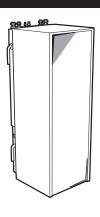


Installation manual

Daikin Altherma – Low temperature split



EHVH04S18CB EHVH08S18CB EHVH08S26CB EHVH11S18CB EHVH11S26CB EHVH16S18CB EHVX04S18CB EHVX08S18CB EHVX08S26CB EHVX11S18CB EHVX11S18CB EHVX11S26CB EHVX116S26CB

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

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DECLARACION-DE-CONFORMIDAD DICHIARAZIONE-DI-CONFORMITA ΔΗΛΩΣΗ ΣΎΜΜΟΡΦΩΣΗΣ

CE - DECLARAÇÃO-DE-CONFORMIDADE CE - 3ARBIEHME-O-COOTBETCTBM CE - OVERENSSTEMMELSESERKLÆRING CE - FÖRSÄKRAN-OM-ÖVERENSTÄMMELSE

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

CE - IZJAVA-O-USKLAĐENOSTI CE - MEGFELELÓSEGI-NYILATKOZAT CE - DEKLARACJA-ZGODNO ŚCI CE - DECLARA ŢIE-DE-CONFORMITATE

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Daikin Europe N.V.

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déclare sous sa seule responsabilité que l'équipement visé par la présente déclaration:

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заявляет, исключительно под свою ответственность, что оборудование, к которому относится настоящее заявление: deklaerear i agenskap av huvudansvaing, att untustingen som berörs av denna dekkaration innebär att. erkære tet littelstrugt ansvar innebærer att. erkerer tet littelstrugt ansvar innebærer att. erkerer tet littelstrugt system innebærer att. erkerer tet stattstanskrivenstamme latteet. erklærer under eneansvarlig, at udstyret, som er omfattet af denne erklæring.

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EHVH04S18CB3V, EHVH08S18CB3V, EHVH08S26CB9W, EHVH11S18CB3V, EHVH11S26CB9W, EHVH16S18CB3V, EHVH16S26CB9W, EHVX04S18CB3V, EHVX08S18CB3V, EHVX08S26CB9W, EHVX11S18CB3V, EHVX11S26CB9W, EHVX16S18CB3V, EHVX16S26CB9W,

are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions: deriden folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entsprichtentsprechen, unter der Voraussetzung, daß sie gemäß. unseren Anweisungen eingesetzt werden 88

conform de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze sont conformes à lafaux norme(s) ou autre(s) document(s) normatif(s), pour autant qu'ils soient utilisés conformément à nos instructions:

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 92

sono conformi ali() seguente(i) standard(s) o altro(i) documento(i) a carattere normativo, a patro che vengano usati in conformità alle nostre istruzioni: είναι σύμφωνα με το(ο) ακόλουθο(ο) πρότυπο(ο) ή άλλο έγγραφο(ο) κανονισμών, υπό την προϋπόθεση ότι χρησιμόποσύνται σύμφωνα με τις οδηγίες μας:

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1 various u kne autorulu va garantaden pa muiden ohjeeli sien dokumentien vaaimulksia edeliytäen, että nitä käyketään ohjeidenme mukaisesti: 14 za pedpokladu, že įsou využivány v soudau si našimi pokony, odpovidaji näsledujicim nomiám nebo nomafinim dokumentium. 15 u skladusa sijededim standardom(ma) ili drugim nomativnim dokumentom(ma), uz uyjet da se oni koriste u skladu s našim uputama:

 slad, uper lodate value fundiqui normativi, pod pogojem, da se uporabigio v sidau z nasimi navoditi.
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megleleinek az alábbi szabkánylok/pak vegy-egyébi tányadó dokumentum(ok)nak, ha azokat előírás szenírt hasznájákk.
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návodom: ūrūnūn, talimatlanmiza göre kullanılması koşuluyla aşağıdaki standarlar ve norm belirten belgelerle uyumludur:

Direktiver, med senere ændringer. Direktiv, med förelagna ändringar. Direktiver, med forelatte endringar. Direktivejä, sellaisina kuin ne ovat muulettuina. irányelv(ek) és módosításaik rendelkezéseit. v platném znění. Smjemice, kako je izmijenjeno. 6 = 5 5 5 5 5 5 01 Directhes, as amended.
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Low Voltage 2014/35/EU

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Electromagnetic Compatibility 2014/30/EU

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z późniejszymi poprawkami. както е изложено в <A> и оценено положително от

Sertifikatą <C> kā norādīts <A> un atbilstoši pozitīvajam vērtējumam ako bolo uvedené v <A> a pozitívne zistené v súlade съгласно **Сертификата <С>** kaip nustatyta **<A>** ir kaip teigiamai nuspręsta **** pagal saskaņā ar sertifikātu <

<A>'da belirtildiği gibi ve <C> Sertifikasına göre tarafından olumlu olarak değerlendirildiği gibi. s osvedčením <C>.

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06 Nota*

11 Information* как указано в «А» и в соответствии с положительным. 14 Poznámka* решением «В» состасно Серджевиньству «С» поятайт «А» од розвит vuderet al «В» i herhold til 15 Napomena* Centifika «С». orno 1 < 4P o Ultipolo em < A> e com o parecer positivo de de acordo com o Certificado <C>. delineato nel <A> e giudicato positivamente da secondo il Certificato <C>. σπυς καθορίζεται στο <A> και κρίνεται θετικά σπυς καθορίζεται στο <A> και κρίνεται θετικά 07 Σημείωση*

10 Bemærk*

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Certifikatet <C>.
som det fremkommer i <A> og gjennom positiv
bedømmelse av figlige Sertifikat <C>.

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DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

Shigeki Morita

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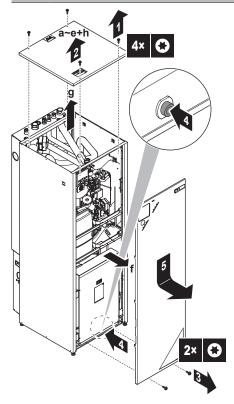
3 Preparation

- 3 Remove the screws at the front of the unit.
- 4 Push on the button on the bottom of the front plate.
- 5 Remove the front plate.

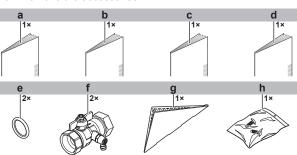


WARNING: Sharp edges

Take the front plate on the upper part instead of the lower part. Watch your fingers, there are sharp edges on the lower part of the front plate.



6 Remove the accessories.



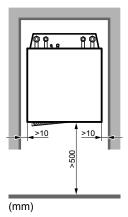
- a General safety precautions
- **b** Addendum book for optional equipment
- c Indoor unit installation manual
- d Operation manual
- e Sealing ring for shut-off valve
 - f Shut-off valve
- g User interface cover
- h 2 screws for fixing the user interface.
- 7 Reinstall the top panel and the front plate.

3 Preparation

3.1 Preparing installation site

3.1.1 Installation site requirements of the indoor unit

• Mind the following spacing installation guidelines:



 The indoor unit is designed for indoor installation only and for ambient temperatures ranging from 5~35°C.

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 10 litre for EHVH/X04+08 and 20 litre for EHVH/X11+16, the internal water volume of the indoor unit NOT included.



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.



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/operation).

See the installer reference guide for more information.

Minimum required flow rate duroperation	ring defrost/backup heater		
04+08 models	12 l/min		
11+16 models	15 l/min		

See the recommended procedure as described in "6.2 Checklist during commissioning" on page 19.

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					

Item	Description	Wires	Maximum running current
1	Power supply for outdoor unit	2+GND or 3+GND	(a)
2	Power supply and interconnection cable to indoor unit	3	(c)
3	Power supply for backup heater	See table below.	_
4	Preferential kWh rate power supply (voltage free contact)	2	(d)
5	Normal kWh rate power supply	2	6.3 A
User inte	rface		
6	User interface	2	(e)
Optional	equipment		
11	Power supply for bottom plate heater	2	(b)
12	Room thermostat	3 or 4	100 mA ^(b)
13	Outdoor ambient temperature sensor	2	(b)
15	Heat pump convector	4	100 mA ^(b)
Field sup	plied components		
16	Shut-off valve	2	100 mA ^(b)
17	Electricity meter	2 (per meter)	(b)
18	Domestic hot water pump	2	(b)
19	Alarm output	2	(b)
20	Changeover to external heat source control	2	(b)
21	Space cool/heat operation control	2	(b)
22	Power consumption digital inputs	2 (per input signal)	(b)
23	Safety thermostat	2	(d)

- (a) Refer to name plate on outdoor unit.
- (b) Minimum cable section 0.75 mm².
- (c) Cable section 2.5 mm².
- (d) 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.
- (e) Cable section 0.75 mm² till 1.25 mm²; maximum length: 500 m. Applicable for both single user interface and dual user interface connection.



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
*3V	1× 230 V	2+GND
*9W	1× 230 V	2+GND + 2 bridges
	3× 230 V	3+GND + 1 bridge
	3× 400 V	4+GND

4 Installation

4.1 Opening the units

4.1.1 To open the indoor unit

- 1 Loosen and remove the screws at the bottom of the unit.
- 2 Push on the button at the bottom of the front plate.



WARNING: Sharp edges

Take the front plate on the upper part instead of the lower part. Watch your fingers, there are sharp edges on the lower part of the front plate.

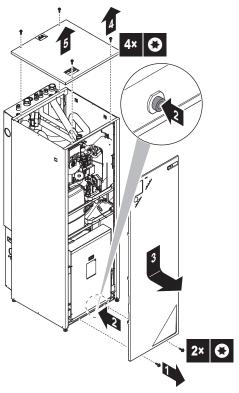
3 Slide the front panel of the unit downwards and remove it.



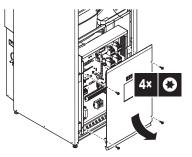
CAUTION

The front panel is heavy. Be careful NOT to jam your fingers when opening or closing the unit.

- 4 Loosen and remove the 4 screws that fix the top panel.
- 5 Remove the top panel from the unit.



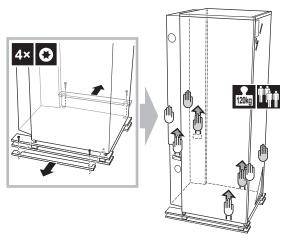
4.1.2 To open the switch box cover of the indoor unit



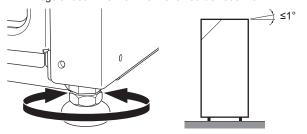
4.2 Mounting the indoor unit

4.2.1 To install the indoor unit

1 Lift the indoor unit from the pallet and place it on the floor.



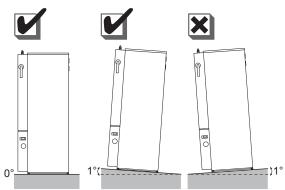
- 2 Slide the indoor unit into position.
- 3 Adjust the height of the leveling feet to compensate for floor irregularities. The maximum allowed deviation is 1°.





NOTICE

Do NOT tilt the unit backwards:

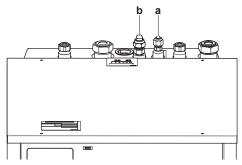


4.3 Connecting the refrigerant piping

See the outdoor unit installation manual 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.



- 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 the water piping

4.4.1 To connect the water piping

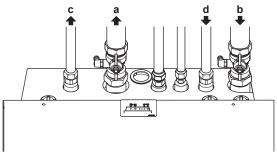


NOTICE

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 are provided. Mount these valves on the space heating water inlet and space heating water outlet. Mind their position. The orientation of the integrated drain and fill valves is important for servicing.

1 Install the shut-off valves on the space heating water pipes.



- 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.

- 2 Screw the indoor unit nuts on the shut-off valves.
- 3 Connect the domestic hot water in and out pipes to the indoor unit.



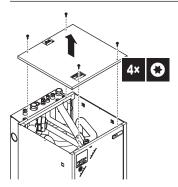
NOTICE

Install air purge valves at all local high points.

4.4.2 To connect the recirculation piping

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

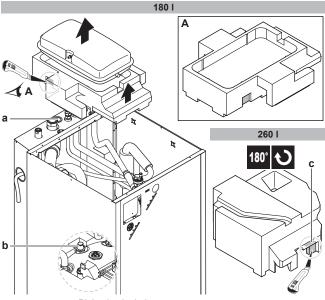
- 1 Loosen and remove the 4 screws that fix the top panel.
- 2 Remove the top panel from the unit.



- 3 In case of a unit with a tank capacity of 180 I, remove the expansion vessel.
- 4 Remove the top insulation.
- 5 Cut out part (c) from the top insulation.

Tank capacity	Cut out position
180 I	Left OR right
260 I	Backside

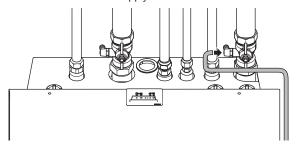
6 Connect the recirculation piping to the recirculation connection (b) and route the piping through the hole at the backside of the unit (a).



- a Piping intake hole
- **b** Recirculation connection
- c Cut-out location
- 7 Reattach the top insulation, expansion vessel (in case of a unit with a tank capacity of 180 l), and casing.

4.4.3 To fill the water circuit

1 Connect the water supply hose to the fill valve.



- 2 Open the fill valve.
- **3** Make sure that the automatic air purge valve is open (at least 2 turns).

- 4 Fill the circuit with water until the manometer indicates a pressure of ±2.0 bar.
- 5 Purge as much air as possible from the water circuit.
- 6 Close the fill valve.
- 7 Disconnect the water supply hose from the fill valve.

4.4.4 To fill the domestic hot water tank

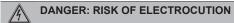
- Open every hot water tap in turn to purge air from the system pipe work.
- 2 Open the cold water supply valve.
- 3 Close all water taps after all air is purged.
- 4 Check for water leaks
- **5** Manually operate the field-installed pressure relief valve to ensure a free water flow through the discharge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

4.4.5 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





WARNING

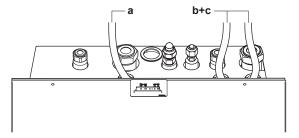
ALWAYS use multicore cable for power supply cables.

4.5.1 About electrical compliance

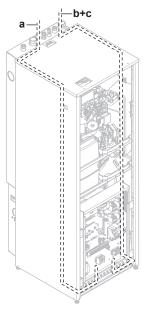
See "4.5.4 To connect the backup heater power supply" on page 9.

4.5.2 To connect the electrical wiring on the indoor unit

- 1 To open the indoor unit, see "4.1.1 To open the indoor unit" on page 5 and "4.1.2 To open the switch box cover of the indoor unit" on page 5.
- 2 Wiring should enter the unit from the top:



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



4 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.



INFORMATION

To access the domestic hot water temperature sensor, the switch box can be tilted. The switch box should NOT be removed from the unit.

Routing	Possible cables (depending on unit type and installed options)	
а	Preferential power supply contact	
Low voltage	User interface	
	Power consumption digital inputs (field supply)	
	Outdoor ambient temperature sensor (option)	
	Indoor ambient temperature sensor (option)	
	Electrical meters (field supply)	
	Safety thermostat (field supply)	
b	Interconnection cable	
High voltage power supply	Normal kWh rate power supply	
	Preferential kWh rate power supply	
	Power supply for backup heater	
	Power supply for bottom plate heater (option)	
С	Heat pump convector (option)	
High voltage control signal	Room thermostat (option)	
	Shut-off valve (field supply)	
	Domestic hot water pump (field supply)	
	Alarm output	
	Changeover to external heat source control	
	Space cool/heat operation control	



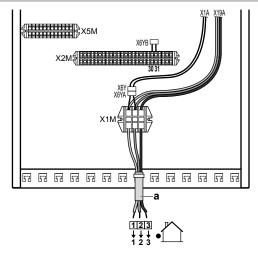
CAUTION

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

4.5.3 To connect the main power supply

1 Connect the main power supply.

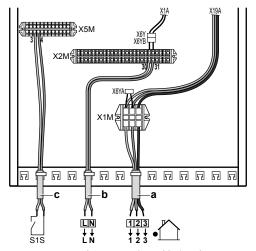
In case of normal kWh rate power supply



Legend: see illustration below.

In case of preferential kWh rate power supply

Connect X6Y to X6YB.



- Interconnection cable (=main power supply)
- h
- Normal kWh rate power supply Preferential power supply contact С
- 2 Fix the cable with cable ties to the cable tie mountings.



INFORMATION

In case of preferential kWh rate power supply, connect X6Y to X6YB. The necessity of separate normal kWh rate power supply to indoor unit (b) X2M30/31 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/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.

4.5.4 To connect the backup heater power



CAUTION

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

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	$Z_{max}(\Omega)$
*3V	3 kW	1~ 230 V	13 A	_
*9W	3 kW	1~ 230 V	13 A	_
	6 kW	1~ 230 V	26 A ^{(a)(b)}	_
	6 kW	3~ 230 V	15 A	_
	6 kW	3N~ 400 V	8.6 A	_
	9 kW	3N~ 400 V	13 A	_

- (a) 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.).
- (b) 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_{sys} is less than or equal to Z_{max} 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 only to a supply with a system impedance $Z_{\mbox{\tiny sys}}$ less than or equal to
- 1 Connect the backup heater power supply. For *3V models, a double-pole fuse is used for F1B. For *9W models, a 4-pole fuse is used for F1B.
- 2 If required, modify the connections on terminals X6M and X7M.

Bashum hastan Cannastiana ta Cannastiana ta					
Backup heater type	Connections to backup heater power supply	Connections to terminals			
3 kW 1~ 230 V (*3V)	## F1B ### ### ### ########################				
3 kW 1~ 230 V (*9W)	F1B	X6M X7M			
6 kW 1~ 230 V (*9W)		X6M X7M			
6 kW 3~ 230 V (*9W)	F1B F1B F1B F1B F1B F1B F1B F1B F1B F1B	X6M X7M 1 2 3 4 5 6 7 8			
6 kW 3N~ 400 V (*9W) 9 kW 3N~ 400 V (*9W)	F1B	X6M X7M 5 6 7 8			

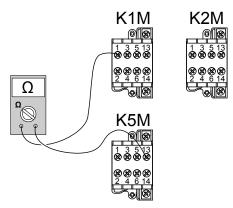
- Fix the cable with cable ties to the cable tie mountings.
- Configure the user interface for the respective power supply. See "5.2.2 Quick wizard: Standard" on page 14.

4 Installation

During connection of the backup heater, miswiring is possible. To detect possible miswiring, it is highly recommended to measure the resistance value of the heater elements. Depending on the different backup heater types, following resistance values (see table below) should be measured. ALWAYS measure the resistance on the contactor clamps K1M, K2M, and K5M.

		3 kW	6 kW	6 kW	6 kW	9 kW
		1~ 230 V	1~ 230 V	3~ 230 V	3N~ 400 V	3N~ 400 V
K1M/1	K5M/13	52.9Ω	52.9Ω	52.9Ω	∞	∞
	K1M/3	∞	∞	∞	105.8Ω	105.8Ω
	K1M/5	∞	8	∞	105.8Ω	105.8Ω
K1M/3	K1M/5	26.5Ω	26.5Ω	26.5Ω	105.8Ω	105.8Ω
K2M/1	K5M/13	∞	26.5Ω	26.5Ω	∞	∞
	K2M/3	∞	∞	∞	52.9Ω	52.9Ω
	K2M/5	∞	∞	∞	52.9Ω	52.9Ω
K2M/3	K2M/5	52.9Ω	52.9Ω	52.9Ω	52.9Ω	52.9Ω
K1M/5	K2M/1	∞	∞	∞	∞	∞

Example measure resistance between K1M/1 and K5M/13:



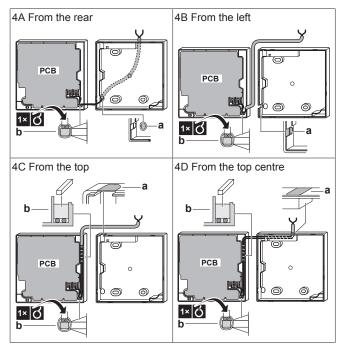
4.5.5 To connect the user interface

- . 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).

The procedure differs slightly depending on where you install the user interface.

#	At the indoor unit	In the room		
1	Connect the user interface cable to the	e indoor unit.		
	Fix the cable with cable ties to the cable tie mountings.			
	2 2 2 3 3 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3			
	A2P A2P			
	a			
	a Main user interfac	e ^(a)		
	b Optional user inter			
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	Use the 2 screws in the accessory bag to fix the wallplate of the user interface to the sheet metal of the unit. Fix the wallplate of the user interface to the wall.			
	Be careful NOT to distort the shape of the backside of the user interface by overtightening the mounting screws			
	<u> </u>			
4	Connect as shown in 4A.	Connect as shown in 4A, 4B, 4C or 4D.		
5	Reinstall the faceplate onto the wallpla			
	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).



- 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.

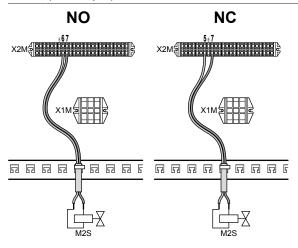
4.5.6 To connect the shut-off valve

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



NOTICE

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



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

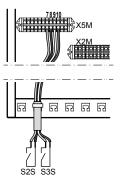
4.5.7 To connect the electrical meters



INFORMATION

In case of an electrical meter with transistor output, check the polarity. The positive polarity MUST be connected to X5M/7 and X5M/9; the negative polarity to X5M/8 and X5M/10.

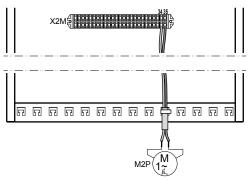
1 Connect the electrical meters cable to the appropriate terminals as shown in the illustration below.



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

4.5.8 To connect the domestic hot water pump

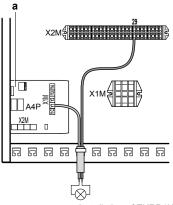
1 Connect the domestic hot water pump cable to the appropriate terminals as shown in the illustration below.



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

4.5.9 To connect the alarm output

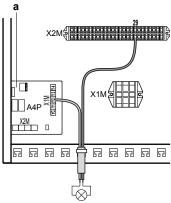
1 Connect the alarm output cable to the appropriate terminals as shown in the illustration below.



- a Installation of EKRP1HB is required.
- 2 Fix the cable with cable ties to the cable tie mountings.

4.5.10 To connect the space cooling/heating ON/ OFF output

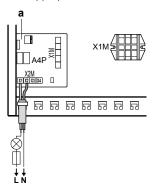
1 Connect the space cooling/heating ON/OFF output cable to the appropriate terminals as shown in the illustration below.



- a Installation of EKRP1HB is required
- 2 Fix the cable with cable ties to the cable tie mountings.

4.5.11 To connect the changeover to external heat source

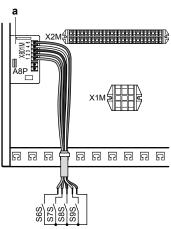
1 Connect the changeover to external heat source cable to the appropriate terminals as shown in the illustration below.



- a Installation of EKRP1HB is required.
- 2 Fix the cable with cable ties to the cable tie mountings.

4.5.12 To connect the power consumption digital inputs

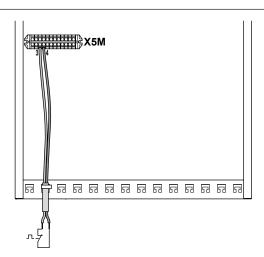
1 Connect the power consumption digital inputs cable to the appropriate terminals as shown in the illustration below.



- a Installation of EKRP1AHTA is required
- 2 Fix the cable with cable ties to the cable tie mountings.

4.5.13 To connect the safety thermostat (normal closed contact)

1 Connect the safety thermostat (normal 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, it is recommended that ...

- ... 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

After it is installed, do NOT forget to configure the safety thermostat. Without configuration, the indoor unit will ignore the safety thermostat contact.



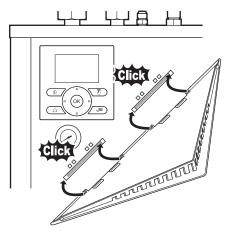
INFORMATION

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 fix the user interface cover to the indoor unit

- Make sure that the front panel is removed from the indoor unit. See "4.1.1 To open the indoor unit" on page 5.
- 2 Plug the user interface cover into the hinges.



3 Mount the front panel to the indoor unit.

4.6.2 To close the indoor unit

- 1 Close the switch box cover.
- 2 Reinstall the top plate.
- 3 Reinstall the front 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

The explanation about the configuration in this chapter gives you ONLY basic explanations. 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.	#
Accessing settings via the code in the overview settings.	Code

See also:

- "To access the installer settings" on page 13
- "5.3 Menu structure: Overview installer settings" on page 18

5.1.1 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]: <a> > Installer settings > Overview settings.

To set the user permission level to Installer

- 1 Set the user permission level to Adv. end user.
- **2** Go to [6.4]: \blacksquare > Information > User permission level.
- 3 Press for more than 4 seconds.

Result: \mathscr{I} is displayed on the home pages.

4 If you do NOT press any button for more than 1 hour or press again for more than 4 seconds, the installer permission level switches back to End user.

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: The user permission level switches to Adv. end user. Additional information is displayed and "+" is added to the menu title. The user permission level will stay in Adv. end user until set otherwise.

To set the user permission level to End user

1 Press for more than 4 seconds.

Result: The user permission level switches to End user. The user interface will return to the default home screen.

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 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 "01".

	Overview settings				
		0	1		
00	00 01 15 02 03				
04	04 05 06 07				
08	09		0a	0b	
0c	0d		0e	Of	
OK Confi	m	♣Ad	ljust	Scroll	

3 Go to the corresponding second part of the setting by using the and button.

5 Configuration

	Overview settings					
		0	1			
00	00 01 15 02 03					
04	04 05 06 07					
08	09		0a	0b		
Oc Od Oe Of						
OK Confirm		♦ Ad	just	♦ Scroll		

Result: The value to be modified is now highlighted.

4 Modify the value by using the ☐ and ☐ button.

	Overview settings					
	01					
00	00 01 20 02 03					
04	04 05 06 07					
08	09		0a	0b		
0c	0d		0e	Of		
OK Confirm						

- 5 Repeat previous steps if you have to modify other settings.
- 6 Push ox to confirm the modification of the parameter.
- 7 At installer settings menu, press ox to confirm the settings.



Result: The system will restart.

5.2 Basic configuration

5.2.1 Quick wizard: Language / time and date

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

5.2.2 Quick wizard: Standard

Backup heater configuration (only for *9W model)

#	Code	Description
[A.2.1.5]	[5-0D]	BUH type:
		• 1 (1P,(1/1+2)): 6 kW 1~ 230 V (*9W)
		• 3 (3P,(1/1+2)): 6 kW 3~ 230 V (*9W)
		• 4 (3PN,(1/2)): 6 kW 3N~ 400 V (*9W)
		• 5 (3PN,(1/1+2)): 9 kW 3N~ 400 V (*9W)

Backup heater relay setting

Relay setting	Backup heater operation		
	If backup heater step 1 is active:	If backup heater step 2 is active:	
1/1+2	Relay 1 ON	Relays 1+2 ON	
1/2	Relay 1 ON	Relay 2 ON	

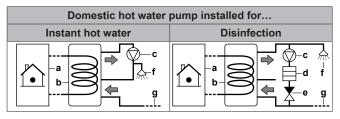
Space heating/cooling settings

#	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:
		O (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.

5.2.3 Quick wizard: Options

Domestic hot water settings

#	Code	Description
[A.2.2.1]	[E-05]	DHW operation:
		Can the system prepare domestic hot water?
		0 (No): NOT installed
		1 (Yes): Installed
[A.2.2.3]	[E-07]	DHW tank type:
		0 (Type 1): Tank with booster heater installed at the side of the tank. Default for EHBH/X.
		1 (Type 2): Default for EHVH/X. The backup heater will also be used for domestic hot water heating.
		Range: 0~6. However, values 2~6 are not applicable for this setting. If the setting is set to 6, an error code will appear and the system will NOT operate.
[A.2.2.A]	[D-02]	Domestic hot water pump:
		0 (No): NOT installed
		1 (Secondary rtrn): Installed for instant hot water
		2 (Disinf. shunt): Installed for disinfection
		See also illustrations below.



- Indoor unit
- b
- Tank
 Domestic hot water pump С
- d Heater element
- Non-return valve
- Shower
- Cold water

Thermostats and external sensors



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 the leaving water temperature control on the unit's user interface is turned ON.

#	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.2.2.6.1]	[C-02]	External backup heater source:
		• 0 (No): None
		1 (Bivalent): Gas, oil boiler
		- 2: N/A
		- 3: N/A

#	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 EKRP1HB 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).
[A.2.2.6.4]	[F-04]	Bottom plate heater
		0 (No): NOT installed
		1 (Yes): Installed

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
		Only applicable for EHBH/X04+08 and EHVH/X04+08. 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.2.2.9]	[D-09]	Optional external kWh meter 2:
		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)

5.2.4 **Quick wizard: Capacities (energy** metering)

#	Code	Description
[A.2.3.1]	[6-02]	Booster heater capacity [kW]

5 Configuration

#	Code	Description
[A.2.3.6]	[6-07]	Bottom plate heater capacity [W]

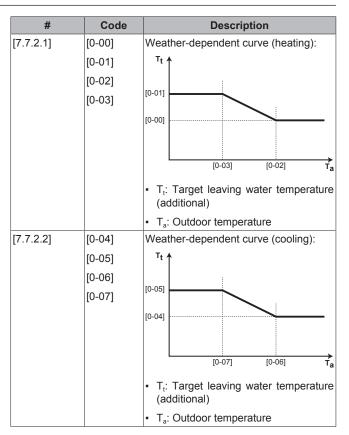
5.2.5 Space heating/cooling control

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]	Weather-dependent curve (heating):
	[1-01] [1-02] [1-03]	[1-02] [1-03] T _i : Target leaving water temperature (main) T _a : Outdoor temperature
[7.7.1.2]	[1-06]	Weather-dependent curve (cooling):
	[1-07] [1-08] [1-09]	[1-08] [1-09] T ₁ : Target leaving water temperature (main) T _a : Outdoor temperature

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)



Leaving water temperature: Delta T source

#	Code	Description
[A.3.1.3.1]	[9-09]	Heating: required temperature difference between entering and leaving water.
		In case a minimum temperature difference is required for the good operation of the heat emitters in heating mode.
[A.3.1.3.2]	[9-0A]	Cooling: required temperature difference between entering and leaving water.
		In case a minimum temperature difference is required for the good operation of the heat emitters in cooling mode.

Leaving water temperature: Modulation

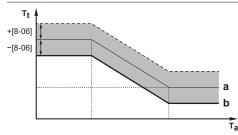
#	Code	Description
[A.3.1.1.5]	[8-05]	Leaving water temperature modulation:
		0 (No): Disabled
		1 (Yes): Enabled. The leaving water temperature is calculated according to the difference between desired and actual room temperature. This allows better matching of the heat pump capacity to actual required capacity and results in less start/stop cycles of the heat pump and more economic operation.

#	Code	Description
N/A	[8-06]	Leaving water temperature maximum modulation:
		0°C~10°C (default: 3°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. Refer to 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]	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.

5.2.6 Domestic hot water control

#	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.



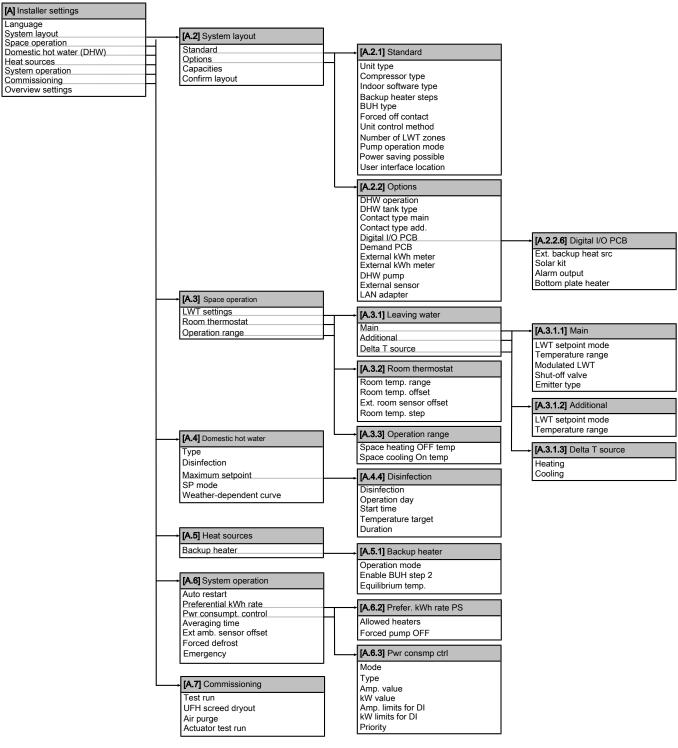
INFORMATION

There is a risk of space heating (cooling) capacity shortage/comfort problem (in case of frequent domestic hot water operation, frequent and long space heating/cooling interruption will happen) when selecting [6-0D]=0 ([A.4.1] Domestic hot water Type=Reheat only) in case of a domestic hot water tank without an internal booster heater.

5.2.7 Contact/helpdesk number

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

5.3 Menu structure: Overview installer settings





INFORMATION

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

Commissioning



NOTICE

NEVER operate the unit without thermistors and/or pressure sensors/switches. Burning of the compressor might result.

6.1 Checklist before commissioning

Do NOT operate the system before the following checks are OK: You read the complete installation instructions, as described in the installer reference guide. The indoor unit is properly mounted. П The outdoor unit is properly mounted. П The following field wiring has been carried out according П 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 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 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 П pipes on the inside of the indoor and outdoor units. Depending on the backup heater type, backup heater circuit breaker F1B on the switch box is turned ON. Only for tanks with built-in booster heater: The booster heater circuit breaker F2B on the switch box is turned ON. There are NO refrigerant leaks. П The refrigerant pipes (gas and liquid) are thermally The correct pipe size is installed and the pipes are properly insulated. There is NO water leak inside the indoor unit. П The **shut-off valves** are properly installed and fully open. The stop valves (gas and liquid) on the outdoor unit are fully open The air purge valve is open (at least 2 turns). П The pressure relief valve purges water when opened.

The minimum water volume is guaranteed in all conditions. See "To check the water volume" "3.2 Preparing water piping" on page 4.



INFORMATION

The software is equipped with an "installer-on-site" mode ([4-0E]), that disables automatic operation by the unit. At first installation, setting [4-0E] is by default set to "1", meaning automatic operation is disabled. All protective functions are then disabled. If the user interface home pages are off, the unit will NOT operate automatically. To enable automatic operation and the protective functions, set [4-0E] to "0".

36 hours after the first power-on, the unit will automatically set [4-0E] to "0", ending "installer-on-site" mode and enabling the protective functions. If - after first installation - the installer returns to the site, the installer has to set [4-0E] to "1" manually.

6.2 Checklist during commissioning

The minimum flow rate during backup heater/defrost operation is guaranteed in all conditions. See "To check the water volume and flow rate" in "3.2 Preparing water	
piping" on page 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).	

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
- Start the pump test run operation (see "6.2.4 To perform an actuator test run" on page 20).
- 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 during defrost/backup heater operation		
04+08 models	12 l/min	
11+16 models	15 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.
- Set the type.
- 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 .

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" on page 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 .



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

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" on page 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.
- 4 Select an actuator and press . Example: Pump.
- 5 Select OK and press .

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

Possible actuator test runs

- Backup heater (step 1) test
- Backup heater (step 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.

Solar pump test

- 2-way valve test
- 3-way valve test
- Bottom plate heater test
- Bivalent signal test
- · Alarm output test
- · Cooling/heating signal test
- Quick heat-up test
- · Circulation pump test

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 .



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 "Checklist before 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:

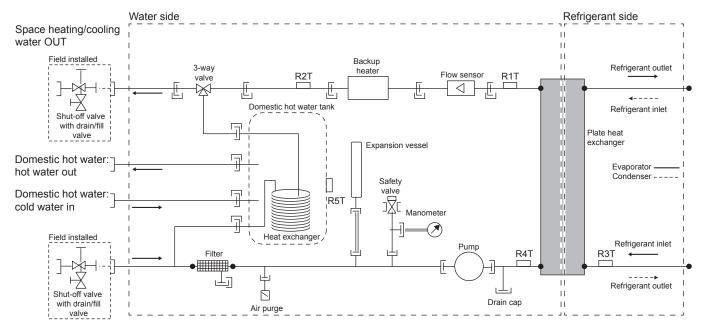
- Fill in the installer setting table (in the operation manual) with the actual settings.
- Make sure that the user has the printed documentation and ask him/her to keep it for future reference. Inform the user that he can find the complete documentation on the url as earlier described in this manual.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

 Explain the user about energy saving tips as described in the operation manual.

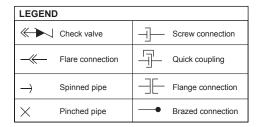
8 Technical data

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 extranet (authentication required).

8.1 Piping diagram: Indoor unit



Space heating/cooling water IN



Thermistor	Description
R5T	Tank thermistor
R4T	Inlet water thermistor
R3T	Refrigerant liquid side thermistor
R2T	Outlet water backup heater thermistor
R1T	Outlet water heat exchanger thermistor
•	

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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	Notes to go through before		
starting the unit	starting the unit		
X1M	Main terminal		
X2M	Field wiring terminal for AC		
X5M	Field wiring terminal for DC		
X6M, X7M	Backup heater terminal		
X4M	Booster heater terminal		
	Earth wiring		
15	Wire number 15		
	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		
Backup heater configuration	Backup heater configuration		
(only for *9W)	(only for *9W)		
□ 3V3 (1N~, 230 V, 3 kW)	□ 3V3 (1N~, 230 V, 3 kW)		
□ 6V3 (1N~, 230 V, 6 kW)	□ 6V3 (1N~, 230 V, 6 kW)		
□ 6WN (3N~, 400 V, 6 kW)	□ 6WN (3N~, 400 V, 6 kW)		
□ 9WN (3N~, 400 V, 9 kW)	□ 9WN (3N~, 400 V, 9 kW)		
□ 6T1 (3~, 230 V, 6 kW)	□ 6T1 (3~, 230 V, 6 kW)		
User installed options	User installed options		
☐ Bottom plate heater	☐ Bottom plate heater		
☐ 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		
☐ Solar pump and control station	☐ Solar pump and control station		
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 how			

Position in switch box

English	Translation
Position in switch box	Position in switch box

Legend

9		
A1P		Main PCB
A2P		User interface PCB
A3P	*	Solar pump station PCB
A3P	*	On/OFF thermostat (PC=power circuit)
A3P	*	Heat pump convector
A4P	*	Digital I/O PCB
A4P	*	Receiver PCB (Wireless On/OFF thermostat)
A5P		Anode driver PCB
A8P	*	Demand PCB
B1L		Flow sensor
BSK (A3P)	*	Solar pump station relay
DS1 (A8P)	*	DIP switch
E1A		Electrical anode
E1H		Backup heater element (1 kW)
E2H		Backup heater element (2 kW)
E3H		Backup heater element (3 kW)
E4H	*	Booster heater (3 kW)
F1B		Overcurrent fuse backup heater
F2B	*	Overcurrent fuse booster heater
F1T		Thermal fuse backup heater
F1U, F2U (A4P)	*	Fuse 5 A 250 V for digital I/O PCB
FU1 (A1P)		Fuse T 6.3 A 250 V for PCB
K1M, K2M		Contactor backup heater
K3M	*	Contactor booster heater
K5M		Safety contactor backup heater (only for *9W)
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 floor heating/domestic hot water
PC (A4P)		Power circuit
PHC1 (A4P)	*	Optocoupler input circuit
Q*DI	#	Earth leakage circuit breaker
Q1L		Thermal protector backup heater
Q2L	*	Thermal protector booster heater
R1H (A3P)	*	Humidity sensor
R1T (A1P)		Outlet water heat exchanger thermistor
R1T (A2P)		Ambient sensor user interface
R1T (A3P)	*	Ambient sensor On/OFF thermostat
R2T (A1P)		Outlet backup heater thermistor
R2T (A3P)	*	External sensor (floor or ambient)
R3T		Refrigerant liquid side thermistor
R4T		Inlet water thermistor
R5T	(*)	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

S4S Safety thermostat

S6S~S9S # Digital power limitation inputs

SS1 (A4P) Selector switch

TR1 Power supply transformer

CN1-2, X*A Connector

X1H, X*Y

X*M Terminal strip

Optional Standard for EHVH/X, optional for EHBH/X Field supply

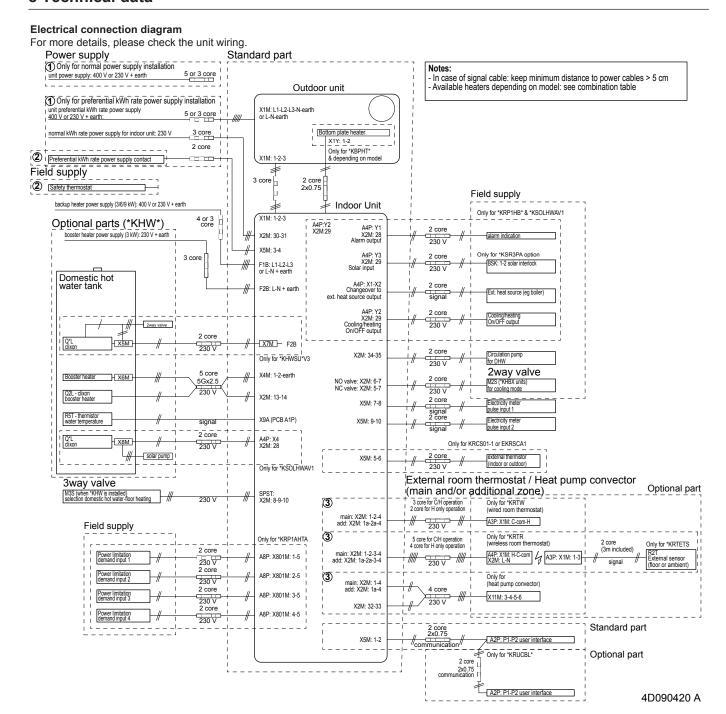
Colours

 BLK Black BRN Brown GRY Grey RED Red

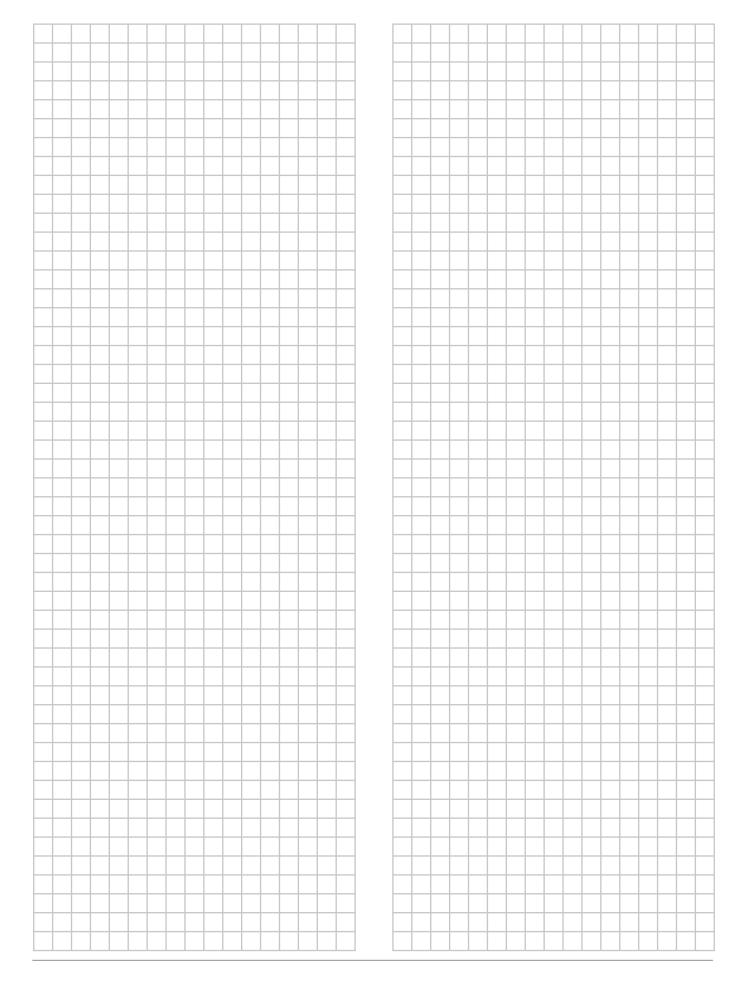
Translation of text on wiring diagram

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)
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 remote user interface option	Only for remote user interface option
Switch box	Switch box
(4) Domestic hot water tanks	(4) Domestic hot water tanks
3 wire type SPST	3 wire type SPST
Booster heater power supply	Booster heater power supply
Only for ***	Only for ***
Only for wall-mounted models	Only for wall-mounted models
Switch box	Switch box
(5) Ext. thermistor	(5) External thermistor
Switch box	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)

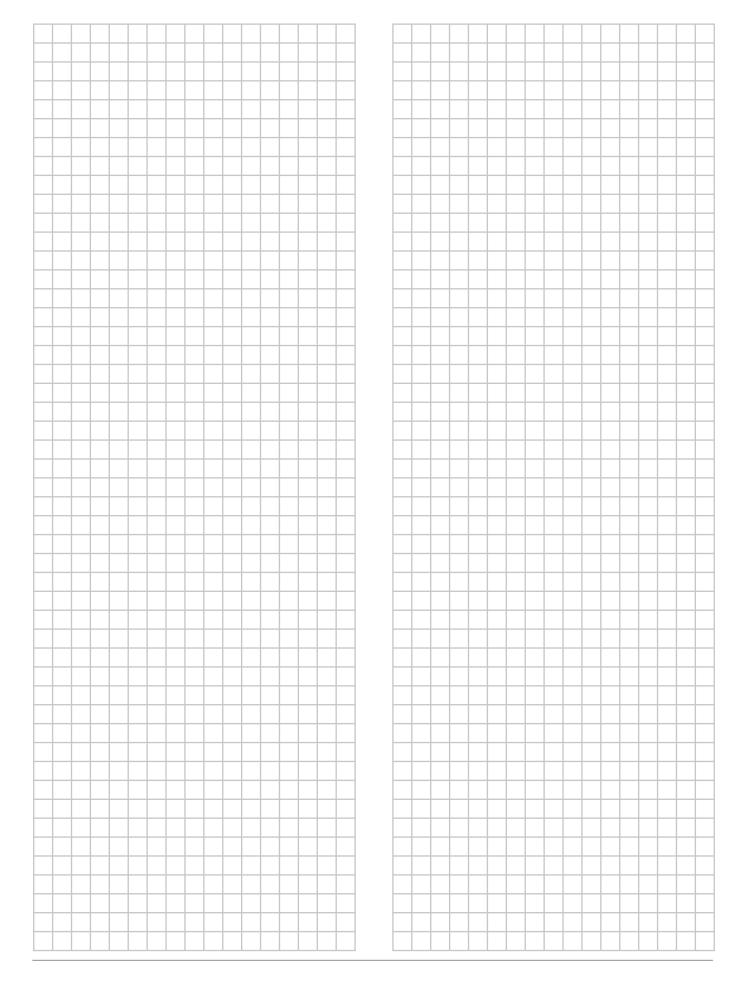
English	Translation
230 V AC supplied by PCB	230 V AC supplied by PCB
Continuous	Continuous current
DHW pump output	Domestic hot water pump output
DHW pump	Domestic hot water pump
Electrical meters	Electrical meters
For safety thermostat	For safety thermostat
Inrush	Inrush current
Max. load	Maximum load
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
If no bottom plate heater	If no bottom plate heater
Max. load	Maximum load
Min. load	Minimum load
Only for bottom plate heater	Only for bottom plate heater
Only for demand PCB option	Only for demand PCB option
Only for digital I/O PCB option	Only for digital I/O PCB option
Only for solar pump station	Only for solar pump station
Options: bottom plate heater OR On/OFF output	Options: bottom plate heater OR On/OFF output
Options: ext. heat source output, solar pump connection, alarm output	Options: external heat source output, solar pump connection, alarm output
Outdoor unit	Outdoor unit
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)
Refer to operation manual	Refer to operation manual
Solar pump connection	Solar pump connection
Space C/H On/OFF output	Space cooling/heating On/OFF output
Switch box	Switch box
To bottom plate heater	To bottom plate heater
(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/	Only for external sensor (floor or
ambient)	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



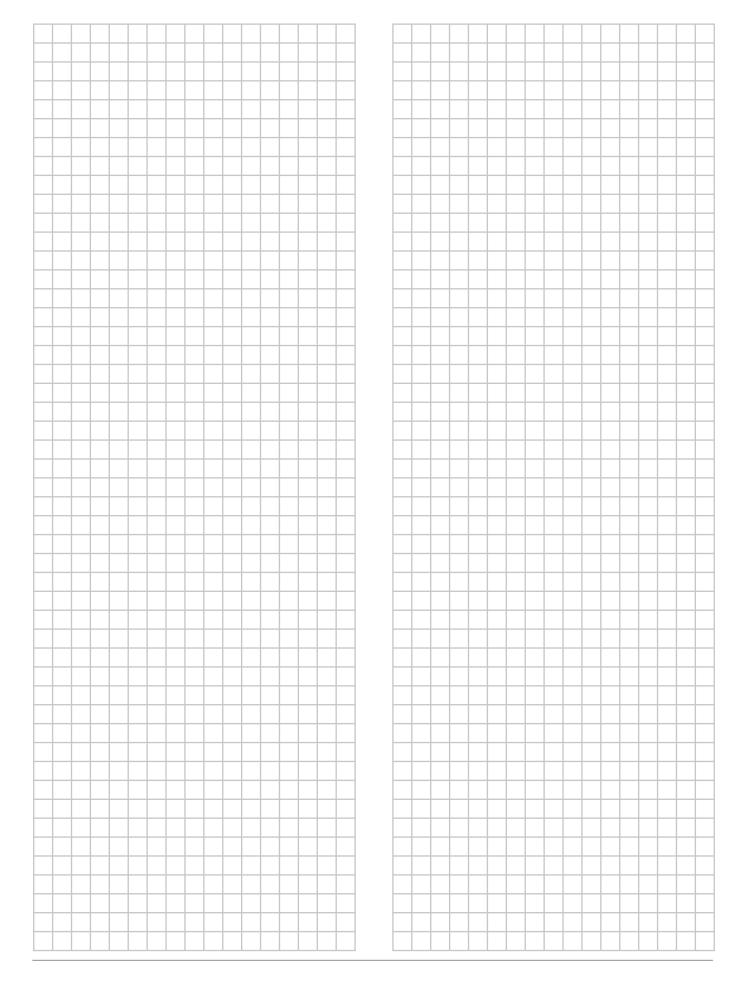












EHE

