

# ■ Operating and installation instructions

REMKO SC-1 Smart-Com

For the room air conditioner BL, ML, MVV, MXD, MXT, MXW, RVD, RVT, RWT and RXT



Manual for experienced specialists



**Read these operating instructions carefully before commissioning / using this device!**

**These instructions are an integral part of the system and must always be kept near or on the device.**

Subject to modifications; No liability accepted for errors or misprints!

**Translation of the original**

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# REMKO SC-1 Smart-Com

## 1 Safety and usage instructions

### 1.1 General safety notes

Carefully read the operating manual before commissioning the units for the first time. It contains useful tips and notes such as hazard warnings to prevent personal injury and material damage. Failure to follow the directions in this manual not only presents a danger to people, the environment and the system itself, but will void any claims for liability.

Keep this operating manual and the refrigerant data sheet near to the units.

### 1.2 Identification of notes

This section provides an overview of all important safety aspects for proper protection of people and safe and fault-free operation. The instructions and safety notes contained within this manual must be observed in order to prevent accidents, personal injury and material damage.

Notes attached directly to the units must be observed in their entirety and be kept in a fully legible condition.

Safety notes in this manual are indicated by symbols. Safety notes are introduced with signal words which help to highlight the magnitude of the danger in question.

#### **DANGER!**

Contact with live parts poses an immediate danger of death due to electric shock. Damage to the insulation or individual components may pose a danger of death.

#### **DANGER!**

This combination of symbol and signal word warns of a situation in which there is immediate danger, which if not avoided may be fatal or cause serious injury.

#### **WARNING!**

This combination of symbol and signal word warns of a potentially hazardous situation, which if not avoided may be fatal or cause serious injury.

#### **CAUTION!**

This combination of symbol and signal word warns of a potentially hazardous situation, which if not avoided may cause injury or material and environmental damage.

#### **NOTICE!**

This combination of symbol and signal word warns of a potentially hazardous situation, which if not avoided may cause material and environmental damage.



*This symbol highlights useful tips and recommendations as well as information for efficient and fault-free operation.*

### 1.3 Personnel qualifications

Personnel responsible for commissioning, operation, maintenance, inspection and installation must be able to demonstrate that they hold a qualification which proves their ability to undertake the work.

### 1.4 Dangers of failure to observe the safety notes

Failure to observe the safety notes may pose a risk to people, the environment and the units. Failure to observe the safety notes may void any claims for damages.

In particular, failure to observe the safety notes may pose the following risks:

- The failure of important unit functions.
- The failure of prescribed methods of maintenance and repair.
- Danger to people on account of electrical and mechanical effects.

### 1.5 Safety-conscious working

The safety notes contained in this manual, the existing national regulations concerning accident prevention as well as any internal company working, operating and safety regulations must be observed.

## 1.6 Safety notes for the operator

The operational safety of the units and components is only assured providing they are used as intended and in a fully assembled state.

- The units and components may only be set up, installed and maintained by qualified personnel.
- Protective covers (grille) over moving parts must not be removed from units that are in operation.
- Do not operate units or components with obvious defects or signs of damage.
- Contact with certain unit parts or components may lead to burns or injury.
- The units and components must not be exposed to any mechanical load, extreme levels of humidity or extreme temperature.
- Spaces in which refrigerant can leak sufficient to load and vent. Otherwise there is danger of suffocation.
- All housing parts and device openings, e.g. air inlets and outlets, must be free from foreign objects, fluids or gases.
- The units must be inspected by a service technician at least once annually. Visual inspections and cleaning may be performed by the operator when the units are disconnected from the mains.

## 1.7 Safety notes for installation, maintenance and inspection

- Appropriate hazard prevention measures must be taken to prevent risks to people when performing installation, repair, maintenance or cleaning work on the units.
- The setup, connection and operation of the units and its components must be undertaken in accordance with the usage and operating conditions stipulated in this manual and comply with all applicable regional regulations.
- Local regulations and laws such as Water Ecology Act must be observed.
- The power supply should be adapted to the requirements of the units.
- Units may only be mounted at the points provided for this purpose at the factory. The units may only be secured or mounted on stable structures, walls or floors.
- Mobile units must be set up securely on suitable surfaces and in an upright position. Stationary units must be permanently installed for operation.
- The units and components should not be operated in areas where there is a heightened risk of damage. Observe the minimum clearances.

- The units and components must be kept at an adequate distance from flammable, explosive, combustible, abrasive and dirty areas or atmospheres.
- Safety devices must not be altered or bypassed.

## 1.8 Unauthorised modification and changes

Modifications or changes to units and components are not permitted and may cause malfunctions. Safety devices may not be modified or bypassed. Original replacement parts and accessories authorised by the manufacturer ensure safety. The use of other parts may invalidate liability for resulting consequences.

## 1.9 Intended use

The unit is used to operate indoor units from a remote location.

Any different or additional use is a non-intended use. The manufacturer/supplier assumes no liability for damages arising from non-intended use. The user bears the sole risk in such cases. Intended use also includes working in accordance with the operating and installation instructions and complying with the maintenance requirements.

The threshold values specified in the technical data must not be exceeded.

## 1.10 Warranty

For warranty claims to be considered, it is essential that the ordering party or its representative complete and return the "certificate of warranty" to REMKO GmbH & Co. KG at the time when the units are purchased and commissioned.

The warranty conditions are detailed in the "General business and delivery conditions". Furthermore, only the parties to a contract can conclude special agreements beyond these conditions. In this case, contact your contractual partner in the first instance.

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## 1.11 Transportation and packaging

The units are shipped in sturdy transport packaging. Immediately check the units on delivery and make a note of any damage or missing parts on the delivery note. Inform the forwarding agent and contractual partner. Claims under guarantee made at a later date will not be accepted.

### **WARNING!**

**Plastic films and bags etc. are dangerous toys for children!**

Why:

- Leave packaging material are not around.
- Packaging material may not be accessible to children!

## 1.12 Environmental protection and recycling

### Disposal of packaging

All products are packed for transport in environmentally friendly materials. Make a valuable contribution to reducing waste and sustaining raw materials. Only dispose of packaging at approved collection points.



### Disposal of equipment and components

Only recyclable materials are used in the manufacture of the devices and components. Help protect the environment by ensuring that the devices or components (for example batteries) are not disposed in household waste, but only in accordance with local regulations and in an environmentally safe manner, e.g. using certified firms and recycling specialists or at collection points.



## 2 Technical data and scope of delivery

### 2.1 Unit data

Series		Smart Control Touch
Operating mode		Remote control
Power supply	V	+12 V DC
Enclosure class	IP	30
Max. power consumption	W	12
Max. cable length	m	150
Recommended cable type (connecting line)	mm <sup>2</sup>	sheathed, min. 0.5 <sup>2</sup>
Environment		
Ambient temperature	°C	0-70
Air humidity	% rH	0-95 (relative) non-condensing
Remote control EDP no.		1613264
WLAN stick EDP no.		1121589

We reserve the right to make technical changes for the purpose of technical advancement.

### 2.2 Unit dimensions

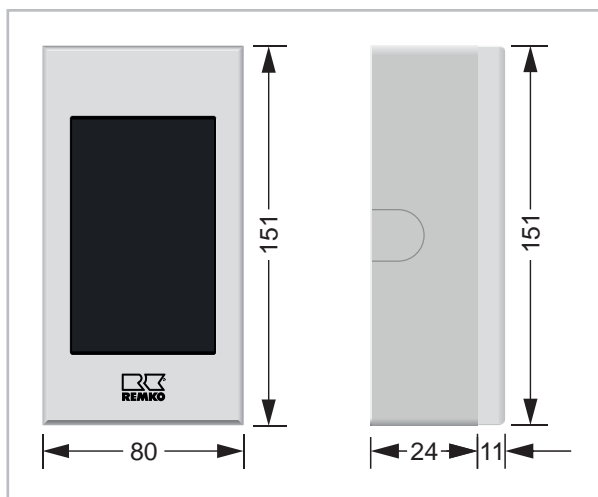


Fig. 1: Unit dimensions (all measurements in mm)

We reserve the right to modify the dimensions and design as part of the ongoing technical development process

### 2.3 Scope of delivery

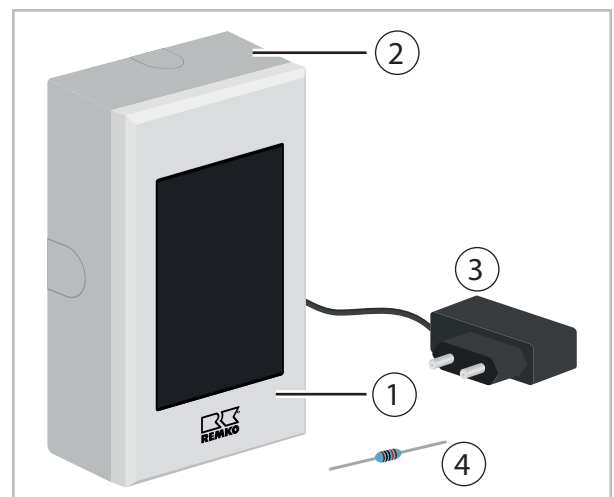


Fig. 2: Scope of delivery

Scope of delivery	
1	Control element
2	Surface-mounted housing
3	Power supply unit with Euro plug
4	120 Ohm resistor

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## 3 Operation

### 3.1 General operation

The REMKO Smart Control Touch regulation is an operating module with touch display. No buttons are required to adjust and change parameters. Instead, this takes place by touching the surface of the controller at the appropriate points.

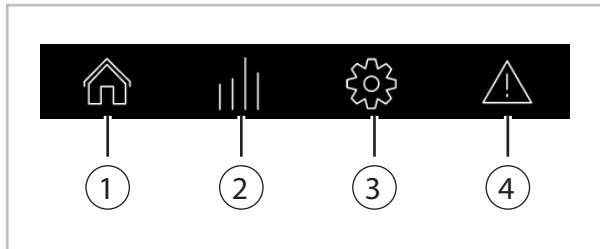


Fig. 3: Basic controls

The control panels for the four basic controls are always displayed at the bottom of the screen. This enables fast and intuitive navigation through the basic menus.

#### ① Overview



Fig. 4: Overview

The overview display shows information such as the current outside temperature, as well as the current room actual and target temperatures when connected to the internet. The tiles can be used to make further settings. The selection of tiles to be displayed in the overview display can be set individually.

The "Operating mode" tile can be used to query and set the system operating state. The following operating modes are available for selection:

#### Off:

All indoor units are switched off.

#### Cooling:

All indoor units receive the one-off command "Cooling" mode.

#### Dehumidification:

All indoor units receive the one-off command "Dehumidification" mode.

#### Heating:

All indoor units receive the one-off command "Heating" mode.

#### Recirculation:

You can operate the weather display to call up the weather forecast for the system location for the next 24 hours.



The indicators on the LCD and division shown in these instructions are subject to further continuous, technical and visual development. Therefore, there may be some differences to the actual indicators on the LCD.

#### "Information" basic menu

The operating parameters of the connected indoor units can be read via this menu. Changes to unit settings are not possible here!

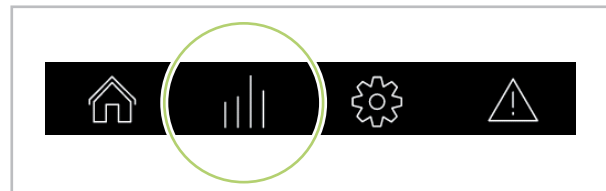


Fig. 5: Information



The information displayed varies depending on the authorisation level (user/expert level). If several indoor units have been combined as a group, they are still displayed individually in this overview in order to query them individually.

### "Settings" basic menu

The operating parameters of the connected indoor units can be set via this menu. The connected indoor units are clearly listed in the unit list with the respective assigned address.

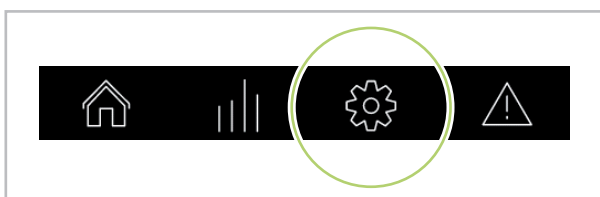


Fig. 6: Settings



The designation of the indoor units can only be changed via the Smart Web Portal. To do so, select the "Edit" menu item in the "Unit overview"

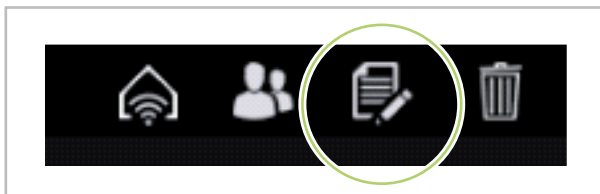


Fig. 7: "Edit" menu item

In the upper area, you will find the "Rename indoor units" menu item.

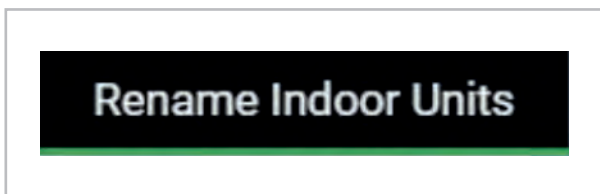


Fig. 8: Rename indoor units

The various settings can be made by selecting the respective indoor unit.



The settings are preset individually for each indoor unit. These settings are the basis for selecting the operating mode in the "Overview" menu. Example: If the status of the respective indoor unit is set to "OFF", this unit will not switch on even if "Automatic" operating mode was selected in the overview. To do this, the indoor unit must be set to "On"

### Status:

The respective indoor unit is switched on or off individually here.

### Operating mode:

If the overall operating mode is "Manual", cooling, heating, recirculation and dehumidification are available here. If the overall operating mode is "Automatic", the operating mode of the respective indoor unit changes automatically depending on the outdoor temperature.

### Room target temperature:

The desired room temperature is set here in the range "17 to 30°C".

### Fan speed:

Select from "Automatic", "Low", "Medium" and "High". In "Automatic" operating mode, the air volume flow is adapted to the currently required unit output.

### Swing mode:

The automatic louvre function can be switched on or off here for better air distribution. This function is available via the SC-1 controller only for the horizontal air control blade!

### Anti-freeze protection function:

If this function is activated, the unit automatically switches to heating mode at a room temperature <7°C. The unit switches off again as soon as a room temperature of 12°C is reached.

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## Time programs:

Up to 6 time programs can be activated here. Example: If the indoor unit is to be switched on in the morning and off in the evening on weekdays, select number 2 here.

2 time windows appear in the settings menu:

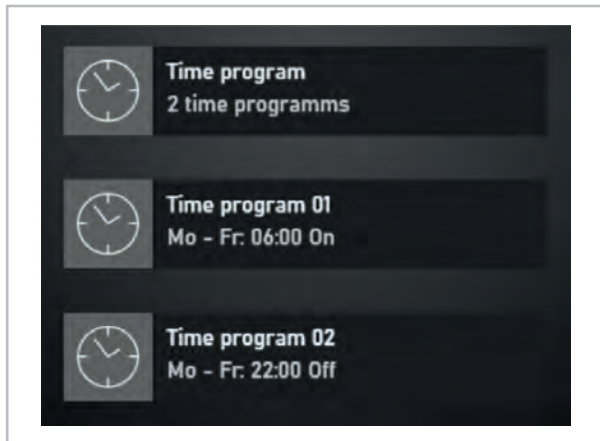


Fig. 9: Time window

In time program one, select Mon. - Fri. with the desired time and select "ON".

In time window 2, also select Mon. - Fri. but with the desired time and the "OFF" function.

The indoor unit then switches on and off automatically at these times with the functions previously selected in the settings menu.

## Expert settings:

If the expert level is activated, the functions "IR remote control lock", "Modes lock" and "Group" are also available.



Fig. 10: Expert settings

## IR remote control:

In this menu item, the IR remote control can be "locked" or "enabled". If the "locked" function is activated, the indoor unit can no longer be operated by IR remote control.

## Mode lock:

"Enabled", "Cooling only", "Heating only" and "Recirculation only" are available. If the function is set to "enabled", all operating modes can be set via IR remote control. To avoid 'mode conflicts' in multi-split systems, the "Cooling only" function can be selected here, for example. The indoor unit then only allows the cooling function. It is no longer possible to select the "Heating" operating mode.

## Group:

This allows the indoor unit to be assigned to a unit group. For example, if you want to combine units 05 and 06 into one group and operate them in parallel, select "Add to group 05" in the Group menu item in the settings for unit 06.

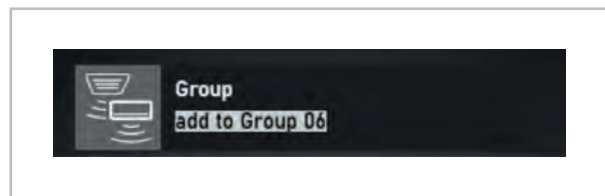


Fig. 11: Unit group

In the unit overview, the units are now grouped together as group 05 (also recognisable by the group symbol). You can assign an individual name for this group in the Smart Web Portal.

## "Messages" basic menu

Any malfunctions associated with the respective indoor units are displayed here. In the event of a fault, the message symbol lights up red.

## Enable expert level:

You can access the expert level via the REMKO logo in the top right corner of the screen.

You will be asked to enter the expert password, which is "0321".

The expert level is then active (recognisable by the word "Expert" after the heading).

## Network integration

With the Smart Control Touch it is possible to establish a network connection with a network cable or with the integrated WLAN receiver. After a connection has been established, the Smart Control Touch must be restarted (switch off power for a short time).

### Network integration with a network cable

If the Smart Control Touch is to be integrated into the network using a network cable, this must be connected to the corresponding interface (see the chapters "Electrical wiring" and "Interfaces"). The Smart Control Touch automatically detects the network and is thus successfully integrated into the network after a restart.

### Network integration over a wireless network (WLAN)

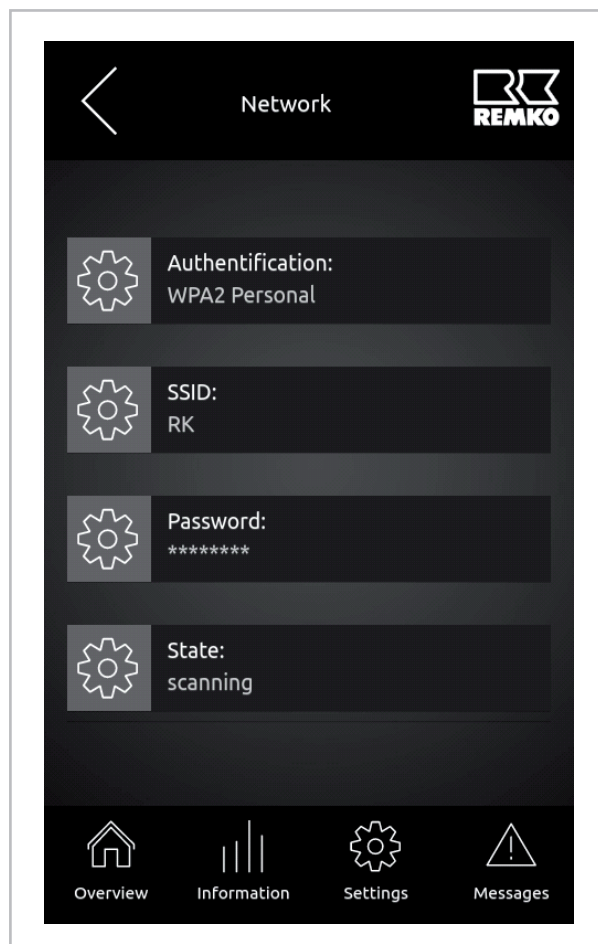
The following system requirements are necessary to complete the WLAN function installation successfully:

- REMKO Smart Control Touch controller with software version 4.24 or higher
- JavaScript/HTML5-capable web browser (Edition not more than two years old)
- Broadband internet connection of at least 10 mbit/s
- The WLAN router must support the WPA 2 encryption/security standard

To connect the Smart Control Touch to the router, the expert level must be called up by pressing the REMKO logo in the upper right corner of the display. A password must then be input using the arrow keys. The default password for the expert level is 0321. After successful password input, the WLAN network can now be set under Settings → Basic settings → Interfaces → Network. Several authentication options are available such as WPA2 Personal or WPS Push Button.



*You may incur fees for transferring data depending on your internet contract. Contact your internet provider for more details.*



*Fig. 12: WPA2 Personal Authentication*

When WPA2 Personal authentication is selected, the two items "SSID" (Network Name) and "Password" appear in the window. After both fields have been filled in correctly, the Smart Control Touch connects to the network and the item "Status" updates to connected.

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## 3.2 External access via REMKO Smart Web

If there is a stable network connection between the router and the Smart Control Touch, it is possible with the REMKO Smart Web interface to mirror the display of the Smart Control Touch to a terminal device via the Internet.

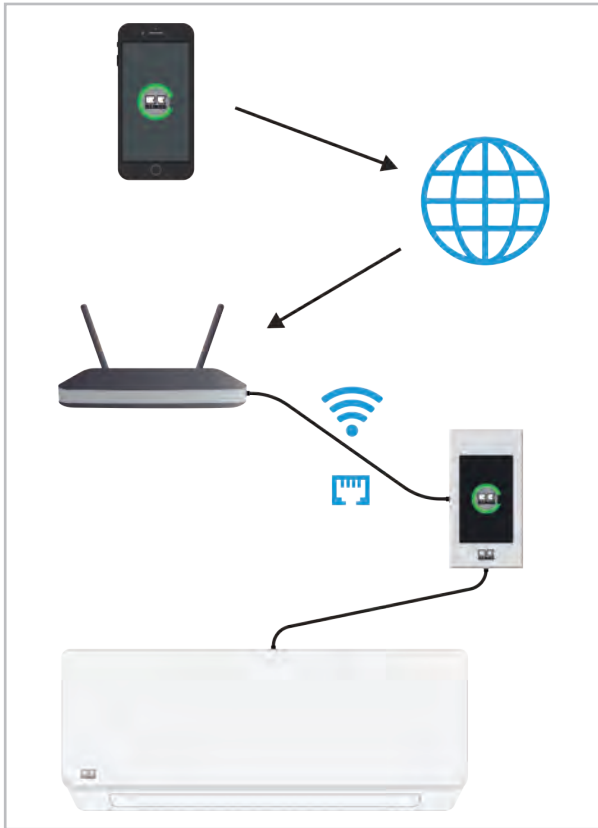


Fig. 13: External access

### Registering on the Smart Web portal



Fig. 14: QR code for registration

The Smart Web portal is called up by entering the address in the web browser.

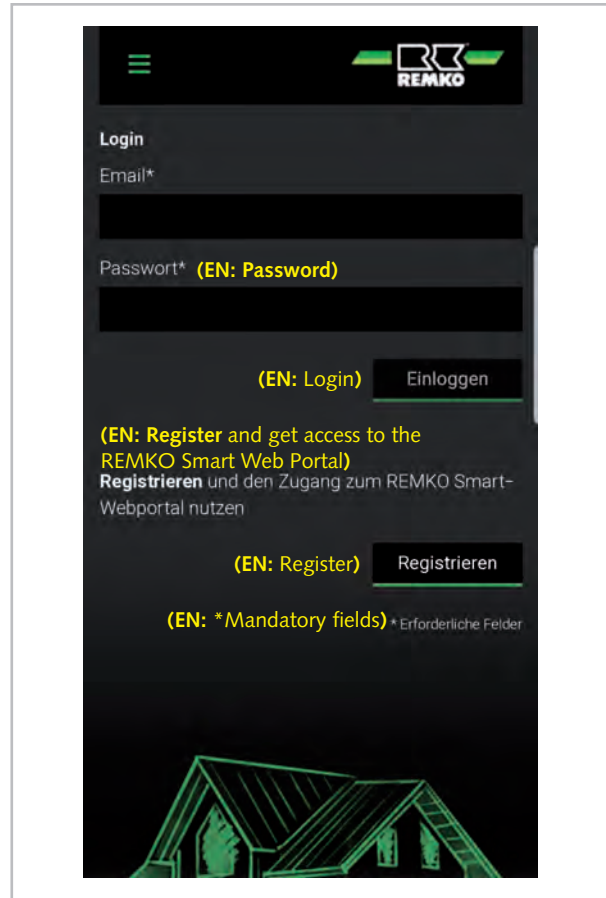


Fig. 15: Smart Web portal login

A login is now required on the Smart Web portal. If no user account has been created yet, it is possible to select the "Register" button and create a user account. Once the registration form has been completed and sent, a confirmation link will be sent to the e-mail address provided. By clicking on the link contained in the message, the user account is confirmed and the registration is completed. You can now login with the activated user account.

### Adding devices to the Smart Web portal

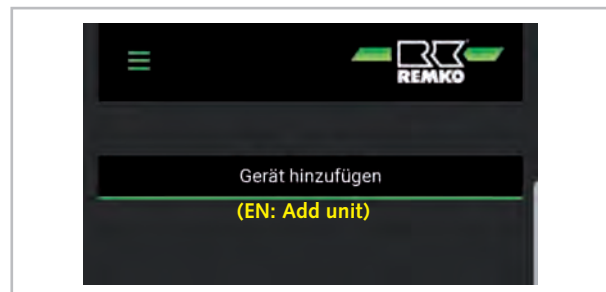
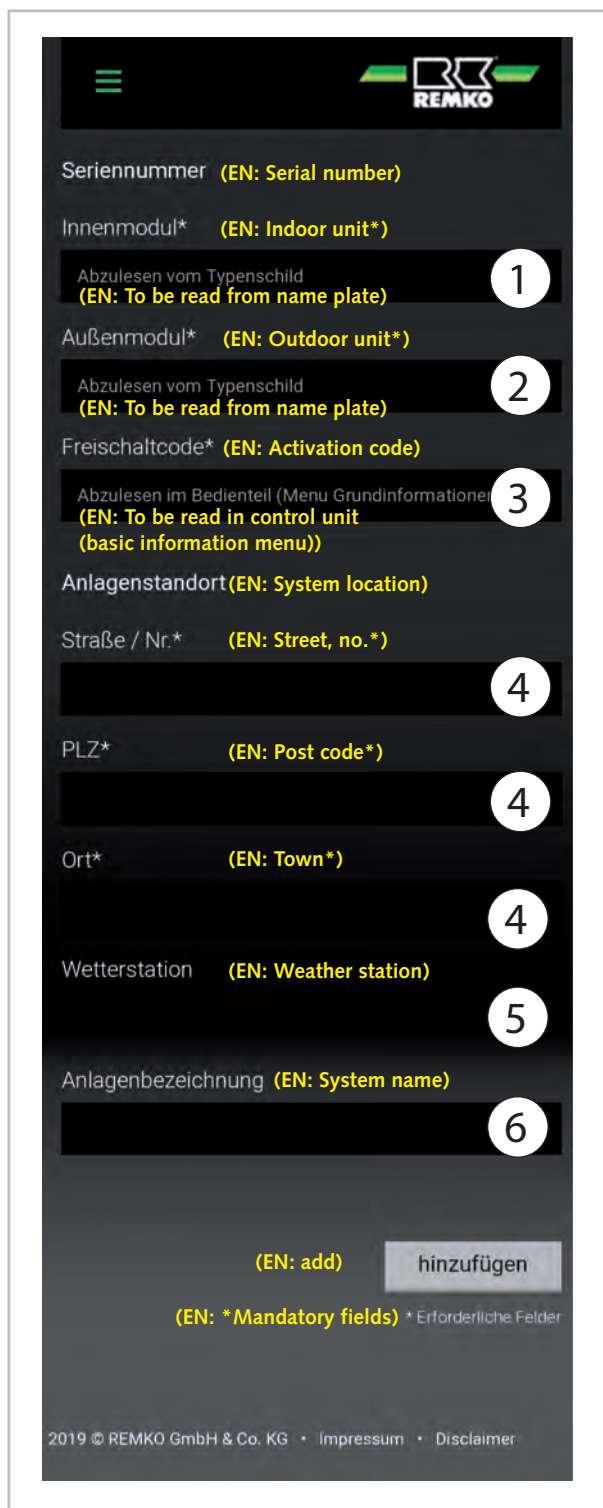


Fig. 16: Add unit

To add a new or first unit, press the "Add unit" button.



For the most stable connection possible, we recommend connecting via LAN cable. When using the LAN function, the WLAN stick must be removed.



Seriennummer (EN: Serial number)

Innenmodul\* (EN: Indoor unit\*)

Abzulesen vom Typenschild (EN: To be read from name plate) 1

Außenmodul\* (EN: Outdoor unit\*)

Abzulesen vom Typenschild (EN: To be read from name plate) 2

Freischaltcode\* (EN: Activation code)

Abzulesen im Bedienteil (Menu Grundinformationen) (EN: To be read in control unit (basic information menu)) 3

Anlagenstandort (EN: System location)

Straße / Nr.\* (EN: Street, no.\*) 4

PLZ\* (EN: Post code\*) 4

Ort\* (EN: Town\*) 4

Wetterstation (EN: Weather station) 5

Anlagenbezeichnung (EN: System name) 6

(EN: add)

(EN: \*Mandatory fields) \* Erforderliche Felder

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Fig. 17: Adding the Smart Control Touch unit

### ① Indoor unit serial number

The serial number of the indoor unit can be read from the name plate of the indoor unit, which is located behind the front panel for wall units and under the filter flap for ceiling cassettes.

### ② Outdoor unit serial number

The serial number of the outdoor unit can be read from the name plate of the outdoor unit, which is usually located near the cover for the electrical connection.

### ③ Activation code

The activation code is displayed on the Smart Control Touch with an active Internet connection under Information → Basic information → Status.

### ④ System location

The location of the system is used to locate the system precisely, so that the Smart Control Touch can automatically select a weather station in the immediate vicinity.

### ⑤ Weather station

The weather station is automatically set based on the location of the system. The weather data can thus be viewed in the overview display under the item Weather Information.

### ⑥ Add

An optional system designation can be entered here in order to facilitate the overview for several units.

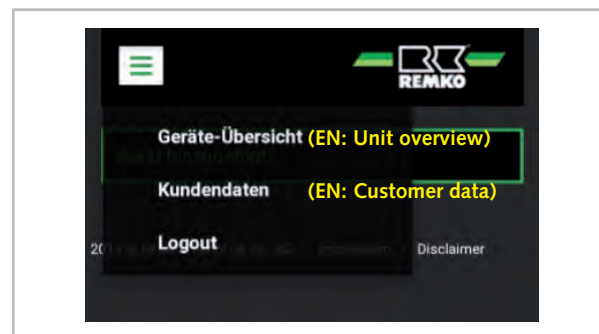


Fig. 18: Drop-down menu

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After the unit has been successfully added, the Unit overview can be selected and accessed from the drop-down menu by pressing the menu button in the upper left corner of the screen.

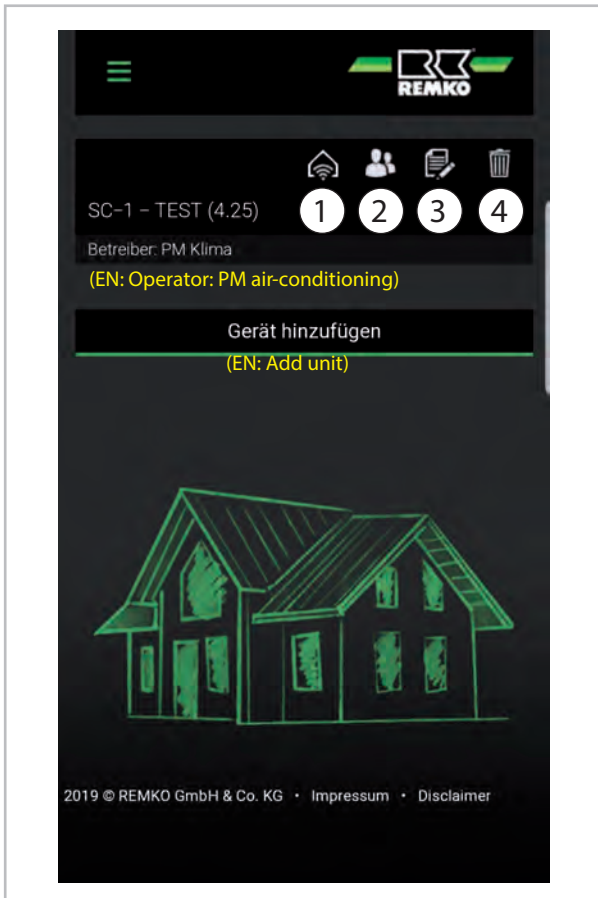


Fig. 19: Unit overview

In the Unit overview, all Smart Control Touch units linked to the account are listed. The following functions can be used from here:

## ① Remote control

By pressing this button, the user interface of the selected Smart Control Touch controller can be mirrored to the terminal device. This allows all functions to be used that are also directly available on the control unit.

## ② User

In this window, additional users can be added to operate the controller and access to the REMKO service (limited to 1 hour) can be granted.

## ③ Editing a unit

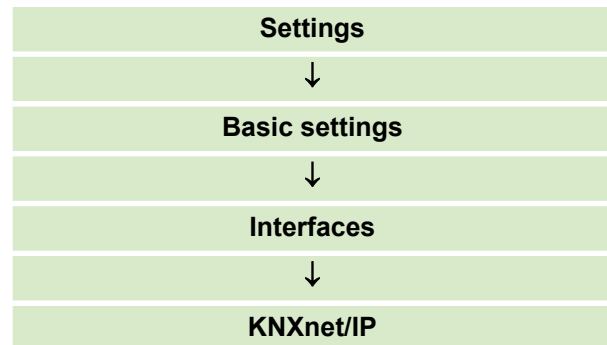
Here, it is possible to edit the data that was input when adding the device.

## ④ Deleting a unit

Under this item the selected unit can be deleted from the account.

## 3.3 Activating KNX programming mode

In order to be able to access the SC-1 Smart Com using KNX programming software, programming mode must be activated in the settings:



KNX programming mode can now be set and activated.

## 4 Electrical wiring and interfaces

### 4.1 Connections and interfaces

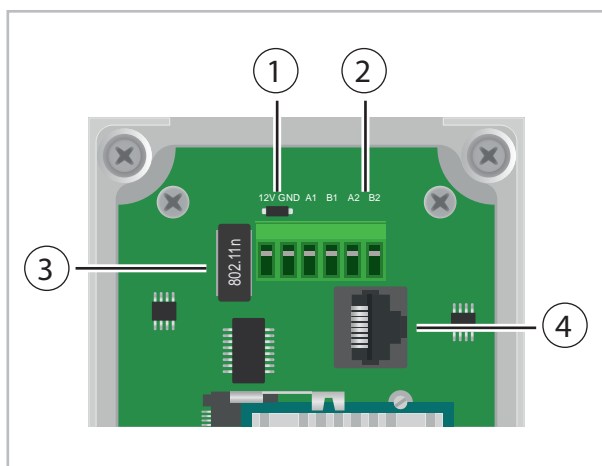


Fig. 20: Electrical wiring and interfaces

#### ① Power supply (12V/GND)

For the surface-mounted installation, the transformer supplied as standard is used for the power supply (230V~/12V  $\overline{\text{---}}$ ). If the unit is flush-mounted, a 12V direct current source must be provided at the installation position.



A flush-mounted power supply unit is available under article number 1613262.

#### ② Unit BUS connection (A2/B2)

The connecting line between the Smart Control Touch and the units to be controlled is connected to the contacts A2 (X) and B2 (Y). The conductor E must be connected to the GND terminal of the power supply. Corresponding diagrams are shown in the chapter "Connection variants". The contacts A1 and B1 are not connected.

#### ③ WiFi receiver

The WiFi receiver is required if a wireless network connection is to be used.



If the network connection is to be made via a network cable, the WiFi receiver must be removed from the corresponding interface [3] to avoid connection errors.

#### ④ Network cable connection

If the Smart Control Touch is to be integrated into a network (Internet or KNX over IP) via a network cable, it must be connected to this interface.

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## 4.2 Electrical wiring for the air conditioning units

### Connection variants

The Smart Control Touch is connected to the X, Y and E contacts of the indoor units in single-split and multi-split systems. With VRF systems of the MVV series, the required connections are located on the outdoor unit. A 120  $\Omega$  resistor must also be provided on the last indoor unit and on the MVV outdoor parts. Further information on the connections can be found in the operating instructions of the respective devices.

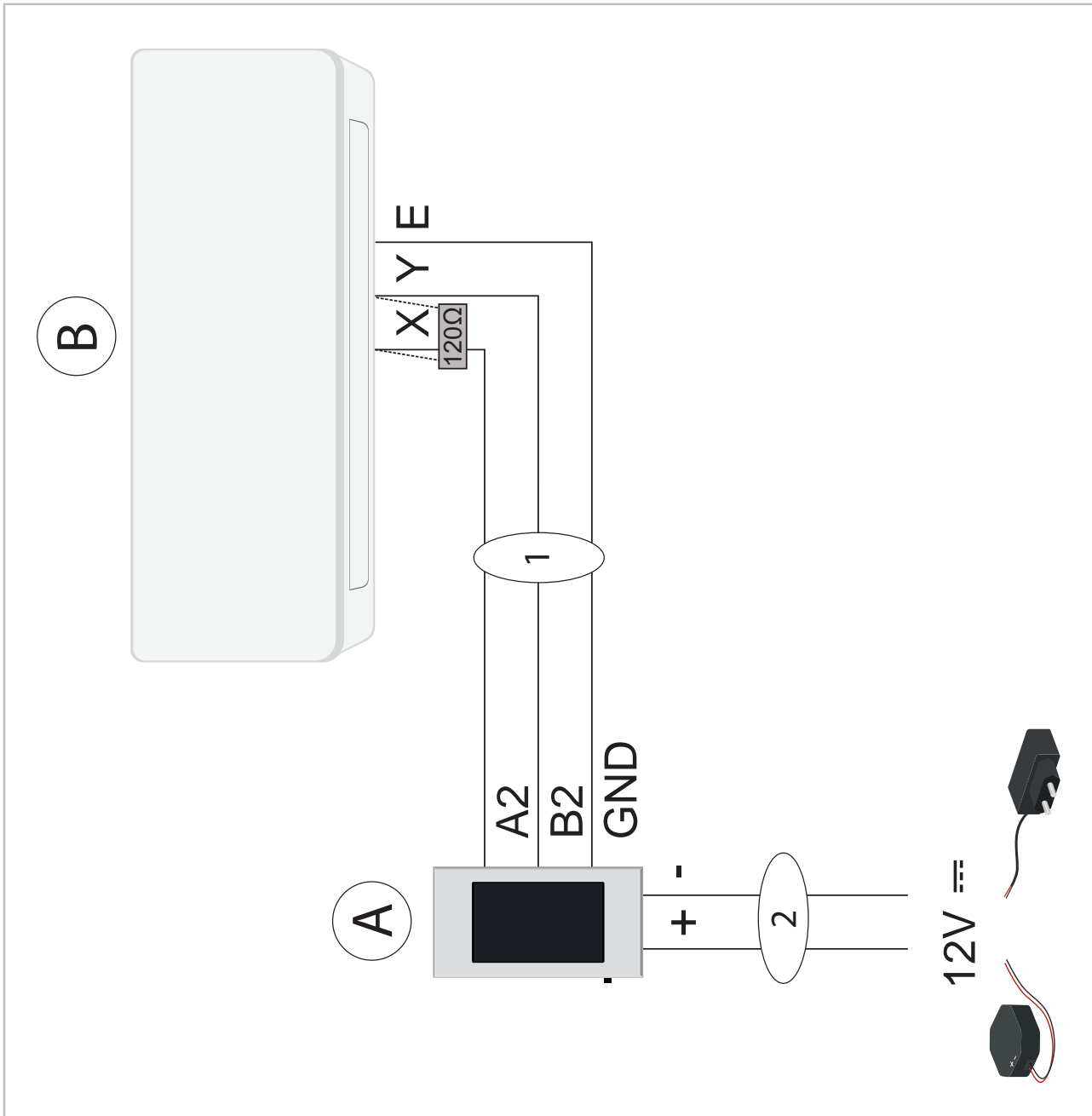


Fig. 21: Single-split system connection

- A: SC-1 Smart-Com
- B: Indoor unit
- 1: Communication line

- 2: Flush-mounted power supply unit or power supply unit with Euro plug

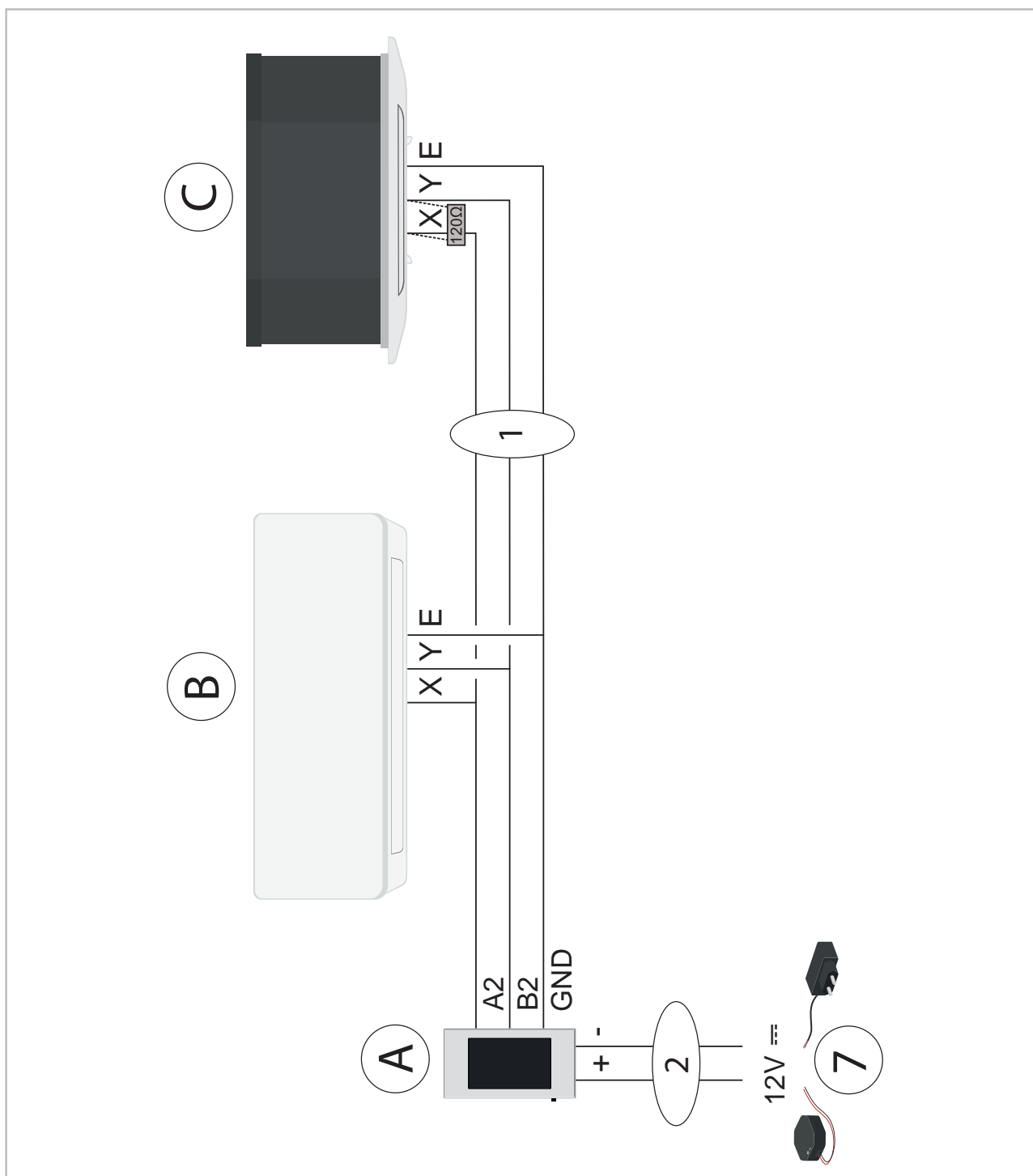


Fig. 22: Multi-split system connection

- A: SC-1 Smart-Com
- B: Indoor unit
- C: Indoor unit 2, 3, 4, etc.

- 1: Communication line
- 2: Flush-mounted power supply unit or power supply unit with Euro plug

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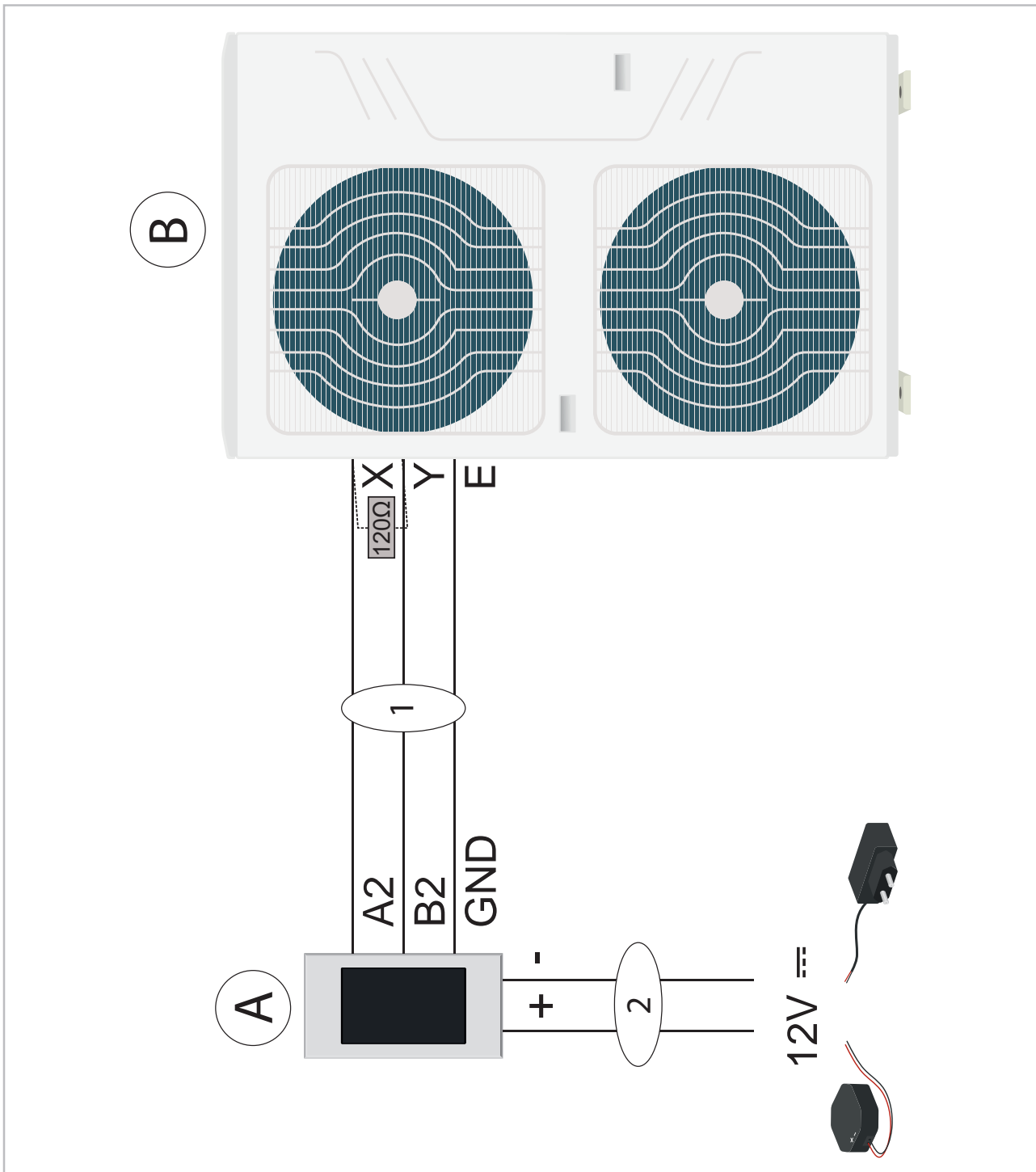


Fig. 23: VRF system connection

- A: SC-1 Smart-Com
- B: Outdoor unit type MVV ...DC
- 1: Communication line

- 2: Flush-mounted power supply unit or power supply unit with Euro plug

### 4.3 Electrical wiring to the KNX network

#### Connection variants

The SC-1 Smart-Com has an interface to connect a KNX over IP network. If the SC-1 Smart-Com is to be connected to a KNX Twisted-Pair network, an IPInterface (accessories) or an IP router is required.

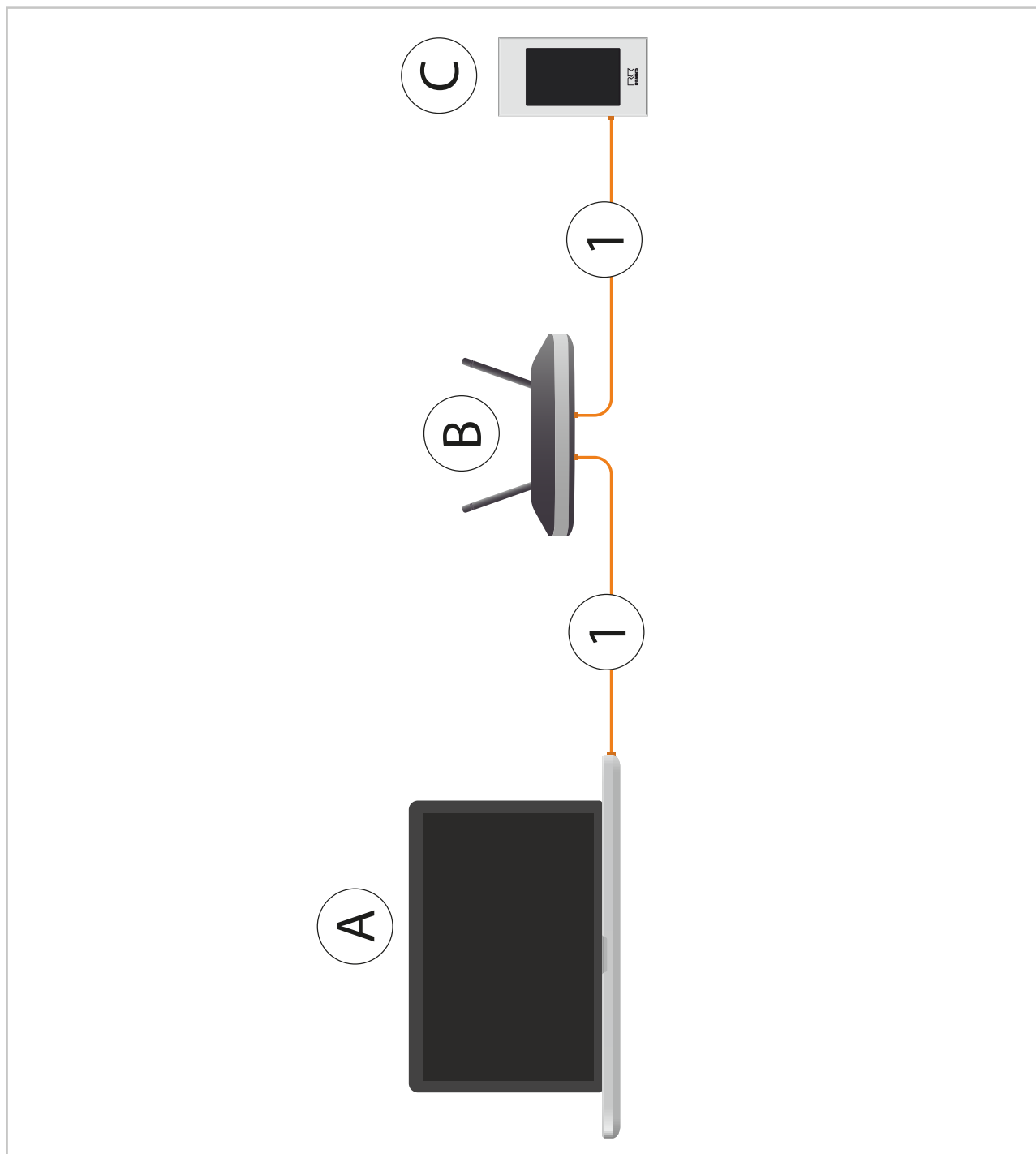


Fig. 24: Connection to a KNX over IP network

A: End device with visualisation software  
B: Router / network switch

C: SC-1 Smart-Com  
1: Network cable

# REMKO SC-1 Smart-Com

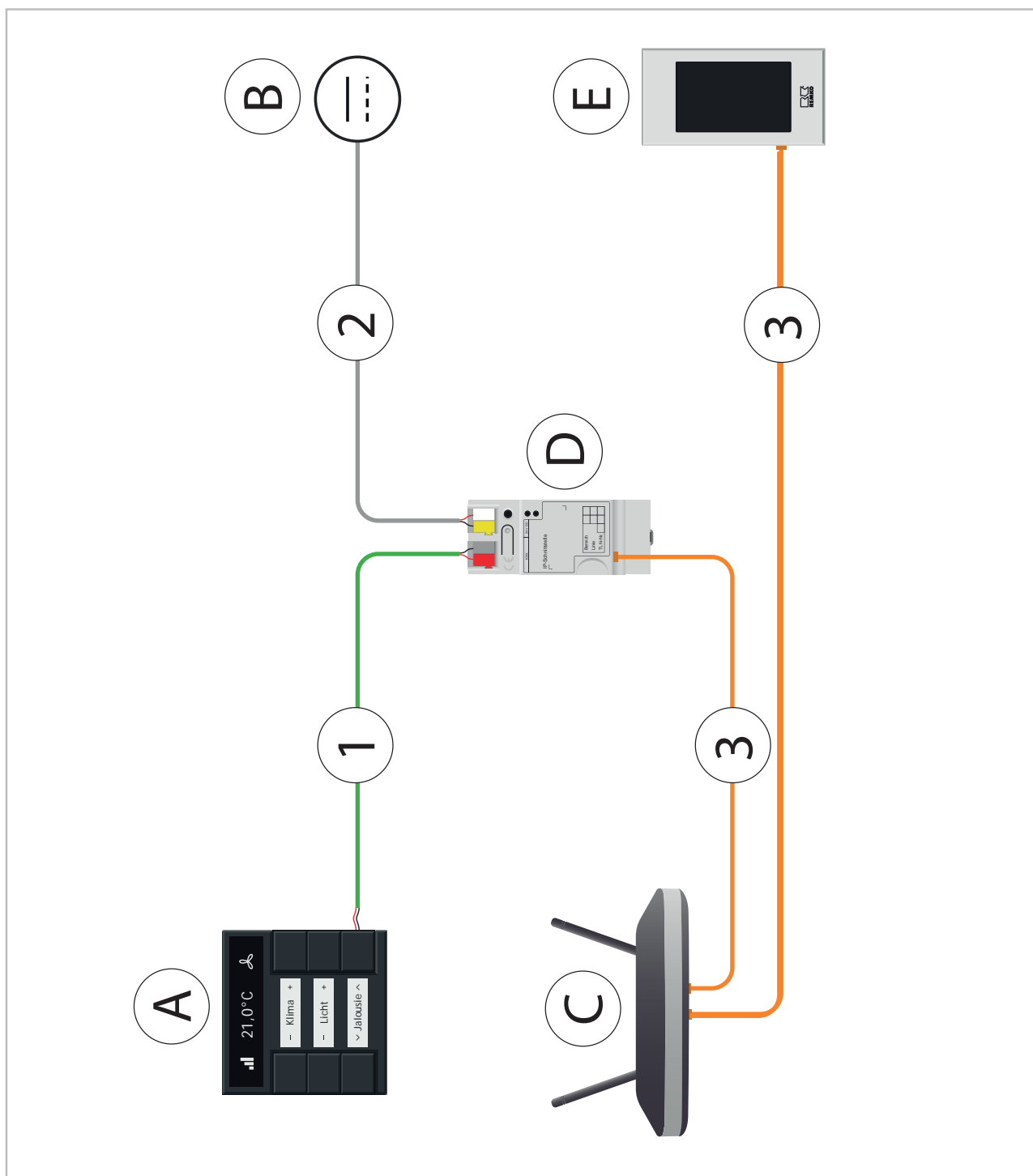


Fig. 25: Connection to a KNX TP network

- A: KNX controller (KNX TP)
- B: Power supply 24-30V DC
- C: Router / network switch
- D: IP router

- E: SC-1 Smart-Com
- 1: KNX-TP bus line
- 2: IP interface power supply
- 3: Network cable

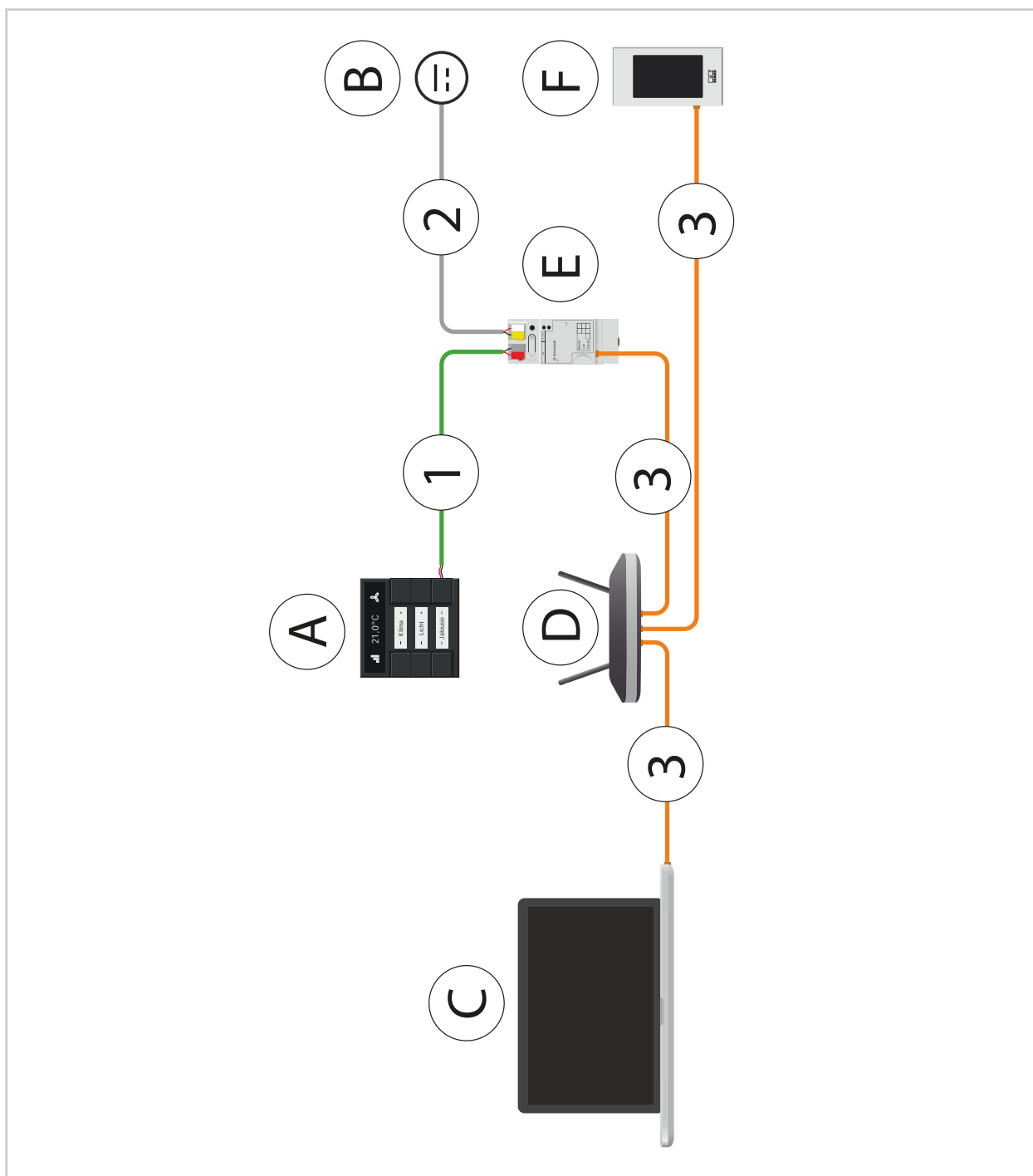


Fig. 26: Connection to a KNX TP network and end device with visualisation software

- |                                           |                              |
|-------------------------------------------|------------------------------|
| A: KNX controller (KNX TP)                | F: SC-1 Smart-Com            |
| B: Power supply 24-30V DC                 | 1: KNX-TP bus line           |
| C: End device with visualisation software | 2: IP interface power supply |
| D: Router / network switch                | 3: Network cable             |
| E: IP router                              |                              |

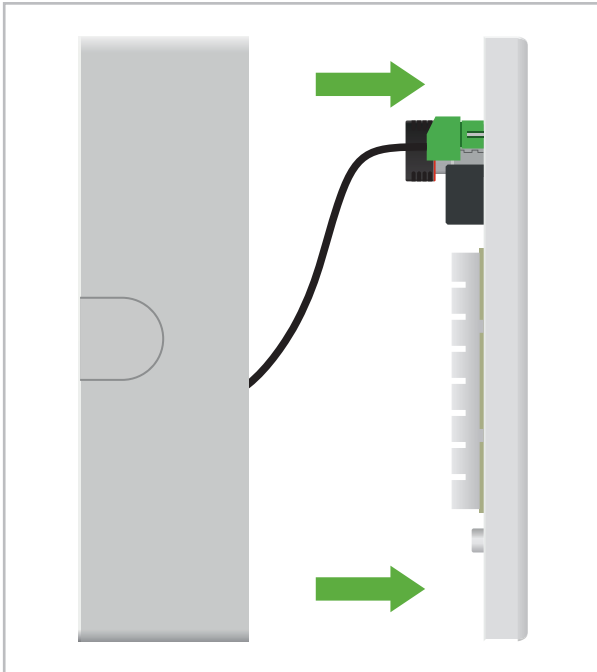
# REMKO SC-1 Smart-Com

## 5 Assembly and installation

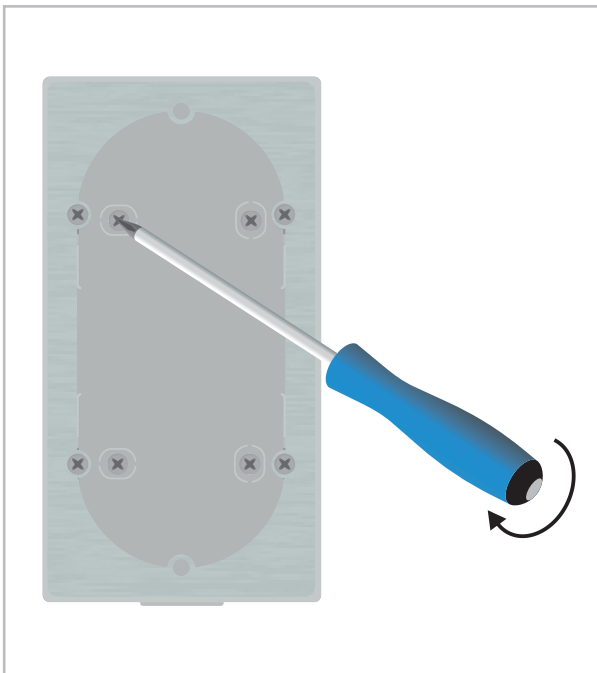
### Surface-mounted installation

The surface-mounted installation can be carried out as follows:

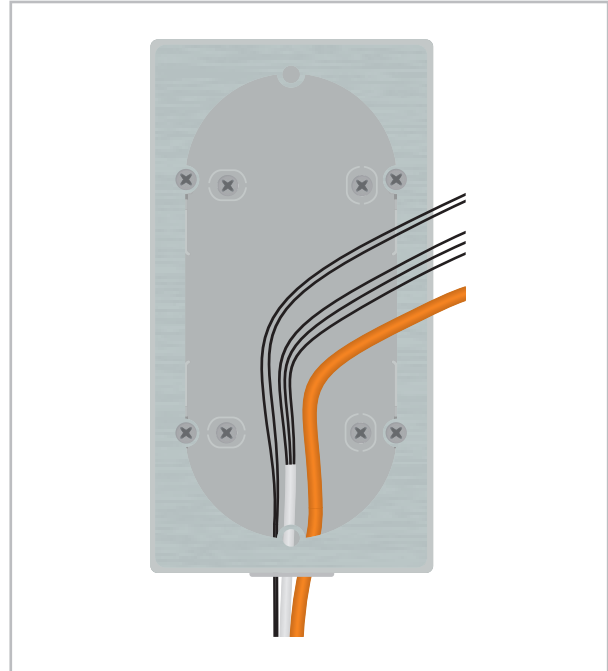
1. → Pull through the aluminium frame fixed by magnets and remove from the housing.



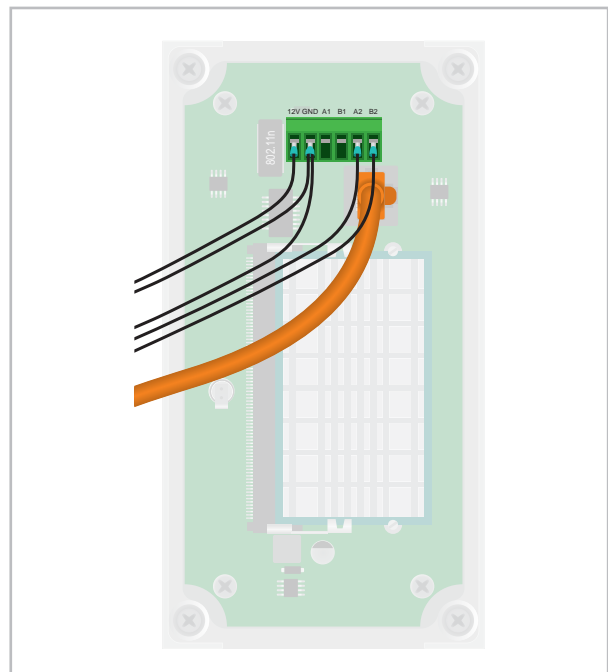
2. → The surface-mounted housing can now be mounted on a suitable surface with the aid of the elongated holes provided.



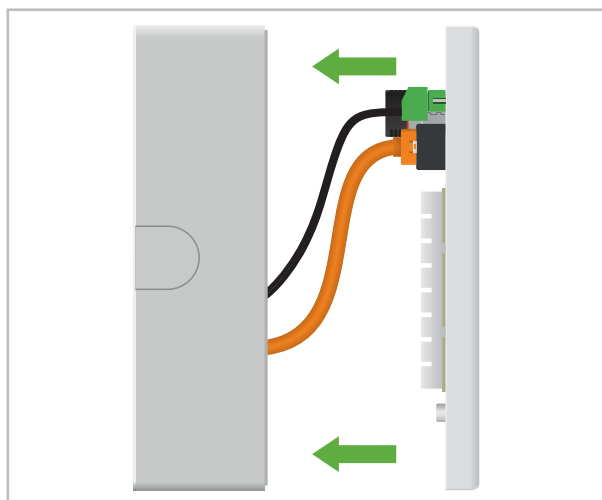
3. → Pull the cables for the power supply, unit BUS and network cable (optional) through one of the grommets so that there is sufficient cable length for connection to the display.



4. → Establish the electrical wiring connections as described in the chapter "Electrical connection".

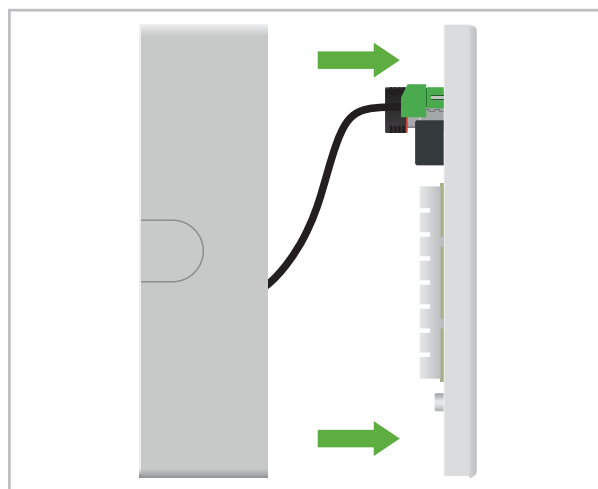


5. → Fasten the aluminium frame to the housing with the help of the magnets. Ensure that cables do not become trapped between the frame and the housing.

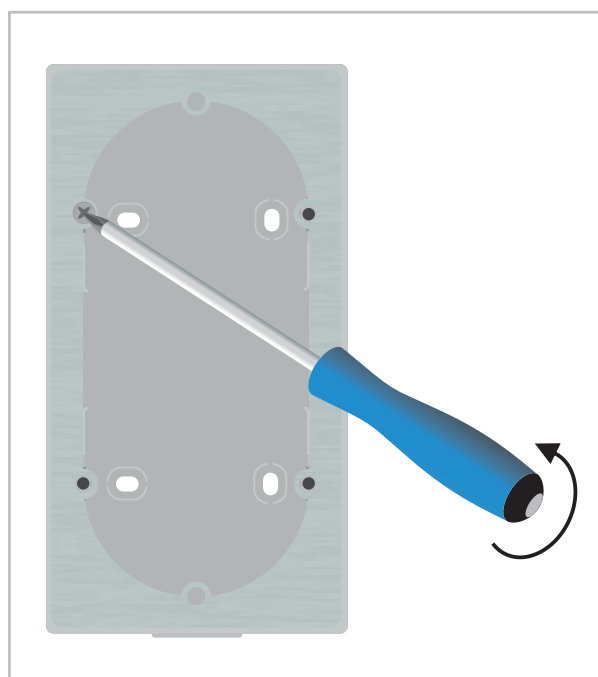


The flush-mounted installation can be carried out as follows:

1. → Pull through the aluminium frame fixed by magnets and remove from the housing



2. → Loosen the four screws and remove the mounting plate from the housing.



### Flush-mounted installation

For the flush-mounted installation, a double socket with the following dimensions must be provided at the desired installation position.

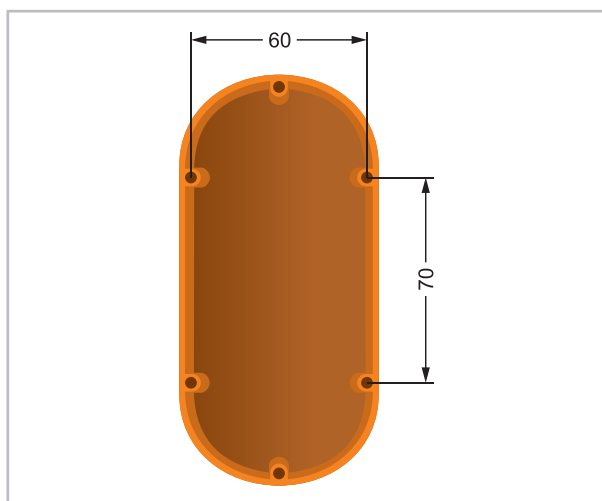


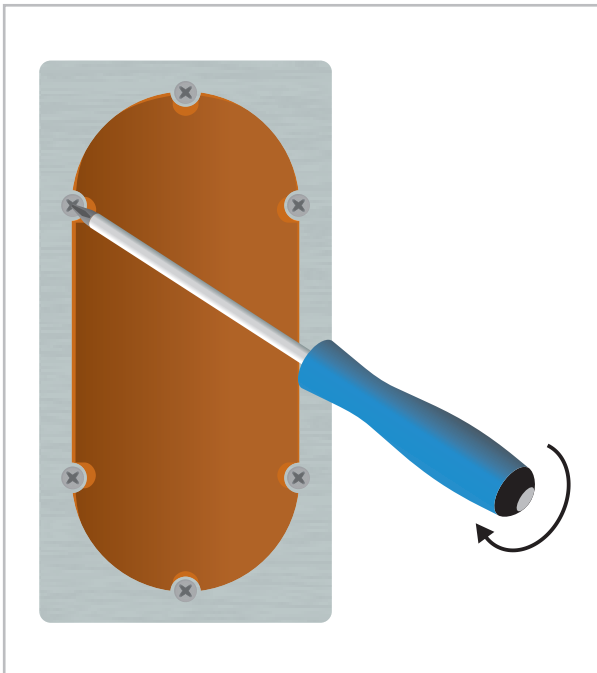
Fig. 27: Double socket



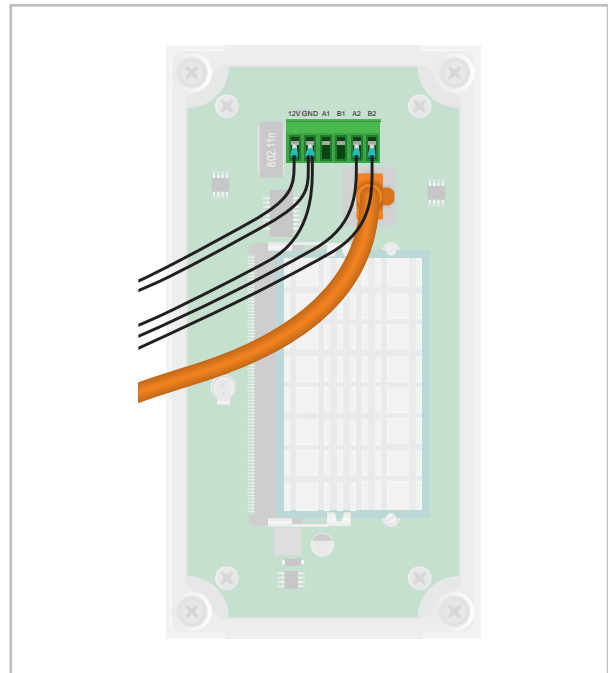
A 12V direct current source is required for the flush-mounted installation.

# REMKO SC-1 Smart-Com

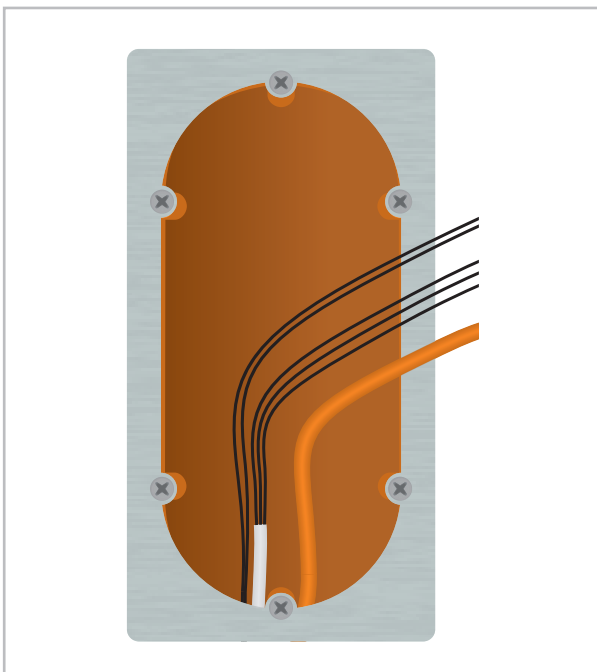
3. → Place the mounting plate on the flush-mounted box and fix it with suitable flat-head screws.



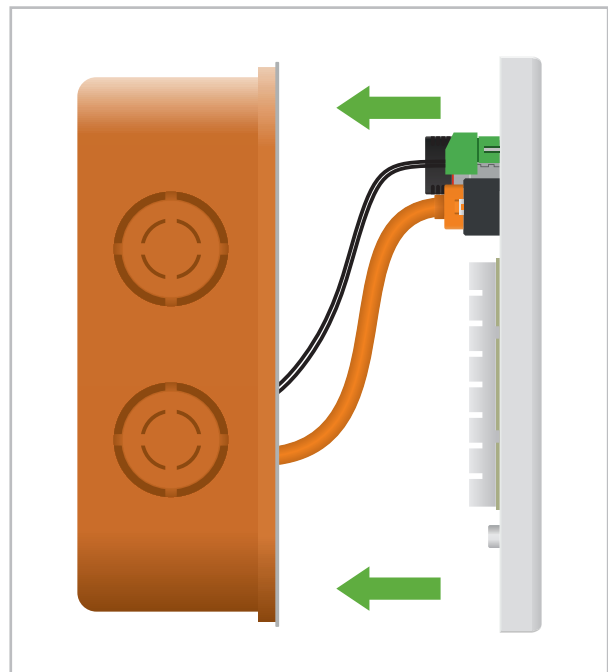
5. → Establish the electrical wiring connections as described in the chapter "Electrical connection".



4. → Pull the cables for the power supply, unit BUS and network cable (optional) through one of the grommets so that there is sufficient cable length for connection to the display.



6. → Fasten the aluminium frame to the housing with the help of the magnets. Ensure that cables do not become trapped between the frame and the housing.











## 6 Commissioning

### Addressing the indoor units

If the Smart Control Touch is to control several indoor units, an address must be assigned to the individual units. Ensure that each address is used only once. To avoid control conflicts, it is also not recommended to operate the SC-1 with additional corded remote controls.

### Single-split and multi-split indoor units

For single split and multi-split indoor units, addressing is carried out with the aid of DIP switch S1 and rotary switch S2 on the control board or the additional board. The setting of the switch must take place while in a de-energised state. The addresses result from the following possible combinations:

Rotary switch	DIP switch	Address
		0-15
		16-31
		32-47
		48-63

### VRF indoor units

The MVV series outdoor units automatically assign addresses to the indoor units during commissioning. However, these should be assigned manually in conjunction with the SC-1 in order to avoid interference caused by incorrectly or duplicated addresses. The procedure for manual addressing can be found in the operating and installation instructions of the indoor units used.

## 7 Compatibility

The Smart Control Touch is intended for connection to the following device types:

### Single-split

ML 265-525 DC

ML 264-524 DC

RVD 355-1055 DC

RVD 354-1054 DC

RVD 353-1053 DC

RVT 265-355 DC

RWT 355-525 DC

RXT 525-1405 DC

RXT 523-1403 DC

### Multi-split

MXW 204-524 DC

MXW 203-523 DC

MXD 204-524 DC

MXD 203-523 DC

MXT 355-525 DC

### VRF

MVV 1200-2000 (DUO)

# REMKO SC-1 Smart-Com

## 8 KNX communication objects

### Overview of available commands

KNX regulation provided by the customer can be used to read or change the following commands. The “Receive” function describes writing data. The “Send” function describes querying data.

ADR <sup>1)</sup>	Description	Object funct.	Length	COM <sup>2)</sup>				Data type
1	Actual temperature	Send	2 bytes	C	R	-	T	Temperature (°C)
2	ON / OFF	Receive	1 bit	C	-	W	-	Switch
3	ON / OFF	Send	1 bit	C	R	-	T	Switch
4	Target temperature	Receive	2 bytes	C	-	W	-	Temperature (°C)
5	Target temperature	Send	2 bytes	C	R	-	T	Temperature (°C)
6	Basic setpoint	Send	2 bytes	C	R	-	T	Temperature (°C)
7	Setpoint offset	Receive	1 byte	C	-	W	-	Counting pulses (-128-127)
8	Setpoint offset	Send	1 byte	C	R	-	T	Counting pulses (-128-127)
9	Setpoint offset	Receive	2 bytes	C	-	W	-	Temperature diff. (C)
10	Setpoint offset	Send	2 bytes	C	R	-	T	Temperature diff. (C)
11	Cooling / heating operating mode	Receive	1 bit	C	-	W	-	Heating/cooling
12	Cooling / heating operating mode	Send	1 bit	C	R	-	T	Heating/cooling
13	Heating request	Receive	1 bit	C	-	W	-	Boolean
14	Cooling request	Receive	1 bit	C	-	W	-	Boolean
15	Operating mode	Receive	1 byte	C	-	W	-	HVAC control mode
16	Operating mode	Send	1 byte	C	R	-	T	HVAC control mode
17	Fan level	Receive	1 byte	C	-	W	-	Fan level (0-255)
18	Fan level	Send	1 byte	C	R	-	T	Fan level (0-255)
19	Swing	Receive	1 bit	C	-	W	-	Switch
20	Swing	Send	1 bit	C	R	-	T	Switch
21	Fault status	Send	1 bit	C	R	-	T	Alarm

<sup>1)</sup> Address number (ADR)

<sup>2)</sup> Communication flags (COM): C = Communication, R = Read, W = Write, T = Transfer

### KNX product database

The KNX product database can be downloaded using the following QR code:



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