

Pump and valve controller

JOKER Z3P

Installation and user manual

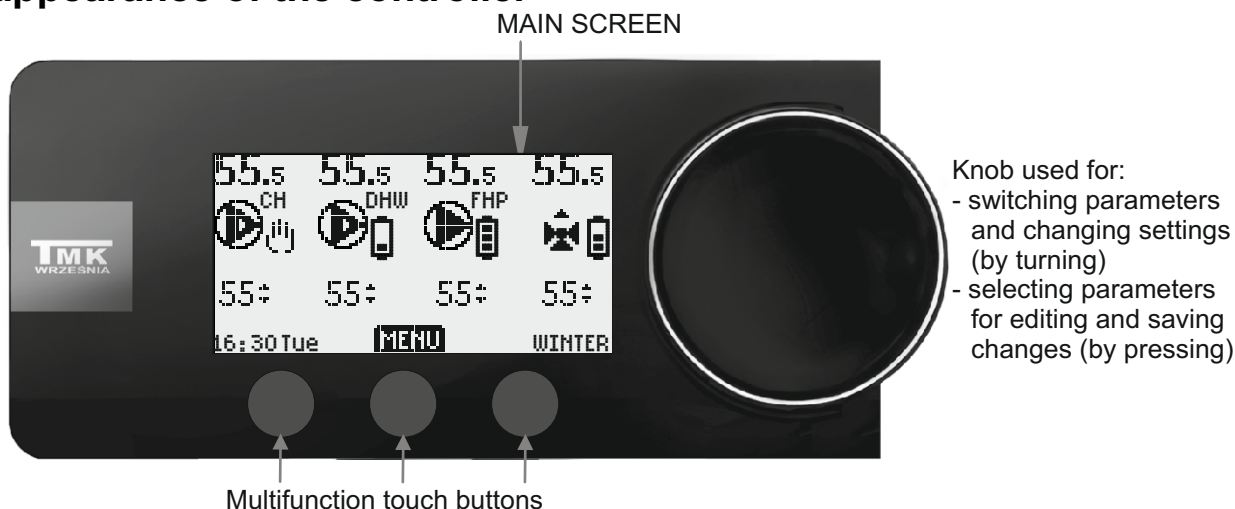
Application

The electronic controller JOKER Z3P is designed to control central heating circulation pump, feeding pump of the domestic hot water storage tank, floor heating pump (optionally tap water circulation pump) and the mixing valve. The controller is equipped with an "anti-stop" function (to prevent the so-called pump "jam" due to limescale deposits on bearings) and antibacterial protection function. JOKER Z3P features a wide range of switch-on and switch-off pump hysteresis, as well as an option of manual override for operation of pumps.

The controller may prioritize domestic hot water and additionally prevent the tank and radiators from excessive cooling due to insufficient boiler temperature. It can operate in the SUMMER or WINTER mode. It distributes boiler capacity among CH and DHW circuits in a dynamic way, in conformity with user's settings and preferences. The user can also apply timed programmes ensuring optimisation of energy consumption.

Thanks to advanced pump and valve control, the boiler can operate in optimal conditions which significantly increase its lifetime, while temperature of both domestic water and heated spaces is maintained at desired levels.

External appearance of the controller



MAIN SCREEN OF THE CONTROLLER - status of appliances and main settings

current temperature →	55.5	55.5	55.5	55.5
current status of appliances →	CH	DHW	FHP	Valve
current settings →	55±	55±	55±	55±
time and day →	16:30 Tue	MENU	WINT/SUM	

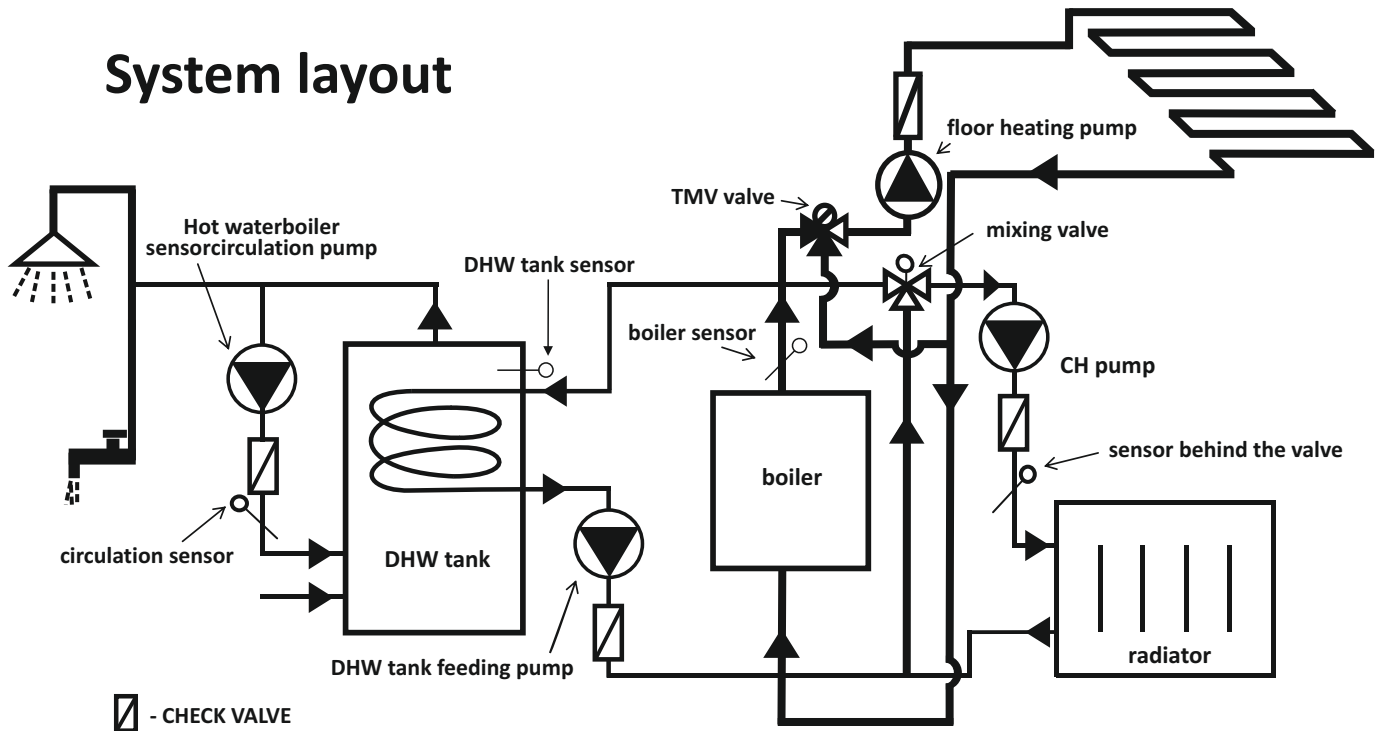
Parameters menu

Examples of the status of appliances

-  CH pump operates in manual mode
-  DHW pump is switched on
Timed programme 'cold temperature' activated
-  Floor heating pump is switched off
Timed programme "day temperature" activated
-  Valve is open (X - closed)
Timed programme "night temperature" activated

In order to change settings of the pumps and valve on the **MAIN SCREEN** press the knob and turn it to select the desired parameter. Once it has been selected, press **[EDIT]** button or press the knob, and then turn the knob to select the desired temperature (arrows flash). To validate, press the **[SAVE]** button or press the knob. To exit without saving, press the **[EXIT]** button.

System layout



The above layout shows the floor heating pump being controlled "as CH" with the use of the thermostatic mixing valve (TMV). Without this valve, the floor heating pump is controlled "as DHW" - (not recommended).

Controller mounting

The controller can be mounted on a wall mount (included in the kit as a standard option) or on a support (available as an extra option). The mount is fixed to a wall with rawl plugs (included in the kit), following which the controller can be easily snapped onto the mount.

Controller connection

Connect the supply cable to a 230V, 50Hz power outlet with an earth contact.
The ambient temperature in the controller mounting location may not exceed 40°C.

CAUTION: The connection cable of the regulator may only be replaced by the manufacturer.

CAUTION: JOKER controller is only able to operate when the system is filled with water
If the system is empty, the controller must be disconnected from the power supply.
Otherwise the pump may become damaged.

General technical data:

- Supply voltage 230V/50Hz
- Maximum pump output 3x100VA, 1x20VA
- "Anti-stop" function (pump protection against "jam") - activated for 30 sec. every 14 days
- Antibacterial protection of tank water against Legionella bacteria _____ SWITCHED OFF
- Low CH boiler temperature alert 0-50°C _____ 8°C
- High CH boiler temperature alert 60-120°C _____ 92°C
- (Once the temperature exceeds the set alert threshold, both the audible and visual alerts are triggered)
- Permanent alert (non-configurable) of low boiler temperature 8°C
- Permanent alert (non-configurable) of high boiler temperature 92°C
- (Once the temperature exceeds the set alert threshold, only a visual alert is triggered)

CH PUMP CONTROL

Installation

1. Installation of the boiler sensor

- Attach the sensor to an uninsulated pipe going out of the CH boiler with two provided strips so that it adheres well.
- It is recommended to additionally wrap the sensor with some thermal insulation material.

CAUTION: *The sensor is not made for direct use in water.*

2. Connecting the power cord to the CH pump

- Connect the yellow-green wire (zero protection) to the marked terminal of the pump.
- Connect brown and blue wires to **L** and **N** terminals of the pump.

CAUTION: *The regulator must be installed by a qualified electrician only.*

CENTRAL HEATING PUMP OPERATION

The controller switches on the CH pump when the boiler temperature reaches the CH pump setting displayed on the MAIN SCREEN. It switches the pump off when the temperature decreases by the hysteresis value (A2 parameter).

By default the controller switches on the CH pump according to the temperature at the CH boiler sensor. It may however turn on the CH pump on according to the temperature behind the mixing valve (when the A4 parameter has been set to "YES"). Such configuration is necessary when the CH pump is installed behind the valve.

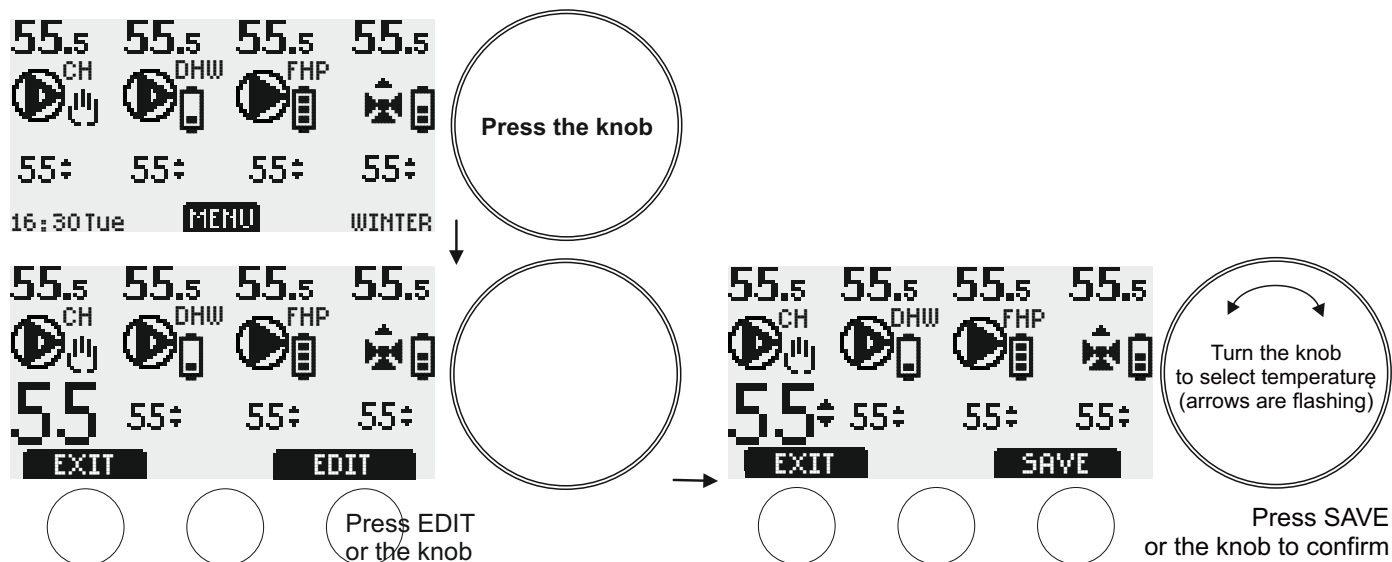
When the function of prioritizing DHW tank is on (B4 parameter is set to "YES"), the CH pump is switched off while DHW tank is re-heating.

The CH pump is switched on below 8°C - FROST PROTECTION. A visual alert is activated.

In the SUMMER mode (F1 parameter) the CH pump is only switched on in an emergency (A3 parameter). In such case the valve is automatically fully opened while the pump is operating.

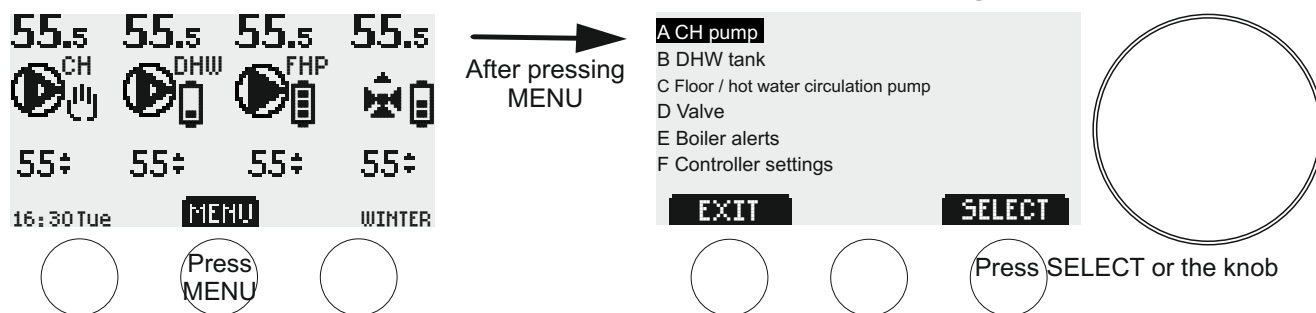
CAUTION: SETTING THE A3 PARAMETER ABOVE 90°C IS ONLY PERMITTED WHEN THE BOILER IS ADDITIONALLY PROTECTED FROM COMING TO BOIL !

QUICK SETTING OF THE CH PUMP SWITCH-ON TEMPERATURE



Pressing [EXIT] restores the MAIN SCREEN without saving changes.

MENU OF CH PUMP PARAMETERS – "A" group



In order to modify CH pump parameters, press the [MENU] button. A list of groups of parameters will appear on screen. The first selected group from top is the A group - "CH pump". Press the [SELECT] button or press the knob. "A1", the first parameter from the CH pump group will be displayed. To go to the following parameters, turn the knob right, and then press the [EDIT] button or the knob to change a desired parameter. Now you can change the value of the parameter using the knob or dynamically alternating buttons.

To save changes, press the [SAVE] button or press the knob. The [EXIT] button restores the previous menu level without saving any changes.

LIST OF CH PUMP PARAMETERS (to switch between parameters and to change setting – turn the knob)

A1 CH pump switch-on temperature (1-99°C, default setting: 50°C)

A2 CH pump hysteresis (1-15°C, default setting: 2°C)

A3 Temperature of emergency CH pump switch-on in the SUMMER mode (60-99°C, default setting: 80°C.
CAUTION: SETTING THE TEMPERATURE ABOVE 90°C IS ONLY PERMITTED WHEN THE BOILER IS ADDITIONALLY PROTECTED FROM COMING TO BOIL !

A4 CH pump control according to the temperature at the sensor behind the valve (YES, NO - default setting: NO)

A5 Manual CH pump mode

([START] button – the pump is working regardless of the settings, [STOP] button- the pump is switched off regardless of the settings) CAUTION: the manual mode prevails over the "anti-stop" function and the frost protection.

When the controller is powered on the pump always switches to automated mode.

CONTROL OF THE HOT WATER TANK FEEDING PUMP

Installation

1. Installation of tank temperature sensor

Mount the sensor in a location recommended by the tank's manufacturer.

CAUTION: *The sensor is not made for direct use in water.*

2. Connecting the power cord to the pump

- Connect the yellow-green wire (zero protection) to the marked terminal of the pump.
- Connect brown and blue wires to L and N terminals of the pump.

CAUTION: *The regulator must be installed by a qualified electrician only.*

OPERATION OF DOMESTIC HOT WATER TANK FEEDING PUMP

The controller switches off the feeding pump of the DHW tank when temperature inside of the tank reaches the setting displayed on the MAIN SCREEN of the controller. The pump is switched on when the temperature falls by the setting of hysteresis (parameter B3).

The user can choose between three different hot water temperature settings: "hot", "warm" and "cold" (parameter B1).

Temperature of hot water is programmable, different settings can be selected for every day and hour of the week (parameter B2).

The timed programme currently in use is displayed on the MAIN SCREEN right from the DHW pump symbol:



Temperature set to "hot"



Temperature set to "warm"



Temperature set to "cold"

The user can select (or unselect) priority of domestic hot water over the operation of central and floor heating pumps (parameter B4).

With this parameter unselected (the default setting is NO) the DHW, CH and FH pumps work independently from each other. However, when priority has been set to YES, the CH pump and the FH pump are switched off when the hot water tank is heating up.

The feeding pump of DHW tank switches on when the temperature set for DHW has not been achieved and when the temperature of the CH boiler is higher than temperature of hot water by the parameter B5 ("protection of DHW tank against cooling down").

Additional condition which must be fulfilled for the DHW pump to be switched on is that the boiler has achieved the value set for parameter B6 - "temperature of the CH boiler at which the feeding pump of the DHW tank is switched on".

When the SUMMER mode is activated (parameter F1), the boiler feeds only the DHW tank and hot water circulation.

ANTIBACTERIAL PROTECTION FUNCTION

The user can select protection against Legionella bacteria in the DHW tank (parameter B7)

CAUTION: temperature of the active weekly antibacterial protection is 60°C.

In addition to selecting automatic antibacterial protection, it is possible to override settings manually to carry out immediately a single antibacterial protection procedure.

CAUTION: For antibacterial protection procedure to be carried out the temperature of the CH boiler must achieve at least 65°C (if that requirement has not been fulfilled, the controller will display an alert).

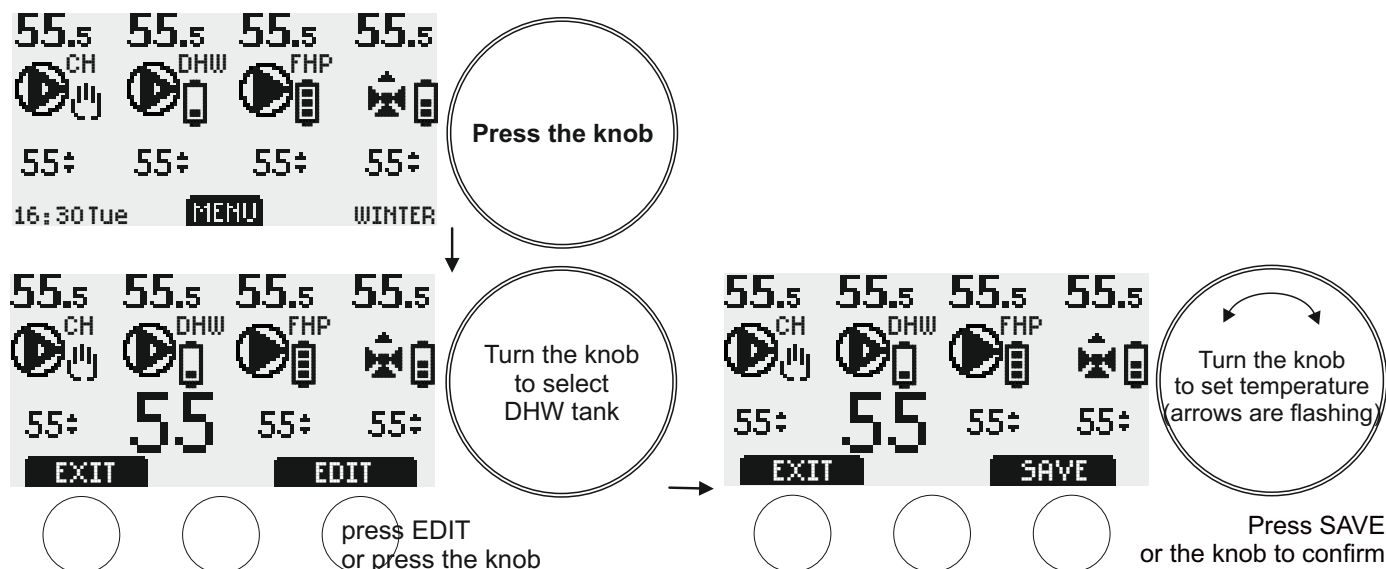
The maximal time of the antibacterial protection procedure is 2 hours.

If the temperature in the DHW tank reaches 60°C in a given weekly cycle the next scheduled antibacterial protection procedure will not be carried out.

■ icon on the main screen means a completed antibacterial protection procedure.

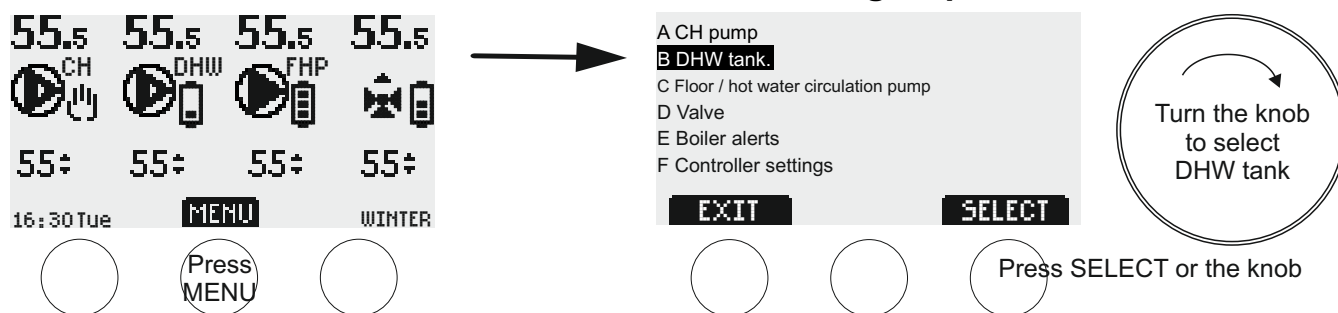
In order to increase efficiency of the procedure, it is recommended to open all water discharge points (taps and others)

DHW TANK - QUICK SETTING (for active timed programmes)



Pressing **EXIT** restores the MAIN SCREEN without saving changes.

DHW TANK PARAMETERS - group B



Press MENU to change parameters of the DHW tank. The first group of parameters will appear on the screen. Turn the knob right (clockwise) to select group "B - DHW tank", and then press the knob or the SELECT button to confirm. The first group of parameters ("B1") will appear on the screen. Turn the knob right to go to different parameters, and then press EDIT/SELECT or the knob to change. At this point, you can change parameter settings either by turning the knob or using the dynamically appearing buttons. Some parameters need to be selected for editing; use the SELECT button and the knob - a flashing dot will highlight the parameter selected for editing.

Editing is confirmed by pressing the knob or the SAVE button.

Pressing EXIT restores the previous menu without saving changes.

LIST OF PARAMETER OF THE DHW TANK (moving between parameters and changing of settings - turn the knob):

- B1 DHW tank temperature (on selecting, a flashing dot will indicate the edited temperature; turn the knob to move between different temperatures)
 - B1a hot (10-90°C, default setting: 50°C)
 - B1b warm (10-90°C, default setting: 40°C)
 - B1c cold (10-90°C, default setting: 25°C)
- B2 timed programmes of the DHW tank (described in the chapter "TIMED PROGRAMMES" on page 11)
- B3 DHW tank hysteresis (on selecting, a flashing dot will indicate the edited hysteresis; turn the knob to move between different hystereses)
 - B3a hot (1-15°C, default setting: 3°C)
 - B3b warm (1-15°C, default setting: 3°C)
 - B3c cold (1-15°C, default setting: 3°C)
- B4 DHW tank priority YES, NO (default setting is NO)
- B5 DHW tank protection from cooling down (0-15°C, default setting: 5°C)
- B6 minimal temperature of the CH boiler at which the DHW tank feeding pump is switched on (20-70°C, default setting: 20°C)
- B7 protection of DHW against Legionella (YES, NO; default setting: NO) **CAUTION: minimal temperature of active antibacterial protection is 60°C**

The [WHEN] button opens a screen to edit the time when the weekly protection procedure is started (default setting: Sunday, 0h.00m); the [NOW] button immediately starts a single antibacterial protection procedure.

CAUTION: For antibacterial protection procedure to be carried out the temperature of the CH boiler must achieve at least 65°C (if that requirement has not been fulfilled the controller will display an alert).

If in a given weekly cycle the temperature in the DHW tank reaches 60°C, the next scheduled antibacterial protection procedure will be skipped.

B8 manual mode of the DHW tank feeding pump. [START] button - the pump is switched on regardless of the settings; [STOP] button - the pump is switched off regardless of the settings.

CAUTION: The manual mode overrides the "anti-stop" function and the holiday mode.

When the controller is powered on the pump always switches to automated mode.

CONTROL OF FLOOR HEATING/CIRCULATION PUMP

Installation instructions

1. Installation of the floor heating temperature sensor/hot water circulation temperature sensor

- When the "as central heating" mode of the floor heating pump is selected (parameters C4, C5) the floor heating sensor is not in use (i.e. it is used ONLY to measure temperature, for instance of returning floor heating water - it is the recommended solution, see diagram on page 2). In this configuration the FH pump works on the basis of the temperature sensor of the CH boiler.
- When the "as domestic hot water" mode of the FH pump is selected (parameters C4, C5), the FH sensor should be installed at the return of the floor heating water circuit.
- When "hot water circulation pump" mode is selected (parameter C4), the sensor should be installed at the return of the hot water circulation circuit close to the circulation pump.
- The sensor should be attached with two provided strips so that it adheres well to the pipe.
- It is recommended to additionally wrap the sensor with some thermal insulation material.

CAUTION: The sensor is not made for direct use in water.

2. Connecting the power cord to the floor heating/hot water circulation pump

- Connect the yellow-green wire (zero protection) to the marked terminal of the pump.
- Connect brown and blue wires to L and N terminals of the pump.

CAUTION: The regulator must be installed by a qualified electrician only.

FLOOR HEATING PUMP IN USE (PAR C4,C5)

When the "as central heating" mode for the FH pump has been selected (recommended - see diagram on page 2), the floor heating sensor is not in use (i.e. it is used ONLY to measure temperature, for instance of returning FH water). The floor heating pump operates on the basis of the readings of the boiler temperature sensor. The controller switches on the pump when the temperature in the central heating system reaches the value set for the FH pump as displayed on the MAIN SCREEN of the controller.

If a thermostatic mixing valve has not been installed in the floor heating circuit (in this configuration installing such a valve is not recommended), the user can select the "as domestic hot water" mode for the FH pump. - In this configuration the temperature sensor should be installed at the return of floor heating water. The controller switches on the FH pump when the temperature of the returning heating water reaches the setting for the FLOOR pump as displayed on the MAIN SCREEN of the controller. The pump is working provided that water in the CH boiler is warmer than the returning water in the floor heating circuit.

The user can select three different temperature values for the floor heating circuit - "day", "night" and "economy" (parameter C1). Temperature can be programmed for every day of the week and every hour (parameter C2 - timed programmes). The timed programme in use is displayed on the MAIN SCREEN to the right of the FLOOR pump icon.



temperature of the floor
heating circuit set to "day"



temperature of the floor
heating circuit set to "night"



temperature of the floor
heating circuit set to "economy"

When DHW priority has been selected (parameter B4 is set to YES), the FH circuit pump will be switched off while the DHW tank is heating up.

If SUMMER mode has been selected (parameter F1), the CH boiler only feeds the DHW tank.

HOT WATER CIRCULATION PUMP IN USE (PAR C4)

When "hot water circulation pump" control has been selected (parameter C4), the sensor should be installed at the return of the circulating hot water close to the circulation pump. The controller switches on the CIR pump when the temperature of the returning circulating water reaches the setting for the CIRCULATION pump as displayed on the MAIN SCREEN of the controller.

The user can select three different temperatures of circulating water - "hot", "warm" and "cold" (parameter C1). Temperatures at which the circulation pump is switched off are programmable. Different temperatures can be set for every day of the week and every hour (parameter C2). The timed programme in use is displayed on the MAIN SCREEN to the right of the CIR pump icon.



Circulating water
temperature set to "hot"



Circulating water
temperature set to "warm"



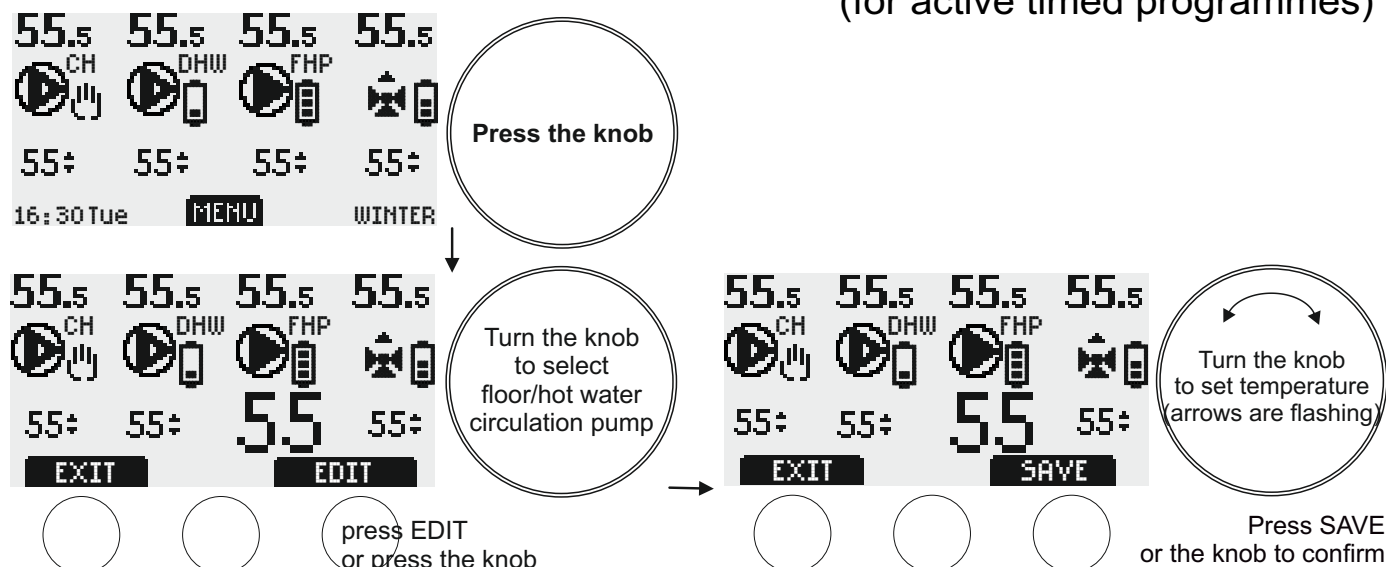
Circulating water
temperature set to "cold"

The circulation pump is in use provided that the temperature in the DHW tank at a given moment is at least 1°C higher than the current setting for the circulation pump.

If SUMMER mode has been selected (parameter F1), the central heating boiler only feeds the DHW tank and hot water circulation.

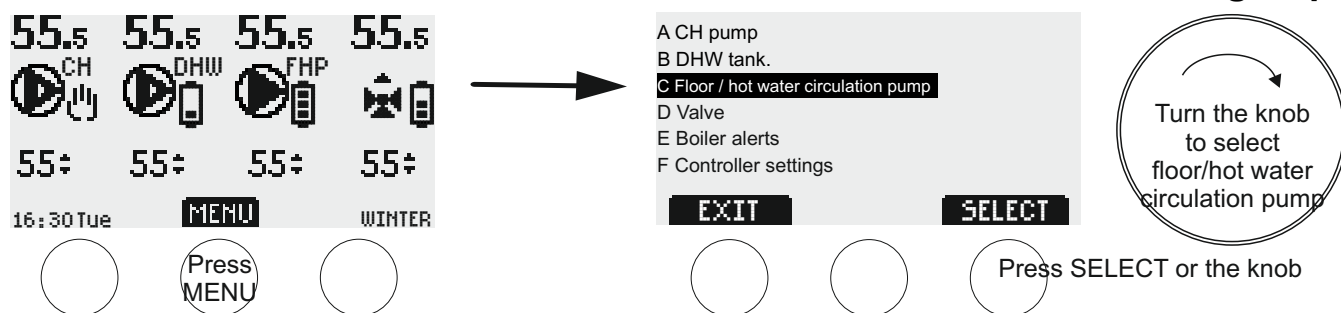
FLOOR CIRCUIT/HOT WATER CIRCULATION PUMP - QUICK SETTING

(for active timed programmes)



Pressing **EXIT** restores the MAIN SCREEN without saving changes.

FLOOR CIRCUIT/HOT WATER CIRCULATION PUMP PARAMETERS - group C



Press MENU to change parameters of the floor heating pump/hot water circulation pump. List of groups of parameters will appear on the screen. Turn the knob right (clockwise) to select group "C - floor heating pump/hot water circulation pump", and then press the knob or the SELECT button to confirm. "C1" - first of the group of parameters of the floor heating pump/hot water circulation pump will appear on the screen. Turn the knob right (clockwise) to go to different parameters. Press the knob or the EDIT/SELECT button to change settings. Some parameters need to be selected for editing: use the SELECT button and the knob - a flashing dot will highlight the parameter selected for editing. Editing is confirmed by pressing the knob or the SAVE button. Pressing EXIT restores the MAIN SCREEN without saving changes.

LIST OF PARAMETERS WHEN THE FLOOR HEATING PUMP IS SELECTED

- C1 temperature of the floor heating circuit
 - C1a day (1-99°C, default setting: 55°C)
 - C1b night (1-99°C, default setting: 50°C)
 - C1c economy (1-99°C, default setting: 45°C)
 - C2 timed programmes for floor heating (described in the chapter 'TIMED PROGRAMMES' on page 11)
 - C3 floor heating hysteresis
 - C3a day (1-15°C, default setting: 2°C)
 - C3b night (1-15°C, default setting: 2°C)
 - C3c economy (1-15°C, default setting: 2°C)
 - C4 Select pump
 - floor pump (default setting)
 - hot water circulation pump
 - C5 - select mode of the floor heating pump
 - as CH (default setting) (the floor heating pump is switched at set temperature at the boiler sensor)
 - as DHW (the floor heating pump is switched off at set temperature at the floor heating circuit sensor)
 - C6 manual mode of the pump. [START] button - the pump is switched on regardless of the settings; [STOP] - the pump is switched off regardless of the settings).
- CAUTION: Manual mode overrides the "anti-stop" function and the holiday mode. When the controller is powered on the pump always switches to automated mode.

LIST OF PARAMETERS WHEN THE HOT WATER CIRCULATION PUMP IS SELECTED

- C1 Hot water circulation pump switch off temperature setting
 - C1a hot (1-99°C, default setting: 50°C)
 - C1b warm (1-99°C, default setting: 40°C)
 - C1c cold (1-99°C, default setting: 25°C)
 - C2 Timed programmes for hot water circulation pump (described in the chapter 'TIMED PROGRAMMES' on page 11)
 - C3 Hysteresis of the hot water circulation pump
 - C3a hot (1-15°C, default setting: 2°C)
 - C3b warm (1-15°C, default setting: 2°C)
 - C3c cold (1-15°C, default setting: 2°C)
 - C4 Select pump
 - floor pump (default setting)
 - hot water circulation pump
 - C5 - circulation pump in use while DHW tank is heating up (NO, YES default setting: YES)
 - C6 Circulation pump - manual mode [START] button - the pump is switched on regardless of the settings; [STOP] button - the pump is switched off regardless of the settings.
- CAUTION: The manual mode overrides the "anti-stop" function and the holiday mode. When the controller is powered on the pump always switches to automated mode

CONTROL OF THE MIXING VALVE

Installation

1. Installation of the temperature sensor behind the valve

Attach the sensor to an uninsulated pipe behind the valve with two provided strips so that it adheres well. It is recommended to additionally wrap the sensor with some thermal insulation material.

CAUTION: *The sensor is not made for direct use in water.*

2. Connecting the power cable to the valve

- Connect the longer BLUE wire of the 3-wire valve power cable with the common (neutral) terminal on the valve (the one marked with N).
- the BLACK wire of the power cable carries the "valve opening" signal.
- the BROWN wire of the power cable carries the "valve closing" signal.

It is recommended to check the connections by opening and closing the valve manually (parameter D4)

CAUTION: *The regulator may be installed by a qualified electrician only.*

THE MIXING VALVE IN USE

The function of the controller is to stabilise water temperature in the central heating system. This is achieved by opening and closing of the mixing valve.

The controller switches the valve on and off in order to achieve the value set for the VALVE as displayed on the MAIN SCREEN of the controller.

The user can select three different temperatures behind the valve - "day", "night" and "economy" (parameter D1). Temperature behind the valve is programmable, different temperature values can be set for every day and hour of the week (parameter D2). The timed programme in use is displayed on the MAIN SCREEN to the right of the VALVE icon.

 temperature behind the valve "day"  temperature behind the valve "night"  temperature behind the valve "economic"

At the time when the temperature setting is switched from "day" to "night", from "night" to "economy" or from "day" to "economy" the valve is continuously closed for 4 minutes. The closing of the valve is overridden when a need to open the valve arises.

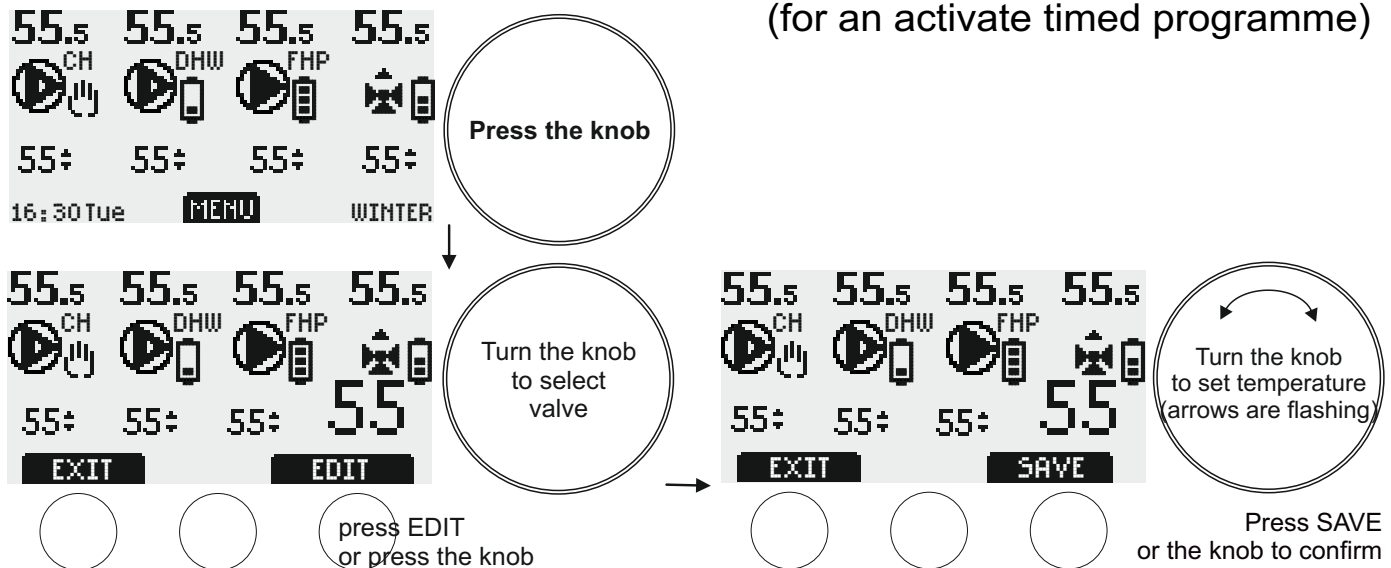
The valve is continuously closed for 4 minutes when the SUMMER mode is activated. When the SUMMER mode has been selected, the CH pump is switched on only in an emergency (a visual and sound alert are triggered). In such a case the valve is fully opened while the CH pump is working. The valve is continuously closed for 4 minutes after the alerts have been switched off.

The valve is fully, continuously open when temperature in the boiler reaches 92°C. A visual alert is activated.

The user can manually open and close the valve, e.g. in order to check if it has been properly connected (parameter D4). Press [OPEN] to open the valve, press [CLOSE] to shut off the valve.

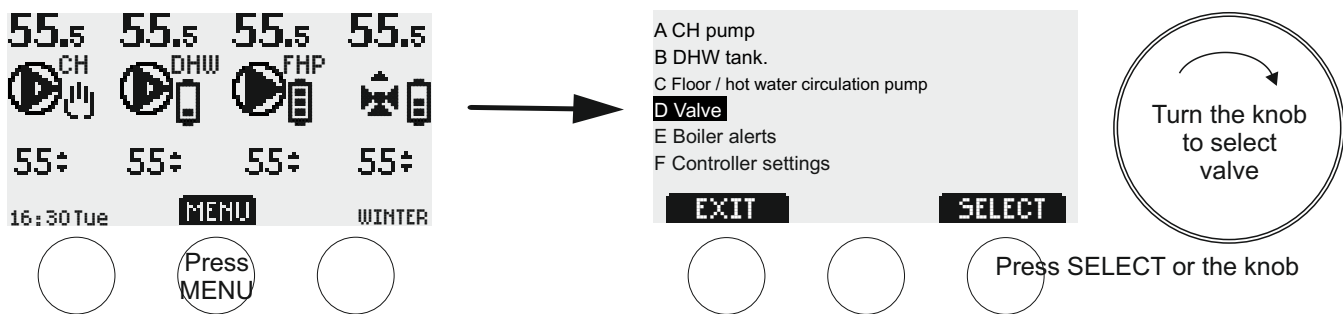
TEMPERATURE BEHIND THE VALVE - QUICK SETTING

(for an activate timed programme)



Pressing **EXIT** restores the MAIN SCREEN without saving changes.

MENU OF VALVE PARAMETERS – D group



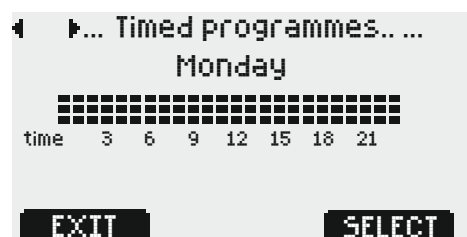
In order to modify valve parameters, press the [MENU] button. A list of groups of parameters will appear on screen. Turn the knob right (clockwise) to select the D group - "Valve". Press [SELECT] or the knob. "D1", the first parameter from the valve group will be displayed. To go to different parameters, turn the knob right, and then press the [EDIT] / [SELECT] button or the knob to change a desired parameter. Now you can change the value of the parameter using the knob or the dynamically alternating buttons. Some parameters need to be selected for editing: use the SELECT button and the knob - a flashing dot will highlight the parameter selected for editing. To save changes, press the [SAVE] button or press the knob. The [EXIT] button restores the previous menu level without saving changes.

LIST OF VALVE PARAMETERS (to switch parameters and change setting – turn the knob):

- D1 Temperature behind the valve (once this option has been selected, a flashing dot highlights edited temperature; turning the knob changes temperature setting)
 - D1a day (1-99°C, default setting: 45°C)
 - D1b night (1-99°C, default setting: 30°C)
 - D1c economy (1-99°C, default setting: 25°C)
- D2 Timed programmes for temperature behind the valve (description in section "TIMED PROGRAMMES OPERATION" on page 11)
- D3 Valve downtime (valve action time is constant - 1 sec.) (0-200 sec., default setting: 10 sec.)
- D4 Manual valve mode (the [STOP] button switches off the manual mode)

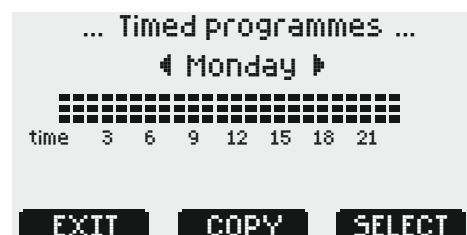
TIMED PROGRAMMES OPERATION (parameters B2,C2,D2)

Having selected a desired group of parameters, turn the knob until the “Timed programmes” parameter appears.



This screen shows a chart of timed programmes (temperatures) for the current day of the week.

Press SELECT or the knob

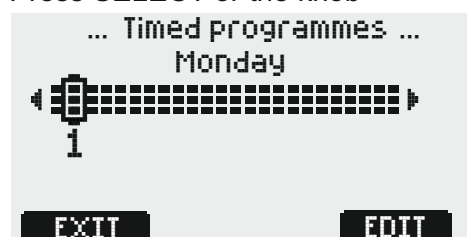


In this screen turn the knob to select a day of the week. You can see the timed programmes chart (temperature) for the selected day.

Possible operations:

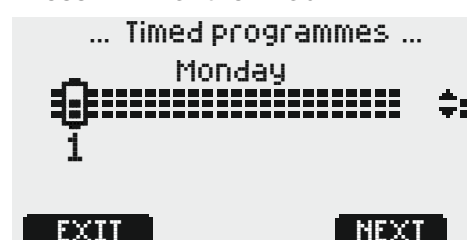
- press [SELECT] to edit the selected day
- press [COPY] to copy the settings for the selected day to another day of the week which you select with the knob

Press SELECT or the knob



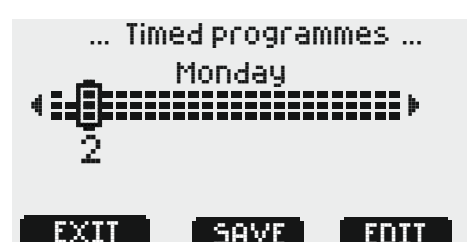
In this screen, turn the knob to select time interval to be edited.

Press EDIT or the knob



In this screen, turn the knob to change temperature for the selected time interval.

Press NEXT or the knob



Once you press [NEXT] or the knob, the symbol of timed programmes moves to the following hour. Possible operations:

- press [EDIT] to change the temperature for a selected hour (see the screen above)
- turn the knob to select any hour for editing
- press [SAVE] to save changes and return to the screen of selection of the day of the week (see the second screen).

Pressing [EXIT] restores the MAIN SCREEN without saving changes.

BOILER ALERTS – E group

Boiler alerts are managed like parameters in MENU groups A to D.

CH BOILER ALERTS (to switch parameters and change setting – turn the knob):

E1 Low CH boiler temperature. (0-50°C, default setting: 8°C)

E2 High CH boiler temperature. (60-120°C, default setting: 92°C)

Once the temperature exceeds the set alert threshold, both the audible and visual alerts are triggered.

Additionally, the controller features permanent (non-configurable) alerts: for low boiler temperature at 8°C and of high boiler temperature at 92°C.

Only a visual alert is triggered when the temperature exceeds the set threshold.

CONTROLLER SETTINGS - group F

Controller settings are managed like parameters in MENU groups A to D.

CONTROLLER SETTINGS (moving between parameters and change of setting - turn the knob):

F1 Season of the year SUMMER, WINTER (factory setting: WINTER) The selected season is displayed on the MAIN SCREEN.

F2 Holiday mode (1-28 days, default setting: 0 days = switched off) - over the selected period of time all economic settings are active. "The text string **"HOLIDAY MODE"** will appear on the MAIN SCREEN instead of settings.

Press the [START] button to switch on the holiday mode for the number of days selected with the knob, press the [STOP] button to switch off.

F3 Day of the week/hour (press the NEXT button or the knob to select day of the week, hour and minutes for edition).

F4 Time until the main screen is returned (10-240 secs, default setting: 60 secs) CAUTION - the controller does not return automatically to the MAIN SCREEN from "manual mode" menus.

F5 Brightness after the main screen is returned (0-100%, default setting: 20%).

F6 Return to default settings (the controller will ask to confirm).

CAUTION: return to default settings does not concern display contrast (parameter F8).

F7 Information about the controller (model, software version 2.1 - 4.0) - read only.

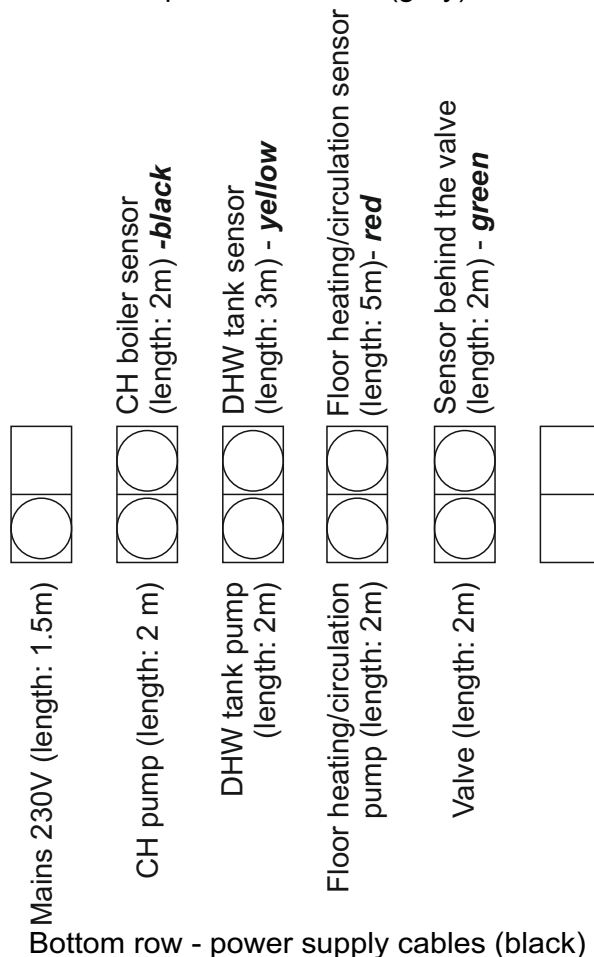
F8 Contrast of the display (1-31, default setting: 12 - CAUTION: return to default settings does not concern display contrast).

KIT COMPOSITION

- controller
- fixing clips – 6 pcs.
- wall mount – 1 pc.
- rawl plugs 6mm – 2 pcs.
- support – 1 pc. (available as an option at an extra charge)

SEQUENCE OF CABLE CONNECTIONS seen in the bottom view of the controller

top row – sensors (gray)



CAUTION

In case any of the appliances is not connected, you must not remove the protective sheath from the cable end. The cable should be coiled up and secured with a fixing clip.

PROTECTION

The pumps, valve and controller are secured with a 3.15A fuse which blows up in the event of electric failure (such as a short circuit in one of the pumps, the valve or the controller).

WARRANTY

TMK sp.j. grants the user a warranty for the JOKER Z3P controller. The warranty period is 3 years from the date of purchase of the device, however not longer than 4 years from the date of manufacture.

WARRANTY TERMS AND CONDITIONS

Warranty claims shall be accepted provided that the terms and conditions of warranty, and general rules of operation of electronic devices, are complied with as required. TMK sp.j. guarantees appropriate workmanship, high quality and reliable operation of the controller. In the event of any faults in the controller's operation, or defects which can be attributed to the manufacturer, TMK sp.j. shall repair or replace the faulty controller with a defect-free device within 14 working days from the date of returning the controller (in person or through post). The warranty scheme explicitly excludes all defects arising due to the user's fault and, particularly, defects caused by mechanical damage, faulty mounting, water ingress or operation of the device contrary to the general rules of operation of electronic devices.

The warranty is only valid with a proof of purchase.

DATE OF SALE:
day, month, year

.....
Seller's stamp and signature

.....
DATE OF MANUFACTURE

MANUFACTURER:

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