Instructions for use

REMKO Smart-Com

Activation of Smart Com for Smart Control Touch regulation to integrate the heat pump into a Smart Home system

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 instructions for use

Table of contents

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 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.

1.5 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.

1.6 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.

1.7 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.

1.8 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 manufactured ensure safety. The use of other parts may invalidate liability for resulting consequences.

1.9 Intended use

The Smart Com function is to connect the Remko Smart Control controller to a factory fitted interface.

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.

1.11 Transport and packaging

The devices are supplied in a sturdy shipping container. Please check the equipment immediately upon delivery and note any damage or missing parts on the delivery and inform the shipper and your contractual partner. For later complaints can not be guaranteed.

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 System requirements

Note the following!

Programming can only be carried out via a KNX system integrator.

*Programming **cannot** be carried out by REMKO Service.*

Prerequisite for using the Smart Com function:

1. Products with REMKO Smart Control controller as of software level 4.28. Check the software in the software version number information & software control panel level. Both versions must have level 4.28.
2. The KNX project planning and commissioning tool ETS in version 5.7, 6.0 or higher.

The heat pump can also be commissioned without integrating the KNX-BUS.

3 IP interface

WKF/HTS/WSP IP interface functional diagram

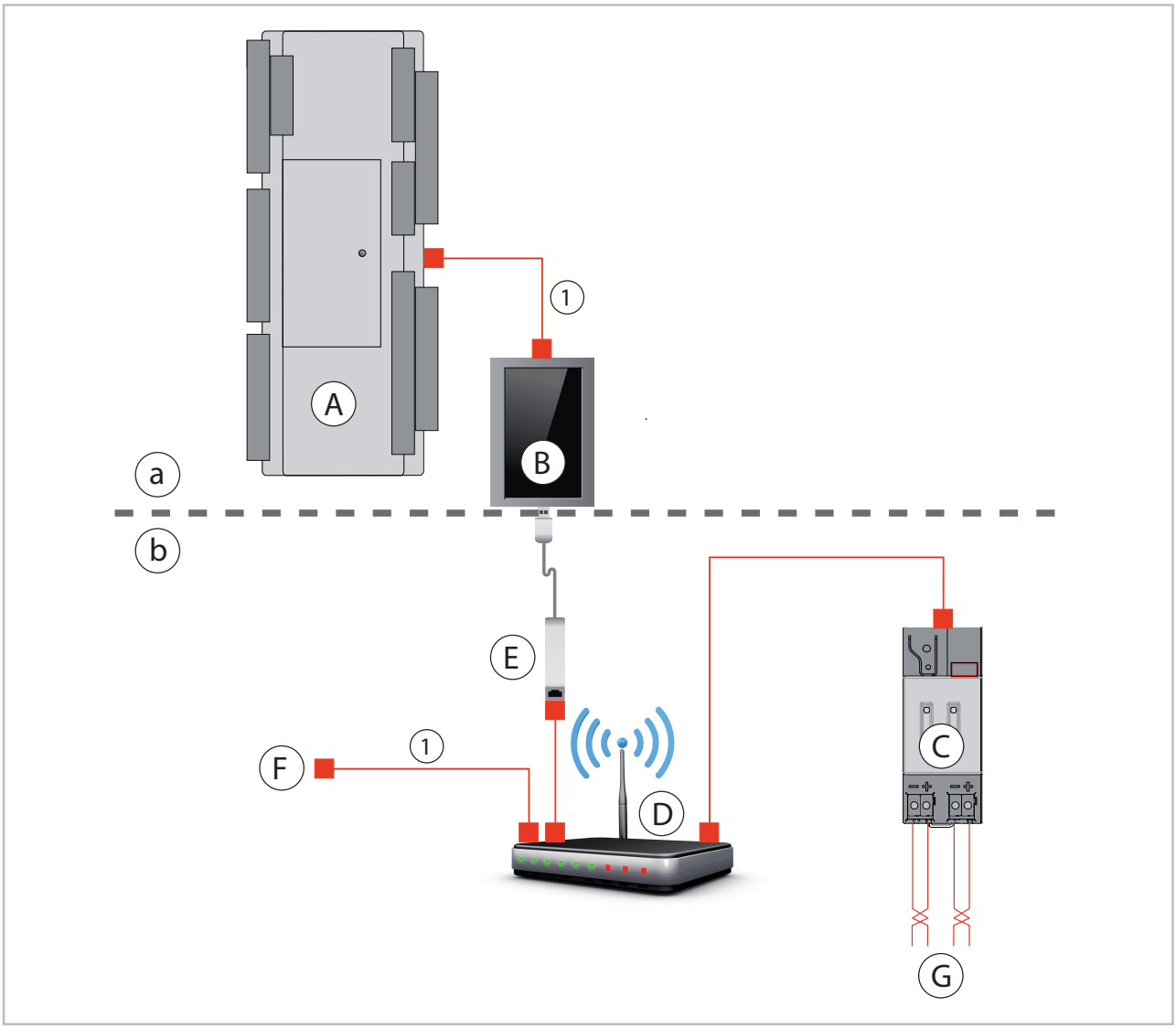


Fig. 1: Functional diagram for an IP interface

a Indoor unit
b: Parts to be provided by the customer
A: REMKO SMT controller (heat pump)
B: Touch display (heat pump)
REMKO Smart-Control (KNX-IP device)
e.g. KNX-IP Linie 2.1.xx
KNX-IP address 2.1.5
IP address 192.168.0.101
C: KNXnet/IP router (line coupler),
optional - only recommended for data exchange with KNX-TP devices
e.g. KNX-TP Linie 1.1.xx KNX-TP adress 1.1.0
IP adress 192.168.0.100
D: Ethernet router (building network) LAN router (local area network) e.g. IP adress 192.168.0.1
E: USB/Ethernet adapter
F: KNX IP devices
e.g. KNX-IP Linie 2.1.xx KNX-IP adress 2.1.2 ...
IP adress 192.168.0.105
G: Twisted Pair
KNX-TP devices e.g. KNX-TP Linie 1.1.xx KNX-TP adress 1.1.3 ...
1: Min. CAT 5 e network cable

Features of an KNX-IP interface

A KNX-IP interface has the following features:

- Simple connection to higher-level systems thanks to the use of the internet protocol (IP)
- Direct access from any point in the IP network
- Cross-building and cross-property communication (networking properties)
- Easy connection to the REMKO SMT controller
- ETS (ETS = Engineering Tool Software) can be setup easily

KNXnet/IP interface to the bus

A direct connection from the REMKO Smart Control controller to the bus is established via a data network and the IP interface. This enables access to the KNX group addresses.

Assigning the IP address

If you have any questions on setting the IP address parameter for the unit and the subnet mask, as well as on DHCP, contact the local network administrator.

It is recommended to assign a fixed IP address to the MAC address of the SMT controller via the network router configuration (DHCP server).

REMKO Smart-Control Touch

The IP address for the REMKO SMT controller is assigned statically via the controller configuration or automatically by a DHCP service in the IP network. The DHCP service makes it possible to assign the network configuration through the router (DHCP server). The unit's MAC address that is displayed in the "Basic information/status/network (USB)" information menu may be required to configure the DHCP service.

Function as delivered

As delivered, the following parameters are set depending on the manufacturer:

- Physical address 15.15.255
- IP address assignment via DHCP

4 Installing the Smart Com software

The Smart Com function provides you with the option of controlling your REMKO heat pump via a KNX/EIB system.

The following pages describe installing the Smart Com function on the REMKO Smart Control controller.

NOTICE!

Before removing and inserting the SD card, the system must be powered down!

1. After you have powered down the system, remove the SD card from the I/O module.

Fig. 2: Removing the SD card

2. Insert the SD card for activating the Smart Com function and turn on the power to the system again. The installation then starts automatically.
3. The installation of the Smart Com function is finished when the default display is shown again.

The activation process can be repeated with the same SD card after a software update or re-commissioning.

NOTICE!

IMPORTANT!

If you want to replace the complete Smart Control controller, a new Smart Com SD card is required.

5 Checking that the Smart Com is enabled

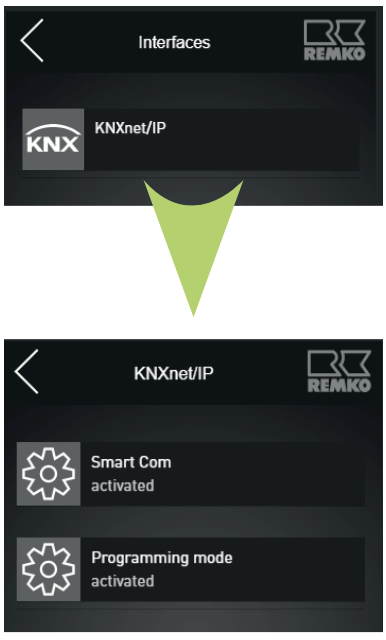
Check the status of the activation as follows:

User level	
↓	
Information	
↓	
Basic information	
↓	
Status	
↓	
Smart Com	
↓	
Activated	Deactivated

Enabling the Smart Com function displays the activation at this level.

After the activation has been checked, switch off the power to the heat pump again and replace the SD card with the original card that you had removed at the beginning.

After switching on the heat pump again, the installation of the Smart Com function is complete and the additional KNX menus are displayed.



6 Configuring the Smart Com function

The settings for the Smart Com function can be made in the User level.

Enabling and programming

This function is not activated ex works. To activate this function, the Smart-Com parameter must be changed to "activated".

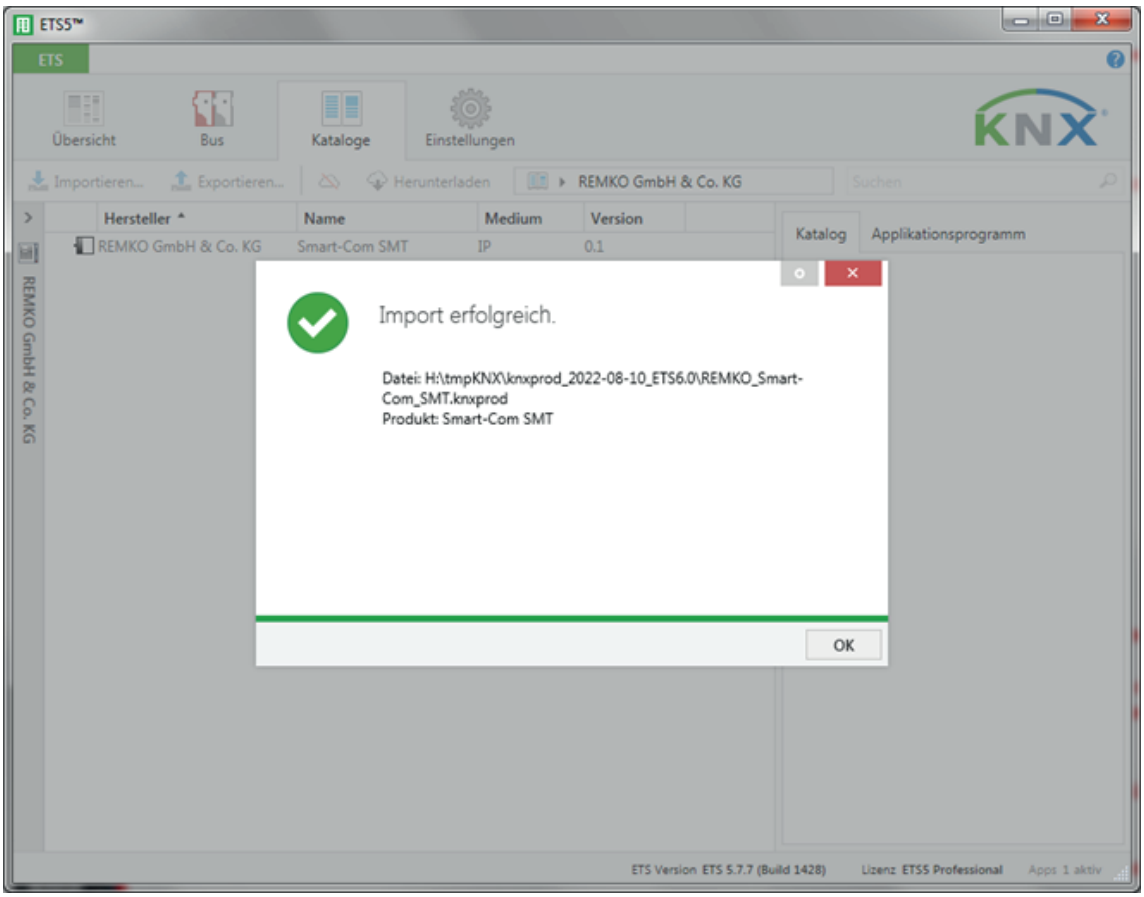
User level
↓
Settings
↓
Default settings
↓
Interfaces
↓
KNXnet/IP

Project planning

Product data

The product database (ETS product file 'REMKO_Smart-Com_SMT.knxprod') can be downloaded via the following QR code and imported into the ETS catalogue:

REMKO Smart-Com



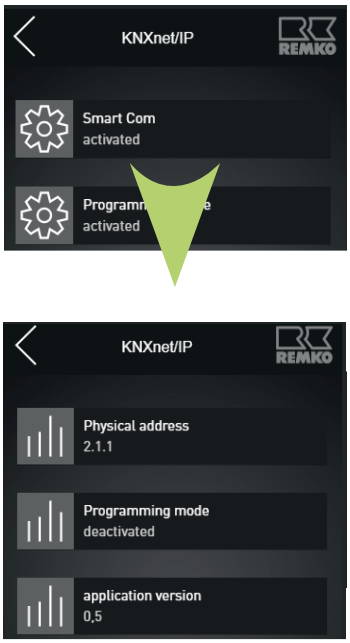
Addressing

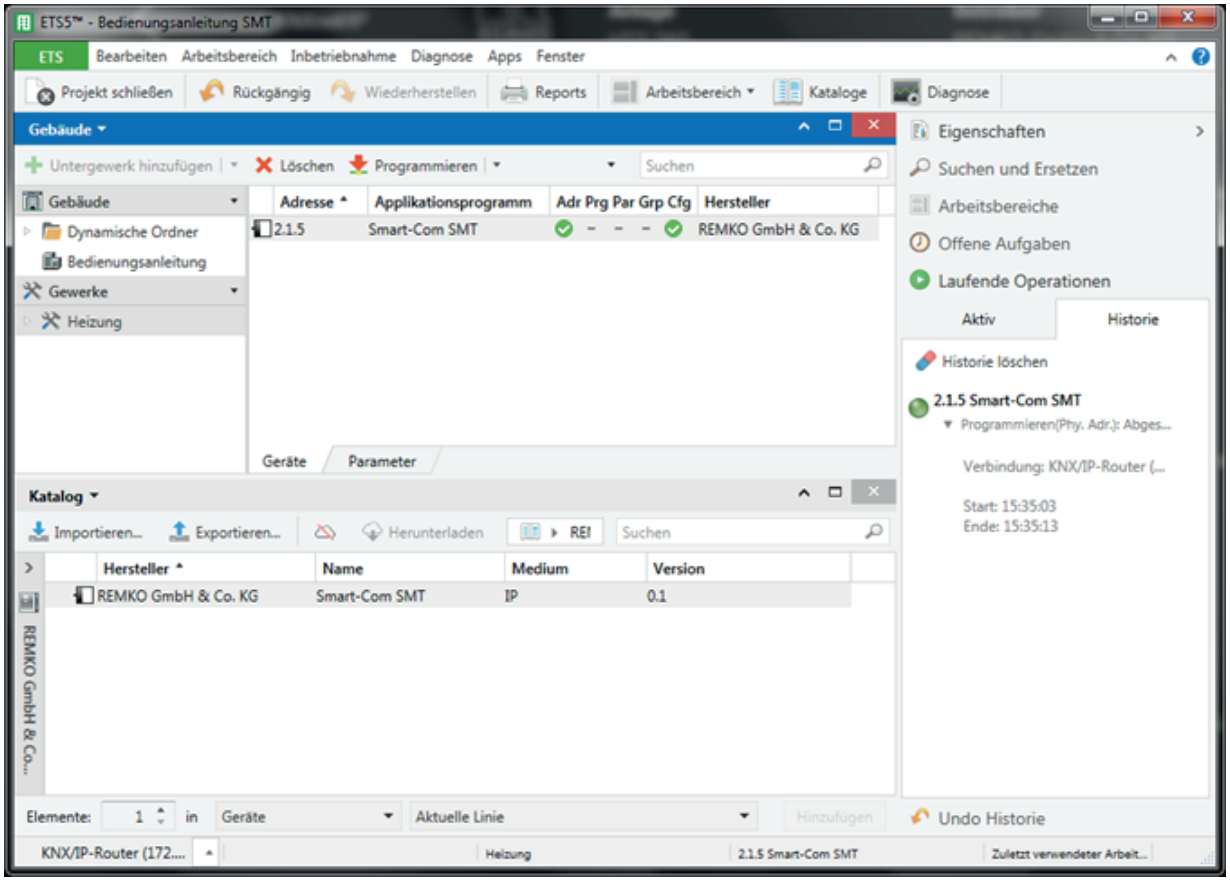
The KNX address (physical address) is preset to 15.15.255 at the factory. The KNX address is set via the ETS.

No additional KNX data interface is necessary for programming.

The device is connected via IP. Enter the address for this in the ETS and program (Programming ⇒ Physical address).

Programming mode is activated via the parameter in the setting menu. After successful programming, programming mode deactivates.





Parametrisation

The configurable communication objects are pre-selected via the parameter in the “General configuration” tab.

For example, all communication objects of the corresponding heating cycle are summarised under the “Unmixed heating cycle” channel. For better clarity, only the channels of the available heating cycles should be activated.

Programming

The configured application is uploaded via the “Programming ⇒ Application program" ETS function.

The application can be reset to factory settings via the “Unload” ETS function.

7 Communication objects

Data points

COM[1)]	Name [3)]	DPT [4)]	Size [5)]	Communication flag [6)]				Function description
1	On/off (Switching)	**DPT 1.001 (DPT_Switch)** (0) Off (1) On	1 bit	C	-	W	-	(0) Off: Switches room climate mode to standby (1) On: Switches room climate mode to the operating mode selected (by object 2) (i.e. to heating or cooling)
2	Heating/ cooling (Switching)	**DPT 1.100 (DPT_Heat-Cool)** (0) Cooling (1) Heating	1 bit	C	-	W	-	(0) Cooling: Switches room climate mode to cooling (1) Heating: Switches room climate mode to heating
3	Heating/ cooling (Status)	**DPT 1.100 (DPT_Heat-Cool)** (0) Cooling (1) Heating	1 bit	C	R	-	T	Returns the value 0 (cooling) if the current room climate mode for the SMT controller is also on cooling (including cooling in automatic mode)
4	SMT Operating mode (Switching)	**DPT 20.102 (DPT_HVAC-Mode)** (0) Auto (1) Comfort (2) Standby (3) Night (Eco) (4) Protection mode (frost/ heat)	1 byte	C	-	W	-	(0) Auto: The SMT controller and all room controllers work in auto mode. (1) Comfort: The SMT controller works in comfort mode. The room controllers work in auto mode. (2) Standby: The SMT controller and all room controllers work in standby mode. (3) Night (Eco): The SMT controller and all room controllers work in eco mode.
5	SMT Operating mode (Status)	**DPT 20.102 (DPT_HVAC-Mode)** (0) Auto (1) Comfort (2) Standby (3) Night (Eco) (4) Protection mode (frost/ heat)	1 byte	C	R	-	T	The Smart-Control controller transfers the operating mode (HVACMode) from object 3 when the KNX bus is changed.
6	Outside temperature	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	R	-	T	The Smart-Control controller transfers the outside temperature to the KNX bus.

COM[1)]	Name [3)]	DPT [4)]	Size [5)]	Communication flag [6)]				Function description
7	Room target temperature	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	R	W	T	The Smart-Control controller converts the "hotter/colder" parameter setting into a target value (e.g. +2K corresponds to 22°C) and sends this to the KNX bus. This can be used by a KNX room temperature controller as the basic target value.
8	Defrosting (status)	**DPT 1.001 (DPT_Switch)** (0) Off (1) On	1 bit	C	R	-	T	The Smart-Control controller transfers the outdoor unit's defrosting status to the KNX bus (1 = defrosting active).
9	HW target temperature	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	The HW target temperature is transferred from the KNX bus to the Smart-Control controller.
10	HW actual temperature	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	R	-	T	The Smart-Control controller transfers the HW actual temperature to the KNX bus.
11	One-off hot water	**DPT 1.017 (DPT_Trigger)** (0,1) Trigger signal	1 bit	C	-	W	-	A trigger pulse activates/deactivates the function (regardless of the value received)
12	Alarm signal (Status)	**DPT 1.005 (DPT_Alarm)** (0) No alarm (1) Alarm	1 bit	C	R	-	T	The Smart-Control controller transfers a signal to the KNX bus if there is a malfunction.
13	Unmix. HC actual temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	R	-	T	The Smart-Control controller transfers the hot water temperature (average of the inlet temperature and the return temperature) to the KNX bus.
14	1st mixed HC actual temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	R	-	T	The Smart-Control controller transfers the hot water temperature (average of the inlet temperature and the return temperature) to the KNX bus.
15	2nd mixed HC actual temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	R	-	T	The Smart-Control controller transfers the hot water temperature (average of the inlet temperature and the return temperature) to the KNX bus.

COM[1)]	Name [3)]	DPT [4)]	Size [5)]	Communication flag [6)]				Function description
16	3rd mixed HC actual temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	R	-	T	The Smart-Control controller transfers the hot water temperature (average of the inlet temperature and the return temperature) to the KNX bus.
17	4th mixed HC actual temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	R	-	T	The Smart-Control controller transfers the hot water temperature (average of the inlet temperature and the return temperature) to the KNX bus.
18	Unmix. HC room temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
19	1st mixed HC room temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
20	2nd mixed HC room temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
21	3rd mixed HC room temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
22	4th mixed HC room temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
23	Unmix. HC room humidity	**DPT 9.007 (DPT_Value_Humidity)** 0 % - 100 %	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.

COM[1)]	Name [3)]	DPT [4)]	Size [5)]	Communication flag [6)]				Function description
24	1st mixed HC room humidity	**DPT 9.007 (DPT_Value_Humidity)** 0 % - 100 %	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
25	2nd mixed HC room humidity	**DPT 9.007 (DPT_Value_Humidity)** 0 % - 100 %	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
26	3rd mixed HC room humidity	**DPT 9.007 (DPT_Value_Humidity)** 0 % - 100 %	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
27	4th mixed HC room humidity	**DPT 9.007 (DPT_Value_Humidity)** 0 % - 100 %	2 byte	C	-	W	-	The room temperature is sent from the KNX bus to the Smart-Control controller and used for the circuit's room temperature influence. The selection parameter for the room control must be set to KNX for this.
28	Time	**DPT 10.001 (DPT_TimeOfDay)**	3 byte	C	R	-	T	The Smart-Control controller sends the controller's time to the KNX bus.
29	Date	**DPT 11.001 (DPT_Date)**	3 byte	C	R	-	T	The Smart-Control controller sends the controller's date to the KNX bus.
30	Unmix. HC room target temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	A room temperature target value is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller and converted into an offset (KNX target value adjustment).
31	1st mixed HC room target temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	A room temperature target value is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller and converted into an offset (KNX target value adjustment).

COM[1)]	Name [3)]	DPT [4)]	Size [5)]	Communication flag [6)]				Function description
32	2nd mixed HC room target temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	A room temperature target value is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller and converted into an offset (KNX target value adjustment).
33	3rd mixed HC room target temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	A room temperature target value is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller and converted into an offset (KNX target value adjustment).
34	4th mixed HC room target temper.	**DPT 9.001 (DPT_Value_Temp)** -273°C - 670 760°C	2 byte	C	-	W	-	A room temperature target value is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller and converted into an offset (KNX target value adjustment).
35	Unmix. HC presence object	**DPT 1.018 (DPT_Occupancy)** (0) Not present (1) Present	1 bit	C	-	W	-	A presence object is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller.
36	1st mixed HC presence object	**DPT 1.018 (DPT_Occupancy)** (0) Not present (1) Present	1 bit	C	-	W	-	A presence object is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller.
37	2nd mixed HC presence object	**DPT 1.018 (DPT_Occupancy)** (0) Not present (1) Present	1 bit	C	-	W	-	A presence object is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller.
38	3rd mixed HC presence object	**DPT 1.018 (DPT_Occupancy)** (0) Not present (1) Present	1 bit	C	-	W	-	A presence object is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller.
39	4th mixed HC presence object	**DPT 1.018 (DPT_Occupancy)** (0) Not present (1) Present	1 bit	C	-	W	-	A presence object is transferred from the KNX bus (e.g. from a KNX room temperature controller) to the Smart-Control controller.

COM[1)]	Name [3)]	DPT [4)]	Size [5)]	Communication flag [6)]				Function description
40	Unmix. HC operating mode	**DPT 20.102 (DPT_HVAC-Mode)** (0) Auto (1) Comfort (2) Standby (3) Night (Eco) (4) Protection mode (frost/ heat)	1 byte	C	R	-	T	The Smart-Control controller transfers the operating mode (HVACMode) to the KNX bus when changed (e.g. depending on the presence object, time programme and room climate mode).
41	1st mixed HC operating mode	**DPT 20.102 (DPT_HVAC-Mode)** (0) Auto (1) Comfort (2) Standby (3) Night (Eco) (4) Protection mode (frost/ heat)	1 byte	C	R	-	T	The Smart-Control controller transfers the operating mode (HVACMode) to the KNX bus when changed (e.g. depending on the presence object, time programme and room climate mode).
42	2nd mixed HC operating mode	**DPT 20.102 (DPT_HVAC-Mode)** (0) Auto (1) Comfort (2) Standby (3) Night (Eco) (4) Protection mode (frost/ heat)	1 byte	C	R	-	T	The Smart-Control controller transfers the operating mode (HVACMode) to the KNX bus when changed (e.g. depending on the presence object, time programme and room climate mode).
43	3rd mixed HC operating mode	**DPT 20.102 (DPT_HVAC-Mode)** (0) Auto (1) Comfort (2) Standby (3) Night (Eco) (4) Protection mode (frost/ heat)	1 byte	C	R	-	T	The Smart-Control controller transfers the operating mode (HVACMode) to the KNX bus when changed (e.g. depending on the presence object, time programme and room climate mode).

COM[1)]	Name [3)]	DPT [4)]	Size [5)]	Communication flag [6)]				Function description
44	4th mixed HC operating mode	**DPT 20.102 (DPT_HVAC-Mode)** (0) Auto (1) Comfort (2) Standby (3) Night (Eco) (4) Protection mode (frost/ heat)	1 byte	C	R	-	T	The Smart-Control controller transfers the operating mode (HVACMode) to the KNX bus when changed (e.g. depending on the presence object, time programme and room climate mode).
45	Heat pump energy	**DPT 13.013 (DPT_ActiveEnergy_kWh)** -2147483648 kWh - 2147483647 kWh	4 byte	C	R	-	T	The Smart-Control controller transfers the counted energy quantities to the KNX bus.
46	Heating energy	**DPT 13.013 (DPT_ActiveEnergy_kWh)** -2147483648 kWh - 2147483647 kWh	4 byte	C	R	-	T	The Smart-Control controller transfers the counted energy quantities to the KNX bus.
47	Hot water energy	**DPT 13.013 (DPT_ActiveEnergy_kWh)** -2147483648 kWh - 2147483647 kWh	4 byte	C	R	-	T	The Smart-Control controller transfers the counted energy quantities to the KNX bus.
48	Cooling energy	**DPT 13.013 (DPT_ActiveEnergy_kWh)** -2147483648 kWh … 2147483647 kWh	4 byte	K	L	-	Ü	The Smart-Control controller transfers the counted energy quantities to the KNX bus.
54	Heat pump capacity	**DPT 9.024 (DPT_Power)** -670760 kWh … 670760 kWh	2 byte	K	L	-	Ü	The Smart-Control controller sends the electrical power to the KNX bus.
55	Household/ purchase capacity	**DPT 9.024** -670760 kWh … 670760 kWh	2 byte	K	L	-	Ü	The Smart-Control controller sends the electrical power to the KNX bus.
56	Photovoltaics capacity	**DPT 9.024** -670760 kWh … 670760 kWh	2 byte	K	L	-	Ü	The Smart-Control controller sends the electrical power to the KNX bus.

COM[1)]	Name [3)]	DPT [4)]	Size [5)]	Communication flag [6)]				Function description
57	Feed-in capacity	**DPT 9.024** -670760 kWh … 670760 kWh	2 byte	K	L	-	Ü	The Smart- Control controller sends the electrical power to the KNX bus.
59	Heat pump capacity	**DPT 9.024 (DPT_Power)** -670760 kWh … 670760 kWh	2 byte	K	-	S	-	The Smart- Control controller receives the electrical power from the KNX bus
60	Household/ purchase capacity	**DPT 9.024 (DPT_Power)** -670760 kWh … 670760 kWh	2 byte	K	-	S	-	The Smart- Control controller receives the electrical power from the KNX bus
61	Photovoltaics capacity	**DPT 9.024** -670760 kWh … 670760 kWh	2 byte	K	-	S	-	The Smart-Control controller sends the electrical power to the KNX bus.
62	Feed-in capacity	**DPT 9.024** -670760 kWh … 670760 kWh	2 byte	K	-	S	-	The Smart-Control controller sends the electrical power to the KNX bus.
64	SG-Ready Input 1	**DPT 1.001 (DPT_Switch)** (0) Off (1) On	1 bit	K	-	S	-	The Smart-Control controller receives the SG ready signal from the KNX bus.
65	SG-Ready Input 2	**DPT 1.001 (DPT_Switch)** (0) Off (1) On	1 bit	K	-	S	-	The Smart-Control controller receives the SG ready signal from the KNX bus.
67	SG-Ready Operating status	**DPT 20.1** (DPT_SGReadyMode)** (0) deactivated (1) Normal operation (2) Raised set-points (3) Maximum setpoints	1 byte	K	L	-	Ü	The Smart-Control controller sends the SG ready operating status to the KNX bus.

[1)] Communication object (COM) number

[2)] Factory setting for group addresses (GA) / [3)] Data point designation

[4)] Data point type (DPT) / [5)] Data point size

[6)] Communication/ flags: C = Communication, R = Read, W = Write, T = Transfer

8 Application example

Connecting a room temperature controller (RTC)

E.g.:

Merlin 616919

Gira 2100

Jung A2178 TS

Berker S.1 75441152

or similar

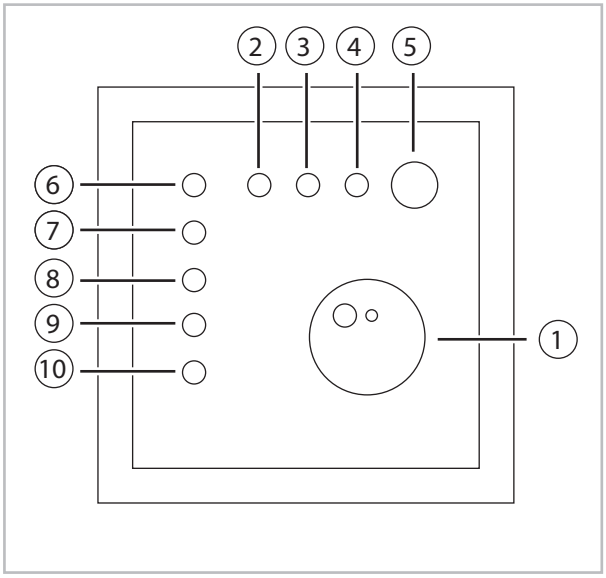


Fig. 3: Connecting a room temperature controller (RTC)

1: Adjustment wheel to specify the target room temperature value
2: LED for comfort operating mode
3: LED for standby operating mode
4: LED for night (time programme) operating mode
5: Presence button to switch between comfort and standby
6: LED for heating or cooling active (non-functional)
7: LED for heating mode active
8: LED for cooling mode active
9: LED for anti-freeze protection mode
10: LED for dew point mode (non-functional)

The address in the relevant heating circuit (e.g. unmixed heating circuit) must be set to KNX to activate the KNX room temperature controller's room temperature influence.

Expert level
↓
Settings
↓
Unmixed cycle
↓
Room unit
↓
KNX

The KNX room temperature controller's current operating mode (Status KNX), as well as the influence on the room temperature target value (KNX target value adjustment) can be checked in the information menu for the heating circuit (e.g. "Expert/Information/Unmixed heating circuit").

Expert level
↓
Information
↓
Unmixed cycle
↓
KNX status
KNX setpoint adjustment

Data points

CO[1]	Grp.-addr. [2]	Name [3]	DPT [4]	Size [5]	Communication flags [6]				Function description
23	5/0/18	Unmix. HC room temp.	**DPT 9.001 (DPT_Value_Temp)** -273°C... 670 760°C	2 byte	K	L	-	T	The room temperature controller transfers the actual temperature to the Smart Control controller when changed.
26	5/0/7	Room set temperature	**DPT 9.001 (DPT_Value_Temp)** -273°C... 670 760°C	2 byte	K	-	S	-	The Smart Control controller transfers the basic setpoint value to the room temperature controller.
32	5/0/44	Unmix. HC operating mode	**DPT 20.102 (DPT_HVACMode)** (0) Auto (1) Comfort (2) Standby (3) Night (Eco) (4) Protection mode (frost/heat)	1 byte	K	-	S	-	The Smart Control controller transfers the operating mode (HVACMode) to the room temperature controller when changed (e.g. depending on the presence object).
33	5/0/38	Unmix. HC presence object	**DPT 1.018 (DPT_Occupancy)** (0) Not present (1) Present	1 bit	K	-	S	T	The room temperature controller transfers the presence object (alternating each time the presence button is pressed) to the Smart Control controller.
35	5/0/3	Heating/cooling (status)	**DPT 1.100 (DPT_HeatCool)** (0) Cooling (1) Heating	1 bit	K	-	S	-	The Smart Control controller transfers the operating mode (HeatCool) to the room temperature controller when changed.
50	5/0/32	Unmix. HC room target temp.	**DPT 9.001 (DPT_Value_Temp)** -273°C... 670 760°C	2 byte	K	L	-	T	The room temperature controller transfers the target room temperature to the Smart Control controller when changed (e.g. via the adjustment wheel or when lowered).

[1] Communication object (CO) number

[2] Factory setting for group addresses (GA)

[3] Data point designation / [4] Data point type (DPT)

[5] Data point size

[6] Communication flags:

C = Communication / R = Read / W = Write / T = Transfer

9 Software update

NOTICE!

The updating may only be carried out by REMKO certified specialist personnel!

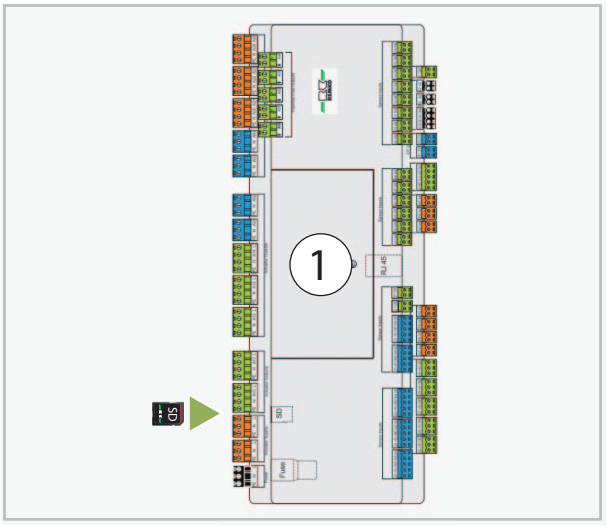
The procedure for loading new software onto the controller/remote control of your REMKO heat pump is as follows:

1. Disconnect the entire heat pump system (outside and indoor unit) from the mains supply before updating the software.

   Therefore the Stand-by mode should be activated. If heat pump operation is deactivated, switch off the heat pump components completely via the fuses.

2. After the system has been de-energised, replace the SD cards of the I/O module. If remote controls are also connected, they must also be fitted with new SD cards.

3. First, replace the SD card of the heat pump's I/O module.

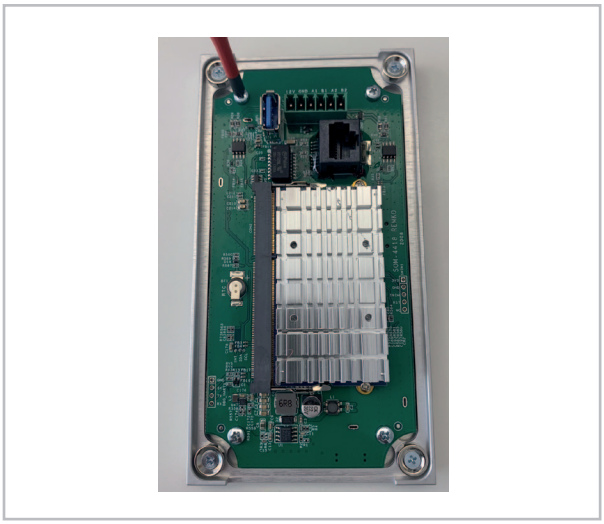


1: I/O module

Replace the SD card for the display as follows:

1. To change the SD card of the display, the display must be removed from the frame.

2. To disassemble, loosen and remove the four screws that secure the display.



3. **NOTICE!**

   The SD cards must not be mixed up!

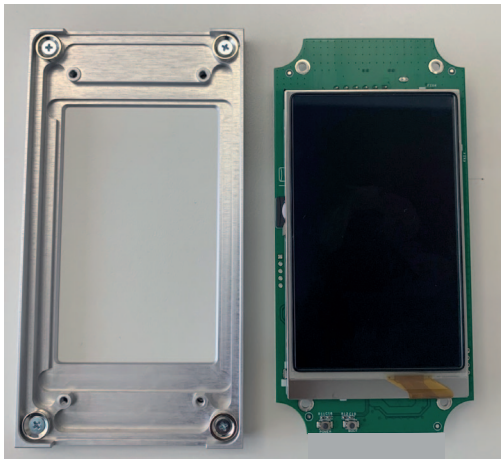
   The Smart-Control Touch control SD card is marked "CP Touch V2".

   The Smart-Control Touch remote control SD card is marked "RC Touch V2"

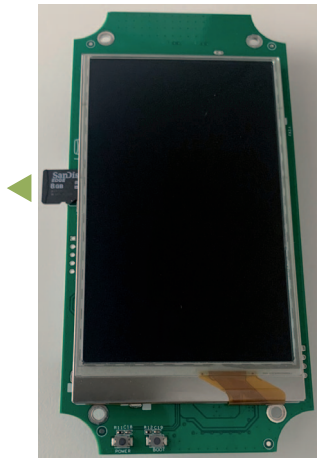
   The SD card I/O module is marked with the software version (e.g. 4.27).

After removing the screws, take the display out of the frame.

Display and frame are now separated.



4. Turn the display with the touch screen upwards and remove the SD card on the left side. Then insert the new SD card with the current software version.

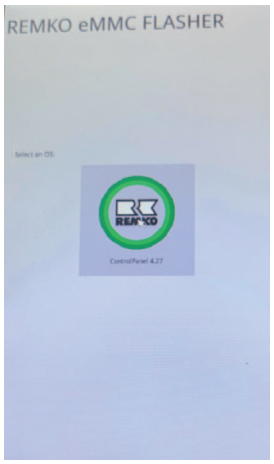


5. If you have removed the RJ 45 cable [1] and the green plug [2] for the power supply, reconnect them now.

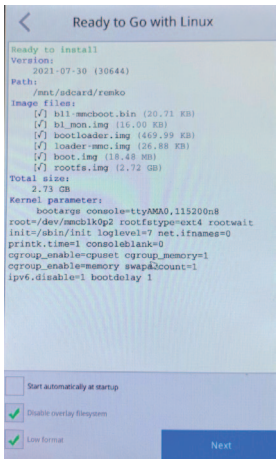
6. To activate the new software, press the boot button [1] at the bottom of the display and keep it pressed. Now switch on the power supply for the indoor unit of the heat pump again. Caution! Do not touch any live parts of the circuit board!

7. After the power supply has been reactivated, the REMKO LOGO and "eMMC_Flasher" appear in the display.Release the boot button once these have appeared in the display. The new software is now being updated.

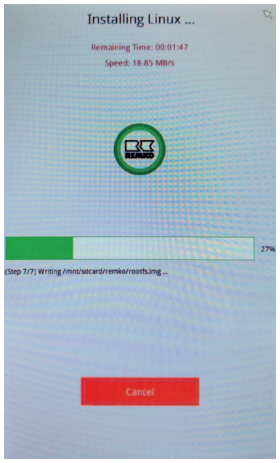
8. After the eMMC-Flasher display is shown, the REMKO logo with the designation Control Panel appears in the display. Now touch the logo once briefly.



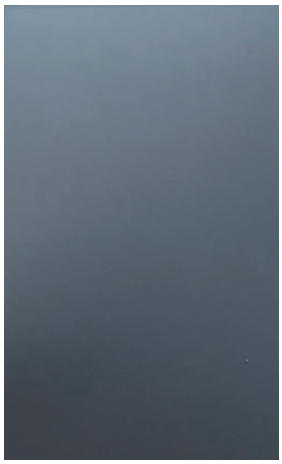
9. The display shows "Ready to Go with Linux". Then touch the "Next" button at the bottom right of the display.



10. The new software is now being transferred. This is indicated by the green bar.

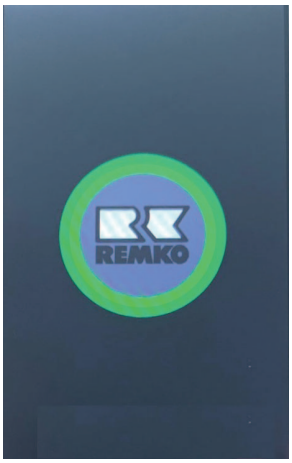


11. The software update is complete when there is no longer any indication in the display.

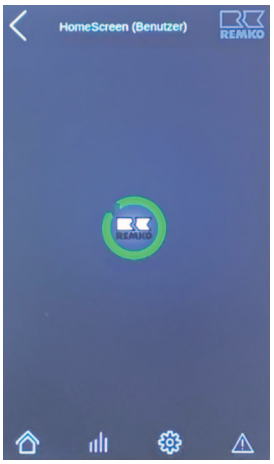


12. When the display has gone "dark", wait approx. 10 seconds and then switch off the power supply to the complete indoor unit again. Wait again for approx. 10 seconds and switch on the power supply of the indoor unit and the components, e.g. the outdoor unit, again.

The Smart-Control Touch controller now starts and the REMKO logo can be seen.



13. The display then changes to the "Home-Screen" display.



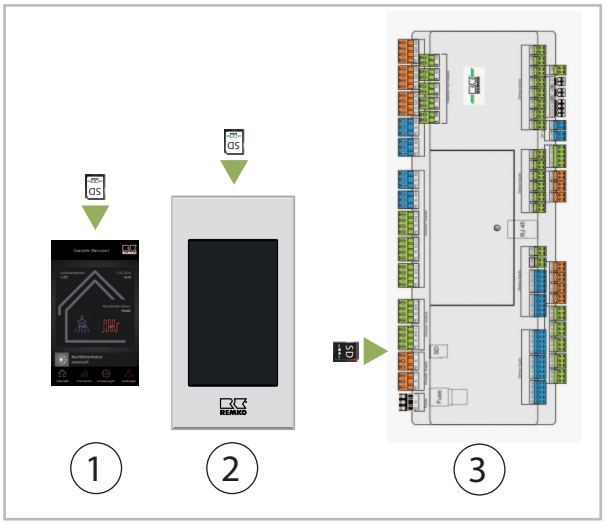
14. The update is now accepted and the touch screen starts with the commissioning data. If commissioning does not start automatically, press the house symbol at the bottom left of the display to continue with commissioning.

Please refer to the chapter 'Commissioning wizard' on the next page to find out which data still have to be set:

! NOTICE!

The SD cards must not be mixed up!

After replacing the SD cards, switch the system back on via the fuses you switched off previously.



1: The Smart-Control Touch control SD card is marked "CP Touch V2".
2: The Smart-Control Touch remote control SD card is marked "RC Touch V2"
3: The SD card I/O module is marked with the software version (e.g. 4.27).

In case of a software update, all components of the control system must have the same software version!

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