EN / *User manual*

Wireless Thermostat SAS920WHL-7

Thermostat Saswell SAS920WHL-7 is a wired thermostat for managing the heating systems. All temperature settings and the regulation itself is easily controlled via the thermostat. The system also allows programming of the Heating schedule clock for 7, 5 + 2, 5 + 1 + 1 days and 4 oz. 6 switches per day.

The instructions for use and maintenance are part of the general terms and conditions of sale. We reserve the right to change the details, technology and performance. The guarantee is valid only with the original invoice. We allow the possibility of errors in the text.

Environmental protection

Do not place electronic devices and batteries after the end of their life in mixed municipal waste, use collection points of separate waste. By properly removing the product, you will prevent negative effects on human health and the environment. Recycling of materials contributes to the protection of natural resources. More information on the recycling of this product is offered to you by administrative units, household waste treatment organizations or the point of sale where you purchased the product.

Important notes before first use, installation and maintenance:
Before use, carefully read the manual not only for the thermostat, but also for the Heating device (heat pump, etc.) • Turn off the power supply before installing the thermostat! • We recommend that the installation is done by a qualified electrician • the electrical circuit must be secured with a fuse that does not exceed the current load of wiring • Please note all safety instructions before installing • Do not expose the product to direct sunlight, extreme cold, humidity and sudden temperature changes. This would reduce the accuracy of the temperature measurement • Do not place the product in places that are prone to vibrations and shocks - this can cause damage • Do not expose the product to excessive pressure, shock, dust, high temperatures or moisture, as these can cause damage to one of the functions product, shorter energy endurance, damage to batteries, and deformation of plastic parts. • Do not expose the product to rain or moisture, dripping or spraying water. • Do not place any sources of fire on the product, for example, spark plugs etc. • Do not place the product in places where there is insufficient air circulation. • Do not insert any objects into the ventilation openings. • Do not interfere with the internal electrical wiring of the product. It may be damaged and therefore terminate the warranty. The product must only be repaired by a trained specialist. • Use a moderately moistened cloth for cleaning. Do not use solutions or cleaning products - may damage plastic parts and electrical wiring • Do not immerse the product in water or other liquids. • Do not repair it yourself if the product is damaged or defective. Put it in the repair shop where you bought it • The product should not be used by a person (including children) by physical, sensory or mental disability or lack of experience and knowledge impeded by the safe use of the device if they are not controlled, or if they were not informed by the person responsible for their safety about the use of the device • Children's control is necessary to ensure that they do not play with the device.

Declaration of conformity has been issued for the product. This and other documentation is available on the website www.sen-controls.eu.
Producer of this product is SASWELL CONTROLS (HONGKONG) LTD.
Importer and distributor for Saswell is Sen Controls d.o.o., Belokranjska cesta 29, 8340 Črnomelj, Slovenia

Features

- Large LCD screen with high brightness
- Maintains all settings despite the loss of power
- Intelligent adaption function
- Temporary hold and constant, permanent hold modes for power saving or greater comfort – manual temperature setting
- Heating schedule program for each day (7 days) or separate working days (5 days) and weekends (2 days or 1+1), with four or six different time and temperature settings
- Temperature calibration
- Antifreeze function
- On wall (dose-socket) installation

Specifications

Power supply	100-240V, AC 50/60Hz (Max load 250V, AC 3(2)A)
Room temperature setting range	5°C ~ 50°C (Accuracy 0.5°C)
Ambient temperature	0°C ~50°C
Transport or warehouse temperature	-10°C ~ +60°C
Dimensions	86 x 86 x 13mm

Thermostat description

Buttons

17. On/Off button (short press will turn on or turn off the device); Confirmation button
18. Check current day and time (short press); Set current day and time (two short presses)
19. Settings/menu button
20. Change value – increase
21. Change value - decrease
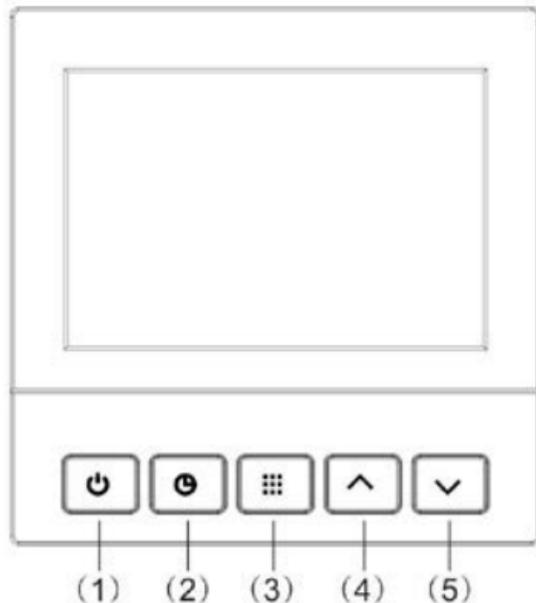
Display

22. Day, days of week
23. Main display (Temperature…)
24. Step of the current advanced setting that is currently editing (visible only in edit mode)
25. Currently active Heating program schedule or the currently editing Heating program schedule
26. Device in WIFI mode*
27. Device in AP mode*
28. Editing advanced settings mode
29. Constant temperature hold mode
30. Thermostat is currently using Heating program schedule or is in Heating program schedule editing mode
31. Heating mode (thermostat's output signal for Heating is active)
32. Thermostat is in antifreeze mode
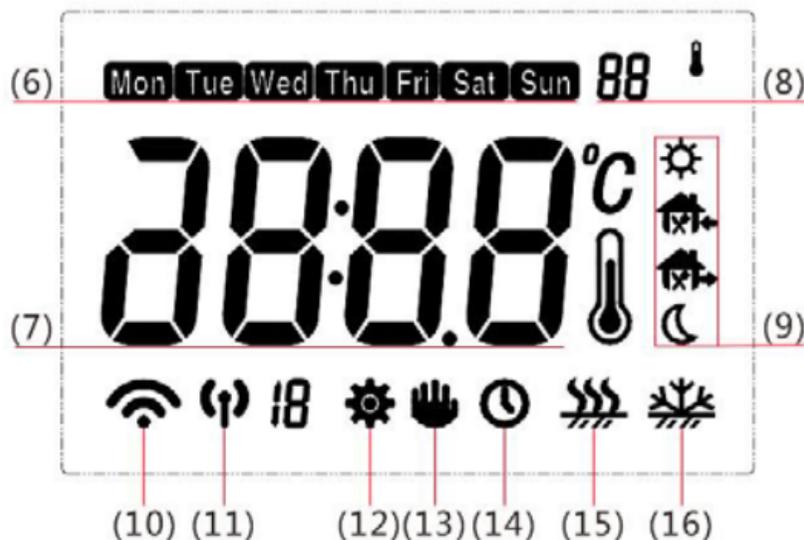
* Only for certain models of SAS920

(6) Mon Tue Wed Thu Fri Sat Sun 88 (8)

(7) (9)

(10) (11) (12)(13)(14) (15) (16)

Installation

Wall mount (dose – socket)

First, remove the back of the thermostat. Do that by using a straight screwdriver and carefully rise the front cover from the bottom up. While doing that you will notice a small flex cable attached to the back and the front of the case. Be careful not tearing it.

You have to remove the cable from the front part of the case. Do it carefully. Now, the thermostat should be separated on two parts – front (screen) and back (electrical connection…).

Opening the case

When the parts are separated, take the back part and make the electrical wiring.

Once again, the assembly should be carried out by a qualified person and read all safety instructions and warnings before assembly. Keep main power off all the time!

Use the electrical wiring scheme on the right side for help.

Spare	Spare	L1	L	N

Imax :250VAC/3A
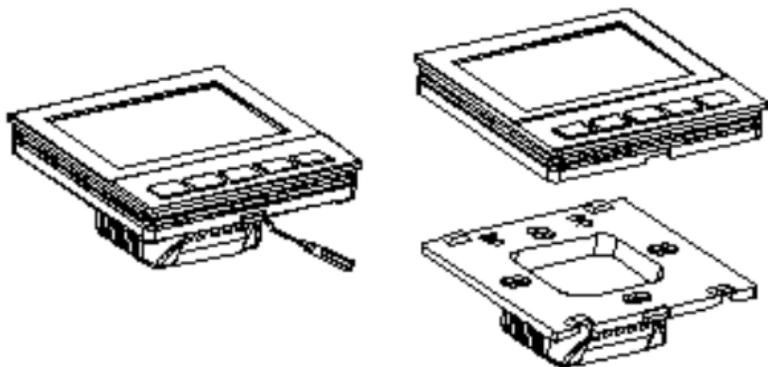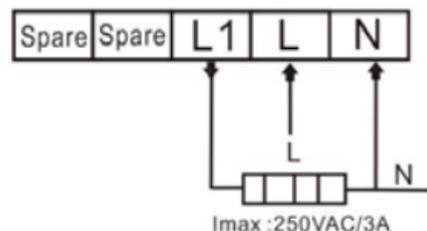
Power: 100-240VAC 50/60HZ
Imax: 3A

Model:SAS920WHL-7

Now follows the installation of the back part into the wall socket. For help use the picture below. Two screws are attached for easier installation. Be careful to install the back part the right orientation as the small "tongue" part on the bottom should be looking towards the floor.
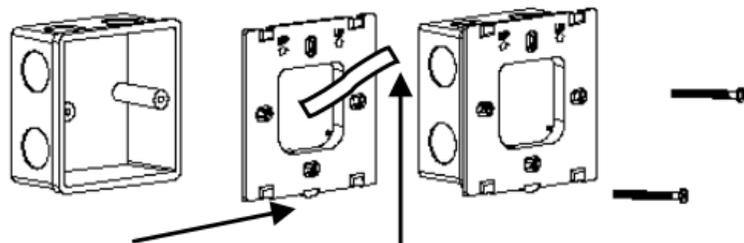
Socket installation / »tongue« / Connecting cable / Screwing the back part in the socket

When you've attached the back part on the wall socket, you can connect the back part with the front one. You can do that by carefully attaching the cable to the front part and then pushing the front part of the case on the already installed one. The thermostat should now be installed and ready for use
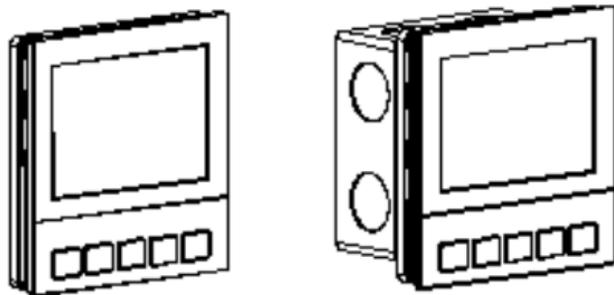
Front part installation

Possible error codes

Below is a description of possible error codes, which might show during the thermostat use.

Error code	Description
Err.3	Sensor in thermostat is in short circuit. Thermostat stops Heating.
Err.4	Sensor in thermostat is malfunctioning. Thermostat stops Heating.

Using the thermostat – First steps, basics and description of functions, settings

The thermostat is very easy to use but it offers many advanced functions. For a quick and easy start, the instructions will be explained in the next pages and we advise that you go through them for even easier use.

By default, the thermostat has Heating schedule programs DISABLED. This means, that out of the box you can only set the permanent, constant temperature and Heating schedule programs cannot be set.

If you want to enable Heating schedule programming, you'll have to follow the part of advanced settings for setting the heating programs of the thermostat.

Turning ON / OFF
The thermostat can be turned ON or OFF by a short press on a button for turning on/off (see button description 1)

Changing the values
The values are always changed by short pressing the ▲ (changing value, button description 4) and ▼ (changing value, button description 5) buttons.

Displaying time and day
You can check the current time and day by simply short pressing button ⊕ (button description 2). The device has to be turned on to use this function.

Temporary temperature change

Temporary temperature change means, that if you currently want to change the temperature which will stay changed until the next Heating program change (if you're using Heating schedule programs – otherwise, a permanent, constant temperature change is made).

For example – Currently the time is 13:00 and the Heating temperature is set to 20.0°C. You temporary change the temperature to 24.0°C and the thermostat will keep this set value until the next Heating schedule change, which you've set at 14:30 with temperature set at 22.0°C.

You can activate the temporary temperature change by pressing ▲ or ▼ buttons, when you're not in any menu and the device is turned on. When you press one of those two buttons, the currently set temperature starts to blink. Now, set it to your desired value and when you're satisfied with the temperature, stop pressing the buttons and the device will save the settings itself and start to use the new set temperature until the next Heating schedule program starts.

If you've set everything correctly, the device will show symbols of a clock (using schedule, display description 14) and a hand (manual temperature change, display description 13). You can exit this function anytime by simply pressing the middle menu button (button description 3) and the thermostat will go back to using the currently set Heating schedule program. The device will show only a symbol of a clock.

Permanent (constant) temperature change
Function of permanent temperature change means, that when the function is enabled, the thermostat ignores all of the currently set schedules of Heating programs until manually canceled and uses your manually set temperature.

You can turn on the function when the device is turned on and is not in any of the menus then you shortly press the middle menu button (button description 3). Only a symbol for hand is displayed below (display description 13) and the Heating schedule programs are turned off. Set the temperature by pressing ▲ or ▼ buttons. When you're satisfied with your set temperature, stop pressing the buttons and device will save the settings by itself. Your new currently set temperature will be kept until you cancel it by shortly pressing the middle button (button description 3).

This function is also usefull if you're away for holiday or a longer time and want to keep the lowest room temperature you want.

Setting the day and time
With a short press on the ⊕ button, the thermostat will show you the current set time and day. If you press the ⊕ button again (or just double press it at the start), you will enter the day and time edit mode. First, the minutes position is blinking. Change the value to the current minutes by using buttons ▲ or ▼ . After you're done with setting the minutes, short press the ⊕ button to enter editing current hour. Now the hour position should blink. Again, change the hour value. When you've set the hour, short pres the ⊕ button again and now you're editing the current day. Again, change the value and after you're done setting current time and day. You can exit editing by pressing the ⊕ button or just wait for the device to save the values itself after a few seconds.

Setting the Heating Schedule Programs

The condition for setting the Heating schedule is that the Heating programs are turned on (it is turned off by default) in the advanced settings.

Before proceeding, check the advanced thermostat settings. Depending on the set advanced thermostat settings, you can set on how the schedule program works. In advanced settings, you can set your schedule for 7 days (each day) or 5 + 2 days or 5 + 1 + 1 days or just turn it off. Also you can set the number of daily switches to 4 or 6.

The Heating schedule can be easily edited via the main editing menu - the thermostat must be turned on, then hold (5 seconds) the middle menu button (button description 3). Now you're in the program editing menu.

When you're in the Heating schedule programs editing menu, you'll see on the right side of the screen a blinking icon (sun, moon, house…) which shows for which program switch you're currently editing the program. Also at the top of the screen, the day or days start to blink. That means that you're editing for the selected day or days.
You change the values by pressing the ▲ and ▼ buttons and go to the next setting with the middle menu button (button description 3). All the settings will be automatically saved if you don't press any button for more than 10 seconds.

Firstly you have to select for which day you'll be setting the schedule. When you select the day or days, press the menu button and then you'll proceed to setting the time of when this schedule will start. When you're done setting the time, press the middle menu button and you'll be setting the temperature for that schedule. Set the desired temperature and again press the menu button. Now you're done setting the settings for the first Heating schedule switch of the program. Now a different icon on the right (sun, moon, house) should blink, which indicates that you're editing for the next Heating program switch.

You can take a look at examples of predefined Heating schedule programs on the next pages.

Predefined Heating Schedule Programs tables

Below are listed the predefined Heating schedule programs. They are set with default values.

Table 1 – 7 days, 6 switches (Set for each day separately)

Heating	1-Morning		2-Work		3-Lunch		4-Afternoon		5-Arrival		6-Night	
Monday	6:00	21 °C	8:00	16.5 °C	12:00	21 °C	14:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Tuesday	6:00	21 °C	8:00	16.5 °C	12:00	21 °C	14:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Wednesday	6:00	21 °C	8:00	16.5 °C	12:00	21 °C	14:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Thursday	6:00	21 °C	8:00	16.5 °C	12:00	21 °C	14:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Friday	6:00	21 °C	8:00	16.5 °C	12:00	21 °C	14:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Saturday	6:00	21 °C	8:00	16.5 °C	12:00	21 °C	14:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Sunday	6:00	21 °C	8:00	16.5 °C	12:00	21 °C	14:00	16.5 °C	18:00	21 °C	22:00	16.5 °C

Heating 2 – 7 days, 4 switches (Set for each day separately)

Heating	1-Morning ☀		2-Work 🏠➡		3-Arrival 🏠⬅		4-Night 🌙	
Monday	6:00	21 °C	8:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Tuesday	6:00	21 °C	8:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Wednesday	6:00	21 °C	8:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Thursday	6:00	21 °C	8:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Friday	6:00	21 °C	8:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Saturday	6:00	21 °C	8:00	16.5 °C	18:00	21 °C	22:00	16.5 °C
Sunday	6:00	21 °C	8:00	16.5 °C	18:00	21 °C	22:00	16.5 °C

Table 3 – 5 days + 2 days, 6 switches (Set separately for weekdays and for weekend)

Heating	1-Morning		2-Work		3-Lunch		4-Afternoon		5-Arrival		6-Night	
From Monday to Friday	6:00	21 ℃	8:00	16.5 ℃	12:00	21 ℃	14:00	16.5 ℃	18:00	21 ℃	22:00	16.5 ℃

Heating	1-Morning		2-Work		3-Lunch		4-Afternoon		5-Arrival		6-Night	
From Saturday to Sunday	6:00	21 ℃	8:00	16.5 ℃	12:00	21 ℃	14:00	16.5 ℃	18:00	21 ℃	22:00	16.5 ℃

Table 4 – 5 days + 2 days, 4 switches (Set separately for weekdays and for weekend)

Heating	1-Morning		2-Work		3-Arrival		4-Night	
From Monday to Friday	6:00	21 ℃	8:00	16.5 ℃	18:00	21 ℃	22:00	16.5 ℃

Heating	1-Morning		2-Work		3-Arrival		4-Night	
From Saturday to Sunday	6:00	21 ℃	8:00	16.5 ℃	18:00	21 ℃	22:00	16.5 ℃

Table 5 – 5 days + 1 day + 1 day, 6 switches (Set separately for weekdays and for Saturday and Friday)

Heating	1-Morning		2-Work		3-Lunch		4-Afternoon		5-Arrival		6-Night	
From Monday to Friday	6:00	21 ℃	8:00	16.5 ℃	12:00	21 ℃	14:00	16.5 ℃	18:00	21 ℃	22:00	16.5 ℃

Heating	1-Morning		2-Work		3-Lunch		4-Afternoon		5-Arrival		6-Night	
Saturday	6:00	21℃	8:00	16.5℃	12:00	21℃	14:00	16.5℃	18:00	21℃	22:00	16.5℃

Heating	1-Morning		2-Work		3-Lunch		4-Afternoon		5-Arrival		6-Night	
Sunday	6:00	21℃	8:00	16.5 ℃	12:00	21℃	14:00	16.5 ℃	18:00	21 ℃	22:00	16.5 ℃

Table 6 – 5 days + 1 day + 1 day, 4 switches (Set separately for weekdays and for Saturday and Friday)

Heating	1-Morning		2-Work		3-Arrival		4-Night	
From Monday to Friday	6:00	21 ℃	8:00	16.5 ℃	18:00	21 ℃	22:00	16.5 ℃

Heating	1-Morning		2-Work		3-Arrival		4-Night	
Saturday	6:00	21℃	8:00	16.5℃	18:00	21℃	22:00	16.5℃

Heating	1-Morning		2-Work		3-Arrival		4-Night	
Sunday	6:00	21℃	8:00	16.5℃	18:00	21℃	22:00	16.5℃

All settings of heating schedule programs can be reset to factory defaults by holding the middle menu button (button description 3) for 3 seconds while editing the programs. Screen will show and blink dEF.

Advanced thermostat settings

The thermostat also has advanced thermostat settings for further customization of the device to your wishes and demands. You can enter the advanced settings by turning off the thermostat. The screen should show OFF. Then hold the middle menu button (button description 3) for 5 seconds. The screen will be turned on and the display will show CL and a small gear icon will appear on the bottom. That means that you're now in the advanced settings and you're editing the first setting.

You move around the menu by short pressing the middle menu button and change the value by pressing the ▲ or ▼ button. Settings are saved by short pressing the ON/OFF button. If you don't press any button for more than 20 seconds, the device will also save the settings by itself.

Step (Shown below, near the gear icon)	Display on display	Selectable values (in brackets is the factory default value)	Description
1	CL	From -6 to +6 (0)	Temperature display correction. Thermostat is factory-set to the correct temperature display, but you still have the option of adjusting the display by correcting it.
2	AH	From 20 to 50 (35)	Maximum setting of heating temperature in degrees °C. With this option, you can limit the heating temperature that can be set using the thermostat.

Step (Shown below, near the gear icon)	Display on display	Selectable values (in brackets is the factory default value)	Description
3	AL	From 5 to 20 (5)	Minimum option of setting the heating temperature in degrees °C. With this option, you can limit the heating temperature that can be set using the thermostat.
4	bL	1 / 2 / 3 (2)	Use this option to change the screen brightness. 1 – Screen backlight is off; 2 – Screen backlight lasts 10 seconds; 3 – Screen backlight is always turned on
5	CH	05 / 10 / 15 / 20 / 25 / 30 / 35 / 40 / 45 / 50 (10)	Hysteresis (temperature range) or start and end of heating. The values are given in °C, and the decimal is not expressed on the screen,. The default value is 10 (1.0 ° C). Function example: The value is set to 15 (1.5 ° C). The heating temperature is set to 22.0 ° C. The system starts with heating when the room temperature drops to at least 22.0 - 1.5 ° C = 18.5 ° C. Heating will go on until the room temperature reaches 22.0 + 1.5 ° C = 23.5 ° C.

Step (Shown below, near the gear icon)	Display on display	Selectable values (in brackets is the factory default value)	Description
6	P51	0 / 2 / 3 / 7 (0)	Heating Schedule programs. Here you can turn on/off and set on how the heating program schedule will work. 0 – The heating program schedule is turned off; 2 – 5 days + 2 days (weekdays + weekend separately; tables 3,4) 3 – 5 days + 1 day + 1 day (weekdays + Saturday + Sunday separately; tables 5,6) 7 – 7 days (each day separately; tables 1,2)
7	ES	On / Off (Off)	Smart adaption. If you have this function enabled (On), the thermostat will start to heat before the next heating program schedule will start and with that it will achieve a more comfort way of heating. The thermostat learns regarding the last 5 days of heating conditions and how much time it took to get to the desired set temperature. For example – if it needed 30 minutes to get from 20°C to 22°C it will start heating 30 minutes before the next heating program with 22°C occurs.
8	An	On / Off (Off)	Antifreeze protection. The thermostat will turn on heating, if the temperature falls below 5°C.

Step (Shown below, near the gear icon)	Display on display	Selectable values (in brackets is the factory default value)	Description
9	FA	NO / NC (NC)	Output valve mode: NO –NO (normally open), Open valve NC – NC (normally closed) Closed valve
10	P52	4 / 6 (4)	Number of heating program switches. Here you can select the number of your daily heating program switches. You can have 4 or 6 daily switches at different hours. The default hours for 4 daily switches are 6:00, 8:00, 18:00, 22:00; For 6 daily switches are: 6:00, 8:00, 12:00; 14:00; 18:00, 22:00. All of the above values are just the default set. You can change them regarding your desires of heating program schedule.

All of the advanced settings can be reset to factory default values by holding the middle menu button (button description 3) for 3 seconds, while in editing mode. Screen will display dEF and all settings will be reset.