Weather compensated controllers
WXD10B | WXD10 | WXD20

Presentation

WXD heating controllers are installed in standard-dimension housings of 144×96 mm. They have been developed for the control of room heating or cooling as well as domestic hot water heating in single-family homes.
They provide the control of one or two heating circuits, switchover between heat sources, and the protection of the return line during the storage tank loading.
They are used for heating systems with one or two boilers, a heat pump, a storage tank, and a solar system.

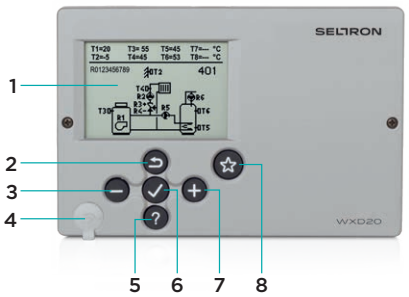
Typical application

- Radiator room heating system control.
- Floor heating or cooling system control.
- Convector heating or cooling system control.
- Wall or ceiling heating or cooling system control.
- Domestic hot water heating.

Features

- Up to 52 preset hydraulic schemes.
- They may be used for the control of new systems or to replace the installed controllers.
- Room heating or cooling according to the time programme.
- Domestic hot water heating according to the time programme.
- Solar system domestic hot water heating.
- Control of heating systems with a storage tank.
- The possibility of connecting 2 room units.
- BOOST function for intense room heating.
- Integrated solar system protection features.
- 13-language user interface.
- Wizard for an easy and quick device start-up.
- Operational diagnostics featuring error and excessive temperature warnings.
- Remote control with the help of the SeltronHome system.

Description of settings buttons



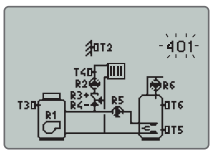
1 – Graphic display.
2 – Move backwards key.
3 – Move left or reduction.
4 – USB port for the connection with PC.
5 – Help.
6 – Menu entry or selection confirmation.
7 – Move right or increase.
8 – Programmable key.

Typical application	WXD10B	WXD10	WXD20
Radiator room heating system control	●	●	●
Floor heating or cooling system control	●	●	●
Convector heating or cooling system control	●	●	●
Wall or ceiling heating or cooling system control	●	●	●
Domestic hot water heating	●	●	●
Technical characteristics			
No. of preset hydraulic schemes	7	17	52
No. of room units	2	2	2
No. of mechanical relays	7	8	9
No. of solid state relays	—	1	1
No. of temperature sensor inputs	8	8	8
No. of analogue outputs (0÷10 V or PWM) for the control of the circulation pump or an energy source	2	2	2
BUS option – the interconnection of WXD controllers and connection with other Seltron controllers	●	●	●
System control			
Control of a heating system with radiators	●	●	●
Floor heating or cooling system control	●	●	●
Convector heating or cooling system control	●	●	●
Wall or ceiling heating or cooling system control	●	●	●
Domestic hot water heating system control	●	●	●
Heating circuits control			
Direct circuit	●	●	●
Mixing circuit	●	●	●
Direct and mixing circuit	—	●	●
Two mixing circuits	—	—	●
Domestic hot water heating	●	●	●
Switchover between direct heating circuit and domestic hot water heating	●	●	●
Domestic hot water circulation	●	●	●
Automatic switchover between heat sources	—	—	●
Control of the supply line constant temperature	●	●	●
Single-stage storage tank loading	—	—	●
Heat source control			
Solid fuel boiler	●	●	●
Solid fuel boiler with a pellet burner	—	—	●
Liquid fuel boiler	●	●	●
Liquid fuel boiler with a two-stage burner	●	●	●
Combined boiler	—	—	●
Gas flow boiler	—	—	●
Heat pump	—	—	●
Storage tank	●	●	●
Auxiliary heating with electricity	●	●	●
Solar collectors	—	●	●
Domestic hot water heating			
With a primary heating source	●	●	●
With a storage tank	●	●	●
Using a solar system	—	●	●
User functions			
Room heating or cooling according to the time programme	●	●	●
Automatic winter/summer mode switchover	●	●	●
PARTY function – activation of the comfort operation mode	●	●	●
ECO function – activation of the economy operation mode	●	●	●
HOLIDAY function – activation of the operation mode during the holiday season	●	●	●
Domestic hot water heating according to the time programme	●	●	●
One-time domestic hot water heating	●	●	●
BOOST function for intense room heating	●	●	●
Function for screed drying	●	●	●

Heating system protection	WXD10B	WXD10	WXD20
Anti-legionella protection (for a controlled energy source)	●	●	●
Storage tank overheating protection	●	●	●
Boiler overheating protection	●	●	●
Collector frost protection	—	●	●
Forced pump start at the highest collector temperature	—	●	●
Switching off of the collectors when the safety temperature has been exceeded	—	●	●
Solar system protection when collectors are overheating	—	●	●
Storage tank recooling to the desired temperature	—	●	●
Periodic starting up of pumps and mixing valves during a period of inactivity	●	●	●
A comprehensive overview of the heating system operation			
Graphic display of temperatures according to days of the last week	●	●	●
Detailed display of temperatures for the current day	●	●	●
Notifications on the activated protection functions and warnings about system failures	●	●	●
Possibility to simulate sensors and analyse the system operation	●	●	●
Remote access			
Possibility of USB connection to a PC	●	●	●
Connectivity to the SeltronHome platform providing remote control using a smartphone or tablet	●	●	●
Setup and installation			
Wizard for an easy and quick device start-up	●	●	●
13-language user interface: EN, DE, FR, NL, PL, ES, SL, IT, CS, LT, GR, HU, HR	●	●	●
Setting up the operation by selecting the hydraulic scheme	●	●	●
“Help” button for quick help with the setup	●	●	●
Graphically adjustable time programmes	●	●	●
Option to simulate the system operation	●	●	●
Logging and display of changes made to the setup	●	●	●
Option for retrieval of the basic setup in the event of data loss or unwanted changes	●	●	●
Option for programming free outputs	●	●	●
Possibility of installation onto the wall or into a cutout (opening)	●	●	●
Simple installation and connection	●	●	●

Outlined functions

Step 1


Step 2

Steps 3 and 4

Start-up wizard

The WXD controller is equipped with a start-up wizard, which takes you through the initial setup of the controller in 3 or 4 steps.

Step 1: language selection.

Step 2: hydraulic scheme selection.

Step 3: setting the heating curve for the first heating circuit.

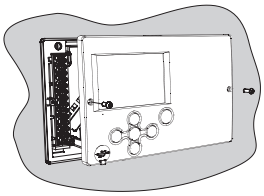
Step 4: setting the heating curve for the second heating circuit.

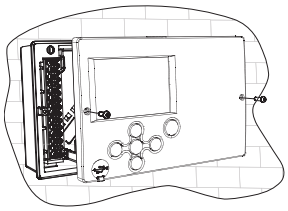
USB port and programmable key

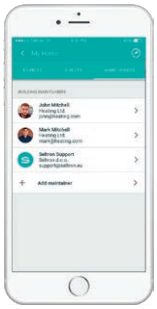
The WXD controller may be connected to personal computer and SELCONTROL via a mini-USB port. The SELCONTROL software package is a connection interface and a software. It is used to control the 3rd generation of SELTRON heating control. With the help of the SELCONTROL software, we can change the parameters of the controller via a personal computer, activate or deactivate user functions, and edit and save the information about the controller setup.
With the programmable key, the user sets the shortcut to the most frequently used settings in the menu.

WXD controller installation

The WXD controller is used for the control of modern heating systems or as a replacement controller in older heating systems.
It can be installed into a standard cutout on the boiler or on the wall.

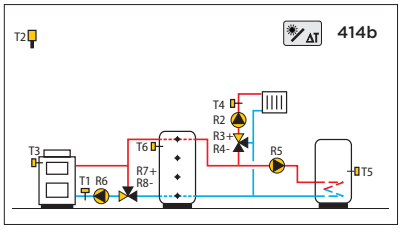

Example of installation into a cutout or aperture on the boiler


Example of installation onto the wall



Remote control with the help of SeltronHome system

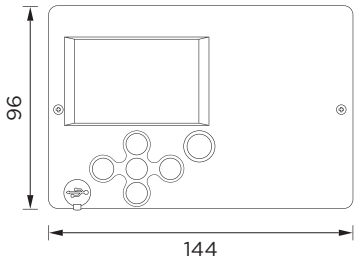
The WXD controllers may be connected to the SeltronHome platform, which provides the heating remote control using a smartphone or tablet.
Remote control is enabled through the CLAUSIUS application for the end user and the KELVIN app for service technicians.
The CLAUSIUS application provides the setting of the desired temperature, heating operation mode, and an overview and the possibility to change time programmes via a smartphone or a computer.



Typical hydraulic scheme

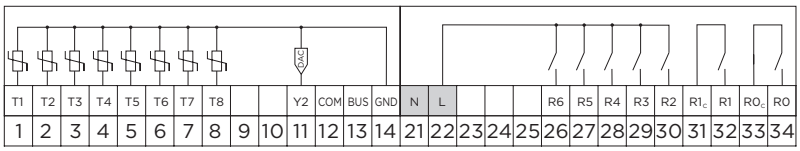
Solid fuel boiler, storage tank, mixing circuit, domestic hot water storage tank.

Example: hydraulic scheme 414b.

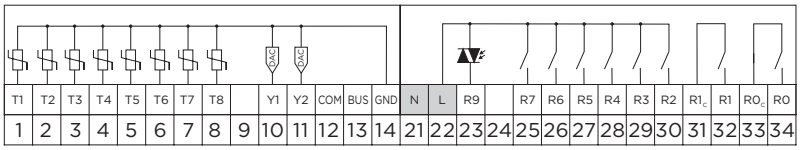
Technical specifications	WXD10B	WXD10	WXD20
Backlit graphic display	•	•	•
Operating hours meter	•	•	•
Weekly program timer	•	•	•
Connection voltage	230 V~, 50 Hz		
Own consumption	2.5 W		
Energy consumption in the standby mode	Max. 0.5 W		
No. of inputs	8 pcs temperature sensor (Pt 1000)		
No. of outputs	7 pcs mechanical 2 pc analogue 0÷10 V (Y2)	8 pcs mechanical 1 pc electronic 2 pcs PWM or analogue 0÷10 V (Y1, Y2)	9 pcs mechanical 1 pc electronic 2 pcs PWM or analogue 0÷10 V (Y1, Y2)
Relay outputs	4 (1) A~, 230 V~		
Triac output	1 (1) A~, 230 V~		
Clock power supply	Battery CR2032 (Li-Mn) 3 V		
Clock accuracy	+/-1 s (24 h) at 20 °C		
Degree of protection	IP20 according to EN 60529		
Safety class	I according to EN 60730-1		
Operation mode	1B according to EN 60730-1		
Type of temperature sensors	Pt1000 or KTY10		
Operation mode	3-point PID		
Housing material	ASA + PC – thermoplastic		
Permissible ambient temperature	5÷40 °C		
Storage temperature	-20÷65 °C		
Product weight	430 g	440 g	430 g
No. of pieces in the packaging unit	6 pcs		
Dimensions			

Electrical connection

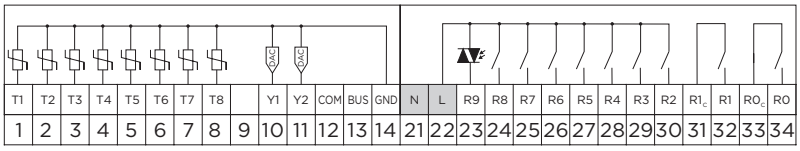
WXD10B



WXD10

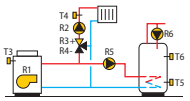


WXD20



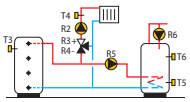
Hydraulic connections for WXD10B, WXD10, WXD20

401



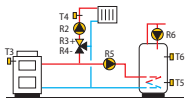
Oil boiler, mixing circuit, domestic hot water storage tank.

401b



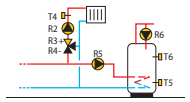
Storage tank, mixing circuit, domestic hot water storage tank.

401c



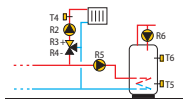
Solid fuel boiler, mixing circuit, domestic hot water storage tank.

401d



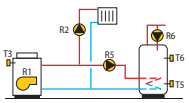
No-boiler system – mixing circuit, domestic hot water storage tank.

401e



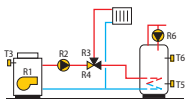
Extension scheme – mixing circuit, domestic hot water storage tank.

402



Oil boiler, direct circuit, domestic hot water storage tank.

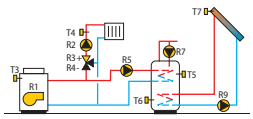
403



Oil boiler, direct circuit, domestic hot water storage tank.

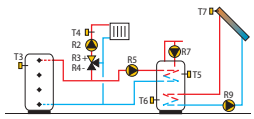
Hydraulic connections for WXD10, WXD20

404



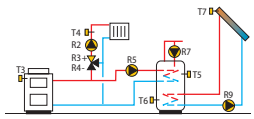
Oil boiler, mixing circuit, domestic hot water storage tank, solar collectors.

404b



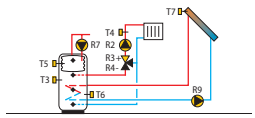
Storage tank, mixing circuit, domestic hot water storage tank, solar collectors.

404c



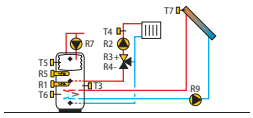
Solid fuel boiler, mixing circuit, domestic hot water storage tank, solar collectors.

404d



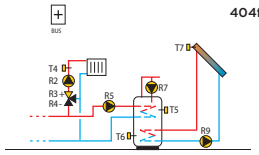
Storage tank with integrated domestic hot water storage tank, mixing circuit, solar collectors.

404e



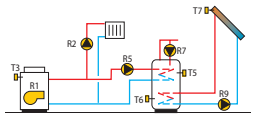
Storage tank with integrated domestic hot water storage tank, mixing circuit, auxiliary heating with electricity, solar collectors.

404f



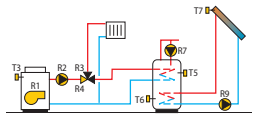
Extension scheme – mixing circuit, domestic hot water storage tank, solar collectors.

405



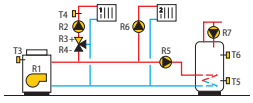
Oil boiler, direct circuit, domestic hot water storage tank, solar collectors.

406



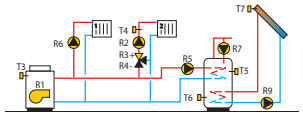
Oil boiler, direct circuit, domestic hot water storage tank, solar collectors.

407



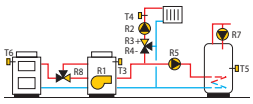
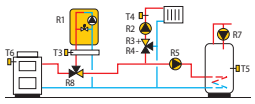
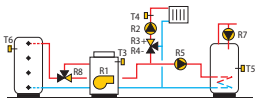
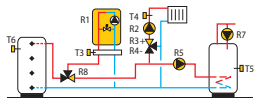
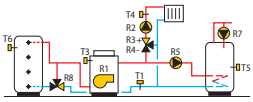
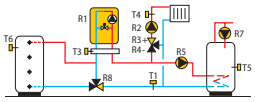
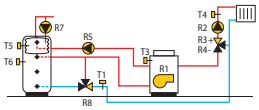
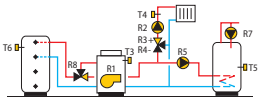
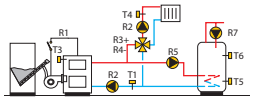
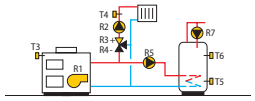
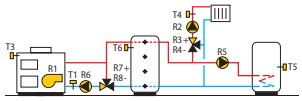
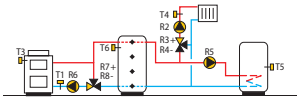
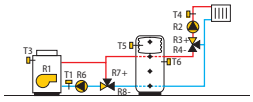
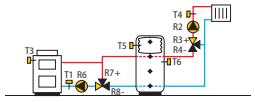
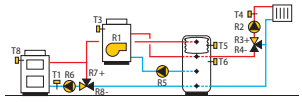
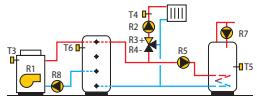
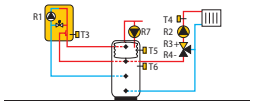
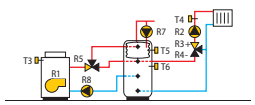
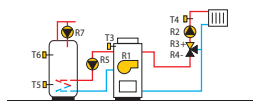
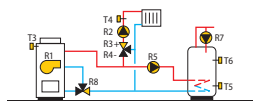
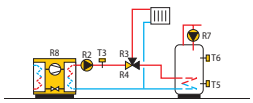
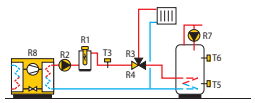
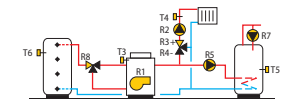
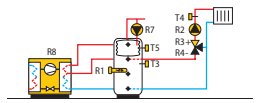
Oil boiler, mixing circuit, direct circuit, domestic hot water storage tank.

407b

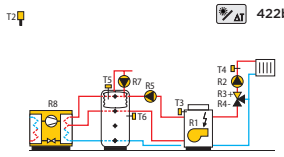


Oil boiler, mixing circuit, direct circuit, domestic hot water storage tank, solar collectors.

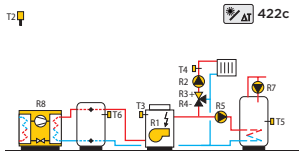
Hydraulic connections for WXD20

408  Solid fuel boiler, oil boiler, mixing circuit, domestic hot water storage tank.	408b  Solid fuel boiler, gas boiler, mixing circuit, domestic hot water storage tank.	409  Storage tank, oil boiler, mixing circuit, domestic hot water storage tank.	409b  Storage tank, gas boiler, mixing circuit, domestic hot water storage tank.
410  Storage tank, oil boiler, mixing circuit, domestic hot water storage tank.	410b  Storage tank, gas boiler, mixing circuit, domestic hot water storage tank.	410c  Storage tank with integrated domestic hot water storage tank, oil boiler, mixing circuit.	411  Storage tank, oil boiler, mixing circuit, domestic hot water storage tank.
412  Pellet boiler, mixing circuit, domestic hot water storage tank.	413  Combined boiler (solid fuel/oil), mixing circuit, domestic hot water storage tank.	414  Combined boiler (solid fuel/oil), storage tank, mixing circuit, domestic hot water storage tank.	414b  Solid fuel boiler, storage tank, mixing circuit, domestic hot water storage tank.
415  Combined boiler (solid fuel/oil), storage tank with integrated domestic hot water storage tank, mixing circuit.	415b  Solid fuel boiler, storage tank with integrated domestic hot water storage tank, mixing circuit.	415c  Solid fuel boiler, oil boiler, storage tank with integrated domestic hot water storage tank, mixing circuit.	416  Oil boiler, storage tank, mixing circuit, domestic hot water storage tank.
416b  Gas boiler, storage tank with integrated domestic hot water storage tank, mixing circuit.	416c  Oil boiler, storage tank with integrated domestic hot water storage tank, mixing circuit.	417  Combined boiler (solid fuel/oil), mixing circuit, domestic hot water storage tank.	418  Combined boiler (solid fuel/oil), mixing circuit, domestic hot water storage tank.
419  Heat pump, direct circuit, domestic hot water storage tank.	420  Heat pump, auxiliary heating with electricity, direct circuit, domestic hot water storage tank.	421  Oil boiler, storage tank, mixing circuit, domestic hot water storage tank.	422  Heat pump, storage tank with integrated domestic hot water storage tank, auxiliary heating with electricity, mixing circuit.

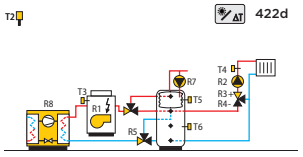
Hydraulic connections for WXD20



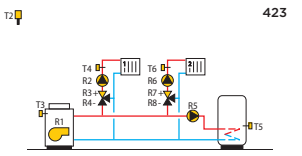
Heat pump, oil boiler, storage tank with integrated domestic hot water storage tank, mixing circuit.



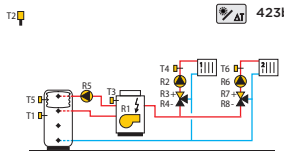
Heat pump, oil boiler, storage tank, mixing circuit, domestic hot water storage tank.



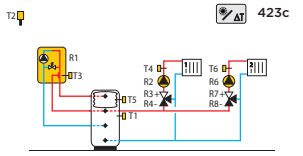
Heat pump, oil boiler, storage tank with integrated domestic hot water storage tank, mixing circuit.



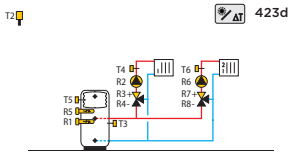
Oil boiler, 2 mixing circuits, domestic hot water storage tank.



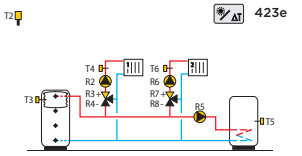
Storage tank with integrated domestic hot water storage tank, oil boiler,
2 mixing circuits.



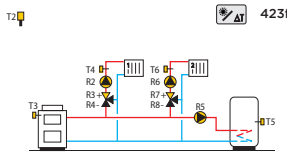
Gas boiler, storage tank with integrated domestic hot water storage tank,
2 mixing circuits.



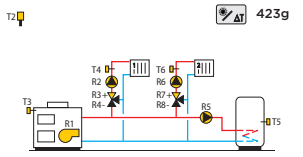
Storage tank with integrated domestic hot water storage tank, heating with electricity, 2 mixing circuits.



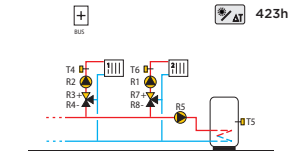
Storage tank, 2 mixing circuits, domestic hot water storage tank.



Solid fuel boiler, 2 mixing circuits, domestic hot water storage tank.



Combined boiler (solid fuel/oil), 2 mixing circuits, domestic hot water storage tank.



Extension scheme, combined boiler (solid fuel/oil), domestic hot water storage tank, 2 mixing circuits.

Item	Order code	Description
	2WXD10B21100-510	Weather compensated controller SELTRON WXD10B with sensors (2xTF/Pt, 1AF/Pt and 1VF/Pt)
	2WXD1041100-510	Weather compensated controller SELTRON WXD10 with sensors (4xTF/Pt, 1AF/Pt and 1VF/Pt)
	2WXD2041100-510	Weather compensated controller SELTRON WXD20 with sensors (4xTF/Pt, 1AF/Pt and 1VF/Pt)

Accessories

	1TFPT-000	Immersion temperature sensor SELTRON TF/Pt
	1VFPT-000	Surface temperature sensor SELTRON VF/Pt
	1FODPT-NN0	Outdoor temperature sensor SELTRON AFD/Pt
	1CFPT90-000	Flue gas temperature sensor SELTRON CF/Pt, 90 mm sensor
	1AVD0532M210-030	Actuator SELTRON AVD 05, 3-point, 5 Nm, 2 min, 230 V~
	1AVD0521M210-030	Actuator SELTRON AVD 05R, 2-point, 5 Nm, 1 min, 230 V~
	1RBD30F-060	Room unit SELTRON RCD20, wired connection, wall mounting
	1GWD3E-050	Communication module SELTRON GWD3E

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www.seltron.eu