

Ventilation VTS

Visualization for air handling units



IMPORTANT



Only qualified personnel may install or carry out technical service on the product.

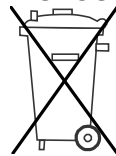
The customer must only use the product in the manner described in the documentation relating to the product.

In addition to observing any further warnings described in this manual, the following warnings must be heeded for all products:

- Prevent the electronic circuits from getting wet. Rain, humidity and all types of liquids or condensate contain corrosive minerals that may damage the electronic circuits. In any case, the product should be used or stored in environments that comply with the temperature and humidity limits specified in the manual.
- Do not install the device in particularly hot environments. Too high temperatures may reduce the life of electronic devices, damage them and deform or melt the plastic parts. In any case, the product should be used or stored in environments that comply with the temperature and humidity limits specified in the manual.
- Do not attempt to open the device in any way other than described in the manual.
- Do not drop, hit or shake the device, as the internal circuits and mechanisms may be irreparably damaged.
- Do not use corrosive chemicals, solvents or aggressive detergents to clean the device.
- Do not use the product for applications other than those specified in the technical manual.

The technical specifications shown in the manual may be changed without prior warning.

DISPOSAL



INFORMATION FOR USERS ON THE CORRECT HANDLING OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

In reference to European Union directive 2002/96/EC issued on 27 January 2003 and the related national legislation, please note that:

- WEEE cannot be disposed of as municipal waste and such waste must be collected and disposed of separately;
- the public or private waste collection systems defined by local legislation must be used. In addition, the equipment can be returned to the distributor at the end of its working life when buying new equipment;
- the equipment may contain hazardous substances: the improper use or incorrect disposal of such may have negative effects on human health and on the environment;
- the symbol (crossed-out wheeled bin) shown on the product or on the packaging and on the instruction sheet indicates that the equipment has been introduced onto the market after 13 August 2005 and that it must be disposed of separately;
- in the event of illegal disposal of electrical and electronic waste, the penalties are specified by local waste disposal legislation.

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1. CONNECTION

1.1 Connection setting

The factory visualization is available at the IP address:

http://192.168.1.111/index.html



Login for full access:

Login: **service**

Password: **service**

Recommended Chrome web browser.

1.2 Checking the controller IP address

To check or change the IP address on the HMI Advanced operator panel hold down the **Enter + Alarm** button and go to Menu:

SETTINGS ► TCP / IPv4 SETTINGS



If necessary, change the connection type:

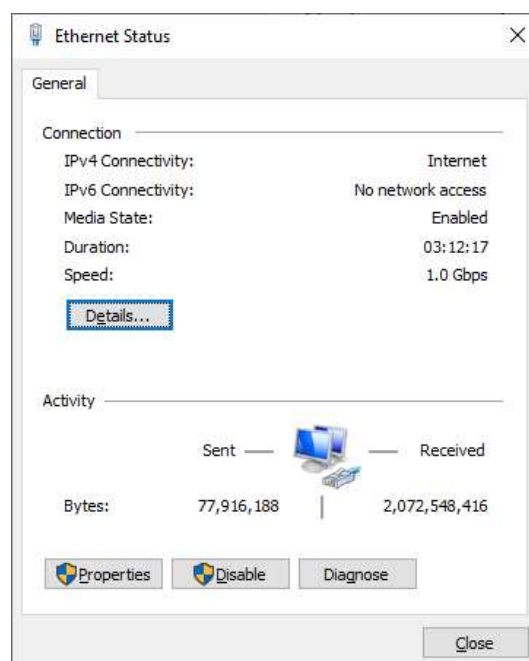
- To enter specific addresses, select ► **STATIC**
- To assign addresses via the router, select ► **DHCP/AutoIP**

On this screen you can view which driver the network settings currently have.

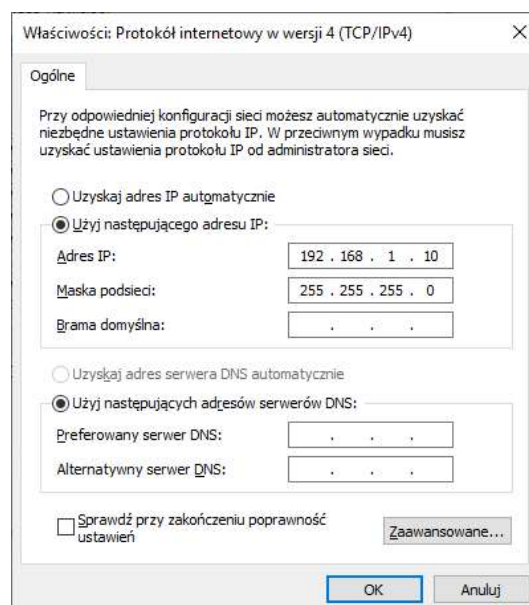
1.3 Connecting directly to a computer

If connected directly to a computer, set the network adapter parameters according to the settings in the controller.

In Windows 10 ► Network and Sharing Center ► Change network adapter option ► Ethernet ► Open the network adapter status window



Properties ► Internet protocol version 4 (TCP / IPv4) ► Set the IP address and subnet mask compatible with the group in which the controller is located (The last number of the IP address must be different from the one set on the controller)



1.4 Connection via a router

If connected to a router (local network), change the connection type in the menu on the HMI Advanced panel **SETTINGS ► TCP / IPv4 SETTINGS ►** Enable switch from **STATIC** to **DHCP/AutoIP** and accept the change **Update config** to **YES**.

After refresh address read the IP address assigned by the router.

Enter the new address in the browser and refresh the page.

2. VISUALIZATION FUNCTIONS

2.1 Main screen - dashboard

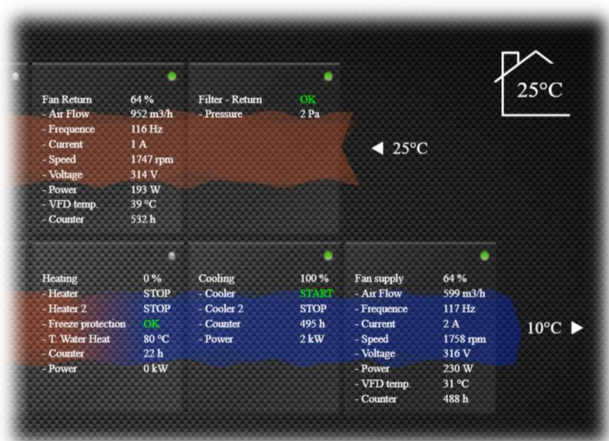
Main screen with control panel preview:



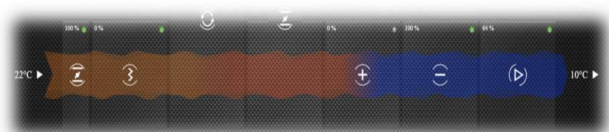
- Current device operating status
- Mode change switch:
ECO / Optimal / Comfort /
Auto (Scheduler)
- Actual last active alarm



Clicking on a given section of the control panel will expand the preview of the current parameters of the given device.



The active web showing the flow changes color depending on the temperature at a given point.



2.2 Setpoints

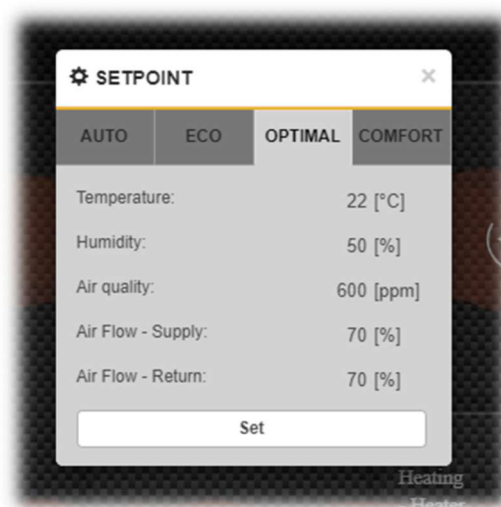
Pop-up window with control panel work settings:



- Change of setpoints
- Set for each operating mode



Each operating mode has all parameters set separately:
Temperature / humidity / air quality / fan supply and return control



The **AUTO** tab shows the current values used for adjustment (read only) depending on the active mode or time schedule.

2.3 Trends

Window for configuring and reading charts:



- Two charts with data from the last 24h
- Possibility of setting plotted values
- All logs can be downloaded to a .csv file



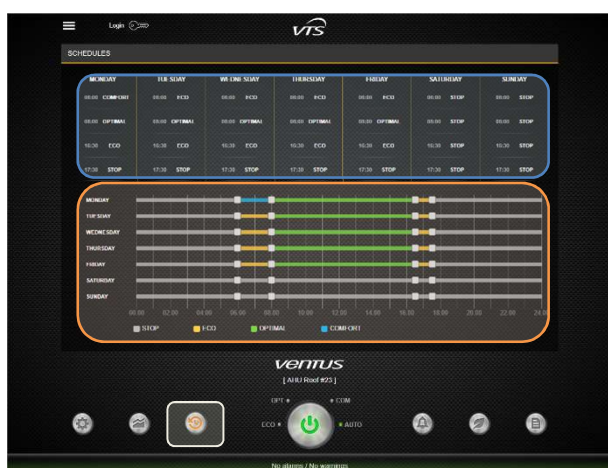
Selecting values for individual charts is done by selecting the position P1 (upper chart) or P2 (lower chart) next to the active variable.

2.4 Time schedule

Weekly time schedule window:



- Time schedule - 7 days with the possibility of setting 4 switching points within one day
- Graphic interpretation of active time zones



Setting the time schedule can be done from the settings and sliders, the last value entered is saved.

2.5 Alarms

Window with an overview of active and historical alarms:



- Current alarms
- Historical alarms



ACTIVE ALARMS			
ID	DATE	TIME	NAME
1	2018-09-07	08:57:50	AL - Fan Return - Offline
2	2018-09-07	08:57:50	AL - Return - Offline
3	2018-09-07	08:57:50	AL - Fan Return CC - Phase Loss
4	2018-09-06	18:26:40	AL - Supply Air Pressure
5	2018-09-06	18:26:40	AL - Supply Air Pressure - Offline
6	2018-09-06	17:36:32	AL - Fan Return CC - Phase Loss
7	2018-09-06	17:36:32	AL - Fan Return CC - Phase Loss
8	2018-09-06	17:36:32	AL - Fan Supply CC - Phase Loss
9	2018-09-06	22:53:20	AL - Supply Air Pressure
10	2018-09-06	22:53:20	AL - Supply Air Pressure - Offline

Historical alarms are recorded in the memory with the date they were reset.

2.6 Settings preview

Window with all parameters and settings in the system:



- List of all variables with preview of current values
- Filtering variables using a filter




NAME	VALUE	NAME	VALUE	NAME	VALUE
AL - Configured	1.00	AL - After preheating coil Temp	0.00	AL - After Return 1st Heating	0.00
AL - Addressed AL - Back Water Temp	0.00	AL - Addressed AL - D1	0.00	AL - Addressed AL - Preheated Back Water Temp	0.00
AL - BIST - Offline	0.00	AL - BIST - Phase	0.00	AL - C307 Indirect Load	1.00
AL - Cooling - Service Alarm	0.00	AL - Device - Wiring configuration	0.00	AL - Error 1000 code	0.00
AL - Fan Group	0.00	AL - Fan Return	0.00	AL - Fan Return - Control Indirect Flow	0.00
AL - Fan Return - Cooling Fan Fault	0.00	AL - Fan Return - CCM	0.00	AL - Fan Return - DC Overload	0.00
AL - Fan Return - Electric Overload	0.00	AL - Fan Return - External Fault A	0.00	AL - Fan Return - External Fault B	0.00
AL - Fan Return - Ground Fault	0.00	AL - Fan Return - Induction Fault	0.00	AL - Fan Return - Magnetism	0.00
AL - Fan Return - Inverter Overload	0.00	AL - Fan Return - Inverter Overload	0.00	AL - Fan Return - Low Voltage	0.00
AL - Fan Return - Motor Overload	0.00	AL - Fan Return - Offline	1.00	AL - Fan Return - Option	0.00
AL - Fan Return - Overload	0.00	AL - Fan Return - Overload	0.00	AL - Fan Return - Overload	0.00

At this point, it is only possible to preview individual values by using defined filters or by entering a word from the description.

2.7 Additional menu

After logging into system settings, the Menu contains a redirection to all available settings.

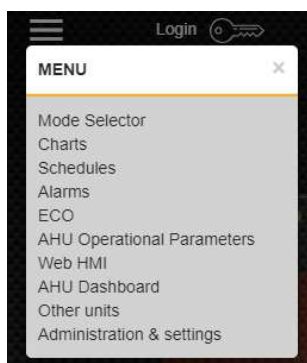
Login 

Login for full access:

Login: **service**

Password: **service**

Additional menu



Each time the VTS logo is clicked, it returns to the main window - dashboard

2.8 Virtual HMI

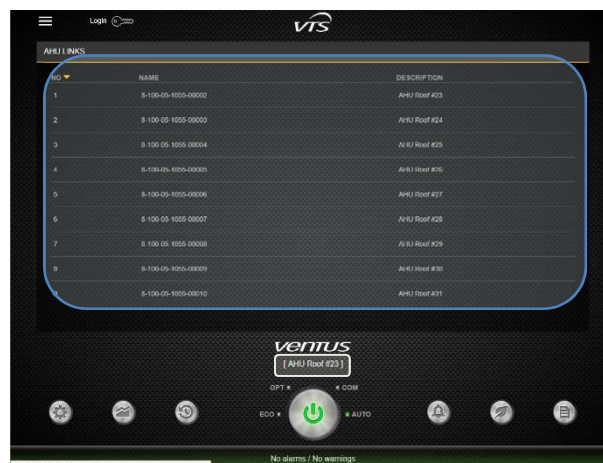
HMI Advanced equivalent available from the browser level. Access to the virtual HMI panel is from an additional menu and gives the opportunity to change all parameters and settings.



Operation is done via 6 buttons on both sides of the screen.

2.9 Switching between AHU

In the case of mounting more than one AHU on one object, it is possible to configure descriptions and IP addresses to switch between them.



Adding unit from the administrative mask level.

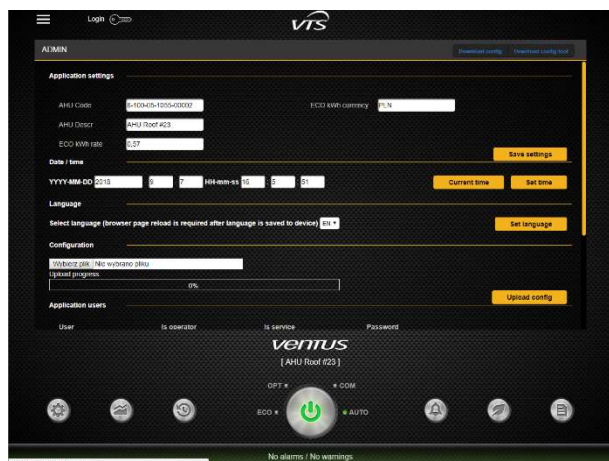
2.10 Mobile mode

For devices with lower resolution, automatically switching the appearance to the mobile version. The mobile version allows you to change the operating mode and set temperature.

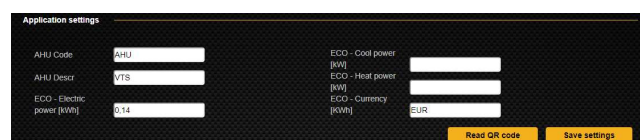


2.11 Administration window

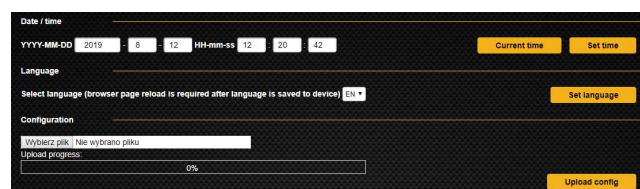
Main screen to configuration:



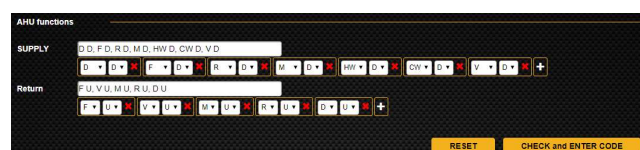
- Application settings - AHU description



- Date / time - setting the time
- Language - language selection
- Configuration - uploading the configuration from a file



- AHU functions - configuration of the control panel appearance



Configuration of individual sections of the AHU is done by introducing elements on the supply and return air paths. The first letter defines the location of the D (Down) or U (Up) element, the next letter defines the function:

E – Empty, V – Fan, F – Filter, D – Damper, R – Recovery RRG, X – Recovery plate, M – Mixing damper, CW – Cooler, HW – Heater.

- List of AHUs - number of AHU on the site (for menu to switch)

No.	NAME	DESCRIPTION	LINK ADDRESS
1	AHU	VTS	http://192.168.1.111/index.html

- Application users - adding users

User	Is operator	Is service	Password
operator	Yes	No	****
service	No	Yes	****

- Save current configuration for storage.

[Download config](#) [Download config tool](#)

2.12 ECO

ECO window for viewing individual sources and energy consumption by the device:

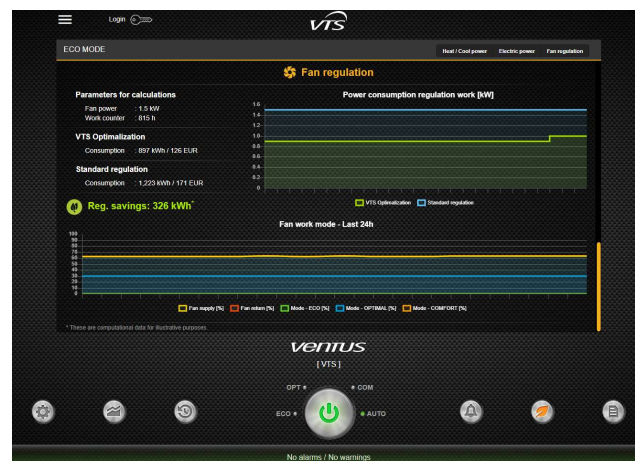
- Heat / Cool power

Shows the current and historical heating and cooling power provided by the device.



- Electric power

It shows the current and historical electrical power consumed by the device, reading the values from the devices using the Modbus-RTU protocol.



- Fan regulation
Shows the difference between fan regulation using the optimal VTS control algorithm compared to the standard on/off control.

The correctness of the displayed data is affected by the correct installation of all sensors. AHU is required with CAV performance measurement on fans and an additional sensor for heat/cold recovery in the supply. All motors must have modbus communication to read electrical data.

