DAIKIN

INSTALLATION AND OPERATION MANUAL

Central control for hydroboxes

EKCC7-W

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The original instructions are written in English. All other languages are translations of the original instructions.

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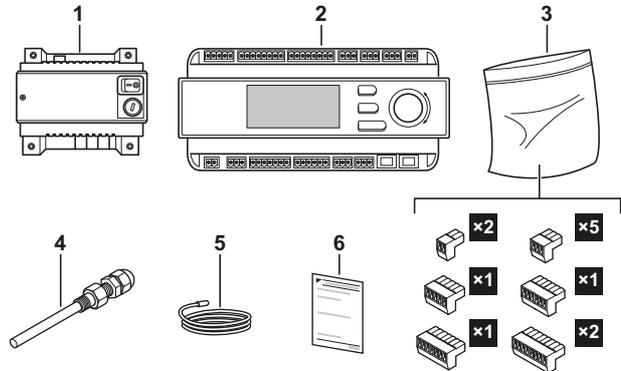
1. Power supply 24 V AC for Microtech III controller (Siemens)
2. POL687.70 Microtech III central control (Siemens/McQuay)
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Intended use

The central control is used to control following Daikin units in cascade.

- EKHBRD* series
- EKHVM* series
- HXHD125*
- EWAQ16..64
- EWYQ16..64

Every unit or group of units is connected through an RTD-W ModBus gateway (to be bought separately from Daikin) to the central control.

Moreover, the central control can control other components of the installation as explained in "2. General layout and setup of a system" on page 2.

2. General layout and setup of a system

The central control can control the following in a system:

■ Leaving water temperature to the secondary circuit (circuit to the heat emitters)
The setpoint for the leaving water temperature to the secondary circuit can be set. The central control will change the setpoint of the units and switch more or less units ON/OFF in order to reach this setpoint.

■ Pump of the secondary circuit

■ Backup heater for room heating

■ Domestic hot water temperature in a centralized domestic hot water tank

In case of a system with domestic hot water, the system can be set up in 2 ways:

1. System with integrated hot water tank(s)
In this case, the units for domestic hot water have their own tank, 3-way valve and 3-way valve control. The parameters for heating domestic hot water (setpoint, schedule, etc.) must be set on the control of the unit itself. Refer to the operation/installation manual of the unit.
On the central control, you can define whether a unit has domestic hot water function or not. (This can be defined in the installer settings. Refer to "Configuration" on page 4.)
If the unit is defined as a unit for domestic hot water, it will always get the lowest priority to start up during room heating, in order to reserve it as much as possible for DHW heating. During room cooling, it will always get the highest priority in order to recover the heat to the DHW tank.
Refer to Figure 3: System with integrated hot water tanks on page 9 for a setup example.

1A~B	Hydroboxes with integrated tank
3~5	Hydroboxes/inverter chillers
A	Domestic hot water tanks (EKHTS200/260)
B	Non-return valve (field supply)
C	Backup heater (field supply)
D	Leaving water temperature to secondary circuit sensor (supplied with EKCC7-W)
E	Secondary circuit pump (field supply)
F	Central control (supplied with EKCC7-W)

When the system is set to heating or cooling (on the central control or by external contact connected to the central control), the central control will switch on the pump of the secondary circuit and change the setpoint of the hydroboxes in order to reach the setpoint for the leaving water temperature to the secondary circuit. In this example, units 1A and 1B are controlled together, since they are connected to the same RTD-W.
If the hydroboxes cannot reach the set temperature to the secondary circuit and depending on other parameters set on the central control, the central control will also switch on the backup heater.

2. System with centralized domestic hot water tank
In this case, a tank sensor in the centralized tank is connected to the central control. The central control will increase the setpoint of the units and switch the 3-way valve when the temperature in the tank becomes too low.

> **INFORMATION**
>
> This means that the units are put in heating mode to heat the DHW tank. For this reason, this setup is only applicable to EKHBRD*AC units set to configuration C (refer to 'Application guide Altherma Flex for commercial applications').
>
> This setup is not advised for EKHVM units, since heating mode is only possible up to an outdoor temperature of 25°C.
>
> For EWYQ units, post-heating of domestic hot water might be required, since the maximum leaving water temperature of these units is limited to 55°C.

Refer to Figure 2: System with centralized domestic hot water tank on page 8 for a setup example.

1A~5	Hydroboxes/inverter chillers
A	Centralized domestic hot water tank (field supply)
B	Domestic hot water sensor (Daikin option: EKCLWS)
C	Non-return valve (field supply)
D	3-way valve for DHW (field supply)
E	Backup heater with integrated pump (field supply)
F	Leaving water temperature to secondary circuit sensor (supplied with EKCC7-W)
G	Secondary circuit pump (field supply)
H	Central control (supplied with EKCC7-W)

When the system is set to heating or cooling (on the central control or by external contact connected to the central control), the central control will switch on the pump of the secondary circuit, switch the hydroboxes ON/OFF and change the setpoint in order to reach the setpoint for the leaving water temperature to the secondary circuit. In this example, units 1A and 1B are controlled together, since they are connected to the same RTD-W.
If the hydroboxes cannot reach the set temperature to the secondary circuit and depending on other parameters set on the central control, the central control will also switch on the backup heater.
When domestic hot water heating is required, the central control will switch the 3-way valve for DHW and increase the setpoint of units 1A and 1B until the required domestic hot water temperature is reached.

3. Installation

3.1. Mounting place

When the central control is ON, the units will be controlled (setpoint setting, ON/OFF control, etc.) by the central control. This will overrule the ON/OFF setting on the individual remote controllers. For ON/OFF control using the remote controllers of the units, the central control must be set to OFF. In order to allow local control of the units at all times, the central control must be installed in the vicinity of the individual remote controllers.

3.2. Wiring the central control

Also refer to Figure 1: Electrical wiring diagram on page 8.

> ⚠ **WARNING**
>
> All electrical wiring must be installed by a licensed electrician and must comply with local regulations.

■ Modbus wiring
The control uses Modbus to communicate with the hydroboxes. Make sure to wire the RS485 wiring (2-wire twisted pair + shield) from the central control to the RTD-Ws.
Also make sure to configure the addresses on the RTD-W correctly (refer to RTD-W manual).

■ Digital inputs
In order to start the system in heating/cooling by an external voltage free contact, wire the following digital inputs:
- DI1-M (T10): Heating ON
- DI2-M (T10): Cooling ON

> **INFORMATION**
>
> The central control can also be configured to start heating/cooling using the central control. In that case, it is not necessary to wire these contacts.

- X1-M(T8): This voltage free input changes the value of the outdoor temperature at which the backup heater is allowed to operate. Also refer to "4.5. Backup heater?" on page 4.
- X2-M(T8): This voltage free input detects alarms of the backup heater.

- Analog inputs
  - AI1-M(T7): Common leaving water sensor. This sensor measures the leaving water temperature to the secondary circuit. (Supplied with EKCC7-W).
  - AI2-M(T7): Domestic hot water temperature. (Daikin option EKCLWS). Only if you have a centralized tank and DHW must be controlled by the central control.
- Digital outputs
  - C3-DO3(T3): Contact to start the secondary pump. This contact closes whenever heating or cooling is ON.
  - C4-DO4(T3): Contact to energize the 3-way valve for DHW. This contact closes when DHW heating is requested.
  - C5-DO5(T4): Contact to start the backup heater. This contact closes when backup heater operation is requested.
  - C8-DO8(T4): This contact closes when there is an alarm in the system (e.g. one of the heatpump units is in alarm, faulty common leaving water sensor, etc.).
  - C9-DO9(T5): Heating operation. This contact closes when the system is in room heating mode.
  - C10-D010(T5): Cooling operation. This contact closes when the system is in room cooling mode.

ℹ️ **INFORMATION**

Contact rating:

- Switching voltage AC 24 V…230 V (–20%, +10%)
- Rated current (res./ind.) Max. AC 3 A / 2 A (cos φ0.6)
- Switching current at AC 19 V Min. AC 30 mA

Max. external supply line fusing 6.3 A slow wire fuse or circuit breaker.

⚠️ **WARNING**

- Do not mix SELV/PELV and line voltage on the same terminal.
- Use external protection for inductive load.

4. Installer settings

Refer to "9. Operation of the central control and menu structure" on page 10 for basic operation of the central control.
All items in the 'Installer settings' menu are explained below in detail. To make the installer settings available, scroll to 'Installer password' in the main menu and enter the installer password (default: '6000') and then go to the 'Installer settings' menu.

4.1. Confirmation of the installer settings

Some settings require a restart of the central control in order to become effective. This is indicated in the first line of the 'Installer settings' menu. When this line shows 'Restart now?', changes were made in the installer settings that require a restart to become effective. Enter the line and select to restart the central control.
When the line shows 'No need to restart', all changes are already effective.

4.2. Language

Select the desired language.

4.3. Operating modes?

Define the possible operating modes of the system.

- Heating only/Cooling only/Heating and cooling

This will make sure the user can only select the appropriate modes. Restart the central control after changing these settings in order to make them effective.

4.4. Centralized DHW tank?

Define if the system has a centralized DHW tank.

Only if the system has a centralized domestic hot water tank and field supplied 3-way valve, select:

- Centralized tank

And enter the desired value for:

- DT LWT-SP tank
  This value determines the temperature difference between the setpoint of the leaving water temperature of the unit(s) and the setpoint of the tank. The higher the value, the faster the tank can be heated. The lower the value, the more efficiently the tank will be heated.
- DHW differential
  Differential for tank heating.
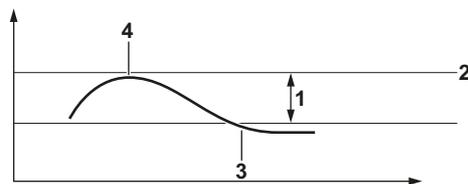
1 DHW differential
2 SP tank (set by user)
3 Start tank heating
4 Stop tank heating

4.5. Backup heater?

Define here if the system has a backup heater or not. If so, select 'Backup heating' and define the backup heater method.

3 methods for the backup heating can be defined:

- Method 1: Outd Temp
  The backup heater will be allowed to operate, depending on the outdoor temperature.
  - BUH allowed: Below this temperature, BUH is allowed to operate, but BUH has the lowest priority.
    Above this temperature, only heatpump units will run (even if target leaving water temperature cannot be reached, unless a heatpump is in alarm, then also BUH will run.)
  - BUH only: Below this outdoor temperature, all heatpump units will be stopped for room heating, and only BUH will operate for room heating.
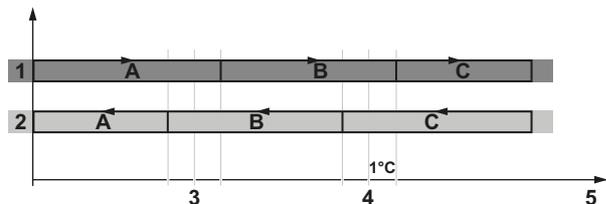
1 At increasing outdoor temperature
2 At decreasing outdoor temperature
3 BUH only
4 BUH allowed
5 Outdoor temperature
A BUH-only zone
B BUH allowed
C No BUH allowed

- Method 2: Outd. Temp. + ext. contacts
  Define the following settings:
  - With open contact
    BUH allowed: Define the outdoor temperature for 'BUH allowed' with OPEN contact.
    BUH only: Define the outdoor temperature for 'BUH only' with OPEN contact.
  - With closed contact
    BUH allowed: Define the outdoor temperature for 'BUH allowed' with CLOSED contact.
    BUH only: Define the outdoor temperature for 'BUH only' with CLOSED contact.

- Method 3: Outd. Temp. + time
  - Time Zone 1
    Define the outdoor temperature for 'BUH allowed' and 'BUH only' from Time Zone 1 onwards.
  - Time Zone 2
    Define the outdoor temperature for 'BUH allowed' and 'BUH only' from Time Zone 2 onwards.
  - Select time zones
    Select for every day of the week the time and zone (Time Zone 1=Z1/Time Zone 2=Z2)

4.6. System layout?

INFORMATION

General note on schedule settings:

Settings with time 00:00 are neglected.

ON/OFF method

Define here if the system has to be set to off, heating or cooling on the central control (refer to the 'User settings' menu > Set room mode) or by external contacts.

Configuration

Enter

- No of units installed: The number of units installed.

- Configure unit type auto
  When 'YES' is selected, the system will detect and configure the unit type (cooling only/heating only/reversible) automatically.

INFORMATION

The central control will show the maximum number of units that can be controlled. Only the unit numbers entered above have to be configured. After restarting the central control, the list of units will be restricted to the number of units installed.

- Unit configuration:
  For every unit, enter the following items (the number in the 'Unit' column corresponds to the address on the RTD-W).
  - Group (GRP)
    Enter which group the indoor unit belongs to. Units belonging to the same group are usually connected to the same outdoor unit, because the program will start up units belonging to the same group first, before starting up units belonging to another group. This is done in order to avoid several outdoor units running at the same time at low load.
  - Type (TYP)
   It is recommended to configure the unit type automatically (see above). However, the type can be changed manually if desired. In this case, enter if the unit has cooling only, heating only or cooling and heating function.
  - Domestic hot water (DHW)
    What happens when you enter yes (Y) depends on whether the domestic hot water is controlled by the central control or not. (Refer to "2. General layout and setup of a system" on page 2).
    If the domestic hot water function is controlled by the unit(s) itself (integrated tank) and DHW=Y for this unit, then this unit will always get the lowest priority to start up in heating mode, in order to preserve it for domestic hot water heating. In cooling mode, it will get the highest priority in order to be able to do heat recovery. Domestic hot water heating itself will be done as configured on the remote controller of the unit.
    If the domestic hot water function is controlled by the central control (refer to Installer settings – Centralized DHW tank?), the units for domestic hot water must be configured to DHW=Y. When domestic hot water heating is requested, the central control will increase the setpoint for those units only.

4.7. Control parameters

■ Diff. LWT Heat On/Off and Diff. LWT Cool On/Off
Defines the differential above/below which the system takes action to switch units ON or OFF. (TempxTime counter is started, see below).

■ Temperature increase slaves (Temp. Incr. slaves)
This parameter determines the increase (heating)/decrease (cooling) for the slaves. The setpoint of the 'leading' unit will be equal to the setpoint of the leaving water temperature to the secondary circuit. The setpoint of the slaves will be the setpoint of the leaving water temperature to the secondary circuit plus temperature increase slaves (minus temperature increase slaves in cooling). This will lead to fully loading up of the slave units, and capacity control by the leading unit.

■ TempxTime for ON and OFF
Defines the temperature×time value that must be exceeded before a unit is switched ON or OFF. A low value will result in fast switching ON/OFF, a high value will result in slow switching ON/OFF.

■ Start delay units (seconds)
Defines the time that must expire before the control starts the TempxTime ON counter as explained above, after a unit has started. Since the units need time to build up capacity, it is advised to keep this value above 500 seconds.

■ Corr. CLWT sensor
This is a correction value for the common leaving water sensor.

■ P-heating/P-cooling
Influences the number of units to be started up at the same time (with an interval of about 10 seconds) when heating or cooling is started. A low value will result in more units starting up, a higher value in less.
The number of units starting up when heating or cooling is switched ON is calculated as follows:

$$\frac{(\textbf{SP leaving water temp - leaving water temp})}{\textbf{P-heating}}$$

e.g.: SP leaving water temp=50°C
Leaving water temp at startup=22°C
Number of units in system=12
P-heating=50°C
→ ((50–22)/50)*12=7 units will be started up at a time (with a time difference of about 10 seconds)

4.8. Diagnostics

■ Manual operation
Change 'Auto' to 'Manual'.
This allows manual ON/OFF control of the digital outputs.
(Note that during this operation, the central control itself is OFF).

> ⚠ **NOTICE**
> Make sure to revert to 'Auto' when leaving this menu.

■ Running timers
Allows readout of the actual value of the running timers set in the control parameters.

■ Application info
Shows information about the installed software.

4.9. IP settings

It is possible to take over the central control over the Internet. For this, the IP address has to be configured appropriately.

Read the actual IP from 'Current IP settings' and, if desired, enter a new IP address.

Access to the central control can be achieved by going to the web page with the configured IP. The user name is 'ADMIN' and the password is 'SBTAdmin!' (case sensitive!).

5. Operation

5.1. Basic control

Refer to "9. Operation of the central control and menu structure" on page 10 for basic operation of the central control.

All menu structure items are explained in detail below.

5.2. Main menu

To System info

Enters a screen with the following main information about the system.

■ Time and date

■ System mode
The system mode can be OFF, HEATING, or COOLING. If heating or cooling is shown with a question mark, the mode is requested, but it does not become active because the outdoor temperature is too high. When the system is off, the letter following OFF shows the last on mode. E.g., "OFF H" means the system is OFF, and the last active mode was heating.

■ SP for LWT and Actual LWT
Setpoint and actual value of the leaving water temperature to the secondary circuit.

■ Outdoor temperature
Outdoor temperature (read through Modbus from indoor unit with Modbus address 1).

■ No of units ON
The number of units ON.

■ Backup heating
Indicates whether backup heating is ON or OFF.

To Unit info

Enters an overview screen with unit information.

The first column is the number corresponding with the Modbus address of the unit (address set on RTD-W). The screen shows the status (H=heating / C=cooling / DHW=domestic hot water / OFF or error code), unit leaving water temperature (LWT), unit return water temperature (RWT), domestic hot water temperature (DHW), and running hours (HOURS) of the unit.

Note that the domestic hot water temperature is the temperature detected by the domestic hot water sensor connected to the unit.

When there is an error in the unit, the corresponding error code is shown. If 'MDB' (Modbus fault) is shown, check the connection to and the status of the RTD-W.

If U5 is shown, check the P1P2 connection to the RTD-W and the remote controller.

To view the unit's error history, scroll to 'STATE' and press the Enter button. Then select the unit number for which you want to display the error history.

> ℹ **INFORMATION**
> When more than one unit is connected to the same RTD-W, a group error is shown and the LWT shown is the average LWT of all units.

To DHW info

Available only when 'Centralized tank' is selected in the installer settings. Shows the setpoint, actual domestic hot water temperature and 3-way valve status.

To User settings

Opens the 'User settings' menu with following items:

■ Time/date
  Enter the correct time and date if you want to use the quiet mode, room heating or DHW heating schedules.

■ Quiet mode
  Select OFF, ON, or SCHEDULED.
  The central control will send the quiet mode command to the units as selected. (Make sure to set the desired quiet mode level on the units themselves. Refer to the installation manual of the units – parameter [8-03].)
  A schedule for the quiet mode can be entered in the 'Settings' menu (see below).

i	**INFORMATION**
	Set the schedule timer on the units to OFF.

■ Set room mode
  Select OFF, COOLING, or HEATING mode.
  If 'By external contacts' is selected in Installer settings - System layout? - ON/OFF method, the mode cannot be selected on the central control, but only by external contacts.

■ Domestic hot water
  Select the domestic hot water mode.
  If set to 'ON', the domestic hot water will be heated in accordance with the schedule that can be set in the 'Settings' menu (see below).
  If 'Reheat now?' is set to 'ON', heating of the domestic hot water will be started immediately until the set reheat temperature (Reheat now till:) is reached.

■ Settings

i	**INFORMATION**
	General note on schedule settings:
	Settings with time 00:00 are neglected.

■ Quiet mode schedule
  Enter the quiet mode schedule for every day of the week.
  (1 = quiet mode activated)

■ Settings for room
  - Room heating
    • Leaving water temp.
      Define the heating curve (leaving water temperature in function of outdoor temperature).
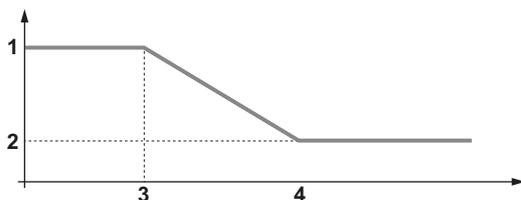
  1 LWT at low Ta
  2 LWT at high Ta
  3 Low Ta
  4 High Ta

i	**INFORMATION**
	There is no need to define the setpoint on the units. The setpoint is transferred by the central control. Make sure the weather dependent function on the units is set to OFF!

    • Max. Ta heating
      Enter the room temperature above which the system should not heat.

i	**INFORMATION**
	This setting may also be available on the units. Make sure the setting on the unit is equal to or higher than the setting on the central control.

    • LWT schedule
      Enter the deviation from the heating curve in function of time.
  - Room cooling
    As above, but for cooling.

■ Settings for DHW

i	**INFORMATION**
	This setting only needs to be done in case of a centralized tank! Centralized tank must be set in the installer settings for this menu to be accessible.

  - DHW schedule
    Enter the desired domestic hot water temperature in function of time.
  - Disinfect params
    Enter the desired disinfection temperature, disinfection duration and day of the week and time to start disinfection.

The tank will be heated until the entered disinfection temperature for an (accumulated) time equal to the disinfection duration is reached.

6. Alarm handling

Unit alarms and system alarms can occur. For both types of alarm, the digital alarm output (C8-DO8) will be closed and an alarm will be indicated in the upper right corner of the display when an alarm is generated.

6.1. Unit alarms

When a unit alarm occurs, the central control will no longer use the unit (or group of units connected to the same RTD-W), and the remote controller of this unit (or group of units) will be set to OFF. This implies that the alarm can no longer be seen on the remote controller. (ON/OFF LED is OFF and no error code). However, the alarm can be seen on the central control in the 'Unit info' menu.

After the cause of the alarm is tackled, the unit has to be switched ON manually (press the ON button on the remote controller). The unit will then be controlled again by the central control and will switch ON or OFF as required.

6.2. System alarms

Following system alarms can occur:

■ Faulty common leaving water sensor
  When the common leaving water sensor indicates a value below 0°C or above 150°C (open sensor), an alarm is generated and all units are switched ON in the currently requested mode up to the currently requested setpoint.
  Units configured for heating a centralized DHW tank are also switched to room heating, but when DHW heating is requested, the setpoint will be increased and the 3-way valve will be energized, as in the normal DHW mode.

■ Faulty domestic hot water sensor (centralized tank)
  When the domestic hot water sensor indicates a value below 0°C or above 150°C (open sensor), an alarm is generated and all units configured for DHW heating are operated for DHW heating and the DHW 3-way valve is energized when the DHW mode is requested.
  (The system operates as if it sees a DHW temperature that never reached the setpoint).

■ Backup heater alarm
  When the backup heater alarm is active (X2-M closed), an alarm is generated.

6.3. Alarm menu

Press the alarm button to access the following screen:

■ Alarm list
  Shows a list of the current alarms.

7. Troubleshooting

■ MDB is shown in the 'Unit info' menu.
  Make sure that the Modbus connection to the RTD-W with the corresponding address is correct.
  Make sure that the correct number of connected units is defined in the installer settings.

■ U5 is shown in the 'Unit info' menu.
  Make sure that the P1P2 connection to the RTD-W with the corresponding address is correct. If so, interrupt the power to the RTD-W and apply it again.

■ Some lines are not available in the menus.
  Interrupt the power to the EKCC7 central control, make the correct installer settings, and apply the power again.

■ Room mode cannot be set. The text "Not available. By external contacts" appears.
  Room mode can only be set by external contacts from the thermostat. To set the mode on the central control, change the installer settings.

8. Figures

T7: AI1-M
T7: AI2-M

T8: X1-M
T8: X2-M

T10: DI1-M
T10: DI2-M

X1 M X2

DI1 M DI2

RTD-W

RTD-W

230 V

T3: C3-DO3
T3: C4-DO4
T4: C5-DO5
T4: C8-DO8
T5: C9-DO9
T5: C10-DO10

AC 24...230 V (–20%, +10%)
Max. AC 4 A / 3 A (cos φ 0.6)
Min. AC 30 mA
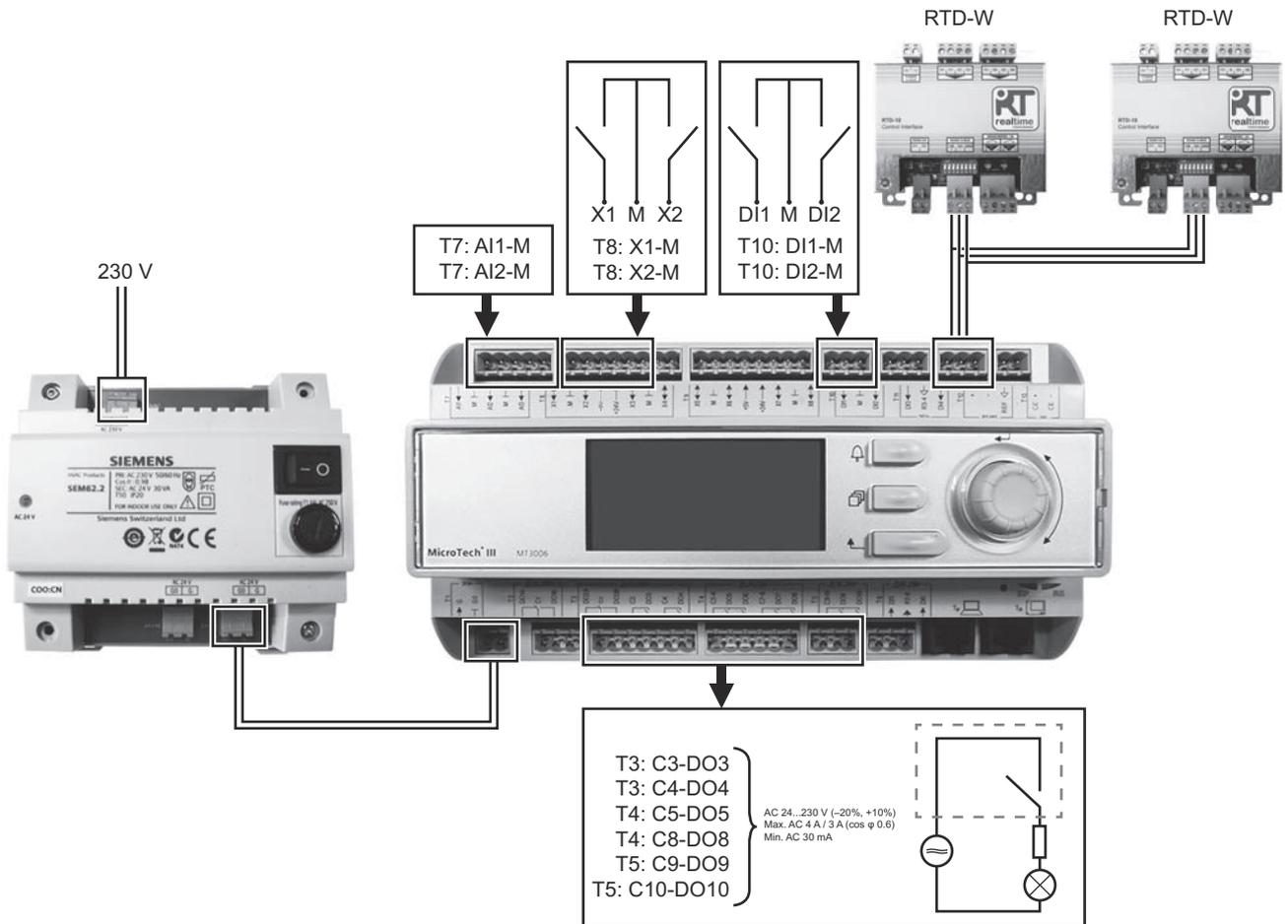
Figure 1: Electrical wiring diagram
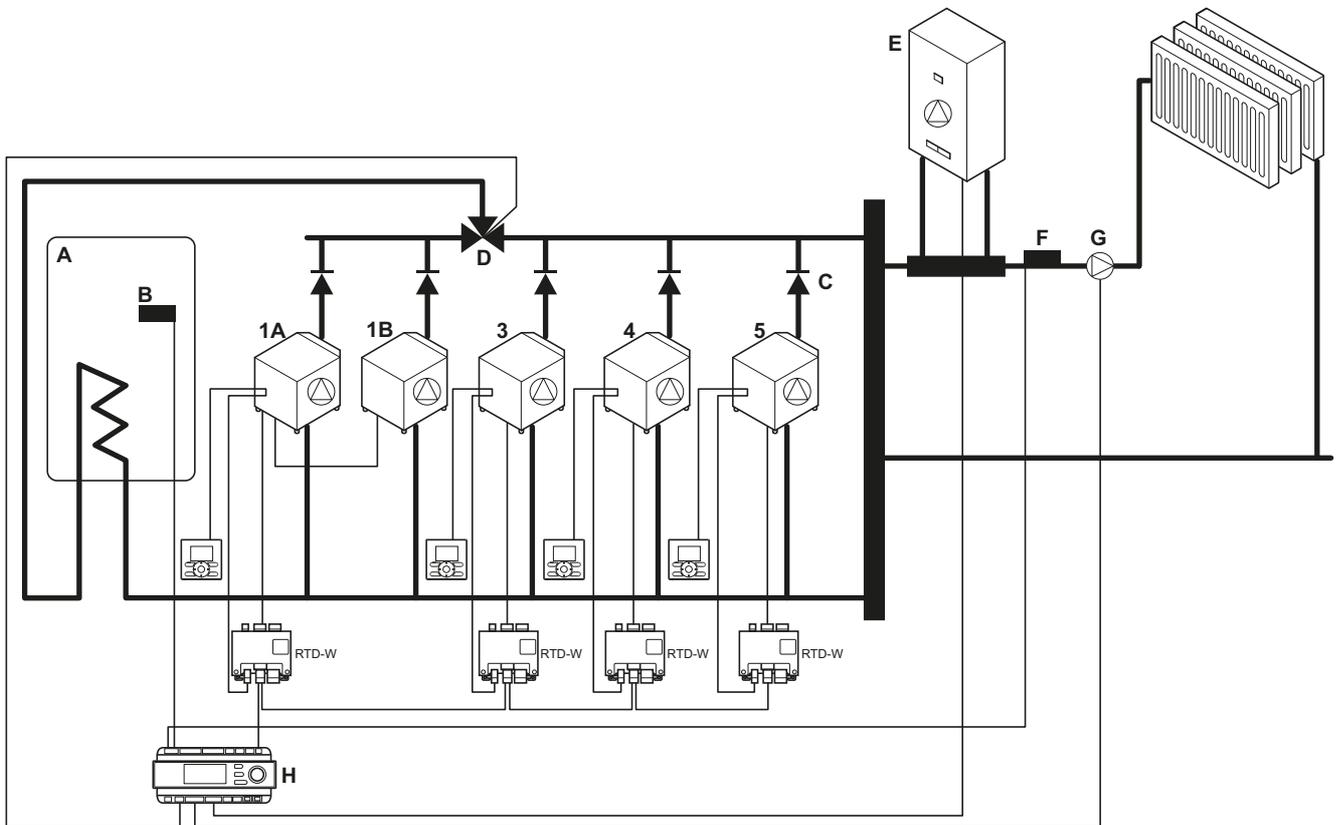
Figure 2: System with centralized domestic hot water tank
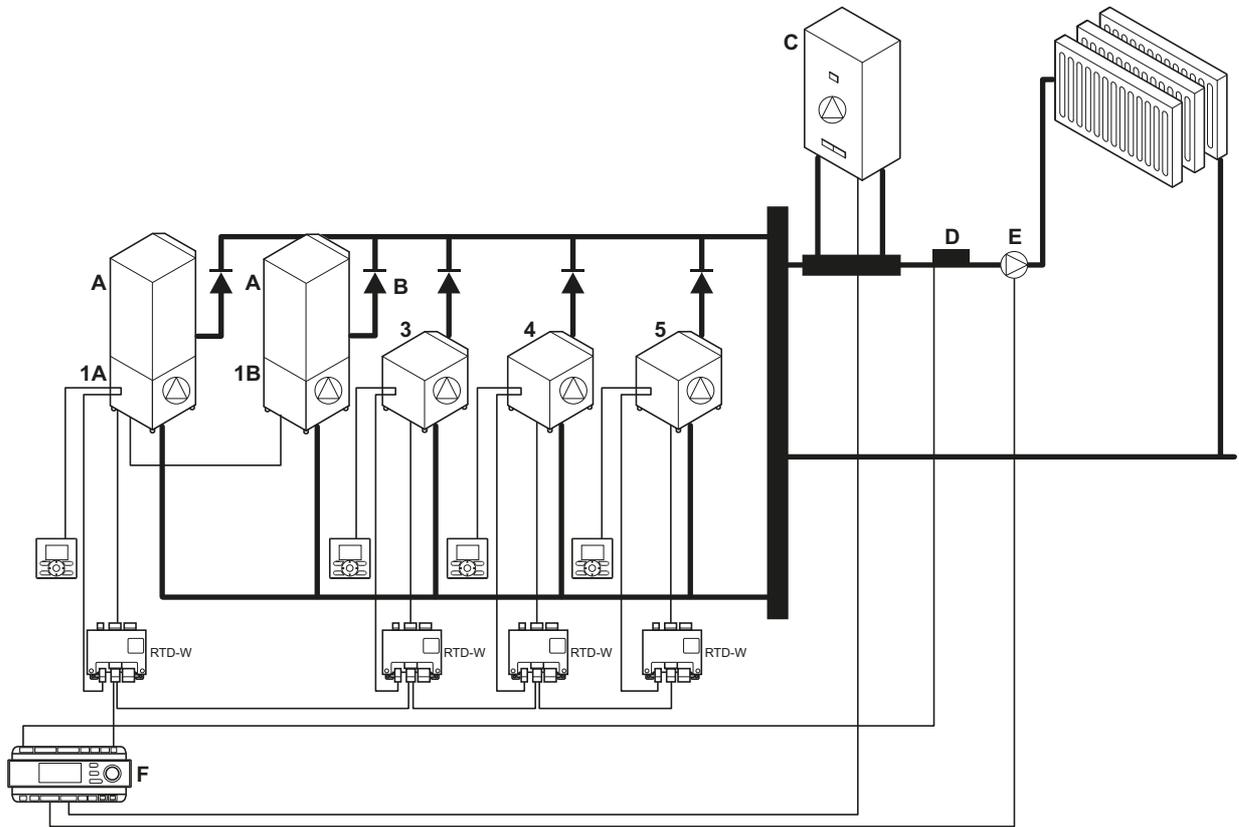
Figure 3: System with integrated hot water tanks

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9.   Operation of the central control and menu structure
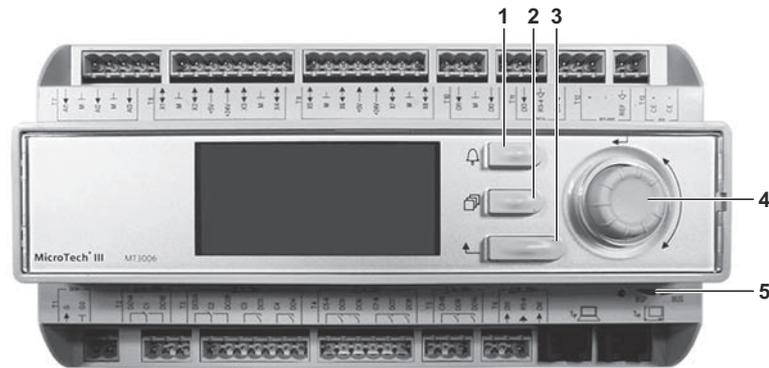
1   Alarm button: press this button to enter the alarm menu.

2   Main menu button: press this button to return to the 'MAIN MENU' screen at all times.

3   Return button: press this button to return to the previous screen.

4   Select button: turn this button to scroll up and down through the menus. Press the button to enter your selection.

5   BSP LED. This LED should be green. See below for the possible states of the LED.

BSP LED status	
Every second flashing between red and green	Download from SD card active
Green	Application running
Yellow	Application loaded but not running
Yellow flashing	Application not loaded
Red flashing	BSP error (software error)
Red ON	Hardware error

Screens shaded in gray are visible only depending on settings in the installer menu.

MAIN MENU
- **To System info** ▶
- To Unit info ▶
- To DHW info ▶
- To User settings ▶
- To Installer settings ▶
- Installer password ▶

SYSTEM INFO

15.02.2013	15:21:33
System mode	Heating
SP for LWT	30.0°C
Actual LWT	30.8°C
Outdoor temperature	9.0°C
Nr of units ON	0/3
Backup heating	OFF

MAIN MENU
- To System info ▶
- **To Unit info** ▶
- To DHW info ▶
- To User settings ▶
- To Installer settings ▶
- Installer password ▶

UNIT INFO

STATE	LWT	RWT	DHWT	HOURS	▶
1 H	50	45	50	199	
2 H	50	45		400	
3 OFF	31	32		440	
4 A6	31	32		210	

ERROR HISTORY UNIT

SELECT UNIT No	2
11/11/2012 10:38	A6

MAIN MENU
- To System info ▶
- To Unit info ▶
- **To DHW info** ▶
- To User settings ▶
- To Installer settings ▶
- Installer password ▶

DHW INFO

DHW setpoint	60.0°C
DHW temperature	58.6°C
DHW 3-way valve	OFF

MAIN MENU
- To System info ▶
- To Unit info ▶
- To DHW info ▶
- **To User settings** ▶
- To Installer settings ▶
- Installer password ▶

USER SETTINGS
- **Time/date** ▶
- Quiet mode ▶
- Set room mode ▶
- Domestic hot water ▶
- Settings ▶

TIME/DATE

21.11.2012   16:00:29

TIME/DATE

21.11.2012   16:00:29

USER SETTINGS
- Time/date ▶
- **Quiet mode** ▶
- Set room mode ▶
- Domestic hot water ▶
- Settings ▶

QUIET MODE

OFF

QUIET MODE

SCHEDULED

USER SETTINGS
- Time/date ▶
- Quiet mode ▶
- **Set room mode** ▶
- Domestic hot water ▶
- Settings ▶

SET ROOM MODE

HEATING

SET ROOM MODE

COOLING AND HEATING

USER SETTINGS
- Time/date ▶
- Quiet mode ▶
- Set room mode ▶
- **Domestic hot water** ▶
- Settings ▶

SETTINGS FOR DHW
- Select DHW mode: ON
- Reheat now? OFF
- Reheat now till: 50°C

SETTINGS FOR DHW

SELECT DHW MODE ON

SETTINGS FOR DHW
- Select DHW mode: ON
- Reheat now? OFF
- Reheat now till: 50°C

SETTINGS FOR DHW

Reheat Now? OFF

SETTINGS FOR DHW
- Select DHW mode: ON
- Reheat now? OFF
- Reheat now till: 50°C

SETTINGS FOR DHW

Reheat Now till: 50°C

USER SETTINGS
- Time/date ▶
- Quiet mode ▶
- Set room mode ▶
- Domestic hot water ▶
- Settings ▶

SETTINGS
- Quiet mode schedule ▶
- Settings for room ▶
- Settings for DHW ▶

QUIET MODE SCHEDULE
- Monday ▶
- Tuesday ▶
- Wednesday ▶
- Thursday ▶
- Friday ▶
- Saturday ▶
- Sunday ▶

QUIET MODE SCHEDULE — Wednesday

Time 1	22:00	1
Time 2	08:00	0
Time 3	00:00	0
Time 4	00:00	0
Time 5	00:00	0
Time 6	00:00	0

SETTINGS
- Quiet mode schedule ▶
- Settings for room ▶
- Settings for DHW ▶

SETTINGS FOR ROOM
- Room heating ▶
- Room cooling ▶

SETTINGS FOR ROOM HEATING
- Leaving water temp ▶
- Max Ta heating ▶
- LWT schedule ▶

DEFINE HEATING CURVE

Low Ta	−10°C
LWT at low Ta	60°C
High Ta	15°C
LWT at high Ta	60°C

SETTINGS FOR ROOM HEATING
- Leaving water temp ▶
- Max Ta heating ▶
- LWT schedule ▶

MAX. OUTDOOR FOR HEATING
- Max Ta heating 20°C

SETTINGS FOR ROOM HEATING
- Leaving water temp ▶
- Max Ta heating ▶
- LWT schedule ▶

LWT SCHEDULE HEATING
- Monday ▶
- Tuesday ▶
- Wednesday ▶
- Thursday ▶
- Friday ▶
- Saturday ▶
- Sunday ▶

LWT SCHEDULE HEATING — Wednesday

Time 1	22:00	−10°C
Time 2	06:00	0
Time 3	00:00	0
Time 4	00:00	0
Time 5	00:00	0
Time 6	00:00	0

USER SETTINGS
- Room heating ▶
- Room cooling ▶

SETTINGS FOR ROOM COOLING
- Leaving water temp ▶
- Min Ta cooling ▶
- LWT schedule ▶

DEFINE COOLING CURVE

Low Ta	20°C
LWT at low Ta	15°C
High Ta	30°C
LWT at high Ta	8°C

SETTINGS FOR ROOM COOLING
- Leaving water temp ▶
- Min Ta cooling ▶
- LWT schedule ▶

MIN. OUTDOOR FOR COOLING
- Min Ta cooling 20°C

SETTINGS FOR ROOM COOLING
- Leaving water temp ▶
- Min Ta cooling ▶
- LWT schedule ▶

LWT SCHEDULE COOLING
- Monday ▶
- Tuesday ▶
- Wednesday ▶
- Thursday ▶
- Friday ▶
- Saturday ▶
- Sunday ▶

LWT SCHEDULE COOLING — Wednesday

Time 1	22:00	10°C
Time 2	06:00	0
Time 3	00:00	0
Time 4	00:00	0
Time 5	00:00	0
Time 6	00:00	0

SETTINGS
- Quiet mode schedule ▶
- Settings for room ▶
- Settings for DHW ▶

DHW SETTINGS
- DHW schedule ▶
- Disinfect params ▶

DHW SCHEDULE
- Monday ▶
- Tuesday ▶
- Wednesday ▶
- Thursday ▶
- Friday ▶
- Saturday ▶
- Sunday ▶

DHW SCHEDULE — Wednesday

Time 1	22:00	65°C
Time 2	06:00	50°C
Time 3	00:00	0
Time 4	00:00	0
Time 5	00:00	0
Time 6	00:00	0

DHW SETTINGS
- DHW schedule ▶
- Disinfect params ▶

DISINFECT PARAMS

Disinfect temp	55°C
Disinfection duration	60 min
Day	Saturday
Time	22:00

Indicates whether a restart of the central control is required to make changes made in the installer menu effective.

```
MAIN MENU
To System info          ▶
To Unit info            ▶
To DHW info             ▶
To User settings        ▶
To Installer settings   ▶
Installer password      ▶
```

```
INSTALLER SETTINGS
Restart now?(1)
Language            English
Operating modes?        ▶
Centralized DHW tank?   ▶
Backup heater?          ▶
System layout?          ▶
Control parameters      ▶
Diagnostics             ▶
IP settings             ▶
```

```
INSTALLER SETTINGS
Language            English
```

```
INSTALLER SETTINGS
Restart now?
Set language
Operating modes?        ▶
Centralized DHW tank?   ▶
Backup heater?          ▶
System layout?          ▶
Control parameters      ▶
Diagnostics             ▶
IP settings             ▶
```

```
OPERATING MODES?

      Heating and cooling
```

```
INSTALLER SETTINGS
Restart now?
Set language
Operating modes?        ▶
Centralized DHW tank?   ▶
Backup heater?          ▶
System layout?          ▶
Control parameters      ▶
Diagnostics             ▶
IP settings             ▶
```

```
CENTRALIZED DHW TANK?

Centralized tank
DT LWT-SP tank       15°C
DHW differential     10°C
```

```
INSTALLER SETTINGS
Restart now?
Set language
Operating modes?        ▶
Centralized DHW tank?   ▶
Backup heater?          ▶
System layout?          ▶
Control parameters      ▶
Diagnostics             ▶
IP settings             ▶
```

```
BACKUP HEATER?


   Backup heating
            Method ▶
```

```
BACKUP HEATER?


   Backup heating
            Method ▶
```

```
BACKUP HEATER?
Outd. Temp+Time

            Settings ▶
```

```
BACKUP HEATER?
Time zone 1
BUH allowed           0°C
BUH only            −10°C
Time zone 2
BUH allowed           0°C
BUH only            −15°C
   Select time zones    ▶
```

```
BUH TIME ZONE SCHEDULE  1/7
      Monday        ▶
      Tuesday       ▶
      Wednesday     ▶
      Thursday      ▶
      Friday        ▶
      Saturday      ▶
      Sunday        ▶
```

```
BUH TIME ZONE SCHEDULE  4/7
           Wednesday
Time 1    22:00        Z1
Time 2    08:00        Z2
Time 3    12:00        0
Time 4    14:00        0
Time 5    16:00        0
Time 6    18:00        0
```

```
INSTALLER SETTINGS
Restart now?
Set language
Operating modes?        ▶
Centralized DHW tank?   ▶
Backup heater?          ▶
System layout?          ▶
Control parameters      ▶
Diagnostics             ▶
IP settings             ▶
```

```
SYSTEM LAYOUT?
ON/OFF method           ▶
Configuration           ▶
```

```
ON/OFF METHOD

   BY EXTERNAL CONTACTS
```

```
SYSTEM LAYOUT?
ON/OFF method           ▶
Configuration           ▶
```

```
CONFIGURATION
No of units installed      3
Configure unit type auto.  ▶
Unit configuration         ▶
```

```
UNIT CONFIGURATION
Unit  |GRP| TYP | DHW |
01    | 1 | H/C | YES |
02    | 1 | H/C | NO  |
03    | 1 | H/C | NO  |
```

```
INSTALLER SETTINGS
Restart now?
Set language
Operating modes?        ▶
Centralized DHW tank?   ▶
Backup heater?          ▶
System layout?          ▶
Control parameters      ▶
Diagnostics             ▶
IP settings             ▶
```

```
CONTROL PARAMETERS
Diff LWT Heat on       3°C
Diff LWT Heat off      0°C
Diff LWT Cool on       3°C
Diff LWT Cool off      0°C
Temp.incr.slaves       5°C
TempxTime for ON       120
Start delay units      600
Corr. CLWT sensor        0
TempxTime for OFF      120
Pheating                50
Pcooling                50
```

(1)Restart now? indicates that a restart of the central control is required in order to make changes made in the installer menu effective.

```
INSTALLER SETTINGS              DIAGNOSTICS                 MANUAL OPERATION              MANUAL OPERATION
Restart now?                    Manual operation      ▶     AUTO                          MANUAL
Set language                    Running timers        ▶     Secondary pump          ON    Secondary pump          ON
Operating modes?          ▶     Application info      ▶     BUH heater             OFF    BUH heater             OFF
Centralized DHW tank?     ▶                                 DHW 3-way valve        OFF    DHW 3-way valve        OFF
Backup heater?            ▶                                 Cooling operation      OFF    Cooling operation      OFF
System layout?            ▶                                 Heating operation       ON    Heating operation       ON
Control parameters        ▶                                 Alarm output           OFF    Alarm output           OFF
Diagnostics               ▶
IP settings               ▶     DIAGNOSTICS                 RUNNING TIMERS
                                Manual operation      ▶     HEATING
                                Running timers        ▶     TempxTime for ON         0
                                Application info      ▶     TempxTime for OFF        0
                                                            COOLING
                                                            TempxTime for ON         0
                                                            TempxTime for OFF        0
                                                            Start delay units        0

                                DIAGNOSTICS                 APPLICATION INFO
                                Manual operation      ▶     24.Mrz.2011
                                Running timers        ▶     Template WS9
                                Application info      ▶     POL687
                                                            2013231624
                                                            TV01.00


INSTALLER SETTINGS              IP SETTINGS
Restart now?                    DHCP                    ON
Set language                    Current IP settings
Operating modes?          ▶            10.32.132.22
Centralized DHW tank?     ▶            255.255.255.0
Backup heater?            ▶            192.168.1.1
System layout?            ▶     New IP settings
Control parameters        ▶            10.32.132.22
Diagnostics               ▶            255.255.255.0
IP settings               ▶            192.168.1.1

MAIN MENU                       ENTER PASSWORD
To System info            ▶
To Unit info              ▶
To DHW info               ▶     Enter password        ▶
To Metering info          ▶     Close account         ▶
To User settings          ▶     Change password       ▶
To Installer settings     ▶
Installer password        ▶
```

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