Wärmepumpen-Manager

Operating instructions

for users

HEIM AG
Heizsysteme

Heat pump manager

Bestell-nr. / Order no. / N°de commande : 452115.66.36

DE / EN / FR · FD 9709 / L23

(DE)

Einstellung der Sprache
Die Einstellung der Sprache ist nach einem Neustart des Wärmepumpenmanagers oder im Menü Einstellungen möglich.

- MENUE-Taste für einige Sekunden gedrückt halten
- Auswahl des Menüpunktes Einstellungen und bestätigen durch Drücken der ENTER-Taste (↵)
- Auswahl des Untermenüpunktes Sprache mit der Pfeiltasten (⇑) und bestätigen durch Drücken der ENTER-Taste (↵) bis Cursor zum Einstellwert springt
- Gewünschte Sprache mit Pfeiltasten (⇑ und ⇓) einstellen
- Gewählte Sprache mit ENTER-Taste (↵) bestätigen oder durch die ESC-Taste verwerfen

(GB)

Sets the desired language
The language can be set after restarting the heat pump manager or in the Settings menu.

- Press and hold the MENUE button for several seconds
- Select the menu item Settings and confirm by pressing the ENTER key (↵)
- Select the Language submenu item with the arrow keys (⇑) and confirm by pressing the ENTER key (↵) until the cursor jumps to the setting value
- Set the desired language with the arrow keys (⇑ and ⇓)
- Confirm the selected language with the ENTER key (↵) or revoke with the ESC key

(FR)

Réglage de la langue
Il est possible de régler la langue après un redémarrage du gestionnaire de pompe à chaleur ou dans le menu Réglages.

- Maintenir la touche MENUE enfoncée pendant plusieurs secondes.
- Sélectionner l'option de menu Réglages et confirmer en appuyant sur la touche ENTRÉE (↵).
- Sélectionner l'option de sous-menu Langue à l'aide des touches flèches (⇑) et confirmer en appuyant sur la touche ENTRÉE (↵) jusqu'à ce que le curseur se positionne sur la valeur de réglage.
- Sélectionner la langue souhaitée à l'aide des touches flèches (⇑ et ⇓).
- Confirmer la langue choisie avec la touche ENTRÉE (↵) ou la rejeter à l'aide de la touche ESC.

(SI)

Nastavitev jezika
Nastavitev jezika je mogoèa po ponovnem zagonu upravitelja toplotne èrpalke ali v meniju za nastavitve.

- Tipko MENUE držite pritisnjeno nekaj sekund
- Izberite menijsko toèko za nastavitve in jo potrdite s pritiskom na tipko ENTER (↵)
- Podmenijsko toèko za jezik izberite s tipkami s pušèico (⇑) in potrdite s pritiskom na tipko ENTER (↵), dokler kazalec ne skoèi na nastavitveno vrednost
- Želeni jezik nastavite s tipkami s pušèico (⇑ in ⇓)
- Izbrani jezik potrdite s tipko ENTER (↵) ali zavrzite s tipko ESC

(IT)

Impostazione della lingua
È possibile impostare la lingua al riavvio del programmatore della pompa di calore oppure nel menu Impostazioni.

- Tenere premuto il tasto MENUE per alcuni secondi
- Selezionare la voce di menu Impostazioni e confermare premendo il tasto ENTER (↵)
- Selezionare la voce di sottomenu Lingua con il tasto freccia (⇑) e confermare premendo il tasto ENTER (↵) fino a che il cursore non si posiziona sul valore da impostare
- Impostare la lingua desiderata con i tasti freccia (⇑ e ⇓)
- Confermare la lingua selezionata con il tasto ENTER (↵) oppure scartarla con il tasto ESC

(SE)

Inställning av språket
Inställningen av språket är möjligt efter en nystart av värmepumphanteraren eller i menyn Inställningar.

- Håll MENUE- knappen nedtryckt några sekunder.
- Välj menypunkt Inställningar och bekräfta med ENTER-knappen (↵)
- Välj undermenypunkten Språk med pilknapparna ⇑) och bekräfta med ENTER-knappen (↵) tills markören hoppar till inställningsvärdet
- Ställ in önskat språk med pilknapparna (⇑ och ⇓)
- Bekräfta utvalt språk med ENTER-knappen (↵) eller annulera med ESC-knappen

(CZ)

Nastavení jazyka
Nastavení jazyka je možné po novém spuštìní manažera tepelného èerpadla nebo v nabídce Nastavení.

- Po dobu nìkolika sekund držte stisknuto tlaèítko MENUE
- Výbìr nabídky menu Nastavení a potvrzení stisknutím tlaèítka ENTER (↵)
- Výbìr nabídky podmenu Jazyk pomocí šipkových tlaèítek (⇑) a potvrzení stisknutím tlaèítka ENTER (↵), až kurzor pøeskoèí k hodnotì nastavení
- Nastavení požadovaného jazyka pomocí šipkových tlaèítek (⇑ a ⇓)
- Zvolený jazyk potvrdit pomocí tlaèítka ENTER (↵) nebo zrušit volbu pomocí tlaèítka ESC

(PL)

Ustawienia języka
Ustawienie języka możliwe jest po ponownym uruchomieniu sterownika pompy ciepła lub w menu Ustawienia.

- Przytrzymać przycisk MENUE przez kilka sekund
- Wybrać punkt menu Ustawienia ipotwierdzić wciskając przycisk ENTER (↵)
- Wybrać podpunkt menu „Język" strzałkami (⇑) ipotwierdzić wciskając przycisk ENTER (↵) aż kursor przejdzie do ustawień
- Ustawić żądany język strzałkami (⇑ i ⇓)
- Wybrany język potwierdzić przyciskiem ENTER (↵) lub odrzucić przyciskiem ESC

(RC)

语言设定
可在重新启动热泵管理器后或通过菜单中的设定项设定语言。

- 持续按住 MENUE 键几秒钟
- 选择菜单项 " 设定 " 并通过按 ENTER 键 （↵）进行确认
- 用方向键（⇑）选择子菜单项 " 语言 " 并通过按 ENTER 键（↵）进行确认，直至光标跳至设定值
- 通过方向键 （⇑ 及 ⇓）对所需语言进行设定
- 通过 ENTER 键 （↵） 确定所需语言或通过 ESC 键取消

(PT)

Definição do idioma
A definição do idioma é possível depois de reiniciado o controlador da bomba de calor ou através do menu Definições.

- Manter a tecla MENUE premida durante alguns segundos
- Seleção do ponto de menu Definições e confirmar premindo a tecla ENTER (↵)
- Seleção do ponto do submenu Idioma com as teclas de setas (⇑) e confirmar premindo a tecla ENTER (↵) até o cursor saltar para o valor de definição
- Definir o idioma desejado com as teclas de setas (⇑ e ⇓)
- Confirmar o idioma selecionado com a tecla ENTER (↵) ou cancelar através da tecla ESC

NL

Instelling van de taal
De taal kan worden ingesteld na een nieuwe start van de warmtepompmanager of in het menu Instellingen.

- Houd de MENUE-toets enkele seconden lang ingedrukt
- Kies de menuoptie Instellingen en bevestig de keuze met de ENTER-toets (↵)
- Kies de submenuoptie Taal met de pijltjestoets (⇑) en bevestig de keuze met de ENTER-toets (↵) tot de cursor naar de instelwaarde springt
- Stel de gewenste taal in met pijltjestoetsen (⇑ en ⇓)
- Bevestig de gekozen taal met de ENTER-toets (↵) of annuleer met de ESC-toets

FI

Kielen valinta
Kieli voidaan valita lämpöpumpun ohjausyksikön uudelleenkäynnistyksen jälkeen tai asetusvalikon kautta.

- Pidä MENUE-näppäintä alhaalla muutaman sekunnin ajan
- Valitse valikkokohta Asetukset ja vahvista painamalla ENTER-näppäintä (↵)
- Valitse valikosta alakohta Kieli nuolinäppäimillä (⇑) ja vahvista painamalla ENTER-näppäintä (↵), jolloin kursori siirtyy asetettavaan arvoon
- Valitse haluamasi kieli nuolinäppäimillä (⇑ ja ⇓)
- Vahvista valitsemasi kieli painamalla ENTER-näppäintä (↵) tai hylkää painamalla ESC-näppäintä

DK

Indstilling af sprog
Det er muligt at indstille sproget efter en ny start af varmepumpestyringen eller i menuen Indstillinger.

- MENUE-tasten holdes inde i nogle sekunder
- Vælg menupunktet Indstillinger og bekræft ved at trykke på ENTER-tasten (↵)
- Valg af undermenupunktet Sprog med piltasten (⇑) og bekræft ved at trykke på ENTER-tasten (↵), indtil cursoren går til indstillingsværdien
- Indstil det ønskede sprog ved hjælp af piltasterne (⇑ og ⇓)
- Bekræft det valgte sprog med ENTER-tasten (↵) og eller fortryd ved at trykke på ESC.

ES

Ajuste del idioma
El idioma se puede ajustar después de reiniciar el controlador de la bomba de calor o en el menú "Ajustes".

- Mantener pulsada la tecla MENUE durante algunos segundos.
- Selección de la opción de menú "Ajustes" y confirmar pulsando la tecla ENTER (↵)
- Selección de la opción de submenú "Idioma" con las teclas de flecha (⇑) y confirmar pulsando la tecla ENTER (↵) hasta que el cursor salte al valor de ajuste
- Ajustar el idioma deseado con las teclas de flecha (⇑ y ⇓)
- Confirmar el idioma seleccionado con la tecla ENTER (↵) o rechazarlo con la tecla ESC

TR

Dil ayarı
Dil ayarı, ısı pompası kontrol ünitesi yeniden başlatıldıktan sonra veya Ayarlar menüsünden gerçekleştirilebilir.

- MENUE tuşu birkaç saniye süreyle basılı tutulmalıdır
- Ayarlar menü noktası seçilmeli ve ENTER tuşuna (↵) basılarak seçim onaylanmalıdır
- Ok tuşları (⇑) ile Dil alt menü noktası seçilmeli ve imleç istenen ayar değerine geldiğinde ENTER tuşuna (↵) basılarak seçim onaylanmalıdır
- Ok tuşları (⇑ ve ⇓) ile tercih edilen dil ayarı yapılmalıdır
- Yapılan dil seçimi ENTER tuşuna (↵) basılarak onaylanmalıdır, iptal etmek için ESC tuşuna basılmalıdır

NO

Stille inn språket
Man kan innstille språket etter oppstart av varmepumpestyring eller i menyen Innstillinger.

- Hold MENUE-tasten inne i noen sekunder.
- Velg menypunktet Innstillinger og bekreft ved å trykke på ENTER (↵)
- Velg undermenypunktet "Språk" med piltastene (⇑) og bekreft ved å trykke på ENTER (↵) til kursøren treffer innstillingsverdien
- Still inn ønsket språk med piltastene (⇑ og ⇓)
- Bekreft språket som du valgte med ENTER-tasten (↵), eller forkast det med ESC-tasten

RU

Языковые настройки
Выбрать язык можно после перезапуска системы управления тепловым насосом или в меню «Настройки».

- Удерживать нажатой клавишу «Меню» (MENUE) в течение нескольких секунд.
- Выбрать пункт меню «Настройки» и подтвердить выбор нажатием клавиши «Ввод» (ENTER) (↵).
- При помощи клавиш со стрелками (⇑) выбрать подпункт меню «Язык» и подтверждать нажатием клавиши «Ввод» (ENTER) (↵), пока курсор не достигнет регулируемого параметра.
- Выбрать желаемый язык при помощи клавиш со стрелками (⇑ и ⇓).
- Подтвердить выбранный язык при помощи клавиши «Ввод» (ENTER) (↵) или отменить выбор при помощи клавиши выхода (ESC).

RO

Setarea limbii
Setarea limbii este posibilă după restartarea managerului pompei de căldură sau din meniul Setări.

- Menţineţi apăsată tasta MENUE timp de câteva secunde
- Selectaţi Setări din punctele meniului şi confirmaţi prin apăsarea tastei ENTER (↵)
- Selectaţi Limba din punctele submeniului cu ajutorul tastelor săgeată (⇑) şi confirmaţi prin apăsarea tastei ENTER (↵) până când cursorul ajunge la valoarea setată
- Setaţi limba dorită cu ajutorul tastelor săgeată (⇑ şi ⇓)
- Confirmaţi limba selectată cu ajutorul tastei ENTER (↵) sau renunţaţi cu ajutorul tastei ESC

JP

言語の設定
言語の設定はヒートポンプマネージャーの再起動後に行うか、あるいは設定メニューから行うことができます。

- MENUE キーを数秒間押し続けます
- 設定のメニュー項目の選択し、ENTER キー（↵）で確定します
- 言語のサブメニュー項目を矢印キー（⇑）で選択し、ENTER キー（↵）で確定します
- 希望の言語を矢印キー（⇑および⇓）で設定します
- 選択した言語を ENTER キー（↵）で確定、または ESC キーで拒否します

Table of contens

1 General information

For installation, operation and maintenance refer to the installation and operating instructions. This unit should only be installed and repaired by a qualified technician. Repairs which are improperly carried out can endanger the safety of the user. In compliance with applicable regulations, the installation and operating instructions must always be available and should be given to the technician working on the device for his/her information. We therefore request that these installation and operating instructions be passed on to the new tenant or owner should there be a change in occupancy. Do not connect the device if it is visibly damaged. In this event, ask the supplier for advice. To prevent damage, ensure only original spare parts are used. All environmentally-relevant requirements regarding the recovery, recycling and disposal of materials and components should be observed in accordance with the applicable standards.

Regulations and safety information

- Any adjustments to the settings within the device must only be carried out by an authorised technician.
- The heat pump manager should only be operated in dry rooms with temperatures ranging between 0 °C and 35 °C. Ensure that no condensation forms on the device.
- To ensure that the frost protection function of the heat pump works properly, the heat pump manager must remain connected to the power supply and the flow must be maintained through the heat pump at all times.

Symbols used:

NOTE

Notes contain important information and are indicated in the manual with the symbol shown above. They are separated from the rest of the text with horizontal lines above and below.

TIP

Tips contain information for energy-efficient operation and are indicated in the manual with the symbol shown above. They are separated from the rest of the text with horizontal lines above and below

2 Heat pump manager

The heat pump manager is essential for the operation of air-to-water, brine-to-water and water-to-water heat pumps. It regulates a bivalent, monovalent or mono energy heat pump heating system and monitors the safety components in the refrigeration circuit. The heat pump manager is either installed in the heat pump casing or is delivered with the heat pump as a wall-mounted controller. It carries out regulation of both the heating system and the heat source system.

Overview of functions

- 6 key operating unit
- Clear, illuminated LCD with indicators for operating status and service information
- Conforms with utility company requirements
- Dynamic menu navigation, customised for the configured heat pump system
- Automatic operating mode switching to auto, summer, or cooling based on the external temperature.
- Remote display interface with identical menu navigation
- Return temperature controlled regulation of heating operation based on external temperature, adjustable fixed-setpoint or room temperature.
- Control of up to three heating circuits
- Priority switching
  – Cooling first
  – Domestic hot water preparation first
  – Heating first
  – Swimming pool first
- Control of a 2nd heat generator (oil or gas boiler, immersion heater)
- Control of a mixer for a 2nd heat generator (oil, gas, solid fuel boiler, or renewable heat source)
- Special program for a 2nd heat generator to ensure minimum runtimes (oil boiler) or minimum heating times (main cylinder)
- Control of a flange heater for targeted reheating of domestic hot water with adjustable time programs, and for thermal disinfection
- Output for controlling a circulation pump via impulse or time program.
- Optional control of up to 5 circulating pumps
- Defrost management system to minimise the energy required for defrosting using variable, self-adjusting defrosting cycle times
- Compressor management system to ensure balanced loading of the compressors for heat pumps with two compressors
- Operating hours counter for compressors, circulating pumps, 2nd heat generator and flange heater
- Keyboard block, child lock
- 10 alarm memories with date, time and description
- Interface for connecting additional communications for LAN, EIB/KNX, Modbus
- Automatic program for targeted heat drying of screed floors and saving the start and finish times

3 Quick reference instructions

3.1 Selecting the mode operation

Select the desired operating mode by repeatedly pressing the MODEbutton (text message). The operating mode will change 10 seconds after altering the setting (symbol changes on the display).

cooling		The system operates in cooling operation.
summer		Domestic hot water heating and swimming pool water heating only. Frost protection is ensured.
winter		Programmed raise and lower times are automatically activated.
vacation		The temperature is lowered and the domestic hot water is blocked for an adjustable time period.
party		The programmed lowering of the heating characteristic curves is overridden.
2nd heat generat.		Heat pump is blocked. Heat is generated by the 2nd heat generator.
auto		The system switches into the operating modes heating - summer - cooling depending on the outside temperature

3.2 Changing the settings

- Press and hold the MENU button for several seconds
- Select the desired menu item with the arrow buttons (⇑ and ⇓)
- Confirm by pressing the ENTER button (↵)
- Select the desired submenu item with the arrow buttons (⇑ and ⇓)
- Confirm with the ENTER button (↵) until the cursor jumps to the setting
- Change the setting to the desired value with the arrow buttons (⇑ and ⇓)
- Confirm the new value with the ENTER button (↵) or discard changes with the ESC button

3.3 Settings and operating data

Menu for setting system-specific parameters (see Cap. 8 on pag. 7). Dynamic menus hide non-essential settings.

- Time — Sets the time and activates automatic operating mode switching from summer to winter.
- Mode — Various operating mode settings available (see Cap. 3.2 on pag. 3)

- Heating circuit 1 — Settings for heating circuit 1
- Heating circuit 2 — Settings for heating circuit 2
- Heating circuit 3 — Settings for heating circuit 3
- Cooling — Settings for cooling operation
- Domestic hot water — Settings for domestic hot water preparation
- Swimming pool — Settings for swimming pool heating

- Date — Sets the date (required for leap years only)
- Language — Sets the language for menu navigation

Heating characteristic curve (see Cap. 6 on pag. 6)
The heating characteristic curve can be adjusted to individual temperature requirements using the hotter/colder buttons on the main display. Increase or reduce the temperature with the ⇑ / ⇓ buttons. For heating circuit 2/3, make this setting in the menu *"Heating circuit 2/Heating circuit 3"*.

Domestic hot water heating (see Cap. 7 on pag. 6)
The domestic hot water temperature and a shut-off time for domestic hot water heating can be set in the menu item "*Settings – Domestic hot water"*. This can be used to change the time for domestic hot water preparation, for example at night. An option is also available for time-controlled reheating of domestic hot water using a flange heater.

Operating data menu (see Cap. on pag. 9)
Displays the measured sensor values.

History menu (see Cap. 8.4 on pag. 14)
Displays runtimes and stored data (e.g. faults).

Displays (see Cap. 9 on pag. 17)

- Display the current operating status of the heat pump system
- Alarm messages: (ESC button flashes)

4 Operation

- The heat pump manager is operated using 6 keys: ESC, MODE, MENU, ⇩, ⇧, ↵. Different functions are assigned to these buttons according to the current display (Standard or Menu).
- The operating status of the heat pump and the heating system is indicated in plain text on a 4 x 20 character LCD (see Cap. 9 on pag. 17).
- 6 different operating modes can be selected: Cooling, Summer, Auto, Party, Vacation, 2nd heat generator.
- The menu is made up of 4 main levels: Settings, Operating data, History, Network (see Cap. 6 on pag. 6)

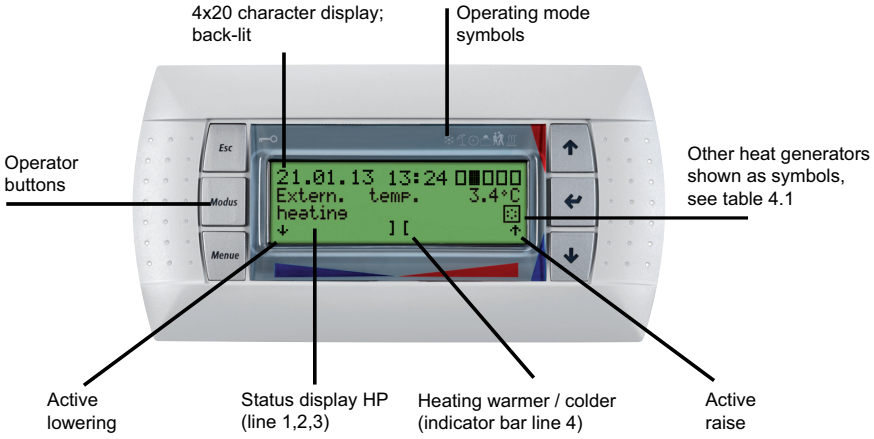

Fig. 4.1: Heat pump manager with detachable main LCD with operator buttons

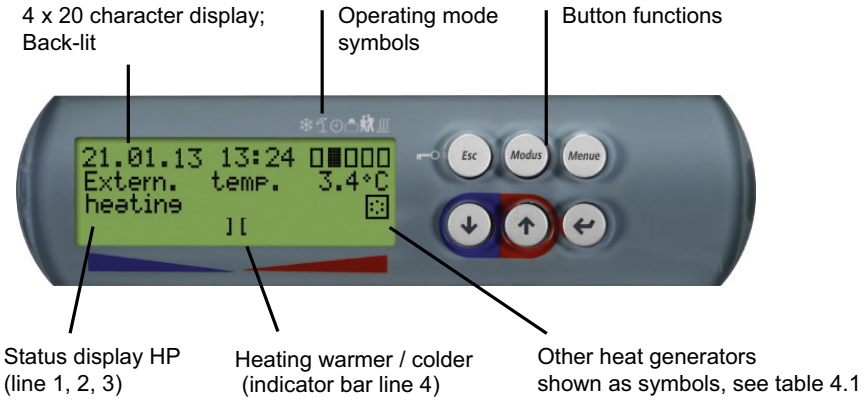

Fig. 4.2: Heat pump manager with integrated main LCD with operator buttons

NOTE

The contrast of the display can be brightened with the key combination (ESC), (MODE), and (⇧) or darkened with (ESC), (MODE), and (⇩) All three keys must be pressed and held together until the required contrast level is set.

NOTE

Keyboard block, child lock

To activate the keyboard block, press and hold the (ESC) key for approximately five seconds. When activated, the keyboard block symbol appears on the display. To release the keyboard block, press and hold the (ESC) key for approximately five seconds.

Pipe heater

Immersion heater

Oil boiler

Flange heater

Supplementary heating

Table 4.1: Display symbols

Button	Standard display (Fig.4.1 on pag. 4)	Change of settings (Cap. 8 on pag. 7)
ESC	■ Activates or deactivates the keyboard block ■ Acknowledges a fault ■ Cancels a change	■ Exits the menu and returns to the main display ■ Returns from a submenu ■ Exits a setting without saving changes
MODE	■ Selects the operating mode (see Cap. 5 on pag. 5)	No action
MENU	■ Jumps to menu	No action
⇓	■ Shifts the heating curve downwards (colder) ■ Changes the room set temperature or fixed-setpoint temperature ■ Selects additional information	■ Scrolls downwards between menu items on one level ■ Lowers the value of a setting
⇑	■ Shifts the heating curve upwards (hotter) ■ Changes the room set temperature or fixed-setpoint temperature ■ Selects additional information	■ Scrolls upwards between menu items on one level ■ Raises the value of a setting
↵	■ Selection for changing the heating curve, room set temperature or fixed-setpoint temperature ■ Confirmation of a change	■ Selects a setting value in the corresponding menu item. ■ Exits a setting and saves changes ■ Jumps to a submenu

Table 4.2: Operator button functions

5 Operating modes

Six different operating modes can be selected using the (MODE) button. A time delay occurs while switching the operating mode. The operating mode can be changed each time the button is pressed in the order shown below.

NOTE

Heat pump operation block

The heat pump is blocked in the 2nd heat generator operating mode. Heating operation and domestic hot water preparation in mono energy systems is carried out using electric heating elements. In the case of bivalent systems, the 2nd heat generator is used.

COOLING Selectable only when the cooling controller is connected		The system operates in cooling mode and individual control functions are activated. This operating mode can only be activated if a cooling controller is connected to the heat pump manager and the cooling function has been enabled in the preconfiguration.
SUMMER		Only domestic hot water and swimming pool water are heated in the SUMMER mode operation. Domestic heating is not activated. (Frost protection is ensured.)
WINTER		The heat pump operates in heating operation. Programmed lowering times, raising times and shut-off times for heating and domestic hot water heating are activated automatically. Hot water heating, heating and swimming pool heating are activated according to priority. The heat pump and the 2nd heat generator are switched on and off are required.
VACATION (lower operation)		The vacation mode operation lowers the heating characteristic curve and activates the domestic hot water block. Both functions are independent of any time controls, but the lower values set for these functions still apply. The duration of the vacation mode operation can be set in the menu ***"1 settings – mode – vacation mode"***. After this time has elapsed, the system switches automatically back to the previous mode operation.
PARTY (daytime operation)		The programmed lowering of the heating characteristic curves is overridden in the party mode operation. The duration of the party mode operation can be set in the menu ***"1 settings – mode – party mode"***. After this time has elapsed, the system switches automatically back to the previous mode operation.
2nd heat generat. (HG 2)		The heat pump is switched off in this mode operation and the entire heat supply is provided by the 2nd heat generator (HG 2). This is the immersion heater in mono energy systems. In bivalent systems, the 2nd heat generator is the oil or gas heating. Time programs and heating curve settings remain active.
AUTO		During auto mode operation, an outside temperature-dependent mode operation switching takes place between the winter - summer - cooling (if possible). The limit temperatures for auto mode operation can be adapted to individual requirements in the menu settings - mode depending on the outside temperature.

6 Adjustment of heating operation

During commissioning, the heating characteristic curve is adjusted to suit the building and local conditions. This heating characteristic curve can be adjusted to individual temperature requirements using the hotter/colder arrow buttons on the main display.

Auswahl der Heizkennlinie mit der ENTER-Taste (↵)

The arrow key ⇑ is used to raise the temperature, the bar display moves to the right.
The arrow key ⇓ is used to lower the temperature, the bar display moves to the left.
For heating circuits 2/3, make this setting in the menu *"heating circuit 2 /3"*.
The set heating characteristic curves can be lowered or raised on a time-controlled basis. For example, in poorly insulated buildings the heating characteristic curve can be lowered or raised before the shut-off time to prevent significant cooling of the heating surfaces.
If the raising and lowering operations overlap each other, the raising operation has priority.

TIP

For energy-efficient operation of the heat pump heating system, the temperature level to be generated by the heat pump should be set as low as possible.
In well insulated buildings, an even heating operation without lowering times usually leads to reduced energy costs, as peaks with high flow temperatures are avoided and the same level of comfort is achieved with lower temperatures.
Shut-off times can be compensated with a raise which begins approx. one hour before the shut-off time.

7 Domestic hot water heating

The heat pump manager automatically calculates the maximum possible hot water temperature in heat pump operation. The desired domestic hot water temperature can be set in the menu *"Settings – Domestic hot water – Hot water set temp"*.

TIP

As domestic hot water preparation takes place with high flow temperatures and can therefore result in high energy costs, it is advisable to adapt the domestic hot water preparation to the user behaviour. This can be achieved with domestic hot water temperatures optimally adapted to the requirements, with corresponding domestic hot water blocks and large hysteresis.

Hot water temperature - HP maximum

To attain the highest possible heat pump ratio during domestic hot water preparation, the heat pump manager automatically calculates the maximum hot water temperature in heat pump operation based on the current heat source temperature. The lower the heat source temperature (e.g. external temperature, brine temperature), the higher the attainable hot water temperature.

Domestic hot water preparation without a flange heater

If the domestic hot water set temperature exceeds the maximum hot water temperature attainable by the heat pump, domestic hot water preparation is terminated as soon as the "HP maximum temperature" is reached.

Domestic hot water preparation with flange heater

If the domestic hot water set temperature exceeds the maximum hot water temperature attainable by the heat pump, domestic hot water preparation is carried out by the integrated flange heater above the "HP maximum temperature".

NOTE

Reheating with flange heater
After domestic hot water preparation with the heat pump, the water can be heated to higher temperatures if the system is equipped with a flange heater. Domestic hot water heating is not reactivated until the heat pump temperature returns to below the HP maximum temperature. This ensures that heat pump can provide basic heating.

7.1 Shut-off times for domestic hot water preparation

Shut-off times for domestic water heating can also be programmed in the menu item *"Settings – Domestic hot water – Domestic hot water block"*. Domestic hot water heating is carried out with only a minimum temperature during this period.

If the cylinder is sufficiently large, we recommend heating or reheating domestic hot water during the night to take advantage of favourable low tariff periods.

7.2 Thermal disinfection

In the menu item *"Settings – Domestic hot water – Therm. disinfection",* thermal disinfection up to a hot water temperature of 85 °C can be carried out for bivalent systems or domestic hot water cylinders with an integrated flange heater. Thermal disinfection can be carried out for each week day. The start time is selectable.

7.3 Circulation

The circulation pump control can be programmed in the menu item "Settings – Domestic hot water circulation". A maximum of two time periods can be defined. A maximum of two circulation time periods can be assigned for each week day. Requests which exceed this will be activated or deactivated at the end of each day accordingly.

TIP

A circulation pipe is a major energy consumer. To save on energy costs, circulation should not be used. If circulation cannot be avoided, however, it is advisable to adapt the time window to the optimal conditions. It is best to let the circulation run for a specific period via an impulse. This function is also possible with the heat pump manager.

8 Menu structure

8.1 Start menu

Selection HP type	Preconfiguration of all system components for dynamic menu structuring	Setting range	Display
language	The language for menu navigation can be selected from the available languages. The 'ENTER' key can be used to select the desired language and the arrow key ↑ can be used to change the language. The 'ENTER' key is used to confirm the selection and the 'ESC' key is used to cancel the selection. Additional languages are available from the after-sales service via Smart Key.		When switching on the voltage, always for 1 min.
heat pump code see type plate	During the first startup of the heat pump manager, the heat pump type must be entered with a 4-digit code that can be found on the type plate. The 'ENTER' key is used to confirm the selection and the 'ESC' key is used to cancel the selection.	**0** 1001 ... 8999	Always when switching on the voltage, if no heat pump code has been selected.
start mask	Settings and displays Date, time and current operating mode Outside temperature display Status display of the HP with error messages Setting for heating, adapted to heating circuit 1 control setting as parallel shift, fixed-setpoint or room set temperature Setting the number of days on holiday or party hours with activated Holiday or Party operating mode		always
master control	Settings and displays for the master control		master control
heat/cool circ. 2 colder / warmer	Parallel shift of the set heating curve for heating circuit 2. By pressing the arrow keys once, the heating curve is shifted by 1 °C upwards (hotter) or downwards (colder).		heating circuit 2 heating
heat/cool circ. 3 colder / warmer	Parallel shift of the set heating curve for heating circuit 3. By pressing the arrow keys once, the heating curve is shifted by 1 °C upwards (hotter) or downwards (colder).		heating circuit 3 heating
hot water set temperature	Sets the desired domestic hot water temperature	30 °C **...60 °C...** 85 °C	domestic hot water sensor
initial heating	Display of information on a running initial heating program Which initial heating program is currently running? Start date of the initial heating Current step / number of steps required Current status of the initial heating program Current return temperature / required return temperature Number of hours passed / number of hours required		initial heating active
high pressure	Which safety unit led to the high-pressure switch-off?	sensor pressure switch flow ODU	high pressure switch-off active
low press.	Which safety unit led to the low pressure cut-off?	sensor pressure switch flow frost protection refrigeration	low pressure cut-off active

Selection HP type	Preconfiguration of all system components for dynamic menu structuring	Setting range	Display
block since	Which block is currently active and since when has it been active.		block active
block	Which block is currently active and how long will it remain active for. This calculation is only possible with individual blocks, e.g. minimum pause time or switch cycle block.		block active Remaining runtime can be calculated
EvD	Display of a detailed error code for the EvD		HP with EvD fault evd
ventilation	Selection of the ventilation level Display of the current status message for the ventilation unit Display of a detailed error code for the ventilation unit		ventilation active
ODU	Display of a detailed error code for the ODU		ODU HP

8.2 Settings

All settings which can be changed by the user are made in the ***"Settings"*** menu item.
The following table shows the structure of the ***"Settings"*** menu. The values shown in bold in the setting range represent the factory default.

The settings menu can be accessed by:

- pressing the (MENU) button for approximately 5 seconds
- select the menu item ***"settings"*** with the arrow buttons and confirm with the ENTER button (↵).

NOTE

Dynamic menus

The following describes the complete menu structure. During commissioning, the control functions and menu structure are adjusted to the specific system. Non-relevant menu items are then hidden according to these settings.

Example: Settings for domestic hot water preparation can only be made if the "Domestic hot water preparation" menu item is configured with "Yes" in the preconfiguration.

Abbreviations:

HG2 = 2nd heat generator (e.g. boiler)

Settings	System-specific parameters	Setting range
date weekday time clock change	Sets the year, day, month, weekday and time. The time can be switched between summer and winter time with the clock change option.	13.05.13 MO … SU *00:00* ... 23:59 yes / *no*
mode	Operating mode settings	
operating mode	Mode operation selection. Changes can be made directly using the mode button. auto mode can only be selected if the outside temperature-dependent operating mode switching is activated.	summer winter vacation party 2nd heat generat. *cooling* auto
party mode no.of hours	Duration of party mode in hours. After this time has elapsed, the system switches automatically back to the previous mode operation. The value for the raise is set in the menu heating circuit 1 – raise.	0 ...*4 hours*… 72
vacation mode no.of days	Duration of vacation mode in days. After this time has elapsed, the system switches automatically back to the previous mode operation. The value for lowering is set in the menu heating circuit 1 – lower.	0 ...*15 days*… 150
heat/cool circ. 1		
room control room set.temp.	Sets the desired room set temperature and I ratio when room temperature control is selected	15.0 …*20.0 °C*… 30.0 001 …*060*… 999
lower	Settings to lower the heating characteristic curve of heating circuit 1.	
time 1: time 2:	Sets the times at which the lower process for heating circuit 1 should take place.	*00:00* ... 23:59 *00:00* ... 23:59
lower value	Sets the temperature value the heating characteristic curve of heating circuit 1 is to be lowered by during a lower process.	*0K* … 19
MO ... SU	For each weekday, it is possible to select whether time 1, time 2, no time or both times are active when the temperature is lowered. Operations to lower the fan speed that exceed a weekday are activated or deactivated at the end of each day accordingly.	*N* / T1 / T2 / Y
raise	Settings to raise the heating characteristic curve of heating circuit 1.	
time 1: time 2:	Sets the times at which the raise process for heating circuit 1 should take place.	*00:00* ... 23:59 *00:00* ... 23:59
raise value	Sets the temperature value the heating characteristic curve of heating circuit 1 is to be raised by during a raise process.	*0 K* … 19
MO ... SU	For each weekday, it is possible to select whether time 1, time 2, no time or both times are active during a raise. Operations to raise the temperature that exceed a weekday are activated or deactivated at the end of each day accordingly.	*N* / T1 / T2 / Y

Settings	System-specific parameters	Setting range
dynamic cooling return set temp.	Sets the desired return set temperature when dynamic cooling is selected. The return nominal value is adapted linear to the outside temperature. A characteristic line is used for this purpose, which is set at two specific operating points. The return nominal value is determined at the fixed outside temperatures of 15 °C and 35 °C.	10 … *15 °C* … 30 10 … *15 °C* … 30
block	Sets the time programs for dynamic cooling.	
time 1: time 2:	Sets the times during which dynamic cooling is blocked.	*00:00* ... 23:59 *00:00* ... 23:59
MO ... SU	For each weekday, it is possible to select whether time 1, time 2, no time or both times are active for a block. Blocks that exceed a weekday are activated or deactivated at the end of each day accordingly.	*N* / T1 / T2 / J
silent cooling room set.temp.	Sets the room set temperature for silent cooling. The actual value is measured by room climate station 1.	15.0 … *20.0 °C* … 30.0
heat/cool circ. 2/3		
lower	Settings to lower the heating characteristic curve of heating circuit 2/3	
time 1: time 2:	Sets the times at which the lower process for heating circuit 2/3 should take place.	*00:00* ... 23:59 *00:00* ... 23:59
lower value	Sets the temperature value by which the heating characteristic curve for heating circuit 2/3 is to be lowered by during a lower process.	*0 K* … 19
MO ... SU	For each weekday, it is possible to select whether time 1, time 2, no time or both times are active when the temperature is lowered. Operations to lower the fan speed that exceed a weekday are activated or deactivated at the end of each day accordingly.	*N* / T1 / T2 / Y
raise	Settings to raise the heating characteristic curve of heating circuit 2/3	
time 1: time 2:	Sets the times at which the raise process for heating circuit 2/3 should take place.	*00:00* ... 23:59 *00:00* ... 23:59
raise value	Sets the temperature by which the heating characteristic curve of heating circuit 2/3 is to be raised during a raise process.	*0 K* … 19
MO ... SU	For each weekday, it is possible to select whether time 1, time 2, no time or both times are active during a raise. Operations to raise the temperature that exceed a weekday are activated or deactivated at the end of each day accordingly.	*N* / T1 / T2 / Y
silent cooling room set.temp.	Sets the room set temperature for silent cooling. The actual value is measured by room climate station 1/2.	15.0 … *20.0 °C* … 30.0
hot water		
set temperature	Sets the desired domestic hot water set temperature.	30 ... *50 °C* … *85*
block	Sets the time program for domestic hot water blocks.	
time 1: time 2:	Sets the times in which domestic hot water preparation is blocked.	*00:00* ... 23:59 *00:00* ... 23:59
MO ... SU	For each weekday, it is possible to select whether time 1, time 2, no time or both times are active for a block. Blocks that exceed a weekday are activated or deactivated at the end of each day accordingly.	*N* / T1 / T2 / J
minimum temperature	Sets the domestic hot water set temperature which should be maintained even during a domestic hot water block.	0 … *10* … *DHW set temp.*
thermal disinfection	To carry out a thermal disinfection, the domestic hot water heating takes place once to the desired temperature. The heating period is terminated automatically when the set temperature is reached, at 12:00 p.m. or after 4 hours at the latest.	
start:	Sets the start time for the thermal disinfection.	*00:00* ... 23:59

Settings	System-specific parameters	Setting range
temperature	Sets the desired domestic hot water set temperature which is to be reached during thermal disinfection.	*60 °C* … *85*
MO ... SU	For each weekday, it is possible to select whether thermal disinfection is desired at the set start time.	*N* / Y
circulation	The circulation pump is controlled by a timer function.	
time 1: time 2:	Sets the times at which the circulation pump is to be activated.	*00:00* ... 23:59 *00:00* ... 23:59
MO ... SU	For each weekday, it is possible to select whether time 1, time 2, no time or both times are active for the circulation pump. Operations that exceed a weekday are activated or deactivated at the end of each day accordingly.	*N* / T1 / T2 / Y
swimming pool		
set temperature	Sets the desired swimming pool set temperature.	5 … *25 °C* … 60
parallel cooling maximum temperat.	Sets the desired swimming pool temperature with parallel cooling operation.	5 … *25 °C* … 60
waste heat use cooling	Sets whether the waste heat recovery during cooling is dependent on the switching status of the thermostat or in continuous operation.	*no* / yes
block	Sets the time programs for blocking swimming pool water preparation.	
time 1: time 2:	Sets the times for the swimming pool block.	*00:00* ... 23:59 *00:00* ... 23:59
MO ... SU	For each weekday, it is possible to select whether time 1, time 2, no time or both times are active for a block. Blocks that exceed a weekday are activated or deactivated at the end of each day accordingly.	*N* / T1 / T2 / Y
minimum temperature	Sets the swimming pool set temperature to be maintained even during a swimming pool block.	0 ... **10** ...DHW set temp.
priority	Sets the time programs for the prioritisation of swimming pool water preparation.	
start:	Sets the start time for the prioritisation of swimming pool water preparation.	*00:00* ... 23:59
no.of hours	Sets the desired number of hours of the prioritisation of the swimming pool water preparation.	*1 hour* … 10
MO ... SU	For each weekday, it is possible to select whether prioritisation is desired at the set start time.	*N* / Y
language	The language for menu navigation can be selected from the available languages. The 'ENTER' key is used to confirm the selection and the 'ESC' key is used to cancel the selection. Additional languages are available from the after-sales service via Smart Key.	

8.3 Operating data

All current operating statuses are displayed in the ***"Operating data"*** menu item.

You can access the operating data menu by:

- pressing the (MENU) button for approximately 5 seconds
- select the menu item ***"operating data"*** with the arrow buttons and confirm with the ENTER button (↵).

Depending on the system configuration, the following data can be queried in the ***"operating data"*** menu:

Operating data	Display of sensor and system values
external temp.	The outside temperature is used for calculating the return set temperature, for frost protection functions and for defrosting.
heat pump *symbol status HP* ↓return ↑flow	 Heat pump off / domestic hot water / heating / swimming pool / cooling / defrost Displays the measured return temperature of heating circuit 1. Displays the measured flow temperature. This temperature is used for frost protection functions and for safeguarding defrosting.
passive cooling □ ↓return ↑flow	 Displays the measured return temperature (R4) during cooling operation. Displays the measured flow temperature (R11) during cooling operation.
heating/cooling symbol demand requesting circuit set ↑actual	Indicates whether a heating/cooling requirement is present. Even if a request is pending, it is possible that the heat pump will not operate (e.g. idle times, flushing periods). This block is shown by the pre-set lock symbol [🔒]. Displays the calculated return set temperature Displays the measured return temperature
heat/cool circ. 1 □ set ↑actual	Indicates whether a heating request is pending. Even if a request is pending, it is possible that the heat pump will not operate (e.g. idle times, flushing periods). This block is shown by the pre-set lock symbol 🔒. Displays the calculated return set temperature. Displays the measured return temperature of heating circuit 1.
heat/cool circ. 1 ↑flow	 Displays the measured flow temperature.
heat/cool circ. 1 dew point	 Displays the dew point for heating/cooling circuit 1 calculated from the values for room climate station 1.
room 1 50 59 humidity set actual	A programmed raise or lowering is integrated into the display. Displays the room humidity in the room climate station for heating/cooling circuit 1. Displays the room set temperature. Displays the room temperature in the room climate station for heating/cooling circuit 1.
heat/cool circ. 2/3 □ set ↑actual	 Displays the calculated set temperature for heating circuit 2/3. Displays the minimum possible temperature for silent cooling in heating circuits 2/3, derived from the calculation of dew point plus dew point distance. Displays the measured temperature for heating circuit 2/3.
room 2 60 69 /3 70 79 humidity set actual	A programmed raise or lowering is integrated into the display. Display of the measured room humidity when using a room climate station or Smart-RTC for heating/cooling circuit 2/3. Displays the room set temperature. Displays the measured room temperature when using a room climate station or Smart-RTC for heating/cooling circuit 2/3.
heat/cool circ. 2/3 dew point	 Displays the dew point for heating/cooling circuit 2/3 calculated from the values for room climate station 2/3.
performance level	Indicates which heat generator is available to carry out the heating or cooling request. 1: max. 1 compressor, 2: max. 2 compressors, 3: max. 2 compressors and a 2nd heat generator

Operating data	Display of sensor and system values
defrost end set actual	 Sensor for determining the defrost end with hot gas defrosting.
tank renewable actual	Displays the temperature measured in the tank in bivalent-renewable systems.
solar	Displays the temperature measured at the collector sensor and solar cylinder.
brine	Displays the temperature measured at the collector sensor and brine.
ventilation outside air Supply air	Display of outside air and supply air temperature
ventilation exhaust air extract air	Display of exhaust air and extract air temperature
ventilation speed supply air fan	Display speed supply fan
ventilation speed exhaust air fan	Display speed exhaust air fan
frost protection cooling	Displays the temperature measured by the frost protection sensor cooling.
hot gas	Displays the temperature measured by the hot gas sensor (R18)
hot water demand *(max)* set actual	 Indicates whether a domestic hot water request has been made. Even if a request is pending, it is possible that the heat pump still does not operate (e.g. programmed shut-off times, operating limits, heating up). This block is shown by the pre-set lock symbol 🔒. Displays the current domestic hot water set temperature Displays the measured domestic hot water temperature (R3).
swimming pool demand set actual	 Indicates whether a swimming pool water request is pending. Even if a request is pending, it is possible that the heat pump still does not operate (e.g. programmed shut-off times, operating limits, heating up). This block is shown by the pre-set lock symbol 🔒. Displays the current swimming pool set temperature. Displays the current swimming pool temperature (R20).
heat source ↓inlet ↑outlet	 Displays the heat source temperature (R27). Displays the temperature measured at the output of the heat source (R6).
pressure sensors high pressure low press.	 Displays the current pressure (R26) on the high pressure side. Displays the current pressure (R25) on the low pressure side.
brine temperature	Displays the heat source temperature (R24) for systems with a combination of passive cooling and a reversible heat pump.

NOTE

Heating request

A heating request is present if the "Return set temperature" minus the "Hysteresis return set temperature" is higher than the current measured "Return temperature".

8.4 History

The ***"history"*** menu can be used to query the runtimes of the compressor(s), circulation pumps and further components in the heat pump heating system.

You can access the history menu by:

- pressing the (MENU) button for approximately 5 seconds
- select the menu item ***"history"*** with the arrow buttons and confirm with the ENTER button (↵).

Depending on the system configuration, the following data is available:

History	Display of runtimes and stored data
runtimes	
compressor 1 □ Σ	Compressor 1 runtime The runtime can be reset. The total runtime cannot be reset.
compressor 2 □ Σ	Compressor 2 runtime The runtime can be reset. The total runtime cannot be reset.
2nd heat generat. □ Σ	Runtime 2nd heat generat. The runtime can be reset. The total runtime cannot be reset.
fan □ Σ	Fan runtime The fan runtime is less than the total number of compressor runtimes due to defrost operations. The runtime can be reset. The total runtime cannot be reset.
primary pump □ Σ	Runtime of the brine circulation pump or well pump The runtime is greater than the total of the compressor runtimes due to pump flow and overtravel. The runtime can be reset. The total runtime cannot be reset.
heating pump □ Σ	Heat circulating pump runtime The runtime can be reset. The total runtime cannot be reset.
auxiliary pump □ Σ	auxiliary circulating pump runtime The runtime can be reset. The total runtime cannot be reset.
cooling □ Σ	Compressor runtime in cooling operation The runtime can be reset. The total runtime cannot be reset.
hot water pump □ Σ	Domestic hot water circulating pump runtime The runtime can be reset. The total runtime cannot be reset.
swimm. pool pump □ Σ	Swimming pool circulating pump runtime The runtime can be reset. The total runtime cannot be reset.
flange heater □ Σ	Flange heater runtime The runtime can be reset. The total runtime cannot be reset.
renewable □ Σ	Renewable runtime The runtime can be reset. The total runtime cannot be reset.
smart-grid □ Σ	Renewable runtime The runtime can be reset. The total runtime cannot be reset.
thermal energy	
solar today	
solar total	

History	Display of runtimes and stored data
total □ Σ	The quantity of thermal energy supplied by the heat pump is totalled and displayed. The quantity of thermal energy can be reset. The total thermal energy cannot be reset.
heating □ Σ	The quantity of thermal energy supplied by the heat pump in heating operating mode is displayed here. For parallel operation (with intermediate heat exchanger: DHW and heating), the quantity of thermal energy is included in the calculation here. The quantity of thermal energy can be reset here. The quantity of thermal energy for heating can be reset. The total thermal energy for heating cannot be reset.
hot water □ Σ	The quantity of thermal energy supplied by the heat pump during domestic hot water operating mode is displayed here. The quantity of thermal energy can be reset here. The quantity of thermal energy for domestic hot water can be reset. The total thermal energy for heating cannot be reset.
swimming pool □ Σ	The quantity of thermal energy supplied by the heat pump during swimming pool operating mode is displayed here. The quantity of thermal energy can be reset here. The quantity of thermal energy for the swimming pool can be reset. The total thermal energy for the swimming pool cannot be reset.
ambient energy □ Σ	Displays the ambient energy used The ambient energy can be reset. The total ambient energy cannot be reset.
smart-grid □ Σ	The quantity of thermal energy supplied by the heat pump during the Smart-Grid function is displayed here. The quantity of thermal energy for the Smart-Grid can be reset. The total quantity of thermal energy for the Smart-Grid can not be reset.
message	
alarm solar	
alarm no.	Display of the last fault which occurred, including date, time and cause. The last 10 faults can be shown by changing the number. The source temperature (→), flow temperature (↑), return temperature(↓) and status value are shown on the display for additional information.
block no.	Displays the last block which occurred, including date, time and cause. Up to 10 blocks can be displayed consecutively by changing the number. The source temperature (→), flow temperature (↑), return temperature(↓) and status value are shown on the display for additional information.
heating function start end	Displays the start and end of the last, fully completed heating function program.
screed drying start end	Displays the start and end of the last, fully completed screed drying program.
maximum temperat.	
hot water 1 0:65 3:65 6:65 9:65 2:65 4:65 7:65 10:65	Display of the current maximum domestic hot water temperature for the 1 compressor operation
hot water 2 0:65 3:65 6:65 9:65 2:65 4:65 7:65 10:65	Display of the current maximum domestic hot water temperatures for the 2 compressor operation
version	
WPM hardware software	Displays the software version installed on the heat pump manager, including boot and bios
WPR hardware software	Displays the software version installed on the heat pump manager, including boot and bios
heat pump coding	Displays the heat pump type identified from the coding resistor (R7).
Plant controller code	

8.5 Network

If an additional interface is available on the heat pump manager, the settings in the **"*network*"** menu must be adjusted.

Network	Adjusting the interface for remote diagnostics	Setting range
protocol	The protocol setting is used to specify the type of the installed interface and the transfer protocol.	*LAN* MODBUS RTU EIB / KNX MODBUS TCP
address	When using Modbus, an address must be assigned to the device attached to the network. This address is used for communicating with the device.	000 … *001* … 199
parity	If Modbus is selected, the parity can be selected here.	None Even Odd
stop bits	If Modbus is selected, the stop bits can be selected here.	1 2
baudrate	When using Modbus, the baud rate must be adjusted to the system baud rate. Ensure that the same baud rate is set on both sides of the communication system.	1200 2400 4800 9600 *19200*

8.5.1 Determining the IP address

When using the NWPM expansion, there is the option of reading out a dynamic IP address allocated by the router or setting a fixed IP address.

The menu is accessed by:

- Simultaneously pressing (approx. 5 seconds) the key combination (ESC) and (ENTER).
- the additional submenus are accessed by pressing the (ENTER) key
- a mask change in the submenu is achieved via the arrow keys
- To return to the standard display, briefly press the (MENUE) key

IP address	Adjusting the interface for remote diagnostics	Setting range
OTHER INFORMATION	Select OTHER INFORMATION with the arrow keys are confirm with ENTER	
PCOWEB/NET CONFIG	Select PCOWEB/NET CONFIG with the arrow keys and confirm with ENTER	
PCOWEB settings	Select PCOWEB settings with the arrow keys and confirm with ENTER	
DHCP	Is DHCP active?	ON / OFF
IP Address	Read out/set the IP address	000 ... 255
Netmask	Read out/set the subnet mask	000 ... 255
Gateway	Read out/set the gateway address	000 ... 255
DNS1	Read out/set the DNS1 address	000 ... 255
DNS2	Read out/set the DNS2 address	000 ... 255
PCOWEB CONFIG ENABLE		
Update pCOWeb?	Has a change been made? If so, YES must be selected and confirmed with ENTER. The heat pump manager must restart after a change has been made. Only then will the amended setting be applied.	NO / YES

9 Displays

The current operating status of the heat pump system can be read from the LCD.

9.1 Normal operating statuses

The display shows both normal operating statuses, and those that are required by utility companies or related to the safety functions of the heat pump. Only information about the relevant system configuration and heat pump type are shown on the display.

	Current status message
OFF	There is no heat request.
heating	The heat pump is in heating operation.
swimming pool	The heat pump is in swimming pool mode
hot water	The heat pump is in domestic hot water preparation mode.
cooling	The heat pump is in cooling water preparation mode.
flowcontrol	The heat pump is in flow rate monitoring. This process lasts a maximum of 4 minutes.
defrosting	The heat pump defrosts the evaporator. The process lasts a maximum of 8 minutes. For hot gas defrosting, the process lasts a maximum of 20 minutes.
block	The heat pump is blocked. The following are possible causes for the block:
p0 monitoring	The heat pump was switched off during defrosting due to pressure fluctuations.
volume flow	Switch-off due to defrost control
system control	A system control can be activated in the "special functions" menu. This is either removed automatically after 24 hours or it can be deactivated in the special functions menu.
pump forerun	The heat pump starts after the set pump flow has expired.
min. pause time	After the minimum pause time has elapsed, the heat pump starts in order to meet any requests that may be pending. The minimum pause time protects the heat pump and can last for up to 5 minutes.
line load	After the switch-on delay has elapsed, the heat pump will start in order to meet any requests that may be pending. The switch-on delay is required by utility companies after the voltage is restored or after a utility block. It can last for up to 200 seconds.
switch cycle bloc	After the switch cycle block has elapsed, the heat pump will start in order to meet any requests that may be pending. The switch cycle block is required by utility companies and can last up to 20 minutes.
dhw reheating	Domestic hot water reheating via the flange heater or pipe heater is active.
renewable	When the "bivalent-renewable" operating mode is selected, the temperature in the renewable cylinder is high enough for all pending requests to be processed by the cylinder.
utility block	A utility block is in place.
soft starter	Heat pump switch-off due to soft starter
flow	The heat pump has been switched off because there is no flow in the primary or secondary circuit. The flow rate switch must be activated in the "Settings - Heat pump" menu. The message is automatically reset after 4 minutes.
operating limit	The outside temperature is below the heat pump's permissible limit temperature.
high pressure	The heat pump's permissible high pressure values have been exceeded.
low press.	The heat pump's permissible low pressure values have been undershot.
low operating limit	The heat source temperature is below the heat pump's operating limit.
system limit	The system temperatures are too low for the heat pump to be operated.
block external	The system has been switched to blocking status due to an external blocking signal at input ID4. The functionality can be configured in the menu.
2nd heat generat. operating mode	The heat pump is switched off because the 2nd heat generator operating mode has been selected. Heat generation is provided by the 2nd heat generator only.
fault	A fault has occurred in the heat pump or in the system. The cause is shown in the plain text display.

9.2 Alarm message

If the ESC button flashes red on the display, the controller has detected an alarm. The cause of this alarm is shown in the plain text display (alternating with the status display).
If an alarm occurs, the local heating technician/after-sales service must be informed. Details of the fault (display), the heat pump designation (type plate) and the software version of the heat pump manager (operating data) are required for rapid and precise troubleshooting.
After the problem has been rectified, press the ESC button to acknowledge the fault.

NOTE

System fault

In mono energy systems, the minimum return set temperature is set if a heat pump or system fault occurs. Frost protection is ensured. By manually switching to the 2nd heat generator operating mode, the building is heated exclusively using the immersion heater.

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Garantiebedingungen und Kundendienstadresse siehe Montage- und Gebrauchsanweisung Wärmepumpe.

For the terms of the guarantee and after-sales service addresses, please refer to the Installation and Operating Instructions for Heat Pumps.

Pour les conditions de garantie et les adresses SAV, se référer aux instructions de montage et d'utilisation de la pompe à chaleur.

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