

FOREWORD

Thank you for purchasing a EC fan controller with LCD display. The EC fan controller is a speed regulator for ventilated rooms to control exhaust or exhaust and intake air flow. The function of the EC fan controller involves maintaining a room at constant temperature and humidity different for day and night time settings keeping a constant negative pressure in the room to avoid odors escaping.

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LEGEND

- | | |
|---------------------------|----------------------------|
| 1. Speed bar | 12. Actual humidity |
| 2. Temperature | 13. Actual fan speed |
| 3. Temperature hysteresis | 14. UP button |
| 4. Humidity | 15. DOWN button |
| 5. Humidity hysteresis | 16. SET/SAVE button |
| 6. Minimum speed | 17. Power LED |
| 7. Maximum speed | 18. Sensor connection |
| 8. Day time | 19. Power supply 12VDC |
| 9. Night time | 20. Exhaust air fan (fan1) |
| 10. Nominal value setting | 21. Intake air fan (fan2) |
| 11. Actual temperature | |

INSTRUCTIONS

Install the EC fan controller on a wall using the included Velcro fasteners. Install the light- humidity & temperature sensor which comes with a 4m long cable at a point where you wish to undertake the measurement. Ensure that this is not directly exposed to a heat source or stream of light in order to obtain the best precise measurement of the ambient air as possible. If the measurement cable is too short, it can be extended up to 50m. Pay attention to the polarity and undertake this when there is no voltage.

An incorrect connection or short circuit will damage sensitive processor parts of the appliance! Connect it to the EC fan controller 18. Sensor connection. Connect the 20 + 21 exhaust and intake air fan with the two supplied 4m extension cables. Connect the 19. Power supply with a conventional household outlet.



The power LED blinks and the fan starts to initialize. This takes a few seconds. As first you will see a screen with all the LCD segments and back-light working.

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Next it starts initializing the sensor and in case this screen stays at this stage, there is a fault with the sensor or the communication it self. Check the connection from the sensor to the device. If it is still faulty return the device to be repaired.



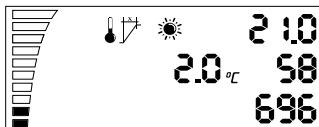
Otherwise you will find in a few seconds the the measured value, fan speed bar and day/night stage.

You find these three buttons on the fan controller UP, DOWN and SAVE/SET. With the buttons UP and DOWN you can navigate through the single settings.



If you press DOWN once you will find the temperature day setting. This setting you will see for about 10sec. and then it goes automatically back to the home position and the back-light stops working.

To change the temperature value push the SET/SAVE button once. The settings start to blink, now you can change the value with the UP and DOWN buttons. Set the desired temperature for the day time indicated with the sun symbol. Push again SET/SAVE to save the setting and return to the selection of settings. In case you forget to confirm the changes the LCD display returns to the main screen after 2min. without saving.



Go to the next setting with the DOWN button. Temperature hysteresis setting.

What is hysteresis? Hysteresis is the value between the lowest and the highest point of the regulation. Example: if we set 25°C and have a hysteresis of 2°C. this means the fan starts to work at >25°C room temperature and reaches the maximum speed +2°C hysteresis at 27°C. In this 2°C hysteresis from 25°C-27°C the fan is running faster and slower depending on the measured temperature.

To change the value use again SET/SAVE button to enter the setting, change the Value with UP/DOWN button and save and return to the selection with SET/SAVE again.



With the DOWN button you go to the next setting "humidity setting day time" repeat again, enter the settings with SET/SAVE or go to the next setting with the DOWN button



Hysteresis setting for the humidity day time, as described above the hysteresis for temperature you can change here the controlling range for the humidity value.



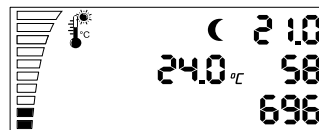
For example: 10%rh at 60% humidity the fan starts to work at 60% humidity and +10%rh at 70%rh it reaches its maximum speed.



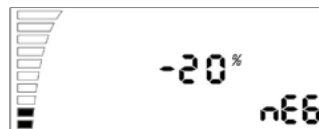
Minimum speed setting day time. Here you can choose the minimum speed of the ventilator which never should be undercut. On the down left side speed bar you can see the actual setting for each filled segment is 10% fan speed. Change the settings again with SET/SAVE as described above.

Maximum speed setting day time. Here you can choose the maximum speed setting of the ventilator which never should be exceeded. On the top left side you can see the actual missing empty segments each is 10% fan speed. Change the settings again with SET/SAVE as described above.

Attention! At the end of the manual you will find the section "Calibration of the minimum speed"!



Repeat all 6 settings we explained for day time now you can give the night time values of the fan.



After you have gone through the 6 night time settings in the menu, you can set the negative pressure setting.

The negative pressure decreases the speed of the intake air fan. Example: at -20% is the intake air fan running 20% slower as the exhaust air fan. At -0% they have both the same speed.



Change the value with the SET/SAVE button. Proceed to the next setting light sensor switch level.



You see the alternate blinking of sun and moon segments. Enter SET/SAVE to change the switch level value between day and night time. The lower the value, as less light it needs to change from day to night time mode.

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This last setting is the switch over time between day and night mode. This is used to avoid an immediate switching between day and night mode. If the light sensor reaches the switching level a count down starts according to the value in seconds you are entering here. As the countdown ends without getting a light interrupt at the light sensor the controller will switch from night to day time or reverse from day to night time. Enter SET/SAVE to change the values.

The Power LED indicates the state of the fan. Blinking means initializing the fan. Constant shining at day time or short blink at night time means the fan is ON and running.

SUB SETTINGS

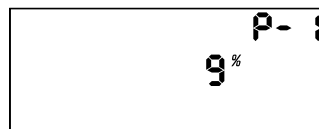
- P-1 Calibration of the smallest possible speed.
- P-2 Back-light settings
- P-3 output signal 0-10V or PWM setting
- P-4 Intake fan ON – OFF

ENTERING INTO THE SUB SETTINGS

Disconnect the power cable from the wall socket. Wait a few seconds. Press and hold the knob and connect the power supply again. Keep holding down the button for more than 3 seconds.

P-1 Calibration of the smallest possible speed

Since not every EC fan has the same minimum speed, this can be set (corrected) at the EC fan controller. Pay attention to the fan speed, set the minimum speed from off to 1%. Now the fan has to start turning on itself, it must not falter or stand still.



Now you can set the speed which should correspond to 1% of the minimum speed. Push the knob to change the displayed value with rotating the knob. Save the new value with pushing the knob. Turn clockwise the knob and go to the next setting. Repeat for all coming settings.

P-2 Back-light settings

Choose between Automatically, ON OFF (default is Auto.)

P-3 Output signal

Choose between 0-10V or PWM pulse wide modulation. (default is 0-10V).

P-4 Intake fan settings

Choose if the intake fan should stop running if the temperature and humidity value is below them settings. (default is OFF).

LEAVE THE SUB SETTING MENU

Turn clockwise the knob to the "end" confirm the setting pushing the knob. The EC fan controller initializes with the new settings.

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