

Compact weather compensated controller AHD20

Description



The AHD20 is a compact, weather compensated controller built into the actuator housing. It is used to control the mixing valve and the circulation pump to regulate the supply temperature during heating or cooling, depending on the outdoor temperature.

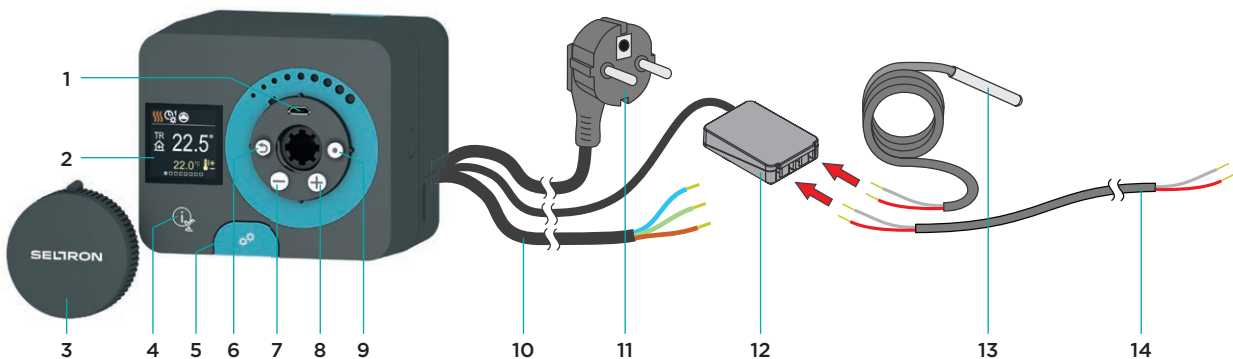
Typical application

- Weather-compensated heating and/or cooling control.
- Control of independent mixing circuit (mixing valve and circulation pump).
- Control of additional mixing circuit (mixing valve and circulation pump).

Features

- 2 pre-set hydraulic schemes.
- Possibility of connecting up to 4 sensors (supply, outdoor, room/return, power source).
- Two operating modes, weather compensated (by outdoor temperature) or thermostatic (by room temperature).
- Intuitive setting with use of keypad and color display.
- Possibility of connecting a return sensor and limiting the power of the heating circuit.
- Quick and easy "click" type installation system on mixing valve.
- Automatic screen adjustment according to the installation direction.
- Possibility of operating without a room unit (according to the heating curve).
- Possibility of BUS connection with several controllers when using a larger system.
- Error diagnostics and automatic activation of an alternative operating mode.
- Connectivity to the SeltronHome platform with remote control option.

Description



- 1 - USB port for software updates and connection to a personal computer.
- 2 - Graphic display.
- 3 - Manual movement button.
- 4 - Button . Help.
- 5 - Manual operation clutch.
- 6 - Button . Return back.
- 7 - Button . Move to the left, decreasing.


- 8 - Button . Move to the right, increasing.
- 9 - Button . Menu entry, confirmation of selection.
- 10 - Pre-wired cable for circulation pump.
- 11 - Pre-wired power cord with plug.
- 12 - Pre-wired connection box for sensors and communication.
- 13 - Temperature sensors.
- 14 - COM and BUS connections.

Applications	AHD20	AHD20W
Weather compensated heating and/or cooling control	●	●
Mixing heating circuit control (mixing valve and circulation pump)	●	●
Technical features		
Number of pre-set hydraulic schemes	2	2
Number of electronic relays	1	1
Number of temperature sensors inputs	4	4
Temperature setup option 10 to 90 °C	●	●
Additional sensor for measuring the source temperature	●	●
BUS option - interconnection of AHD controller or with other Seltron heating controllers	●	●
Wireless connectivity (connection of wireless room unit and outdoor sensor, WiFi connection to the internet)	—	●
User functions		
Room heating or cooling according to the timer programme	●	●
Heating system protection		
Frost protection	●	●
Antiblock function for mixing valve	●	●
Antiblock function for pump	●	●
Limiting the maximum supply temperature for floor heating	●	●
Data display		
Display of notifications and warnings about the heating system operation	●	●
Display of temperatures and other operating data	●	●
Detailed display of temperatures for the current day	●	●
Review of temperature data for the previous week	●	●
Signalling of the mixing valve rotating direction	●	●
Control and signalling of the circulation pump operation	●	●
Remote access		
Possibility of USB connection to a personal computer	●	●
Possibility of connectivity to the SeltronHome platform, which allows remote control via a smartphone or tablet	●	●
Setting and installation		
Wizard for an easy and quick device start-up	●	●
14-language user interface: EN, DE, FR, NL, PL, ES, SL, IT, CZ, SK, HR, RU, HU, UA	●	●
Connection box for sensors	●	●
Setting of the operation by selecting the hydraulic scheme	●	●
Setting of the rotation direction of the mixing valve	●	●
Logging and display of changes made to the setup	●	●
Allows recalling basic settings in case of loss or unwanted changes	●	●
Suitable for installation on different types of mixing valves	●	●
"Click" type installation system	●	●
Connection box for sensors is prewired to the controller	●	●
Power cord equipped with plug	●	●

Featured functions



Clutch for manual operation

The manual mode clutch of the AHD compact controller is activated by pressing the  button. When the clutch is activated, the mixing valve control and, where appropriate, also the circulation pump is switched off to save energy. Manual operation mode is signalled on the display.



Quick installation

For dismounting, release of safety knob on the flange is needed and controller can be removed from the valve.

For dismounting, press and hold the release knob on the flange and remove the controller from the valve.

During operation, controller can not release itself from the valve.

Mounting accessories are available for most mixing valves on the market.



User friendly interface

The user menu consists of a colour display and a keypad. The keypad was deliberately placed under the button for manual movement, what prevents unwanted changes of the settings to the controller.

For clear and user-friendly data display, the controller has a built-in colour graphic display with a 240 x 240-pixel resolution, with adjustable brightness. The automatic screen orientation ensures that the data is readable regardless of the installation position.

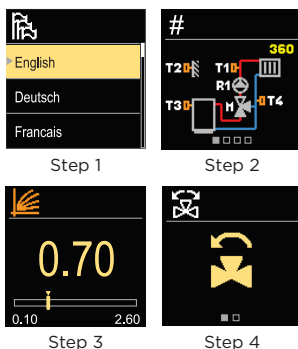


Plug-in connectors

The AHD compact controller has a built-in socket for the connector of the power cable. This allows an easy disconnection in the case of maintenance work, without the need for any tools.

Sensors and other connections are connected to an external connection box, which allows the connection of:

- T1-T4 sensors.
- Bus connection to another controller.
- Room unit.



Start-up wizard

The controller is equipped with a built-in wizard, which allows the initial setting of the controller. It only takes four steps and includes:

Step 1: Language selection.

Step 2: Hydraulic scheme selection.

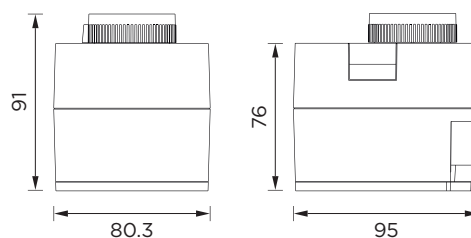
Step 3: Setup of heating curve steepness.

Step 4: Selection of opening direction of mixing valve.

After completing this procedure, the controller is set up and ready for basic operation.

Technical data	AHD20	AHD20W
TFT display		•
Keypad		•
Own consumption		Maximum 3,5 W
Standby power consumption		Maximum 0,5 W
Torque		5 Nm
Rotation angle		90 < °
Wireless connectivity - wireless connection with room unit and outdoor sensor	—	•
Wireless connectivity - WiFi connection to internet	—	•
Rotation speed		2 min 90 < °
Mixing valve control		3-point PID
Circulation pump control		2-point (ON/OFF)
Relay output		electronic relay, 1 (1) A ~, 250 V-
Supply voltage		230 V ~, 50 Hz
Maximum own consumption		5 W
Power supply of built-in clock		Battery CR1025 (Li-Mn) 3 V
Accuracy of built-in clock		+/-1 s (24 h) at 20 °C
Degree of protection		IP42 according to EN 60529
Safety class		I according to EN 60730-1
Type of temperature sensors		Pt1000
Housing material		PC - dark grey
Operating temperature		0 to 50 °C
Storage temperature		-20 to 65 °C
Product weight		800±1.000 g
Number of pieces in a package unit		12 pieces

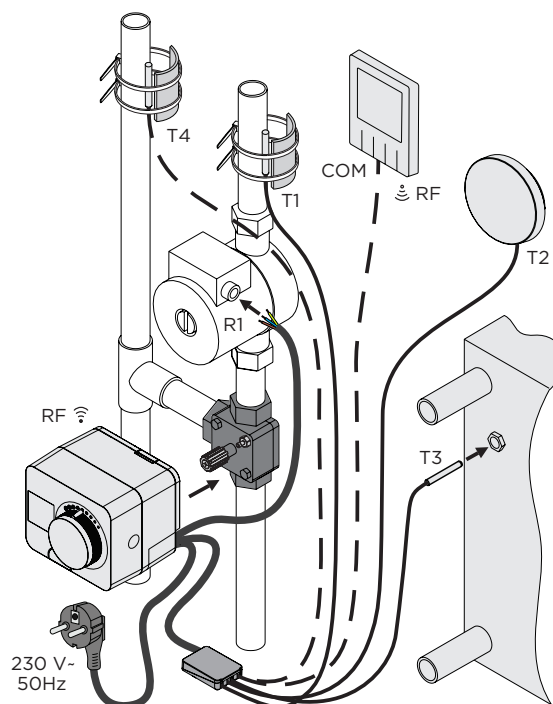
Dimensions



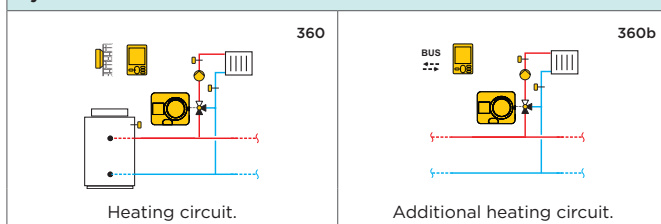
Electrical connection


Key:

- mandatory sensors (T1, T2, T3)
- optional sensors (T4, COM)



Hydraulic schemes for AHD20



Product	Order code	Description
	1AHD2021-050	Compact weather-compensated controller SELTRON AHD20, 2x TF/Pt, 1xAfD/Pt
	1AHD20W21-050	Compact weather-compensated controller SELTRON AHD20W, wireless, 2x TF/Pt, 1xAfD/Pt

Accessories

1AVDMSA+NNO	Seltron, Acaso, Brv, Esbe Type F & G & MG, Hora, Imit, Imp, Ivar, Paw old type, Somatherm, Valvex Controlmix, Wip (5 Nm)
1AVDMSB+NNO	Seltron, Acaso, Brv, Esbe Type F & G & MG, Hora, Imit, Imp, Ivar, Paw old type, Somatherm, Valvex Controlmix, Wip(10 Nm+)
1AVDMSC+NNO	Afriso ARV series, Danfoss HFE series, Esbe 3F & 4F & T series
1AVDMSD+NNO	Meibes new valve, Brv
1AVDMSE+NNO	Landis & Gyr, Siemens - Type VBI, Type VBF
1AVDMSF+NNO	Meibes old valve, Wita
1AVDMSG+NNO	Esbe VRG series
1AVDMSH+NNO	Brv 1060 & 1050 series, Herz MV3P & MV4P series, Womix MIX M
1AVDMSI+NNO	Honeywell V544.., V543..
1AVDMSJ+NNO	Paw K32, K33, K34
1AVDMSK+NNO	Danfoss HRB, HRE
1AVDMSL+NNO	Vexve AMV Series, ABV Series
1AVDMST+NNO	ISO 5211 ball valve, F03 flange, L/R axis 9 mm
1AVDMSU+NNO	ISO 5211 ball valve, F04 flange, L/R axis 9 mm
1AVDMSV+NNO	ISO 5211 ball valve, F04 flange, L/R axis 11 mm
1AVDMSW+NNO	ISO 5211 ball valve, F05 flange, L/R axis 11 mm



1FODPT-NNO	Outdoor temperature sensor SELTRON AFD/Pt
------------	---



1RBD30F-060	Room unit SELTRON RCD20, wired connection, surfaces-mounting
1RBD30WF-060	Room unit SELTRON RCD20W, wireless connection, surfaces-mounting



1GWD3E-050	Communication module SELTRON GWD3E
------------	------------------------------------

Seltron d.o.o.
Tržaška cesta 85 A
SI-2000 Maribor
Slovenia

T: +386 (0)2 671 96 00
F: +386 (0)2 671 96 66
sales@seltron.eu
www.seltron.eu