care se referă această declaraţie:
19 z vso odgovornostjo izjavlja, da je oprema naprav, na katero se izjava nanaša:
20 kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluv varustus:
21 декларира на своя отговорност, че оборудването, за което се отнася тази декларация:
22 visiška savo atsakomybe skelbia, kad įranga, kuriai taikoma ši deklaracija:
23 ar pilnu atbildību apliecina, ka tāllk aprakstītās iekārtas, uz kurām attiecas šī deklarācija:
24 vyhlasuje na vlastnú zodpovednosť, že zariadenie, na ktoré sa vzťahuje toto vyhlásenie:
25 tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu donanımının aşağıdaki gibi olduğunu beyan eder:

EHYHBH05AFV3*, EHYHBH08AFV3*, EHYHBX08AFV3*,

* = , , 1, 2, 3, ..., 9

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 der/den folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung, daß sie gemäß unseren Anweisungen eingesetzt werden:
03 sont conformes à la/aux norme(s) 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 al(i) seguente(i) standard(s) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni:
07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται σύμφωνα με τις οδηγίες μας:
08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de acordo com as nossas instruções:
09 соответствуют следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям:
10 overholder følgende standard(er) eller andet/andre retningsgivende dokument(er), forudsat at disse anvendes i henhold til vore instrukser:
11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under förutsättning att användning sker i överensstämmelse med våra instruktioner:
12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutsetning av at disse brukes i henhold til våre instrukser:
13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme mukaisesti:
14 za předpokladu, že jsou využívány v souladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům:
15 u skladu sa slijedećim standardom(ima) ili drugim normativnim dokumentom(ima), uz uvjet da se oni koriste u skladu s našim uputama:
16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják:
17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi instrukcjami:
18 sunt în conformitate cu următorul (următoarele) standard(e) sau alt(e) document(e) normativ(e), cu condiţia ca acestea să fie utilizate în conformitate cu instrucţiunile noastre:
19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili:
20 on vastavuses järgmis(t)e standardi(te)ga või teiste normatiivsete dokumentidega, kui neid kasutatakse vastavalt meie juhenditele:
21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите инструкции:
22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:
23 tad, ja lietoti atbilstoši ražotāja norādījumiem, atbilst sekojošiem standartiem un citiem normatīviem dokumentiem:
24 sú v zhode s nasledovnou(ými) normou(ami) alebo iným(i) normatívnym(i) dokumentom(ami), za predpokladu, že sa používajú v súlade s našim návodom:
25 ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve norm belirten belgelerle uyumludur:

EN60335-2-40,

01 following the provisions of:
02 gemäß den Vorschriften der:
03 conformément aux stipulations des:
04 overeenkomstig de bepalingen van:
05 siguiendo las disposiciones de:
06 secondo le prescrizioni per:
07 με τήρηση των διατάξεων των:
08 de acordo com o previsto em:
09 в соответствии с положениями:
10 under iagttagelse af bestemmelserne i:
11 enligt villkoren i:
12 gitt i henhold til bestemmelsene i:
13 noudattaen määräyksiä:
14 za dodržení ustanovení předpisu:
15 prema odredbama:
16 követi a(z):
17 zgodnie z postanowieniami Dyrektyw:
18 în urma prevederilor:
19 ob upoštevanju določb:
20 vastavalt nõuetele:
21 следвайки клаузите на:
22 laikantis nuostatų, pateikiamų:
23 ievērojot prasības, kas noteiktas:
24 održiavajúc ustanovenia:
25 bunun koşullarına uygun olarak:

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

01 Directives, as amended.
02 Direktiven, gemäß Änderung.
03 Directives, telles que modifiées.
04 Richtlijnen, zoals geamendeerd.
05 Directivas, según lo enmendado.
06 Direttive, come da modifica.
07 Οδηγιών, όπως έχουν τροποποιηθεί.
08 Directivas, conforme alteração em.
09 Директив со всеми поправками.
10 Direktiver, med senere ændringer.
11 Direktiv, med företagna ändringar.
12 Direktiver, med foretatte endringer.
13 Direktiivejä, sellaisina kuin ne ovat muutettuina.
14 v platném znění.
15 Smjernice, kako je izmijenjeno.
16 irányelv(ek) és módosításaik rendelkezéseit.
17 z późniejszymi poprawkami.
18 Directivelor, cu amendamentele respective.
19 Direktive z vsemi spremembami.
20 Direktiivid koos muudatustega.
21 Директиви, с техните изменения.
22 Direktyvose su papildymais.
23 Direktīvās un to papildinājumos.
24 Smernice, v platnom znení.
25 Değiştirilmiş halleriyle Yönetmelikler.

01 Note* as set out in <A> and judged positively by <B> according to the **Certificate <C>**.
02 Hinweis* wie in <A> aufgeführt und von <B> positiv beurteilt gemäß **Zertifikat <C>**.
03 Remarque* tel que défini dans <A> et évalué positivement par <B> conformément au **Certificat <C>**.
04 Bemerk* zoals vermeld in <A> en positief beoordeeld door <B> overeenkomstig **Certificaat <C>**.
05 Nota* como se establece en <A> y es valorado positivamente por <B> de acuerdo con el **Certificado <C>**.
06 Nota* delineato nel <A> e giudicato positivamente da <B> secondo il **Certificato <C>**.
07 Σημείωση* όπως καθορίζεται στο <A> και κρίνεται θετικά από το <B> σύμφωνα με το **Πιστοποιητικό <C>**.
08 Nota* tal como estabelecido em <A> e com o parecer positivo de <B> de acordo com o **Certificado <C>**.
09 Примечание* как указано в <A> и в соответствии с положительным решением <B> согласно **Свидетельству <C>**.
10 Bemærk* som anført i <A> og positivt vurderet af <B> i henhold til **Certifikat <C>**.
11 Information* enligt <A> och godkänts av <B> enligt **Certifikatet <C>**.
12 Merk* som det fremkommer i <A> og gjennom positiv bedømmelse av <B> ifølge **Sertifikat <C>**.
13 Huom* jotka on esitetty asiakirjassa <A> ja jotka <B> on hyväksynyt **Sertifikaatin <C>** mukaisesti.
14 Poznámka* jak bylo uvedeno v <A> a pozitivně zjištěno <B> v souladu s **osvědčením <C>**.
15 Napomena* kako je izloženo u <A> i pozitivno ocijenjeno od strane <B> prema **Certifikatu <C>**.
16 Megjegyzés* a(z) <A> alapján, a(z) <B> igazolta a megfelelést, a(z) **<C> tanúsítvány** szerint.
17 Uwaga* zgodnie z dokumentacją <A>, pozytywną opinią <B> i **Świadectwem <C>**.
18 Notă* aşa cum este stabilit în <A> şi apreciat pozitiv de <B> în conformitate cu **Certificatul <C>**.
19 Opomba* kot je določeno v <A> in odobreno s strani <B> v skladu s **certifikatom <C>**.
20 Märkus* nagu on näidatud dokumendis <A> ja heaks kiidetud <B> järgi vastavalt **sertifikaadile <C>**.
21 Забележка* както е изложено в <A> и оценено положително от <B> съгласно **Сертификата <C>**.
22 Pastaba* kaip nustatyta <A> ir kaip teigiamai nuspręsta <B> pagal **Sertifikatą <C>**.
23 Piezīmes* kā norādīts <A> un atbilstoši <B> pozitīvajam vērtējumam saskaņā ar **sertifikātu <C>**.
24 Poznámka* ako bolo uvedené v <A> a pozitívne zistené <B> v súlade s **osvedčením <C>**.
25 Not* <A>'da belirtildiği gibi ve <B> tarafından olumlu olarak değerlendirildiği gibi. <C> **Sertifikasına** göre

<A>	DAIKIN.TCF.025J07/10-2020
<B>	DEKRA (NB0344)
<C>	2082543.0551-QUA/EMC

3P353176-5G

Hiromitsu Iwasaki
Director
Ostend, 1st of February 2021

DAIKIN EUROPE N.V.
Zandvoordestraat 300, B-8400 Oostende, Belgium

Table of contents

1 About the documentation

1.1 About this document

Target audience

Authorised installers

Documentation set

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

- **General safety precautions:**
  - Safety instructions that you must read before installing
  - Format: Paper (in the box of the indoor unit)
- **Heat pump module installation manual:**
  - Installation instructions
  - Format: Paper (in the box of the indoor unit)
- **Gas boiler module installation manual:**
  - Installation and operation instructions
  - Format: Paper (in the box of the gas boiler unit)
- **Outdoor unit installation manual:**
  - Installation instructions
  - Format: Paper (in the box of the outdoor unit)
- **Installer reference guide:**
  - Preparation of the installation, reference data,…
  - Format: Digital files on http://www.daikineurope.com/support-and-manuals/product-information/
- **Addendum book for optional equipment:**
  - Additional info about how to install optional equipment
  - Format: Paper (in the box of the indoor unit) + Digital files on http://www.daikineurope.com/support-and-manuals/product-information/

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

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

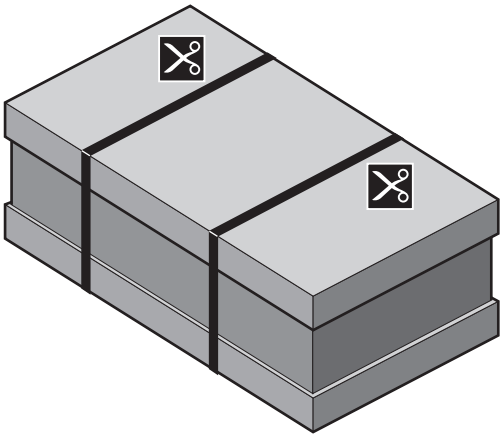
Technical engineering data

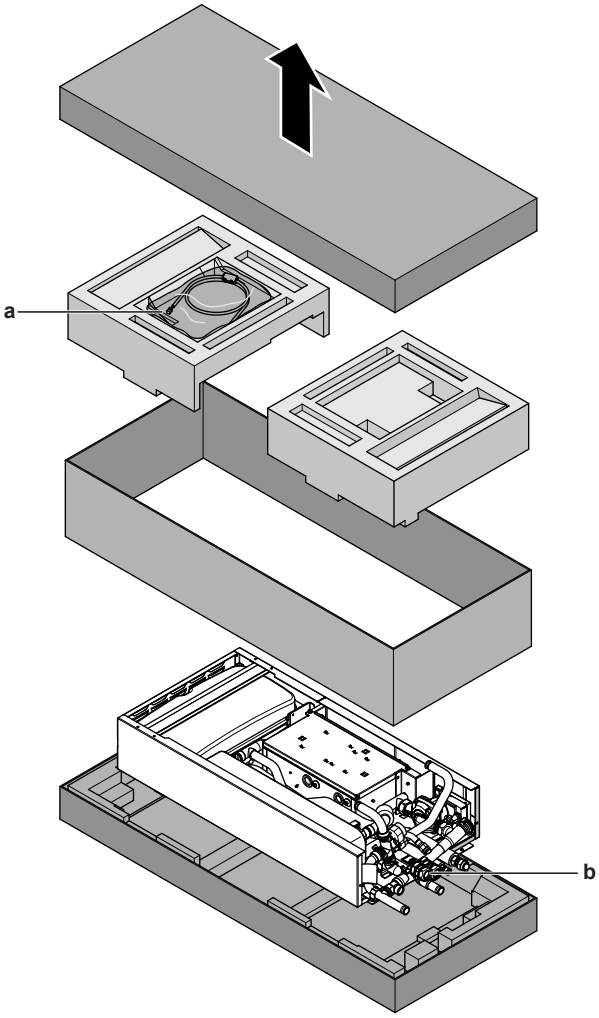
- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of latest technical data is available on the Daikin Business Portal (authentication required).

2 About the box

2.1 Indoor unit

2.1.1 To unpack the indoor unit





a Installation manual, operation manual, addendum book for optional equipment, quick installation guide, general safety precautions, boiler communication cable, reducer accessory set.
b Connection pieces for the gas boiler

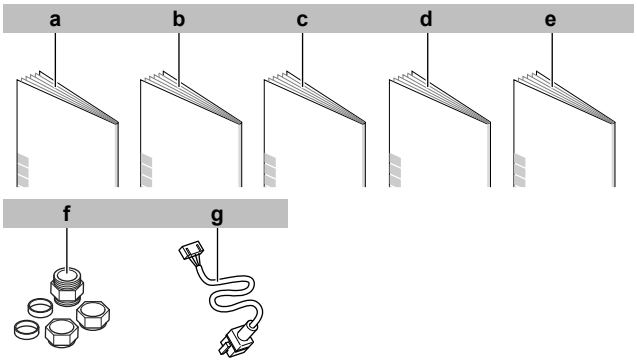
INFORMATION

Do NOT throw away the upper cardboard cover. On the outside of the cardboard cover, the installation pattern is printed.

2.1.2 To remove the accessories from the indoor unit

1 Remove the accessories as described in "2.1.1 To unpack the indoor unit" [▸ 4].

The installation manual, operation manual, addendum book for optional equipment, general safety precautions, quick installation guide, and boiler communication cable are located in the upper part of the box. The connection pieces for the gas boiler are attached to the water piping.



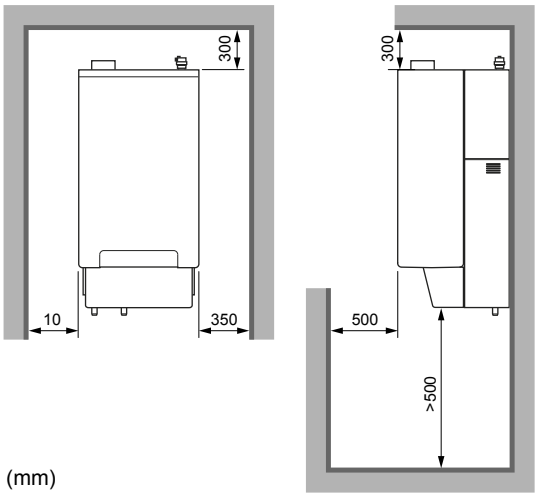
a General safety precautions
b Addendum book for optional equipment
c Indoor unit installation manual
d Operation manual
e Quick installation guide
f Connection pieces for gas boiler
g Boiler communication cable

3 Preparation

3.1 Preparing the installation site

3.1.1 Installation site requirements of the indoor unit

- Mind the following spacing installation guidelines:



(mm)

- The indoor unit is designed for indoor installation only and for ambient temperatures ranging 5~35°C in cooling mode and 5~30°C in heating mode.

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.

3.2.1 To check the water volume and flow rate

Minimum water volume

Check that the total water volume in the installation is minimum 13.5 litre, the internal water volume of the indoor unit NOT included.

INFORMATION

In critical processes, or in rooms with a high heat load, extra water might be required.

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 (required during defrost/backup heater operation) in the installation is guaranteed in all conditions.

Minimum required flow rate	
05 models	7 l/min
08 models	8 l/min

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.

See the recommended procedure as described in "6.2 Checklist during commissioning" [▶ 21].

3.3 Preparing electrical wiring

3.3.1 Overview of electrical connections for external and internal actuators

Item	Description	Wires	Maximum running current
Outdoor unit and indoor unit power supply			
1	Power supply for outdoor unit	2+GND	(a)
2	Power supply and interconnection cable to indoor unit	3+GND	(g)
3	Power supply gas boiler	2+GND	(c)
4	Preferential kWh rate power supply (voltage free contact)	2	(e)
5	Normal kWh rate power supply	2	6.3 A
User interface			
6	User interface	2	(f)
Optional equipment			
7	3-way valve	3	100 mA(b)
8	Domestic hot water tank thermistor	2	(d)
9	Power supply for drain pan heater	2	(b)
10	Room thermostat/heat pump convector	3 or 4	100 mA(b)
11	Outdoor ambient temperature sensor	2	(b)
12	Indoor ambient temperature sensor	2	(b)
Field supplied components			
13	Shut-off valve	2	100 mA(b)
14	Electricity meter	2	(b)
15	Domestic hot water pump	2	(b)
16	Alarm output	2	(b)
17	Changeover to external heat source control	2	(b)
18	Space cool/heat operation control	2	(b)
19	Power consumption digital inputs	2 (per input signal)	(b)
20	Gas meter	2	(b)
21	Safety thermostat	2	(e)

(a) Refer to name plate on outdoor unit.
(b) Minimum cable section 0.75 mm².
(c) Use the cable supplied with the boiler.
(d) The thermistor and connection wire (12 m) are delivered with the domestic hot water tank.
(e) Cable section 0.75 mm² till 1.25 mm²; maximum length: 50 m. Voltage-free contact shall ensure the minimum applicable load of 15 V DC, 10 mA.
(f) Cable section 0.75 mm² till 1.25 mm²; maximum length: 500 m. Applicable for both single user interface and dual user interface connection.
(g) Cable section 1.5 mm²; maximum length: 50 m.

NOTICE

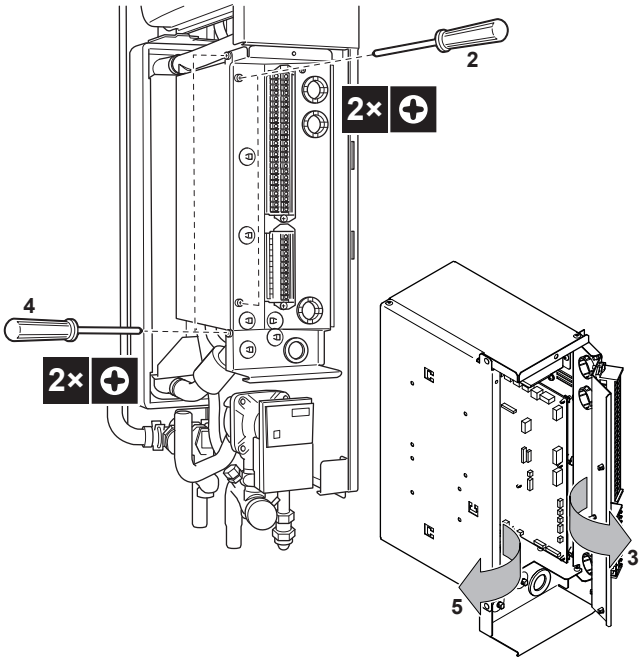
More technical specifications of the different connections are indicated on the inside of the indoor unit.

4 Installation

4.1 Opening the units

4.1.1 To open the switch box cover of the indoor unit

1 Remove the side panel at the right side of the indoor unit. The side panel is fixed at the bottom with 1 screw.
2 Remove the upper and lower screw on the side panel of the switch box.
3 The right panel of the switch box will open.
4 Remove the upper and lower screw on the front panel of the switch box.
5 The front panel of the switch box will open.

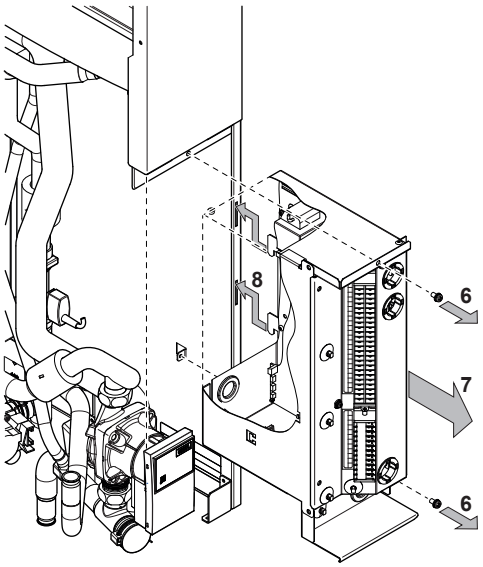


When the boiler is installed and access to the switch box is required, please follow the steps below.

6 Remove the upper and lower screw on the side panel of the switch box.

7 Remove the switch box from the unit.

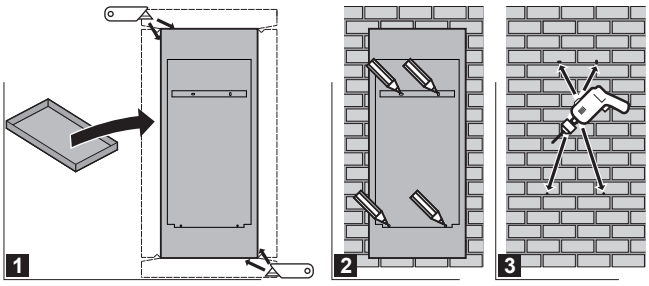
8 Hook the switch box to the side of the unit with the hooks foreseen on the switch box.



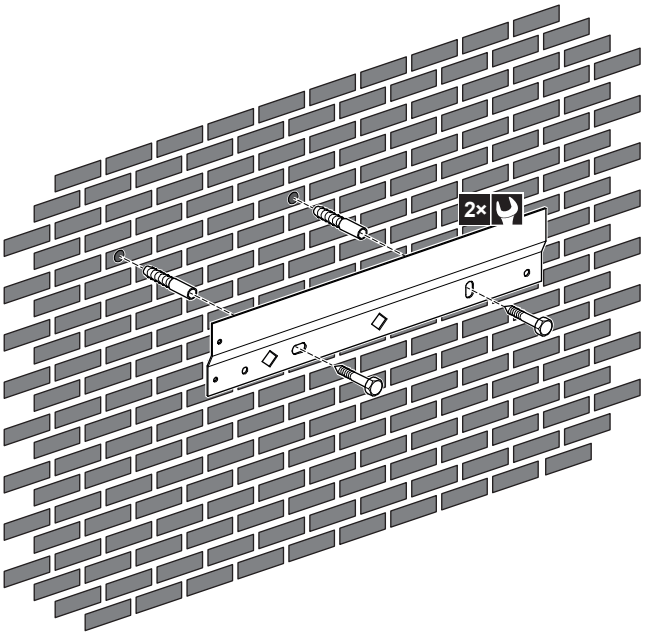
4.2 Mounting the indoor unit

4.2.1 To install the indoor unit

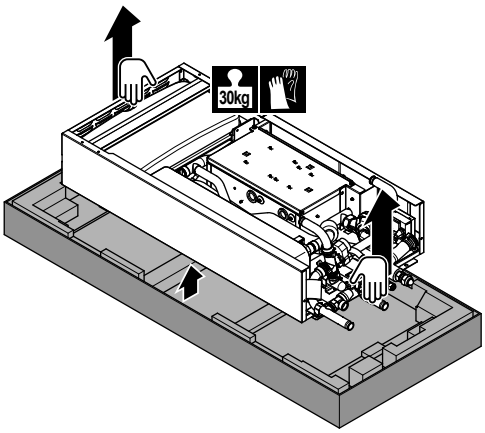
1 Put the installation pattern (see box) on the wall and follow the steps as shown below.



2 Fix the wall bracket to the wall with 2 M8 bolts.



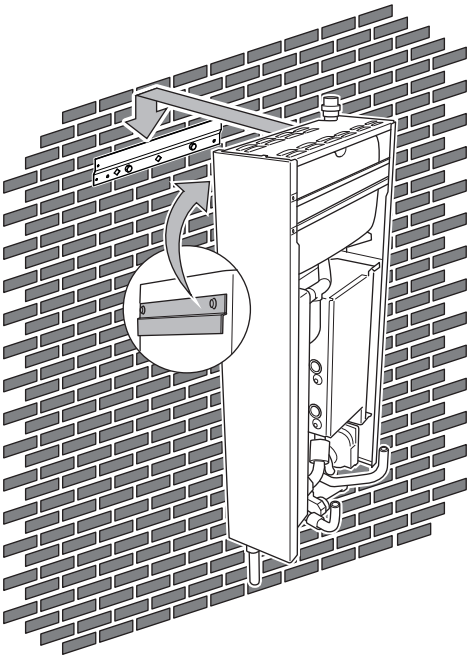
3 Lift the unit.



4 Tilt the top of the unit against the wall at the position of the wall bracket.

5 Slide the bracket on the back of the unit over the wall bracket. Make sure the unit is fixed properly. You can additionally fix the bottom side of the unit with 2 M8 bolts.

6 The unit is mounted to the wall.

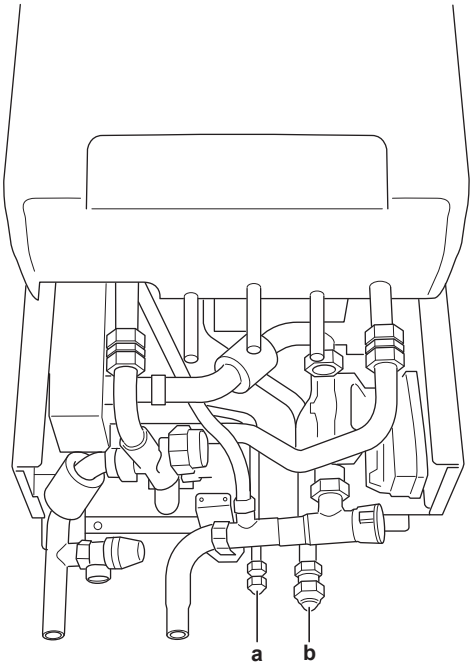


4.3 Connecting refrigerant piping

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

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



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.

4.4 Connecting water piping

4.4.1 Connecting the water piping of the indoor unit

To connect the water piping for space heating

NOTICE

In case of old heating installations, it is recommended to use a dirt separator. Dirt or sediment from the heating installation can damage the unit and reduce its lifetime.

NOTICE

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

NOTICE

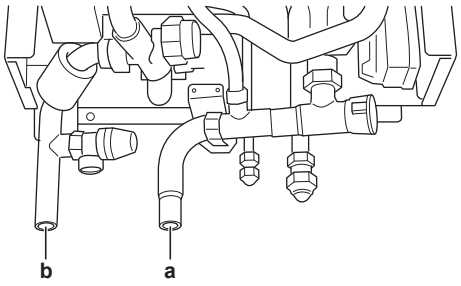
- It is recommended to install shut-off valves to space heating in and space heating out connections. Shut-off valves are field supplied. They allow service to the unit without draining the whole system.
- Foresee a drain/fill point to drain or fill the space heating circuit

NOTICE

Do NOT install valves to shut down the entire emitter system (radiators, floor heating loops, fan coil units, ...) instantly if this can result in an immediate short circuit of the water flow between the outlet and the inlet of the unit (for example via a bypass valve). This may trigger an error.

1 Connect the water inlet connection (Ø22 mm).

2 Connect the water outlet connection (Ø22 mm).



a Water inlet
b Water outlet

3 In case of connection with the optional domestic hot water tank, see the installation manual of the domestic hot water tank.

NOTICE

Install air purge valves at all local high points.

NOTICE

In case an optional domestic hot water tank is installed: 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 fill the space heating circuit

Before filling the space heating circuit, the gas boiler MUST be installed.

1 Flush the installation thoroughly to clean the circuit.

2 Connect the water supply hose to the drain point (field supply).

3 Power up the gas boiler to see the pressure indication on the boiler display.

4 Make sure that the air purge valves of the gas boiler and the heat pump module are open (at least 2 turns).

5 Fill the circuit with water until the boiler display indicates a pressure of ±2 bar (with a minimum of 0.5 bar).

6 Purge air from the water circuit as much as possible.

7 Disconnect the water supply hose from the drain point.

NOTICE

- Air in the water circuit can cause malfunctioning. During filling, it may not be possible to remove all the air from the circuit. Remaining air will be removed through the automatic air purge valves during the initial operating hours of the system. Additional filling with water afterwards may be required.
- To purge the system, use the special function as described in the chapter "6 Commissioning" [▶ 21]. This function should be used to purge the heat exchanger coil of the domestic hot water tank.

4.4.3 To fill the domestic hot water tank

See the installation manual of the domestic hot water tank.

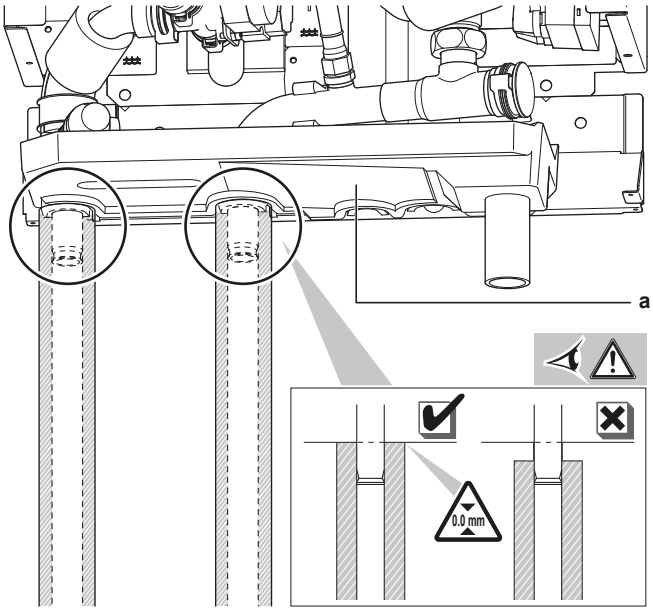
4.4.4 To insulate the water piping

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.

When the drain pan is installed, make sure to insulate the water piping up to the drain pan to avoid condensation.

In case of EHYHBX



a Drain pan kit

4.5 Connecting the electrical wiring

DANGER: RISK OF ELECTROCUTION

WARNING

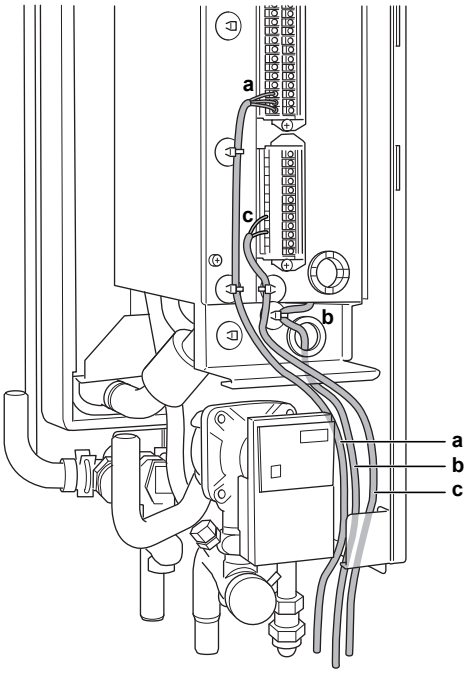
ALWAYS use multicore cable for power supply cables.

4.5.1 To connect the electrical wiring to the indoor unit

It is recommended to install all electrical wiring to the hydro box before installing the boiler.

1 Wiring should enter the unit from the bottom.

2 Routing of the wiring inside the unit should be as follows:



INFORMATION

When installing field supply or option cables, foresee sufficient cable length. This will make it possible to remove/ reposition the switch box and gain access to other components during service.

Routing	Possible cables (depending on unit type and installed options)
a	▪ Interconnection cable between indoor and outdoor unit ▪ Normal kWh rate power supply ▪ Preferential kWh rate power supply ▪ Heat pump convector (option) ▪ Room thermostat (option) ▪ 3-way valve (option in case of tank) ▪ Shut-off valve (field supply) ▪ Domestic hot water pump (field supply)
b	▪ Interconnection cable between indoor unit and gas boiler (see boiler manual for connection instructions)
c	▪ Outdoor ambient temperature sensor (option) ▪ User interface ▪ Indoor ambient temperature sensor (option) ▪ Electrical meter (field supply) ▪ Preferential power supply contact ▪ Safety thermostat (field supply) ▪ Gas meter (field supply)

3 Fix the cable with cable ties to the cable tie mountings to ensure strain relief and to make sure that it does NOT come in contact with the piping and sharp edges.

CAUTION

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

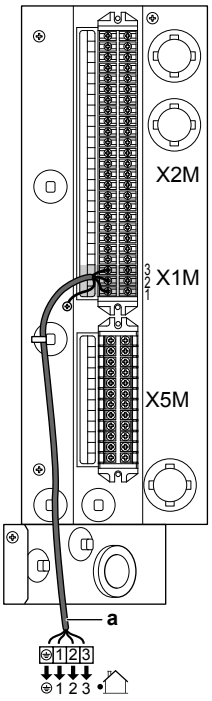
NOTICE

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

4.5.2 To connect the main power supply of the indoor unit

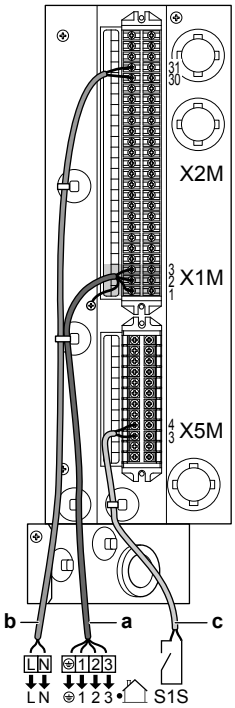
1 Connect the main power supply.

In case of normal kWh rate power supply



Legend: see illustration below.

In case of preferential kWh rate power supply



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

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

INFORMATION

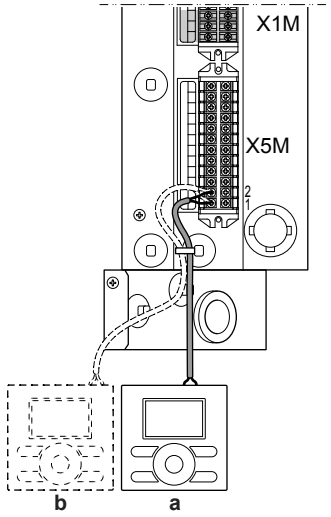
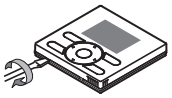
If the system is connected to a preferential kWh rate power supply, a separate normal kWh rate power supply is required. Change connector X6Y according to the wiring diagram on the inside of the indoor unit.

INFORMATION

The preferential kWh rate power supply contact is connected to the same terminals (X5M/3+4) as the safety thermostat. It is only possible for the system to have EITHER preferential kWh rate power supply OR a safety thermostat.

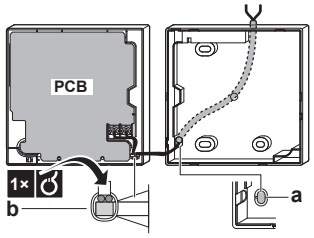
4.5.3 To connect the user interface

- If you use 1 user interface, you can install it at the indoor unit (for control close to the indoor unit), or in the room (when used as room thermostat).
- If you use 2 user interfaces, you can install 1 user interface at the indoor unit (for control close to the indoor unit) + 1 user interface in the room (used as room thermostat).

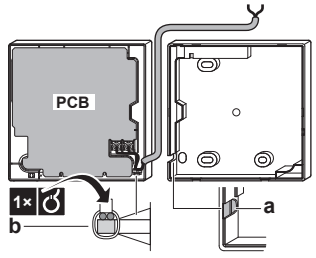
#	Action
1	Connect the user interface cable to the indoor unit. Fix the cable with cable ties to the cable tie mountings.  **a** Main user interface[(a)] **b** Optional user interface
2	Insert a screwdriver into the slots underneath the user interface and carefully separate the faceplate from the wallplate. The PCB is mounted in the faceplate of the user interface. Be careful NOT to damage it. 
3	Fix the wallplate of the user interface to the wall.
4	Connect as shown in 4A, 4B, 4C or 4D.
5	Reinstall the faceplate onto the wallplate. Be careful NOT to pinch the wiring when attaching the frontplate to the unit.

(a) The main user interface is required for operation, but has to be ordered separately (mandatory option).

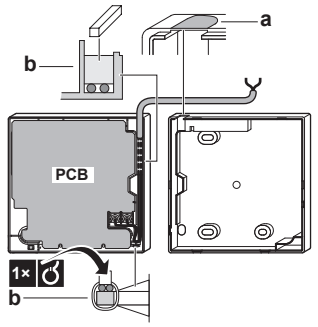
4A From the rear



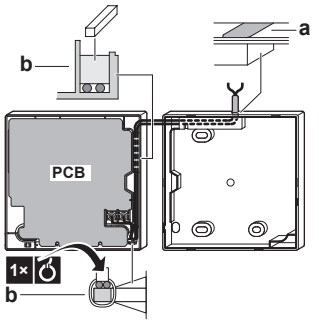
4B From the left



4C From the top



4D From the top centre



a Notch this part for the wiring to pass through with nippers etc.

b Secure the wiring to the front part of the casing using the wiring retainer and clamp.

4.5.4 To connect the shut-off valve

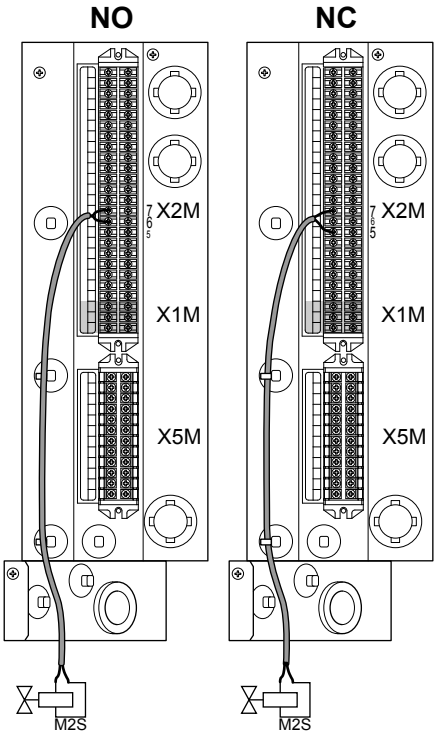
INFORMATION

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.



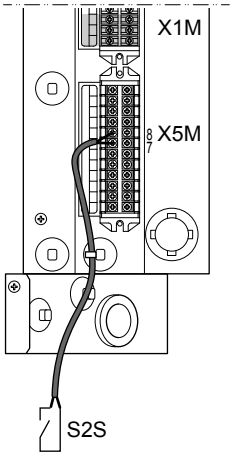
2 Fix the cable with cable ties to the cable tie mountings.

4.5.5 To connect the electrical meter

INFORMATION

In case of an electricity meter with transistor output, check the polarity. The positive polarity MUST be connected to X5M/7; the negative polarity to X5M/8.

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



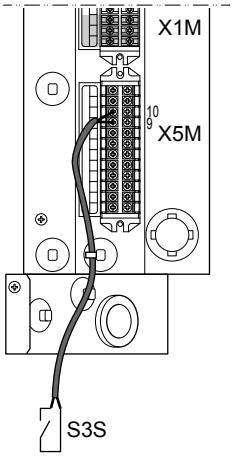
2 Fix the cable with cable ties to the cable tie mountings.

4.5.6 To connect the gas meter

INFORMATION

In case of a gas meter with transistor output, check the polarity. The positive polarity MUST be connected to X5M/9; the negative polarity to X5M/10.

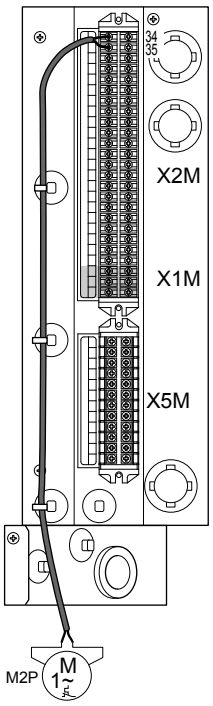
1 Connect the gas meter cable to the appropriate terminals as shown in the illustration below.



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

4.5.7 To connect the domestic hot water pump

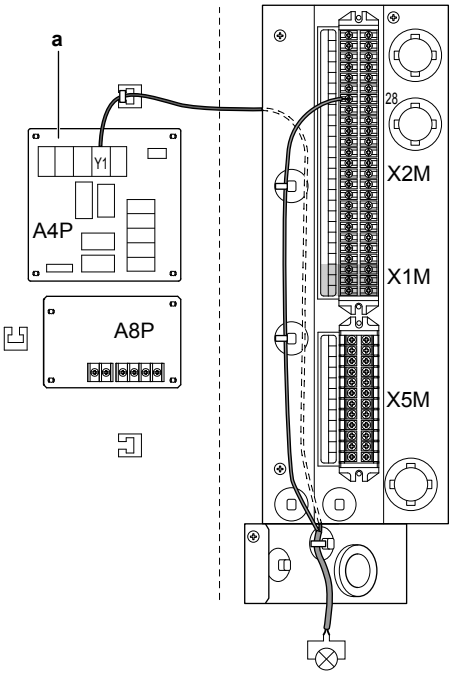
1 Connect the domestic hot water pump cable to the appropriate terminals as shown in the illustration below.



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.

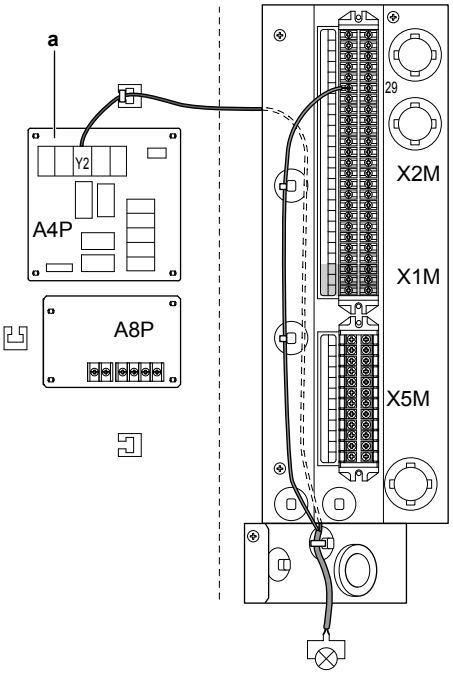


a Installation of EKRP1HBAA is required.

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.

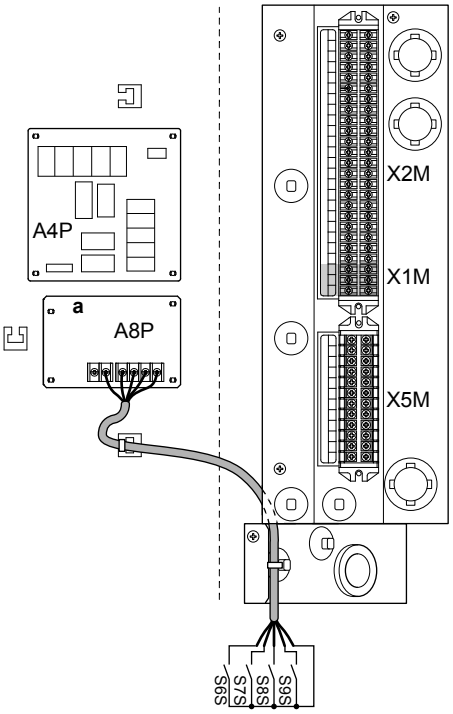


a Installation of EKRP1HBAA is required.

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

4.5.10 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.

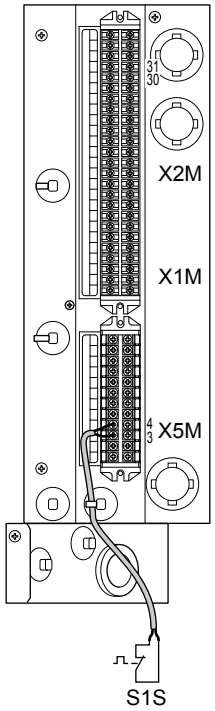


a Installation of EKRP1AHTA is required.

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

4.5.11 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.

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 motorized 3-way valve delivered with the domestic hot water tank.
- The safety thermostat setpoint is at least 15°C greater than the maximum leaving water temperature setpoint.

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/3+4) as the safety thermostat. It is only possible for the system to 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 switch box.

2 Mount the side plate to the unit.

3 Mount the top plate.

NOTICE

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

Before doing the configuration of the heat pump module, the gas boiler MUST be installed correctly.

5 Configuration

5.1 Indoor unit

5.1.1 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 – Quick wizard.** When you turn ON the user interface for the first time (via the indoor unit), a quick wizard starts to help you configure the system.
- **Afterwards.** If necessary, you can make changes to the configuration afterwards.

INFORMATION

When the installer settings are changed, the user interface will request to confirm. When confirmed, the screen will shortly turn OFF and "busy" will be displayed for several seconds.

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 **menu structure**.	**#** For example: [A.2.1.7]
Accessing settings via the code in the **overview settings**.	**Code** For example: [C-07]

See also:

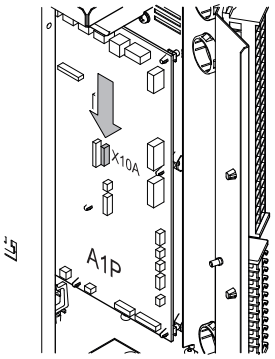
- "To access the installer settings" [▶ 13]
- "5.1.3 Menu structure: Overview installer settings" [▶ 20]

To connect the PC cable to the switch box

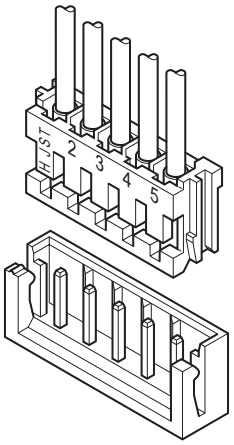
Prerequisite: The EKPCCAB4 kit is required.

1 Connect the USB connector of the cable to your PC.

2 Connect the plug of the cable to X10A on A1P of the switch box of the indoor unit.



3 Pay special attention to the position of the plug!



To access the most used commands

To access the installer settings

1 Set the user permission level to `Installer`.

2 Go to [A]: ☰ > `Installer settings`.

To access the overview settings

1 Set the user permission level to `Installer`.

2 Go to [A.8]: ☰ > `Installer settings` > `Overview settings`.

To set the user permission level to Installer

Prerequisite: Your user permission level is `Adv. end user`.

1 Go to [6.4]: ☰ > `Information` > `User permission level`.

2 Press ☰ for more than 4 seconds.

Result: Your user permission level is now `Installer`. The home pages display 🔧.

INFORMATION

The `Installer` permission level switches automatically back to `End user` in the following cases:

- If you press ⓘ again for more than 4 seconds, or
- If you do NOT press any button for more than 1 hour

To set the user permission level to Advanced end user

1 Go to the main menu or any of its submenus: ☰.

2 Press ⓘ for more than 4 seconds.

Result: Your user permission level is now `Adv. end user`. The user interface displays additional information and a "+" is added to the menu title. The user permission level stays in `Adv. end user` until manually set otherwise.

To set the user permission level to End user

1 Press ⓘ for more than 4 seconds.

Result: Your user permission level is now `End user`. The user interface displays the default home page.

To modify an overview setting

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

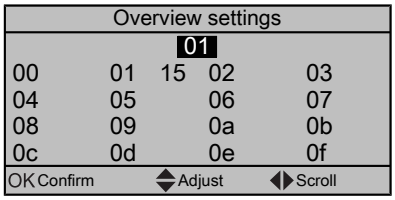
1 Go to [A.8]: ☰ > `Installer settings` > `Overview settings`.

2 Go to the corresponding screen of the first part of the setting (in this example [**1**-01]) by using the ▲ and ▼ button.

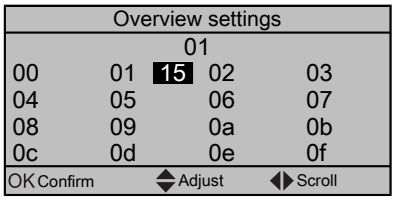
INFORMATION

An additional 0-digit is added to the first part of the setting when you access the codes in the overview settings.

Example: [1-01]: "1" will result in "**0**1".

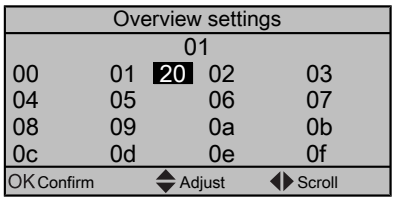


3 Go to the corresponding second part of the setting (in this example [1-**01**]) by using the ◀ and ▶ button.



Result: The value to be modified is now highlighted.

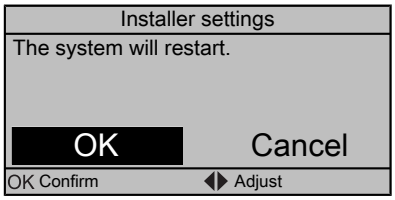
4 Modify the value by using the ▲ and ▼ button.



5 Repeat previous steps if you have to modify other settings.

6 Push OK to confirm the modification of the parameter.

7 At installer settings menu, press OK to confirm the settings.



Result: The system will restart.

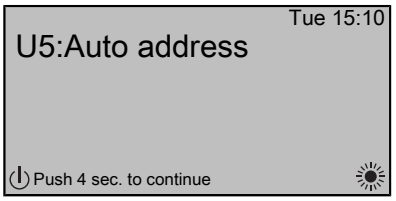
To copy the system settings from the first to the second user interface

If a second user interface is connected, the installer must first proceed below instructions for the proper configuration of the 2 user interfaces.

This procedure offers you also the possibility to copy the language set from one user interface to the other one: e.g. from EKRUCBL2 to EKRUCBL1.

1 Turn on the unit.

Result: When turned on for the first time, both user interfaces display:



2 Push ⏻ for 4 seconds on the user interface on which you want to proceed to the quick wizard.

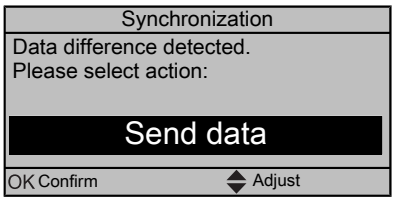
Result: This user interface is now the main user interface.

INFORMATION

While using the quick wizard on the main user interface, the second user interface displays `Busy` and you cannot interact with it.

3 On the display, check if there is a data difference between both user interfaces.

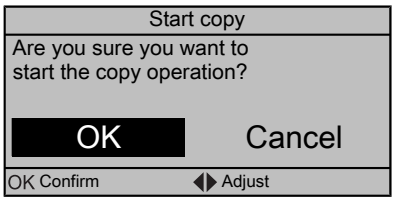
Result: For proper operation of the system, the local data on both user interfaces must be the same. If they contain different data, both user interfaces will display:



4 To make the data equal on both user interfaces, select the required action:

- `Send data`: the user interface you are operating contains the correct data. Copy this data to the other user interface.
- `Receive data`: the user interface you are operating does NOT contain the correct data. Copy the data of the other user interface to this user interface.

5 Confirm to proceed.



6 Push OK to confirm the displayed selection of data.

Result: All data (languages, schedules etc.) will be copied from the selected source user interface to the other one. When done, the system is ready to be operated via both user interfaces.

INFORMATION

- As long as data is being copied, you cannot operate the user interfaces.
- Copying data can take up to 90 minutes.
- It is recommended to change installer settings, or the configuration of the unit, on the main user interface. If not, it can take up to 5 minutes before these changes are visible in the menu structure of the main user interface.

To copy the language set from the first to the second user interface

See "To copy the system settings from the first to the second user interface" [▶ 14].

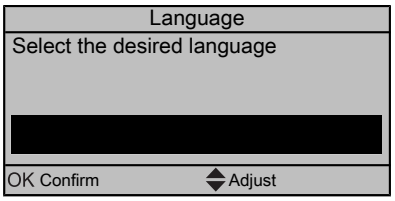
Quick wizard: Set the system layout after first power ON

After first power ON of the system, a quick wizard guides you through the initial configuration of the following system settings:

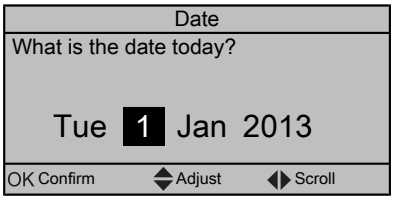
- language
- date
- time
- system layout

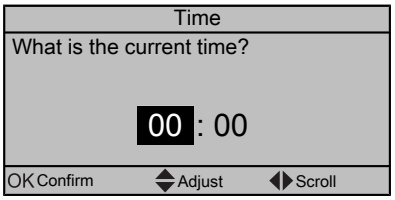
After you confirmed the system layout, you can proceed with the installation and commissioning of the system.

1 At power ON and as long as the system layout was not confirmed yet, select your preferred language.

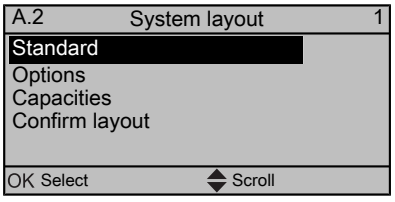


2 Set the current date and time.

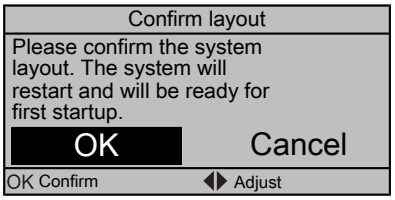




3 Set the system layout settings: `Standard`, `Options`, `Capacities`. For more details, see "5.1.2 Basic configuration" [▸ 15].



4 After configuration, select `Confirm layout` and press OK.



Result: The user interface reinitializes.

5 Proceed with the configuration of the system. When done, confirm the configuration settings.

Result: The screen shortly turns OFF and `Busy` is displayed for several seconds.

5.1.2 Basic configuration

Quick wizard: Language / time and date

#	Code	Description
[A.1]	N/A	Language
[1]	N/A	Time and date

Quick wizard: Standard

Space heating/cooling settings

#	Code	Description
[A.2.1.7]	[C-07]	Unit temperature control: ▪ 0 (`LWT control`): Unit operation is decided based on the leaving water temperature. ▪ 1 (`Ext RT control`): Unit operation is decided by the external thermostat. ▪ 2 (`RT control`): Unit operation is decided based on the ambient temperature of the user interface.
[A.2.1.B]	N/A	Only if there are 2 user interfaces: User interface location: ▪ `At unit` ▪ `In room`
[A.2.1.8]	[7-02]	Number of water temperature zones: ▪ 0 (`1 LWT zone`): Main ▪ 1 (`2 LWT zones`): Main + additional
[A.2.1.9]	[F-0D]	Pump operation: ▪ 0 (`Continuous`): Continuous pump operation, regardless of thermo ON or OFF condition. ▪ 1 (`Sample`): When thermo OFF condition occurs, the pump runs every 5 minutes and the water temperature is checked. If the water temperature is below target, unit operation can start. ▪ 2 (`Request`): Pump operation based on request. **Example:** Using a room thermostat and thermostat creates thermo ON/OFF condition.

Quick wizard: Options

Domestic hot water settings

#	Code	Description
[A.2.2.1]	[E-05]	Domestic hot water preparation: ▪ 0 (`No`): NOT possible ▪ 1 (`Yes`)(default): Possible
[A.2.2.2]	[E-06]	Domestic hot water production: ▪ 0 (`Type 1`): by boiler ▪ 1 (`Type 2`): by tank **Note:** For Switzerland, setting MUST be "1".
[A.2.2.3]	[E-07]	Domestic hot water tank: ▪ 4 (`Type 5`). EKHWP. ▪ 6 (`Type 7`) Third-party tank. Range: 0~6.

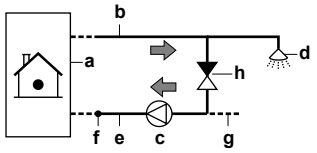
#	Code	Description
[A.2.2.A]	[D-02]	Domestic hot water pump (not applicable for Switzerland): In case of [E-06]=0 ▪ 0 (No)(default): NOT installed ▪ 1 (Secondary rtrn): Installed for instant hot water In case of [E-06]=1 ▪ 0 (No)(default): NOT installed ▪ 1 (Secondary rtrn): Installed for instant hot water ▪ 2 (Disinf. shunt): Installed for disinfection See also illustrations below.

INFORMATION

The tank can be heated via the gas boiler or heat pump.

In case of [E-06]=0 (not applicable for Switzerland)

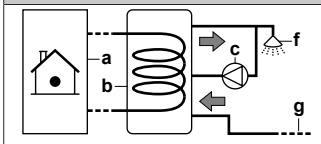
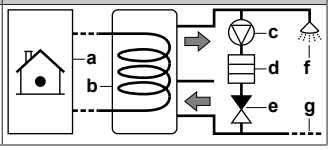
Domestic hot water pump installed for instant hot water



a Indoor unit
b Hot water connection on boiler
c Domestic hot water pump
d Shower
e Inlet on boiler
f Recirculation thermistor (EKTH2)
g Water supply
h Non-return valve

In case of [E-06]=1

Domestic hot water pump installed for…

Instant hot water	Disinfection
	

a Indoor unit
b Tank
c Domestic hot water pump
d Heater element
e Non-return valve
f Shower
g Cold water

INFORMATION

The correct domestic hot water default settings become only applicable when domestic hot water operation is activated ([E-05]=1).

Thermostats and external sensors

#	Code	Description
[A.2.2.4]	[C-05]	External room thermostat for the **main** zone: ▪ 1 (Thermo ON/OFF): When the used external room thermostat or heat pump convector can only send a thermo ON/OFF condition. No separation between heating or cooling demand. ▪ 2 (H/C request): When the used external room thermostat can send a separate heating/cooling thermo ON/OFF condition.
[A.2.2.5]	[C-06]	External room thermostat for the **additional** zone: ▪ 0: N/A ▪ 1 (Thermo ON/OFF): When the used external room thermostat or heat pump convector can only send a thermo ON/OFF condition. No separation between heating or cooling demand. ▪ 2 (H/C request): When the used external room thermostat can send a separate heating/cooling thermo ON/OFF condition.
[A.2.2.B]	[C-08]	External sensor: ▪ 0 (No): NOT installed. ▪ 1 (Outdoor sensor): Connected to PCB measuring the outdoor temperature. ▪ 2 (Room sensor): Connected to PCB measuring the indoor temperature.

Digital I/O PCB

#	Code	Description
[A.2.2.6.2]	[D-07]	Solar pump station kit: ▪ 0 (No): NOT installed ▪ 1 (Yes): Installed
[A.2.2.6.3]	[C-09]	Alarm output on optional EKRP1HBAA PCB: ▪ 0 (Normally open): The alarm output will be powered when an alarm occurs. By setting this value, a distinction is made between the detection of an alarm, and the detection of a power failure. ▪ 1 (Normally closed): The alarm output will NOT be powered when an alarm occurs. See also table below (Alarm output logic).

Alarm output logic

[C-09]	Alarm	No alarm	No power supply to unit
0 (default)	Closed output	Open output	Open output
1	Open output	Closed output	

Demand PCB

#	Code	Description
[A.2.2.7]	[D-04]	Demand PCB Indicates if the optional demand PCB is installed. ▪ 0 (No) ▪ 1 (Pwr consmp ctrl)

Energy metering

#	Code	Description
[A.2.2.8]	[D-08]	Optional external kWh meter 1: ▪ 0 (No): NOT installed ▪ 1: Installed (0.1 pulse/kWh) ▪ 2: Installed (1 pulse/kWh) ▪ 3: Installed (10 pulse/kWh) ▪ 4: Installed (100 pulse/kWh) ▪ 5: Installed (1000 pulse/kWh)
[A.2.2.C]	[D-0A]	Optional gas meter: ▪ 0 (No): NOT installed ▪ 1: Installed (1 pulse/m³) ▪ 2: Installed (10 pulse/m³) ▪ 3: Installed (100 pulse/m³)

Savings mode

The user can choose whether switching between operation modes is either economically or ecologically optimised. Set to Economical, the system will in all operating conditions select the energy source (gas or electricity) based on energy prices, resulting in a minimisation of energy costs. Set to Ecological, the heat source will be selected based on ecological parameters, resulting in a minimisation of primary energy consumption.

#	Code	Description
[A.6.7]	[7-04]	Defines whether switching between operation modes is either economically or ecologically optimised. ▪ 0 (Economical)(default): reduction of energy costs ▪ 1 (Ecological): reduction of primary energy consumption, but not necessarily energy costs

Primary energy factor

The primary energy factor indicates how many units of primary energy (natural gas, crude oil, or other fossil fuels, prior to undergoing any human-made conversions or transformations) are needed to obtain 1 unit of a certain (secondary) energy source, such as electricity. The primary energy factor for natural gas is 1. Assuming an average electricity production efficiency (including transportation losses) of 40%, the primary energy factor for electricity equals 2.5 (=1/0.40). The primary energy factor allows you to compare 2 different energy sources. In this case, the primary energy use of the heat pump is compared to the natural gas use of the gas boiler.

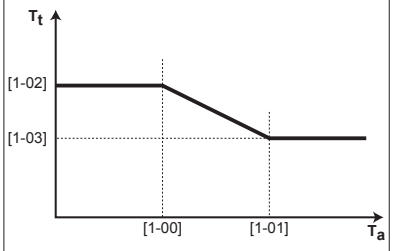
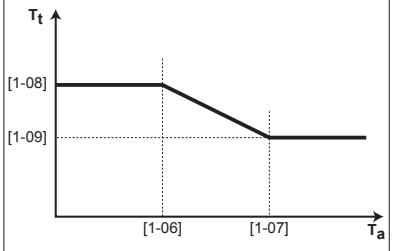
#	Code	Description
N/A	[7-03]	Compares the primary energy use of the heat pump with that of the boiler. Range: 0~6, step: 0.1 (default: 2.5)

INFORMATION

- The primary energy factor can always be set, but is only used in case the savings mode is set to Ecological.
- To set electricity price values, do NOT use overview settings. Set them in the menu structure instead ([7.4.5.1], [7.4.5.2], and [7.4.5.3]). For more information on how to set the energy prices, see the operation manual and the user reference guide.

Space heating/cooling control

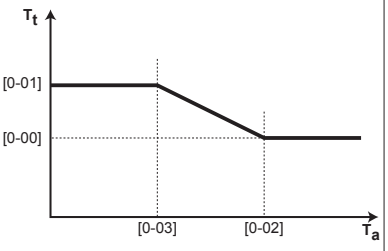
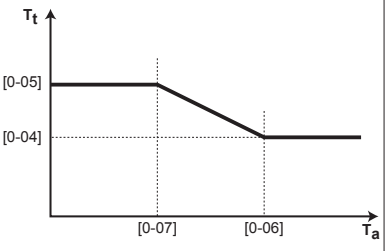
Leaving water temperature: Main zone

#	Code	Description
[A.3.1.1.1]	N/A	Set point mode: ▪ 0 (Fixed): Absolute ▪ 1 (Weather dep.): Weather-dependent ▪ 2 (Fixed/scheduled): Absolute + scheduled (only for leaving water temperature control) ▪ 3 (WD/scheduled): Weather-dependent + scheduled (only for leaving water temperature control)
[7.7.1.1]	[1-00] [1-01] [1-02] [1-03]	Weather-dependent curve (heating):  ▪ T_t: Target leaving water temperature (main) ▪ T_a: Outdoor temperature
[7.7.1.2]	[1-06] [1-07] [1-08] [1-09]	Only for EHYHBX08. Weather-dependent curve (cooling):  ▪ T_t: Target leaving water temperature (main) ▪ T_a: Outdoor temperature

INFORMATION

In order to optimise comfort as well as running costs, it is recommended to choose weather-dependent setpoint operation. Set the settings carefully; they have significant influence on heat pump as well as boiler operation. Too high leaving water temperature can result in constant boiler operation.

Leaving water temperature: Additional zone

#	Code	Description
[A.3.1.2.1]	N/A	Set point mode: ▪ 0 (Fixed): Absolute ▪ 1 (Weather dep.): Weather-dependent ▪ 2 (Fixed/scheduled): Absolute + scheduled (only for leaving water temperature control) ▪ 3 (WD/scheduled): Weather-dependent + scheduled (only for leaving water temperature control)
[7.7.2.1]	[0-00] [0-01] [0-02] [0-03]	Weather-dependent curve (heating):  ▪ T_t: Target leaving water temperature (additional) ▪ T_a: Outdoor temperature
[7.7.2.2]	[0-04] [0-05] [0-06] [0-07]	Only for EHYHBX08. Weather-dependent curve (cooling):  ▪ T_t: Target leaving water temperature (additional) ▪ T_a: Outdoor temperature

Pump control: Flow target

#	Code	Description
N/A	[8-0B]	Target flow rate during heat pump operation.
N/A	[8-0C]	Target flow rate during hybrid operation.
N/A	[8-0D]	Target flow rate during boiler operation.

INFORMATION

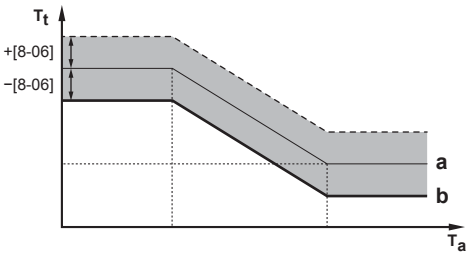
Changing these settings can result in discomfort. Refer to the installer reference guide for more information.

Leaving water temperature: Modulation

#	Code	Description
[A.3.1.1.5]	[8-05]	Leaving water temperature modulation: ▪ 0 (No): Disabled ▪ 1 (Yes): Enabled. The leaving water temperature is calculated according to the difference between desired and actual room temperature. This allows better matching of the heat pump capacity to actual required capacity and results in less start/stop cycles of the heat pump and more economic operation.
N/A	[8-06]	Leaving water temperature maximum modulation: 0°C~10°C (default: 5°C) Requires modulation to be enabled. This is the value by which the desired leaving water temperature is increased or lowered.

INFORMATION

When leaving water temperature modulation is enabled, the weather-dependent curve needs to be set to a higher position than [8-06] plus the minimum leaving water temperature setpoint required to reach a stable condition on the comfort setpoint for the room. To increase efficiency, modulation can lower the leaving water setpoint. By setting the weather-dependent curve to a higher position, it cannot drop below the minimum setpoint. See the illustration below.



a Weather-dependent curve
b Minimum leaving water temperature setpoint required to reach a stable condition on the comfort setpoint for the room.

Leaving water temperature: Emitter type

#	Code	Description
[A.3.1.1.7]	[9-0B]	Emitter type: Reaction time of the system: ▪ 0: (Quick) **Example:** Small water volume and fan coils. ▪ 1: (Slow) **Example:** Large water volume, floor heating loops. Depending on the system water volume and the heat emitters type, the heat up or cool down of a space can take longer. This setting can compensate for a slow or a quick heating/cooling system by adjusting the unit capacity during the heat up/cool down cycle.

Quick heat up function

#	Code	Description
N/A	[C-0A]	Indoor quick heat up function: ▪ 0: OFF. ▪ 1 (default): On. Only applicable in case of room thermostat control. The function will start up the gas boiler when the actual room temperature is 3°C lower than the desired room temperature. The large boiler capacity can quickly boost up the room temperature to the desired temperature. This can be useful after long periods of absence or after a breakdown of the system.

Domestic hot water control

Only applicable in case an optional domestic hot water tank is installed.

This is always applicable for Switzerland.

#	Code	Description
[A.4.1]	[6-0D]	Domestic hot water Type: ▪ 0 (Reheat only): Only reheat operation is allowed. ▪ 1 (Reheat + sched.): Same as 2, but between the scheduled heatup cycles, reheat operation is allowed. ▪ 2 (Scheduled only): The domestic hot water tank can ONLY be heated according to a schedule.
[A.4.5]	[6-0E]	The maximum temperature that users can select for the domestic hot water. You can use this setting to limit the temperature at the hot water taps.

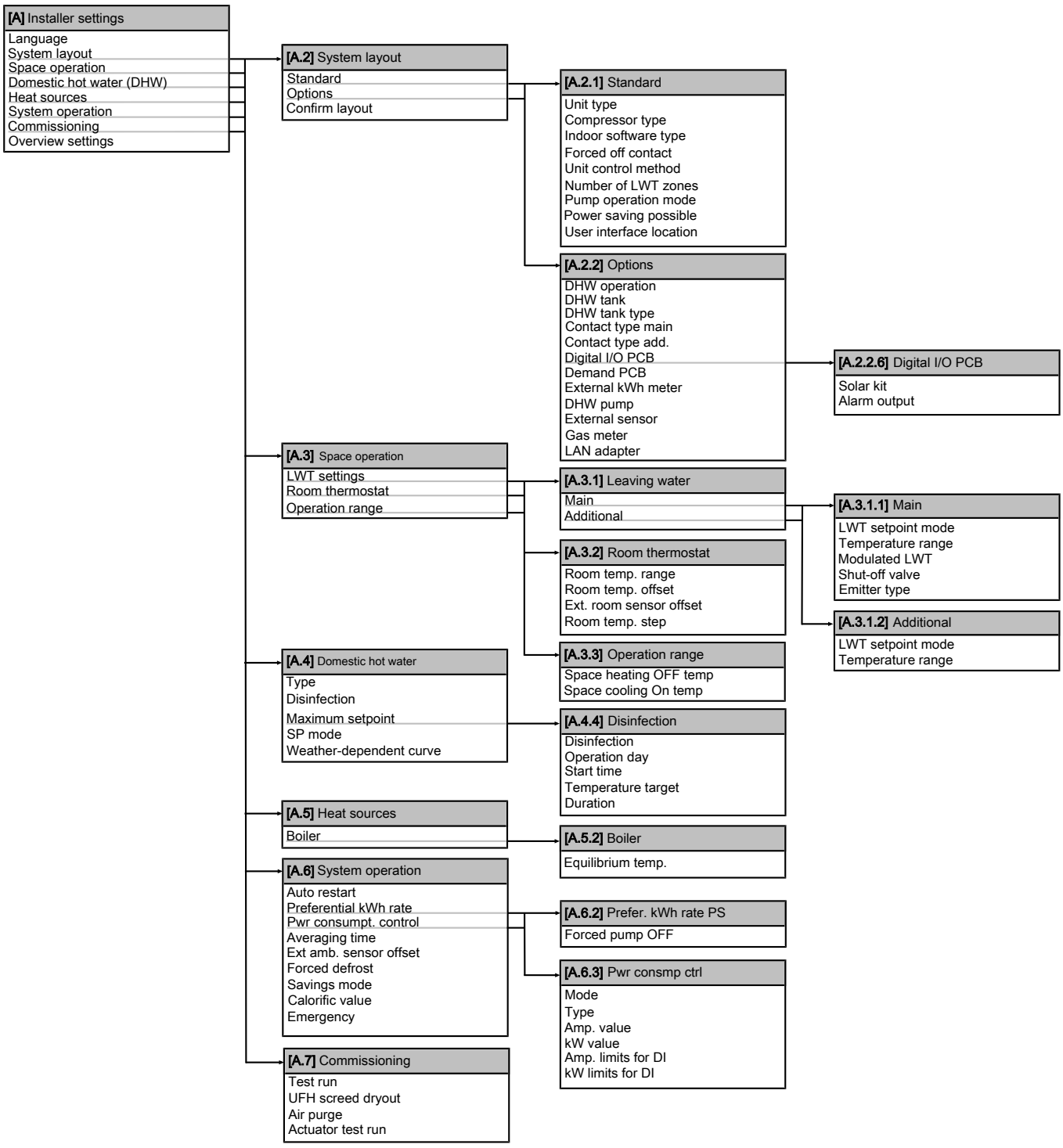
INFORMATION

If a third-party tank is present in the system ([E-07]=6), it is recommended to set [6-0D] to "0" (i.e. Reheat only).

Contact/helpdesk number

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

5.1.3 Menu structure: Overview installer settings



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. (If the user interface home pages are off, the unit will not operate automatically.)

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 [4-0E]=1. After his work is done, he can enable the protective functions by setting [4-0E]=0.

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.

☐	You read the complete installation instructions, as described in the **installer reference guide**.
☐	The **indoor unit** is properly mounted.
☐	The **outdoor unit** is properly mounted.
☐	The **gas boiler** is properly mounted.
☐	The following **field wiring** has been carried out according to this document and the applicable legislation: ▪ Between the local supply panel and the outdoor unit ▪ Between indoor unit and outdoor unit ▪ Between the local supply panel and the indoor unit ▪ Between the indoor unit and the valves (if applicable) ▪ Between the indoor unit and the room thermostat (if applicable) ▪ Between the indoor unit and the domestic hot water tank (if applicable) ▪ Between the gas boiler and the local supply panel (only applicable in case of hybrid system)
☐	The **communication cable** between the gas boiler and the indoor unit is properly mounted.
☐	The system is properly **earthed** and the earth terminals are tightened.
☐	The **fuses** or locally installed protection devices are installed according to this document, and have NOT been bypassed.
☐	The **power supply voltage** matches the voltage on the identification label of the unit.
☐	There are NO **loose connections** or damaged electrical components in the switch box.
☐	There are NO **damaged components** or **squeezed pipes** on the inside of the indoor and outdoor units.
☐	There are NO **refrigerant leaks**.
☐	The **refrigerant pipes** (gas and liquid) are thermally insulated.
☐	The correct pipe size is installed and the **pipes** are properly insulated.
☐	There is NO **water leak** inside the indoor unit.
☐	There is NO **water leak** inside the gas boiler.
☐	There is NO **water leak** in the connection between the gas boiler and the indoor unit.
☐	The **shut-off valves** are properly installed and fully open (field supply).
☐	The **stop valves** (gas and liquid) on the outdoor unit are fully open.
☐	The **air purge** valve is open (at least 2 turns).
☐	The **pressure relief valve** purges water when opened. Clean water must come out.
☐	The **gas boiler** is switched ON.
☐	Setting E. is correctly set on the gas boiler. ▪ 0=for EHYHBH05 + EHYHBH08 ▪ 1=for EHYHBX08
☐	The **minimum water volume** is guaranteed in all conditions. See "To check the water volume and flow rate" in "3.2 Preparing water piping" [▶ 4].

6.2 Checklist during commissioning

☐	The **minimum flow rate** is guaranteed in all conditions. See "To check the water volume and flow rate" in "3.2 Preparing water piping" [▶ 4].
☐	To perform an **air purge**.
☐	To perform a **test run**.
☐	To perform an **actuator test run**.
☐	**Underfloor screed dryout function** The underfloor screed dryout function is started (if necessary).
☐	To perform a gas pressure test.
☐	To perform a test run on the **gas boiler**.

6.2.1 To check the minimum flow rate

1. Confirm according to the hydraulic configuration which space heating loops can be closed due to mechanical, electronic, or other valves.
2. Close all space heating loops that can be closed (see previous step).
3. Start the pump test run operation (see "6.2.4 To perform an actuator test run" [▶ 22]).
4. Go to [6.1.8]: ☰ > `Information` > `Sensor information` > `Flow rate` to check the flow rate. During pump test run operation, the unit can operate below this minimum required flow rate.

Bypass valve foreseen?	
Yes	**No**
Modify the bypass valve setting to reach the minimum required flow rate + 2 l/min	In case the actual flow rate is below the minimum flow rate, modifications at the hydraulic configuration are required. Increase the space heating loops that can NOT be closed or install a pressure-controlled bypass valve.

Minimum required flow rate	
05 models	7 l/min
08 models	8 l/min

6.2.2 To perform an air purge

Prerequisite: Make sure that the leaving water temperature home page, room temperature home page, and domestic hot water home page are turned OFF.

1 Go to [A.7.3]: ☰ > `Installer settings` > `Commissioning` > `Air purge`.

2 Set the type.

3 Select `Start air purge` and press OK.

4 Select `OK` and press OK.

Result: The air purge starts. It stops automatically when done. To stop it manually, press ⏻, select `OK` and press OK.

6.2.3 To perform a test run

Prerequisite: Make sure that the leaving water temperature home page, room temperature home page, and domestic hot water home page are turned OFF.

1 Set the user permission level to Installer. See "To set the user permission level to Installer" [▶ 13].

2 Go to [A.7.1]: ☰ > `Installer settings` > `Commissioning` > `Test run`.

3 Select a test and press OK. **Example:** `Heating`.

4 Select `OK` and press OK.

Result: The test run starts. It stops automatically when done (±30 min). To stop it manually, press ⏻, select `OK` and press OK.

INFORMATION

If 2 user interfaces are present, you can start a test run from both user interfaces.

- The user interface used to start the test run displays a status screen.
- The other user interface displays a "busy" screen. You cannot use the user interface as long as the "busy" screen is shown.

6.2.4 To perform an actuator test run

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.

Prerequisite: Make sure that the leaving water temperature home page, room temperature home page, and domestic hot water home page are turned OFF.

1 Set the user permission level to Installer. See "To set the user permission level to Installer" [▶ 13].

2 Make sure the room temperature control, the leaving water temperature control and the domestic hot water control are turned OFF via the user interface.

3 Go to [A.7.4]: ☰ > `Installer settings` > `Commissioning` > `Actuator test run`.

4 Select an actuator and press OK. **Example:** `Pump`.

5 Select `OK` and press OK.

Result: The actuator test run starts. It automatically stops when finished. To stop it manually, press ⏻, select `OK` and press OK.

Possible actuator test runs

- 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.

- Solar pump test
- Shut-off valve test
- 3-way valve test
- Alarm output test
- Cooling/heating signal test
- Quick heat-up test
- DHW pump test
- Gas boiler test
- Bypass valve test

INFORMATION

The setpoint during a boiler test run is 40°C. Keep in mind the 5°C overshoot that is possible during boiler operation, especially in combination with floor heating loops.

6.2.5 To perform an underfloor heating screed dryout

Prerequisite: Make sure there is only 1 user interface connected to your system to perform an underfloor heating screed dryout.

Prerequisite: Make sure that the leaving water temperature home page, room temperature home page, and domestic hot water home page are turned OFF.

1 Go to [A.7.2]: ☰ > `Installer settings` > `Commissioning` > `UFH screed dryout`.

2 Set a dryout program.

3 Select `Start dryout` and press OK.

4 Select `OK` and press OK.

Result: The underfloor heating screed dryout starts. It stops automatically when done. To stop it manually, press ⏻, select `OK` and press OK.

INFORMATION

In case no outdoor unit is installed, the user interface will ask if the gas boiler can take over the entire load. After allowing this, restart the screed dryout program to make sure all actuators are operating.

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

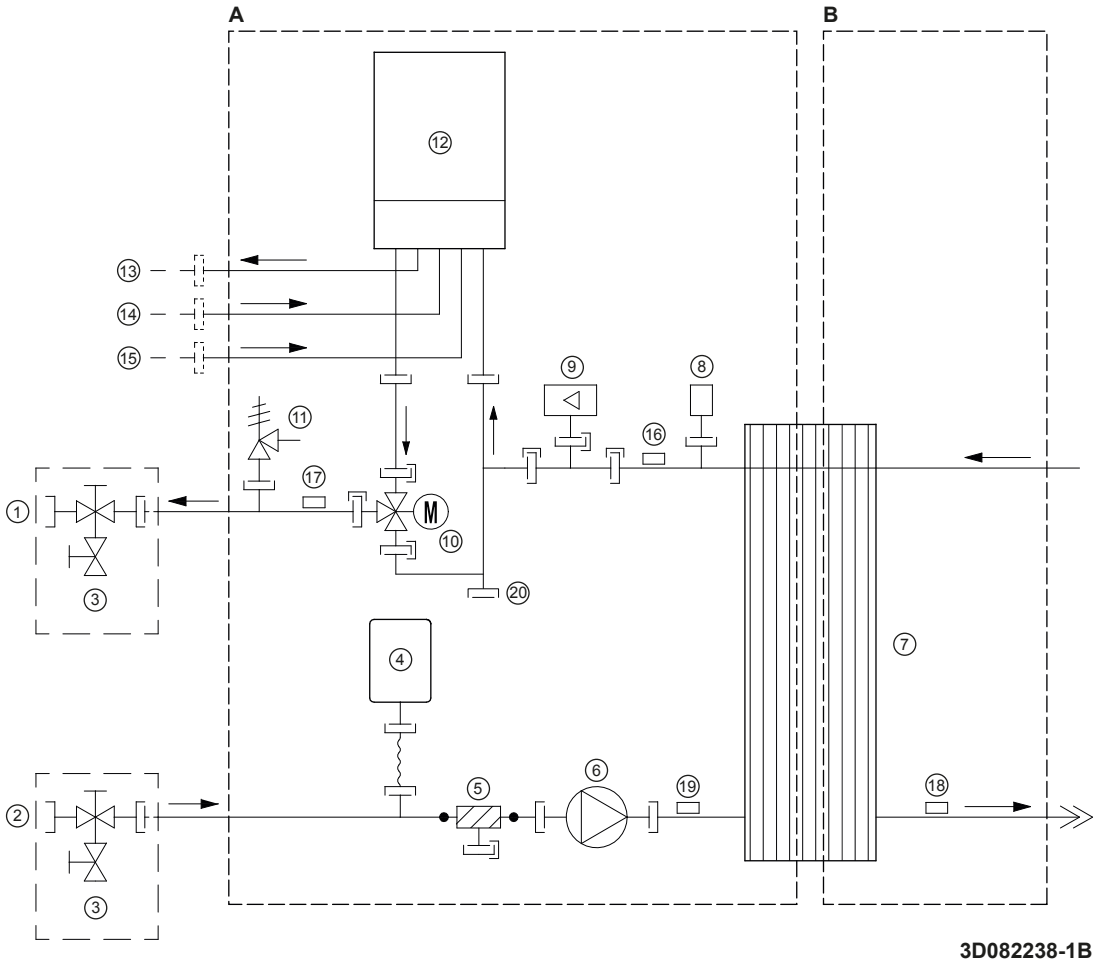
Once the test run is finished and the unit operates properly, please make sure the following is clear for the user:

- 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



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A Water side
B Refrigerant side
1 Space heating/cooling water IN
2 Space heating/cooling water OUT
3 Shut-off valve with drain/fill valve
4 Expansion vessel
5 Filter
6 Pump
7 Plate heat exchanger
8 Air purge
9 Flow sensor

10 3-way valve
11 Safety valve
12 Gas boiler
13 Domestic hot water: hot water OUT
14 Gas pipe
15 Domestic hot water: hot water IN
16 R1T – Plate heat exchanger outlet water thermistor
17 R2T – Outlet water thermistor
18 R3T – Heat exchanger liquid pipe thermistor
19 R4T – Inlet water thermistor
20 Screw connection (only for EHYHBH05+EHYHBH08)

Screw connection
Quick coupling
Brazed connection
Flare connection

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	Indoor/outdoor communication
X2M	Field wiring terminal for AC
X5M	Field wiring terminal for DC
—·—·—·—	Earth wiring
– – – – – – –	Field supply
—> **/12.2	Connection ** continues on page 12 column 2
①	Several wiring possibilities
	Option
	Not mounted in switch box
	Wiring depending on model
	PCB
User installed options	User installed options
☐ Domestic hot water tank	☐ Domestic hot water tank
☐ Domestic hot water tank with solar connection	☐ Domestic hot water tank with solar connection
☐ Remote user interface	☐ Remote user interface
☐ Ext. indoor thermistor	☐ External indoor thermistor
☐ Ext outdoor thermistor	☐ External outdoor thermistor
☐ Digital I/O PCB	☐ Digital I/O PCB
☐ Demand PCB	☐ Demand PCB
☐ Instant DHW recirculation	☐ Instant domestic hot water recirculation
Main LWT	Main leaving water temperature
☐ On/OFF thermostat (wired)	☐ On/OFF thermostat (wired)
☐ On/OFF thermostat (wireless)	☐ On/OFF thermostat (wireless)
☐ Ext. thermistor	☐ External thermistor
☐ Heat pump convector	☐ Heat pump convector
Add LWT	Additional leaving water temperature
☐ On/OFF thermostat (wired)	☐ On/OFF thermostat (wired)
☐ On/OFF thermostat (wireless)	☐ On/OFF thermostat (wireless)
☐ Ext. thermistor	☐ External thermistor
☐ Heat pump convector	☐ Heat pump convector

Position in switch box

English	Translation
Position in switch box	Position in switch box

Legend

A1P		Main PCB (hydrobox)
A2P		User interface PCB
A3P	*	On/OFF thermostat
A3P	*	Heat pump convector
A3P	*	Solar pump station PCB
A4P	*	Digital I/O PCB
A4P	*	Receiver PCB (Wireless On/OFF thermostat, PC=power circuit)
A8P	*	Demand PCB
B1L		Flow sensor
DS1 (A8P)	*	DIP switch
F1U, F2U	*	Fuse 5 A 250 V for digital I/O PCB (A4P)
FU1		Fuse T 6.3 A 250 V for main PCB (A1P)
K*R		Relay on PCB
M1P		Main water supply pump
M2P	#	Domestic hot water pump
M2S	#	2-way valve for cooling mode
M3S		3-way valve for floor heating/domestic hot water tank
M4S		Bypass valve for gas boiler
PHC1	*	Optocoupler input circuit
PS		Switching power supply
Q*DI	#	Earth leakage circuit breaker
R1T (A1P)		Outlet water heat exchanger thermistor
R1T (A2P)		Ambient sensor user interface
R1T (A3P)	*	Ambient sensor On/OFF thermostat
R2T (A1P)		Outlet gas boiler thermistor
R2T (A4P)	*	External sensor (floor or ambient)
R3T (A1P)		Refrigerant liquid side thermistor
R4T (A1P)		Inlet water thermistor
R5T (A1P)	*	Domestic hot water thermistor
R6T (A1P)	*	External indoor or outdoor ambient thermistor
R1H (A3P)	*	Humidity sensor
S1S	#	Preferential kWh rate power supply contact
S2S	#	Electrical meter pulse input
S3S	#	Gas meter pulse input
S4S	#	Safety thermostat
S6S~S9S	#	Digital power limitation inputs
SS1 (A4P)	*	Selector switch

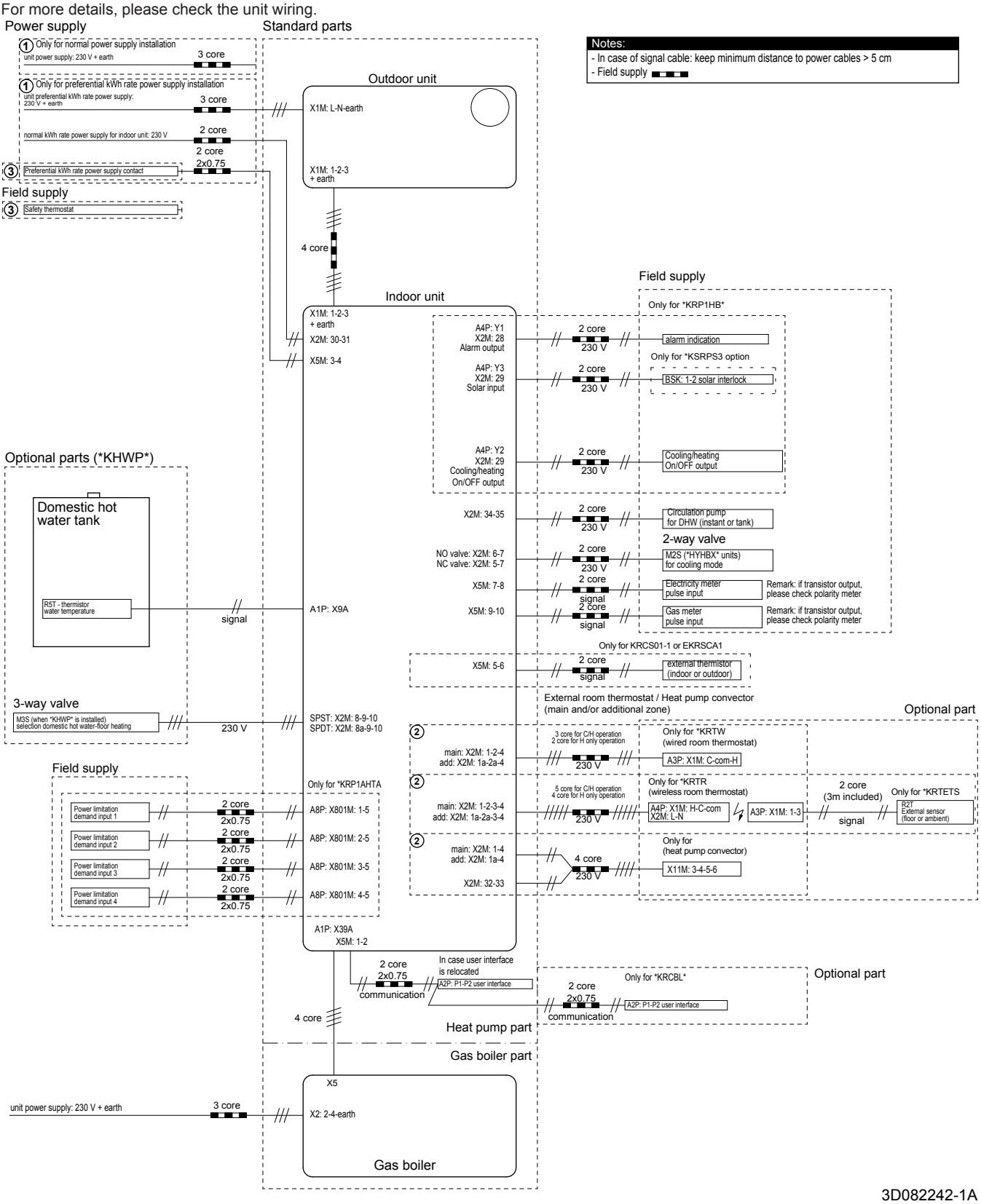
TR1, TR2	Power supply transformer
X*M	Terminal strip
X*Y	Connector
* =	Optional
# =	Field supply

Translation of text on wiring diagram

English	Translation
(1) Main power connection	(1) Main power connection
16 V DC detection (voltage supplied by PCB)	16 V DC detection (voltage supplied by PCB)
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
Use normal kWh rate power supply for indoor unit	Use normal kWh rate power supply for indoor unit
(2) Gas boiler interconnection	(2) Gas boiler interconnection
Gas boiler	Gas boiler
(3) User interface	(3) User interface
Only for remote user interface option	Only for remote user interface option
(4) Domestic hot water tank	(4) Domestic hot water tank
3 wire type SPDT	3 wire type SPDT
3 wire type SPST	3 wire type SPST
(5) Options	(5) Options
230 V AC supplied by PCB	230 V AC supplied by PCB
5 V DC pulse detection (voltage supplied by PCB)	5 V DC pulse detection (voltage supplied by PCB)
Continuous	Continuous current
DHW pump output	Domestic hot water pump output
DHW pump	Domestic hot water pump
Electrical and gas meter	Electrical and gas meter
Ext. thermistor option	External thermistor option
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
(6) Option PCBs	(6) Option PCBs
12 V DC / 12 mA detection (voltage supplied by PCB)	12 V DC / 12 mA detection (voltage supplied by PCB)
Alarm output	Alarm output
Max. load	Maximum load
Min. load	Minimum load
Only for demand PCB option	Only for demand PCB option
Only for solar pump station	Only for solar pump station
Options: solar pump connection, alarm output, On/OFF output	Options: solar pump connection, alarm output, On/OFF output
Refer to operation manual	Refer to operation manual
Solar pump connection	Solar pump connection
Switch box	Switch box
Thermo On/OFF output	Thermo On/OFF output
(7) External room thermostats and heat pump convector	(7) External room 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 thermostat	Only for wired thermostat
Only for wireless thermostat	Only for wireless thermostat

Electrical connection diagram

For more details, please check the unit wiring.



DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

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