AutomatikCentret AHC-3000-HMI-35T OJ-Air AHU Controller Instructions

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AutomatikCentret

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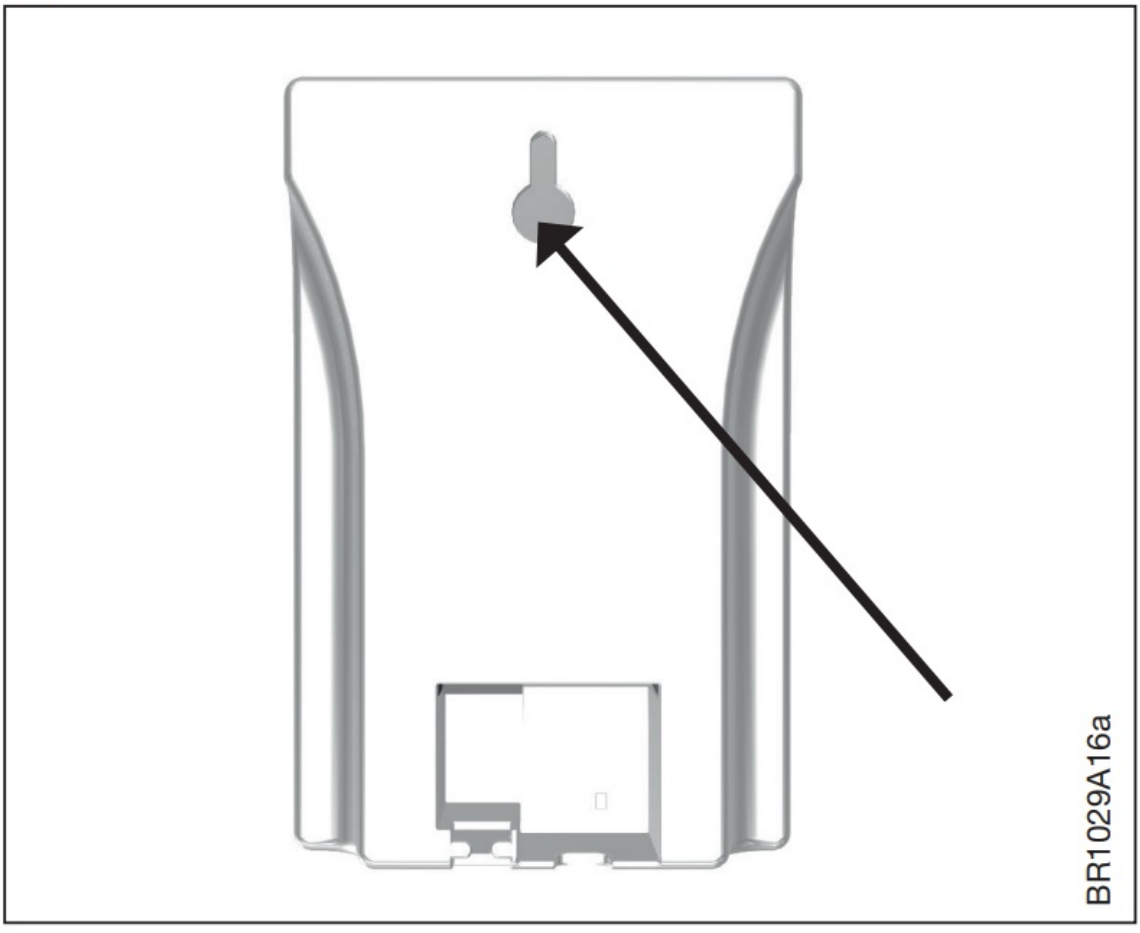

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Fig. 2 Removing the front cover

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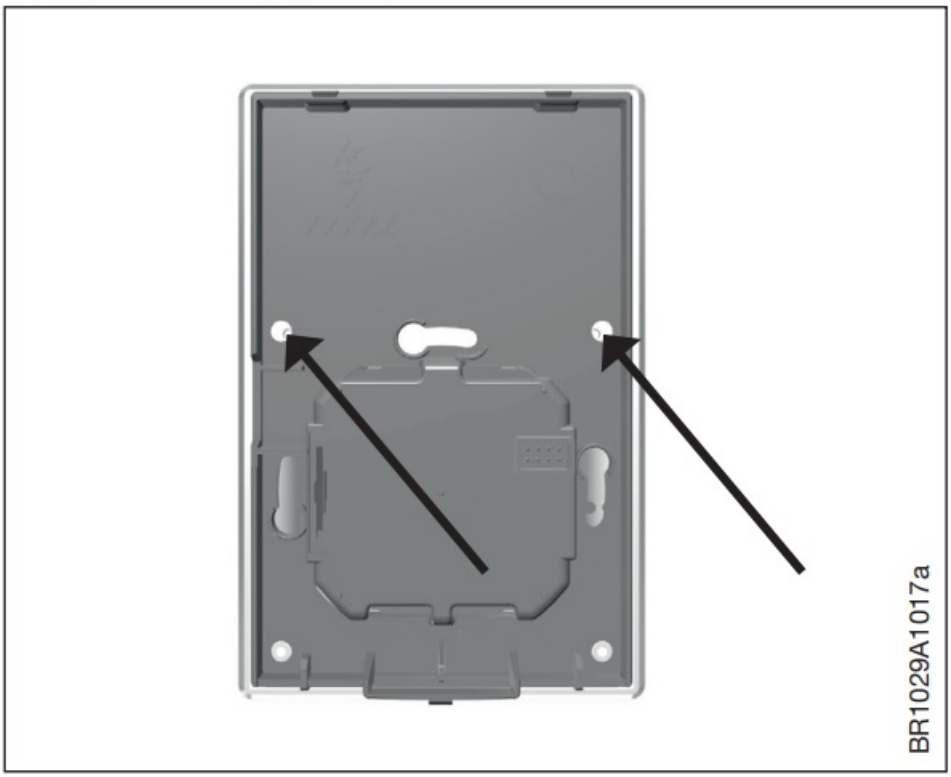

- **Fig. 4**: Dimensioned drawing to facilitate installation in wall box or panel front

Fig. 4 Dimensioned drawing to facilitate installation in wall box or panel front

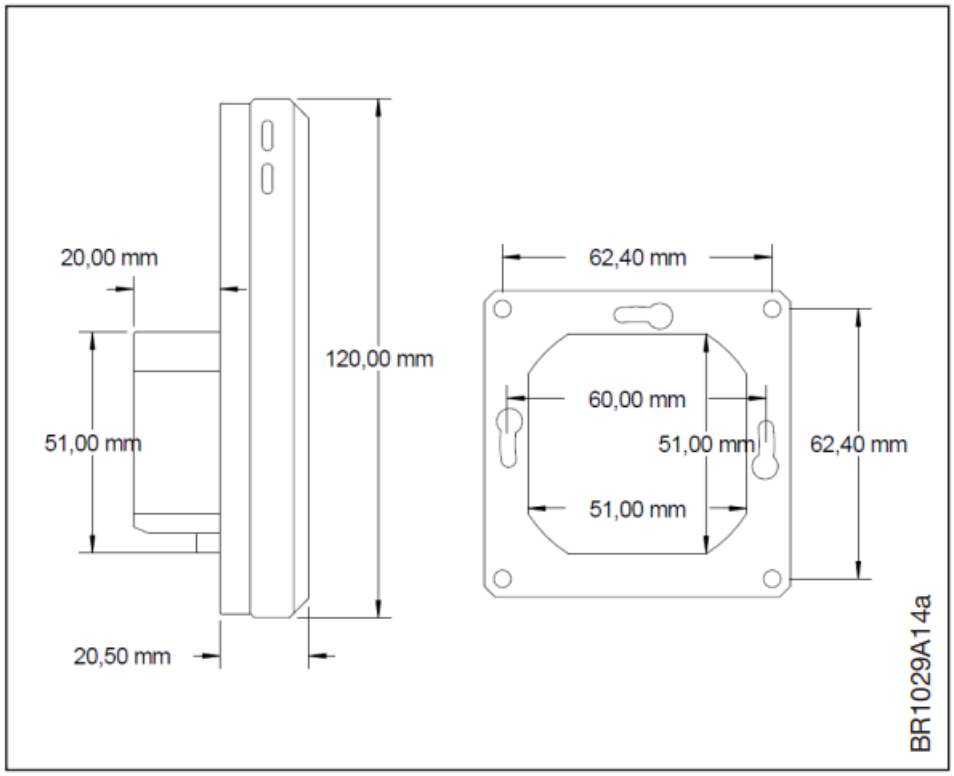

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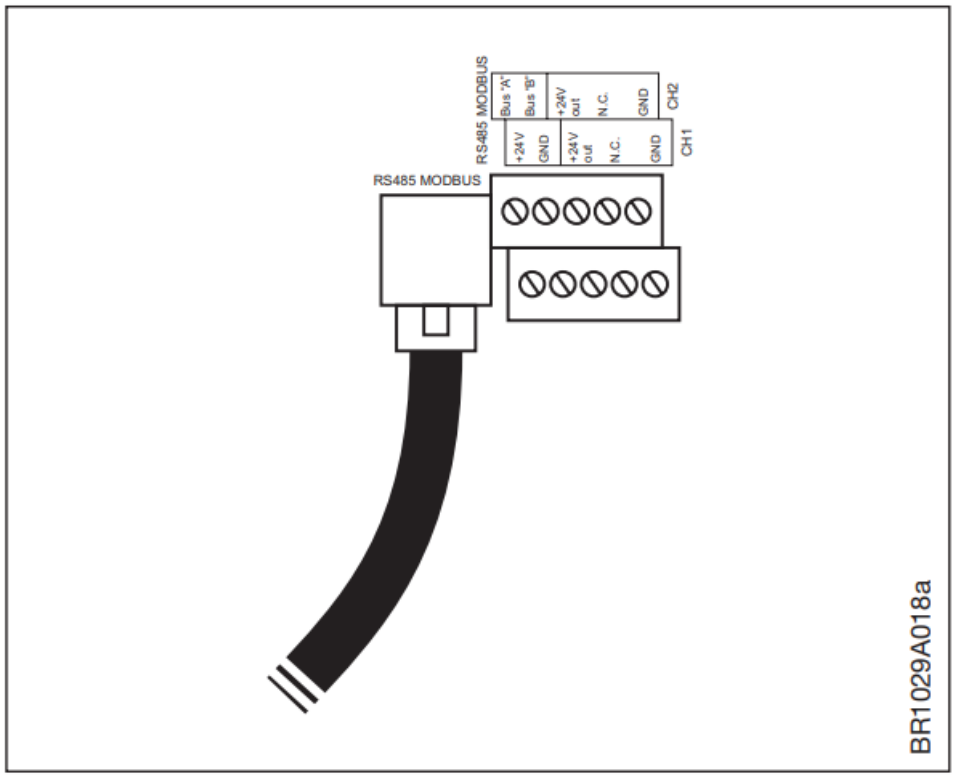
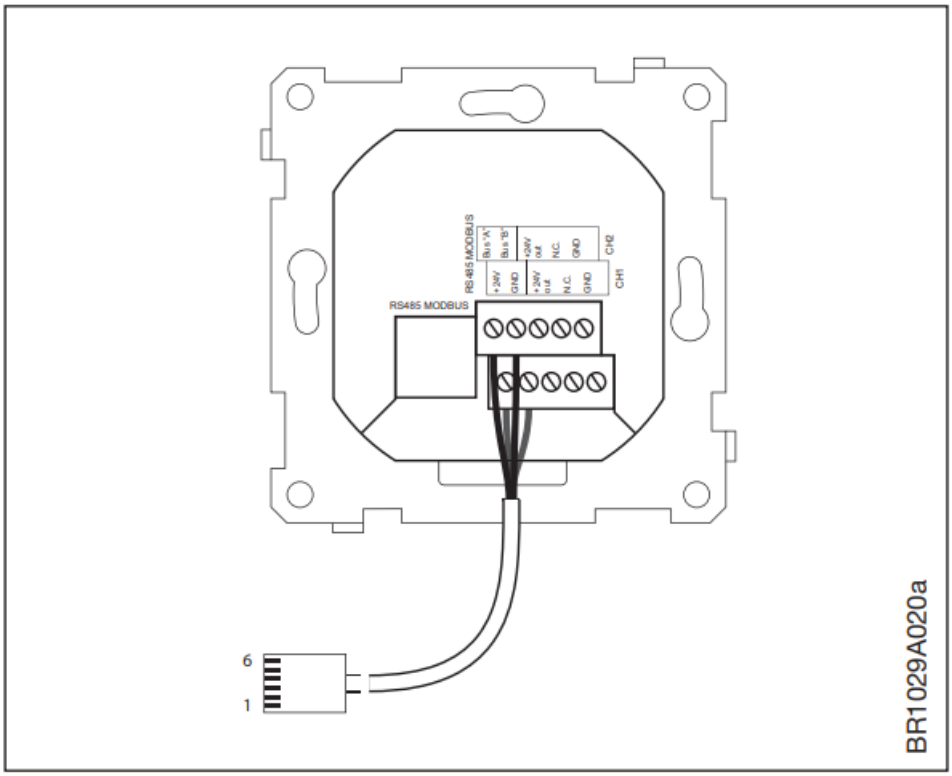
Fig. 5 Connecting Modbus via the RJ12 6P4C port



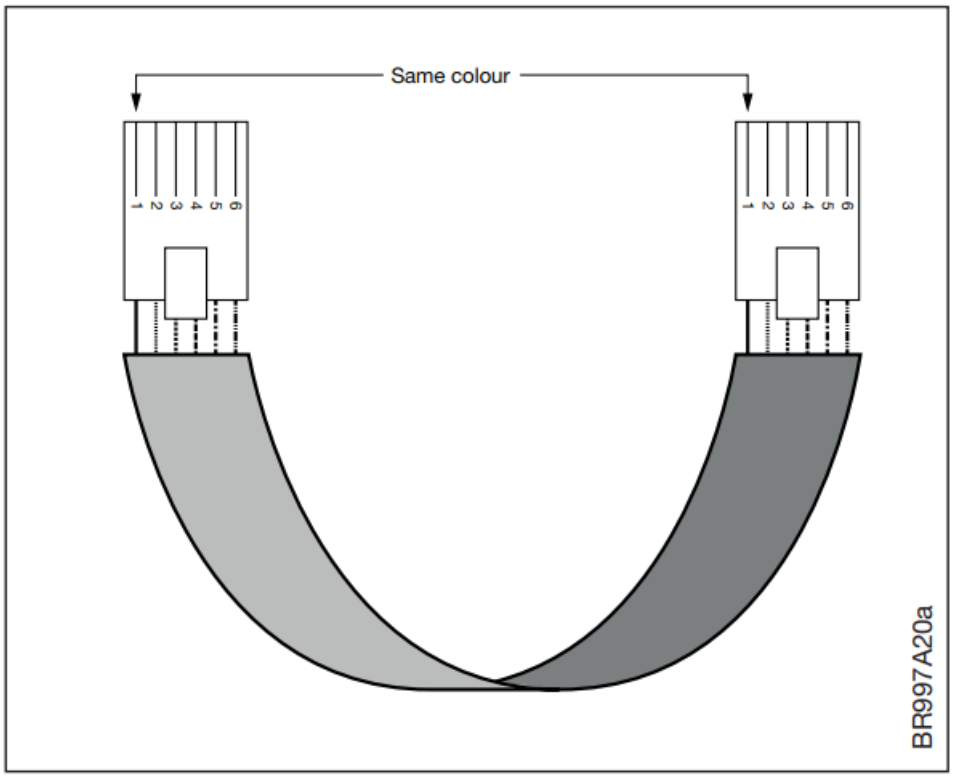
- **Fig. 6**: Connecting Modbus via the screw terminals

Fig. 6 Connecting Modbus via the screw terminals



- **Fig. 7:** Modbus cable connection

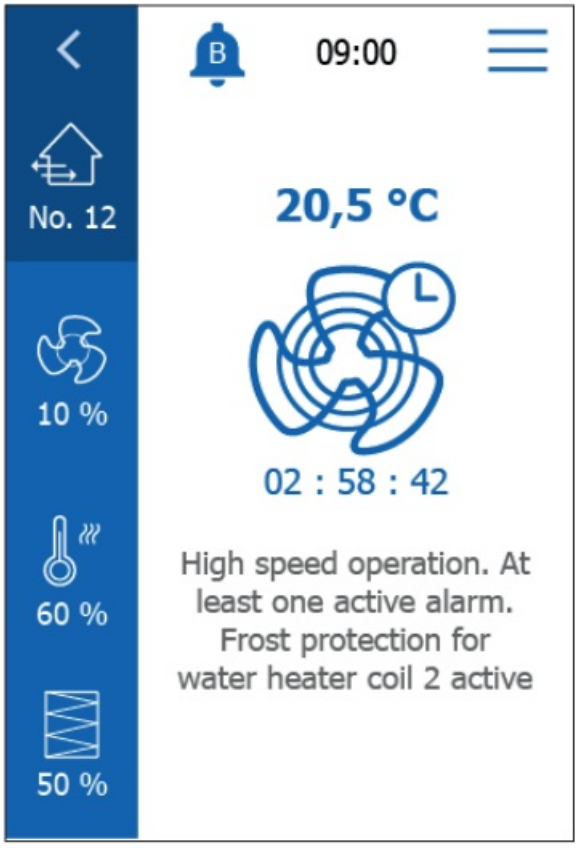
Fig. 7 Modbus cable connection.



INTRODUCTION

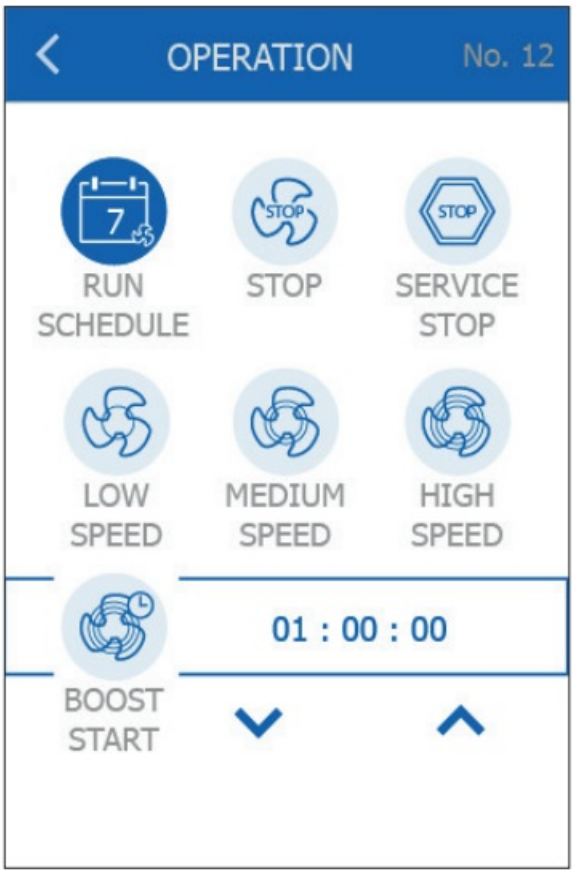
AHC-3000-HMI-35T is a touchscreen panel with a user-friendly graphical user interface specially developed for controlling ventilation systems. The panel communicates with the AHC-3000 controller via the Modbus interface, ensuring easy installation.

GENERAL SETTINGS



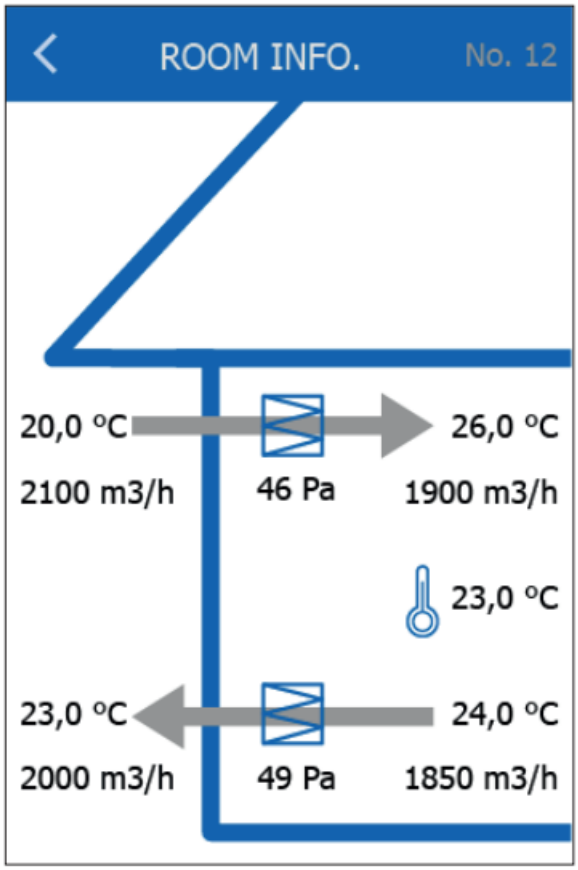
This quick start guide only describes basic settings. If the screen saver is active, simply touch the screen once to open the home screen. This screen provides access to elementary functions such as fan speed, temperature, and set-up. The time and alarm are shown at the top of the screen. The alarm bell is visible if an alarm has been activated and can be classified either A or B. The house at the top left of the screen provides access to a simple overview of temperatures, air volumes, and filter pressures. The number under the house indicates the number of units. The temperature shown to the right of the house is the temperature setpoint. The icons shown in the lower part under the house are the fan speed setpoint, heat setpoint, outdoor and extract filter status.

OPERATION



This screen provides access to functions such as Run Schedule, Stop ventilation, and Service Stop for the Air Handling Unit (AHU). You control the speed of the AHU using the functions Low – Medium – High speed. The unit is also equipped with a BOOST START function. This is activated using the time setpoint, which can be changed using the up and down markers shown under the time. ”No 12” in the upper right corner indicates the number of the room.

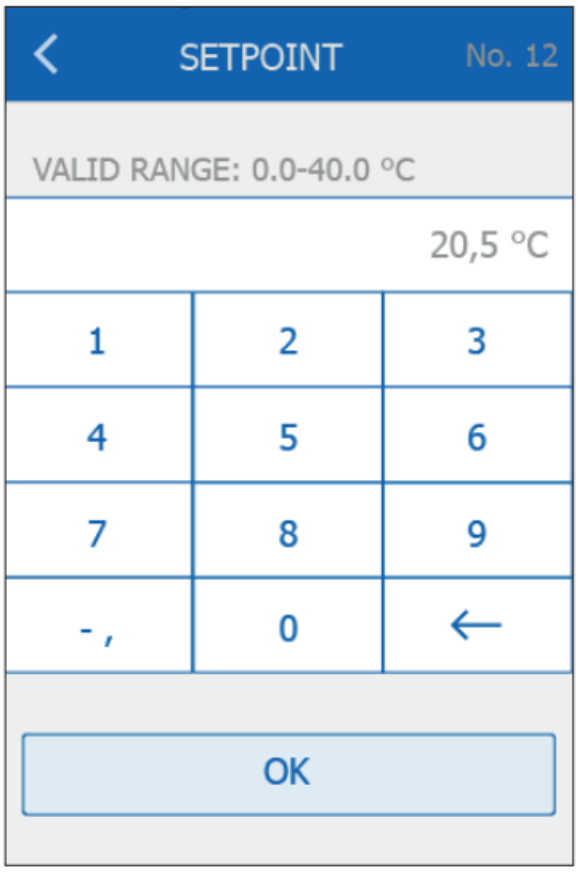
ROOM INFO.



This screen provides information from the room. You can view the ambient temperature, the outdoor/indoor air temperature, flow, and pressure.

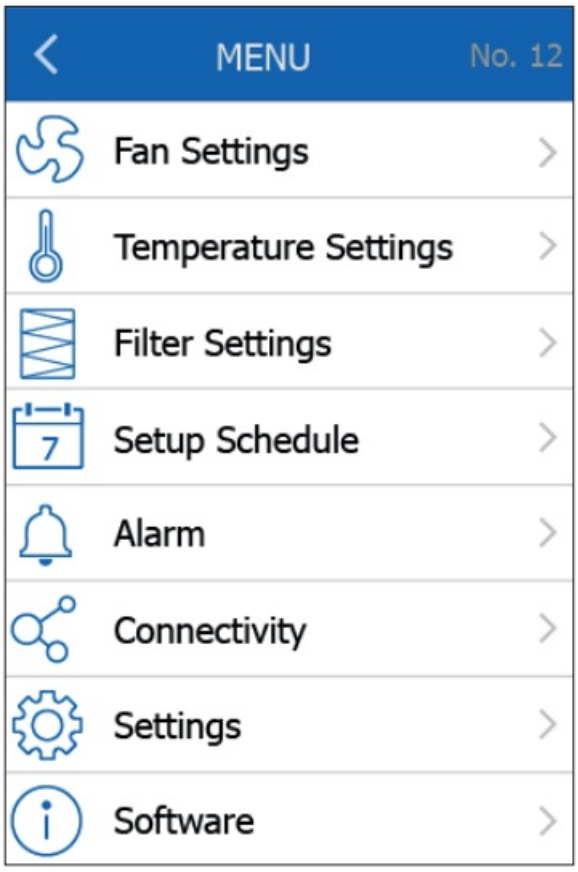
SETPOINT

This screen makes it possible for you to change the room temperature setpoint, and see the minimum and maximum setpoint value. Use the numbers and press OK to enter a new setpoint.

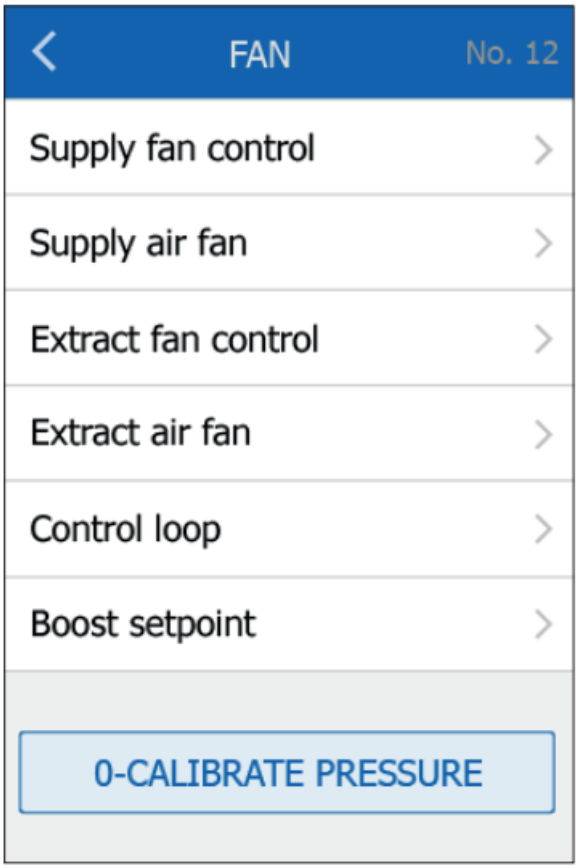


MENU

Settings can be made via the menu icon in the upper right corner of the home screen. Begin by pressing the menu icon in the upper right corner of the home screen.



FAN



- Supply fan control For changing the fan control mode.

Supply air fan

- For changing the fan speed setpoints.

Extract fan control

- For changing and viewing the extract air flow.

Extract air fan

- For viewing and changing the extract air fan setpoints.

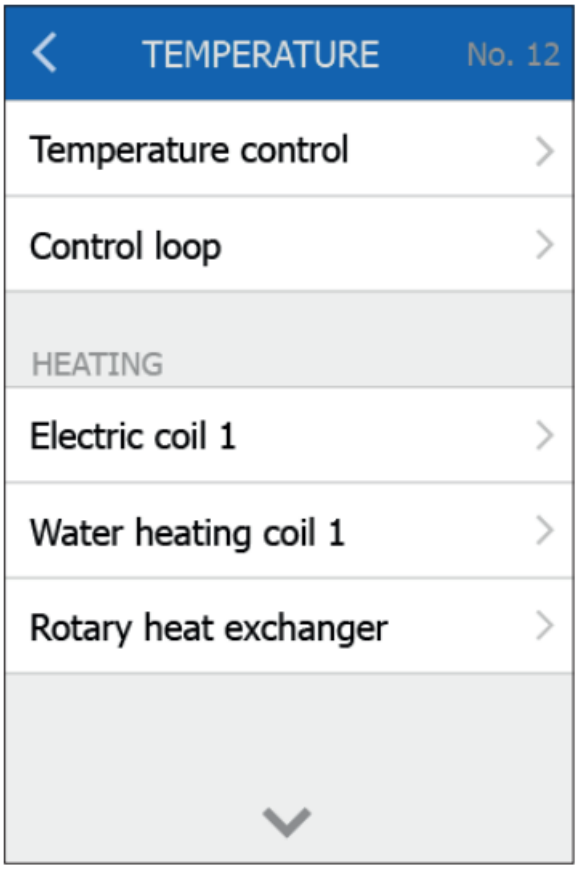
Control loop

- For fine-tuning the supply/exhaust fan control loop parameters.

Boost setpoint

- Here you can change the boost fan speed setpoints.

TEMPERATURE



- Temperature control
- For changing the temperature control mode.

Control loop

- For fine-tuning the supply/extract temperature control-loop parameters

Electric coil 1

- Shows the current status of electrical heating.

Water heating coil 1

- Shows the current status of water heating.

Rotary heat exchanger

- Shows the current status of rotary heat exchanger.

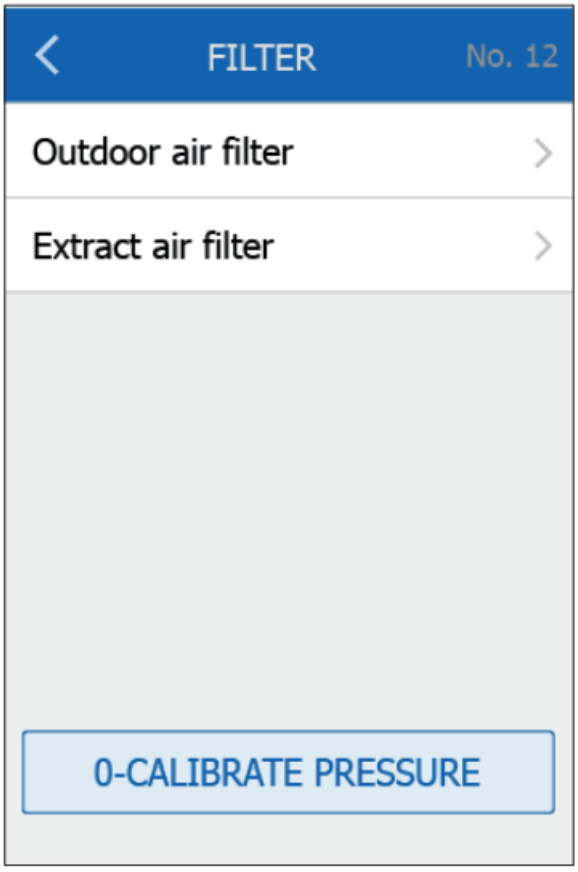
Water cooling

- Shows the current status of water cooling.

Summer night cooling

- Shows the current status of summer night cooling.

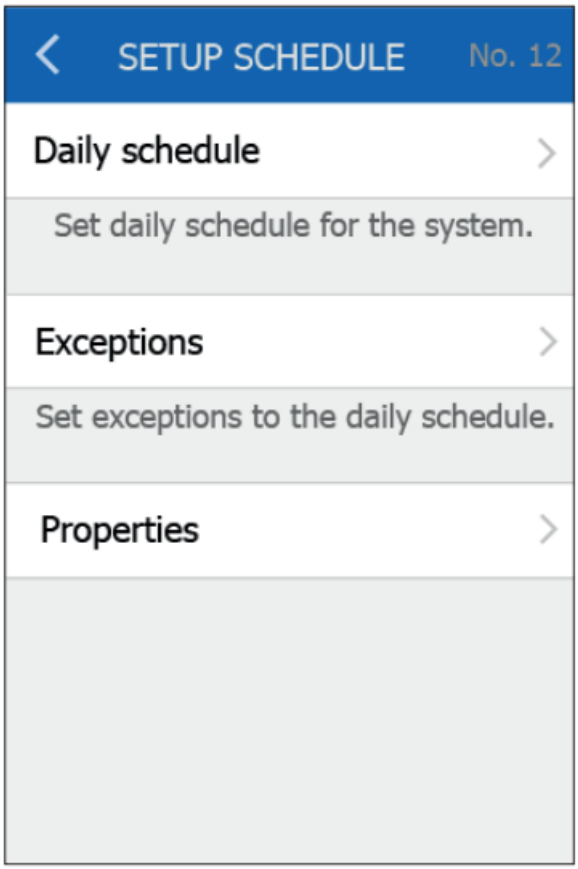
FILTER



- For changing the outdoor and extract filter-alarm settings and viewing the current status. Pressing the ”0-Calibrate Pressure” bar at the bottom will temporarily stop the Air
  Handling Unit and resetting the calibration of all pressure transmitters in the system. The system returns to normal operation after the completion of the zero calibration.

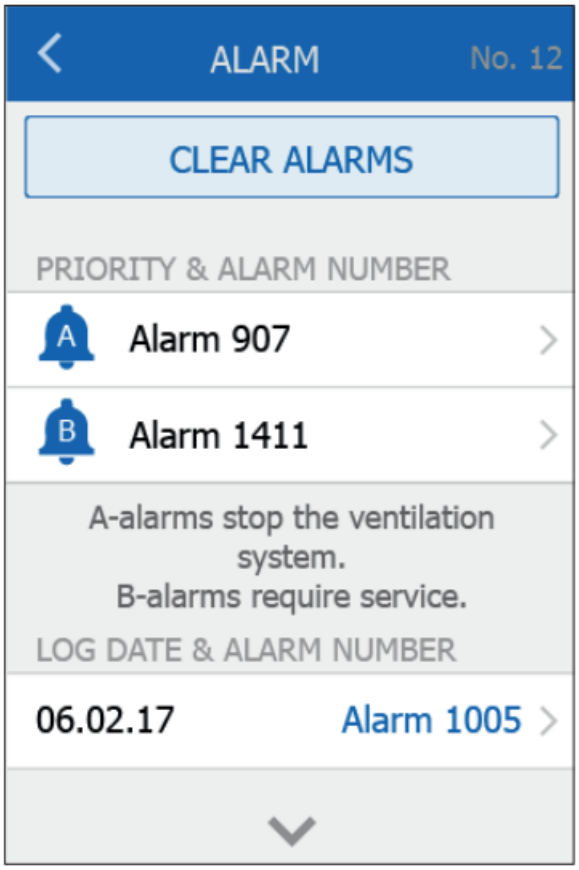
SETUP SCHEDULE

- This is where you can set up your schedule for the week. Use “Daily schedule” to set up the daily schedule. Use the Exceptions function to overrule the Daily schedule on the days selected. When no schedule is active, the system will automatically use fallback speed. Use “Properties” to set up the fallback speed.

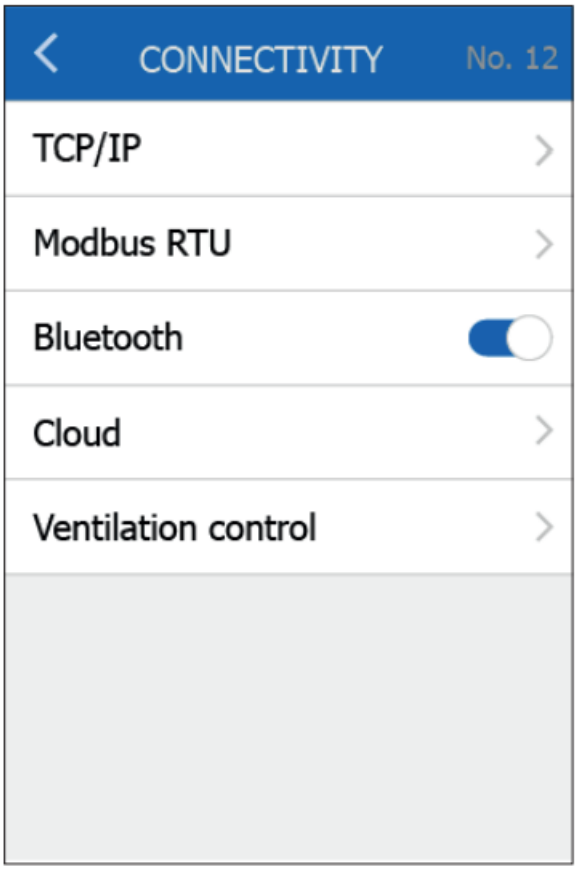


ALARM

- This is where you can view active alarms and the alarm log. In case of an alarm, this screen can also be accessed via the bell icon on the home screen. ”A” alarms stop the ventilation system. ”B” alarms require service, but the ventilation system will still be running.

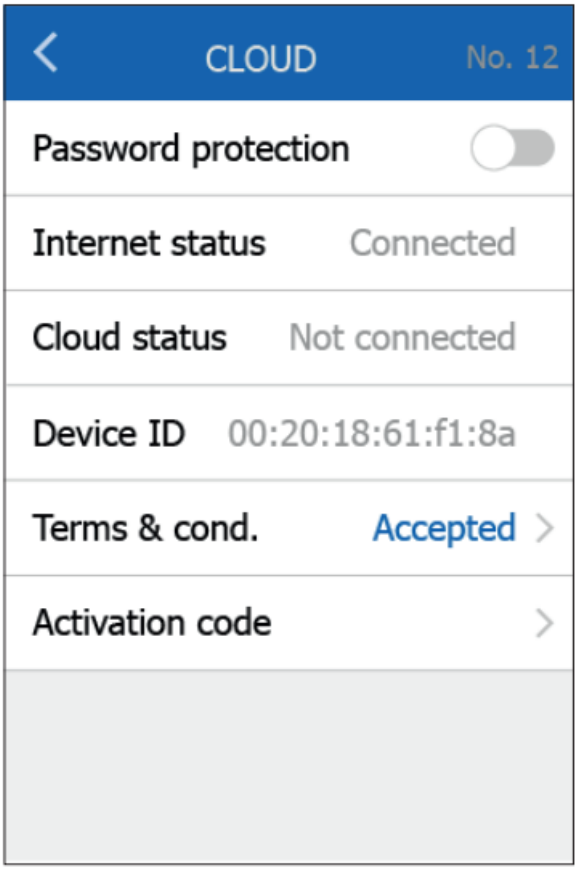


CONNECTIVITY



- Here you can configure TCP/ IP (LAN) settings such as static/dynamic IP and associated addresses. It is also possible to get connected through Modbus RTU, Bluetooth and Cloud. Available features depend on the actual AHC model. AHC-3000-T supports TCP/IP. AHC-3000-B supports Bluetooth.

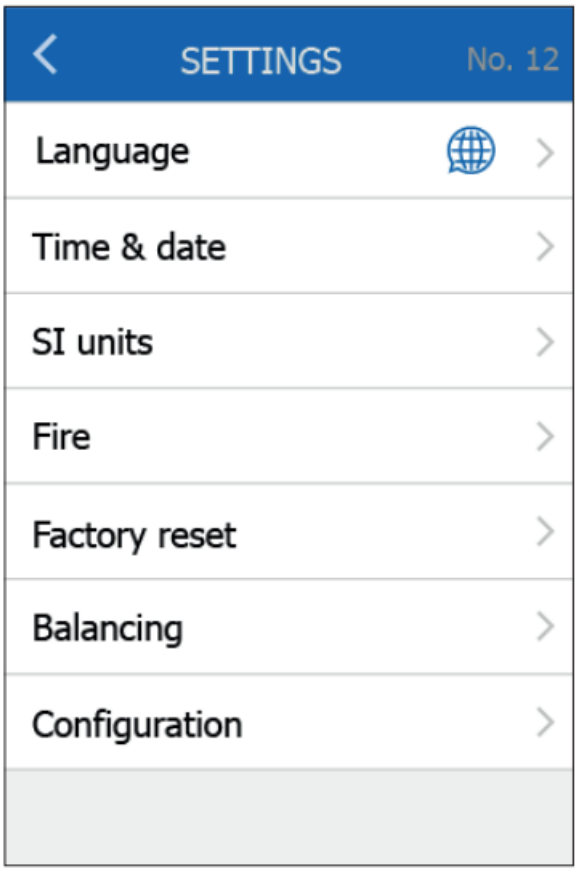
CLOUD



- To connect to OJ Air Cloud, you will need to accept the terms and conditions. These are shown on https://oj.hvac-cloud.com. The AHC-3000 must have internet access in order to get a valid activation code. The activation code must be used when assigning the controller to your OJ Air Cloud account on https://oj.hvac-cloud.com. Note down the activation code carefully or take a picture of it. The code is valid for 7 days after creation.

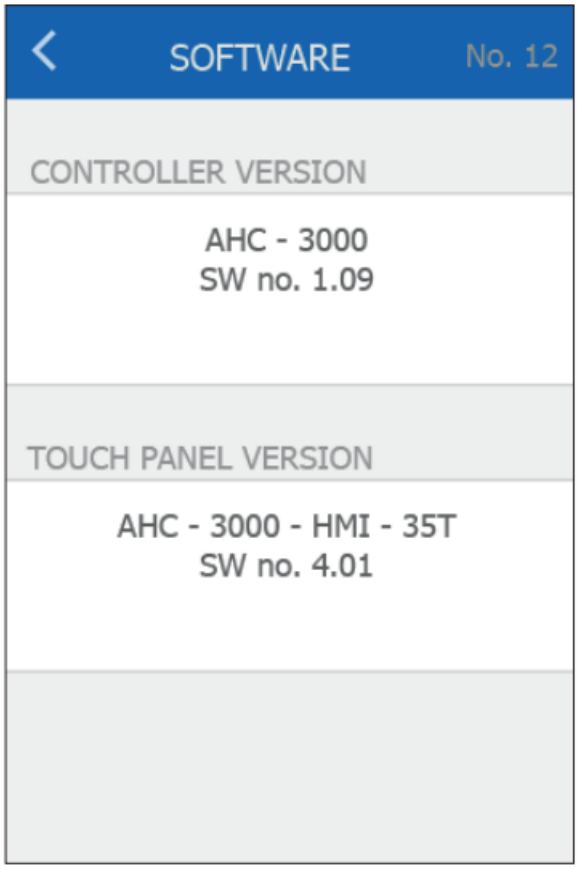
SETTINGS

The following can be set/viewed:



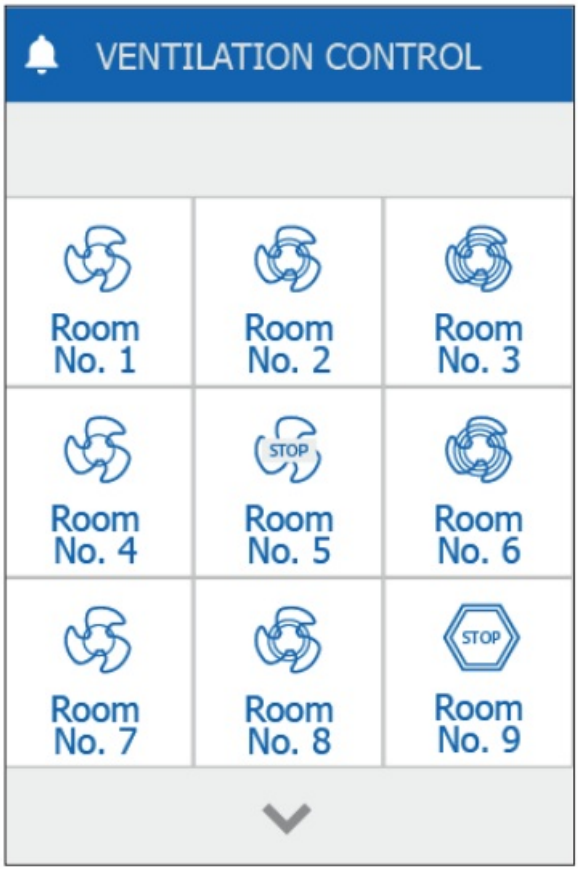
- Language
- Time & date
- SI Units
- Fire
- Factory reset
- Balancing
- Configuration

SOFTWARE



- Here you will get an overview that indicates the Controller's version and the touch panel version of the software installed in the AHC-3000-HMI-35T. Touch panel software is automatically updated from the AHC-3000 controller.

VENTILATION CONTROL



- This screen will appear if the system is set up with more than one ventilation unit in a network. The screen provides you with a quick overview of the complete network, displaying current ventilation speeds and alarms. Detailed information for each room is accessible by touching the panels' room numbers.

INSTALLATION

- AHC-3000-HMI-35T can be installed in two ways: either in a wall box/panel front or directly on a flat surface.

Installation on a flat surface

- The back cover of the HMI is equipped with a keyhole-shaped opening which can be used to hang the unit on a flat surface (see Fig. 1). Use a screw that is a maximum of 3.5 mm in diameter with a head no longer than 9 mm.

Installation in a wall box/panel front

- If HMI-35-T is to be installed in a wall box or panel front, the back cover must be removed. First detach the front cover by gently releasing the catch on the bottom of the unit with a flat screwdriver and then tipping the cover outwards (see Fig. 2).
- Once the front cover has been detached, remove the two screws holding the back cover in place (see Fig. 3).
- Now detach the back cover can now be detached and refit the front cover. The baseplate is equipped with several screw holes. The dimensioned drawing (see Fig. 4) can be used as a drilling template. Secure the baseplate with at least two screws tightened to a torque of max. 0.8 Nm. The installation depth is 20 mm.

CABLE CONNECTION

- AHC-3000 is connected to the AHC-3000 Master by means of a Modbus cable. The Modbus cable can be connected to the HMI-35-T by means of the RS485 port or four single-wire screw terminals. Which ones are used does not influence the available functions or operation. See Figures 5 and 7.

Modbus RS485

- Connect the Modbus cable to the Modbus port for HMI-35-T on the AHC-3000 Master and to the corresponding screw terminals on the HMI-35-T (see Fig. 6)

RS485 Screw terminals

1. +24 V IN
2. GND
3. Bus “B”
4. Bus “A”
5. +24 V IN
6. GND

TECHNICAL DATA

- **Supply voltage**……24 V DC +/-10%
- **Cable dimensions**…… max. 0.75 mm2
- **Relative humidity**…… 0–95% (noncondensing)
- **Operating temperature**……-10/+40°C
- **Enclosure rating..**……IP20 (EN 60529)
- **Port.**……1x RS485
  …… 10 x screw terminals
- **Dimensions..**…… 80 x 121 x 42 mm (see Fig. 2)
- **Installation depth**…….. 22 mm
- **Max. power consumption**……..900 mW
- **Standby power consumption**……..600 mW

SERVICE AND MAINTENANCE

- The AHC-3000-HMI-35T touch panel contains no parts that require service or maintenance. Contact your supplier in case of a problem.

DISPOSAL AND ENVIRONMENTAL PROTECTION

- Help protect the environment by disposing of the packaging and redundant products in an environmentally responsible manner.
- Products marked with this symbol must not be disposed of with household waste, but must be delivered to a waste collection centre in accordance with current local regulations.

CE MARKING

- OJ Electronics A/S hereby declares under sole responsibility that the product complies with the following directives of the European Parliament:
- EMC – Electromagnetic compatibility: 2014/35/EU
- RoHS – Restriction of the use of certain hazardous substances in electrical and electronic equipment: 2011/65/EU

Applied standards

- EN 61000-6-2 and EN 61000-6-3 Electromagnetic compatibility (EMC)
- **OJ ELECTRONICS A/S**
- **Stenager 13B · DK-6400 Sønderborg**
- **Tel.: +45 73 12 13 14 · Fax +45 73 12 13 13**
- **oj@ojelectronics.com**
- **www.ojelectronics.com**
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Documents / Resources

	AutomatikCentret AHC-3000-HMI-35T OJ-Air AHU Controller [pdf] Instructions AHC-3000-HMI-35T OJ-Air AHU Controller, AHC-3000-HMI-35T, OJ-Air AHU Controller, AHU Controller, Controller

References

- OJ Electronics – Know-how Creates Strong Partnerships
- oj.hvac-cloud.com