

AIR UNIT CONTROLLER **STAVOKLIMA**

User manual

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model **ECON**

EN



# 1. Introduction



The ECON CONTROL controllers are designed for controlling of door air curtains or other air-conditioning units fitted with the internal ECON regulator both without heating as well as with water or electric heating. The controllers are intended for basic environment without humidity.

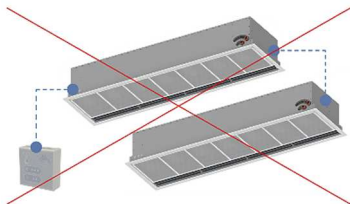
Indicator of activated door contact or external contact

Button for fan speed level switch

Button for heating level switch



The ECON CONTROL controllers do not support connection of other parallel devices, i.e. the master-slave system. To control two air curtains in parallel connection, use the **ECON CONTROL DUAL** controller.



\*Exception is only ECON EC 2.

## 2. Technical parameters



Control type	ECON CONTROL	ECON CONTROL EC	ECON CONTROL DUAL
Power supply	10V DC	10V DC	10V DC
Connection	LiYCY 10 x 0,5	LiYCY 12 x 0,5	LiYCY 12 x 0,5
Operation temperature	10-35 °C		
IP rating	IP 20		
Dimensions (h x w x d)	71 x 71 x 25 mm		
Material	ABS plast		



**ATTENTION:** Before connecting the regulator (connecting to power supply), please check correct connection of all cables in the electronic fit-out of the unit. Also check correctness of protection pre-element according to design documentation.

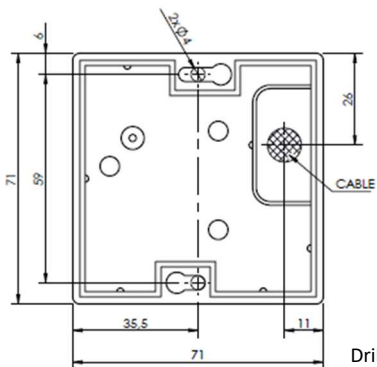
## 3. Controller mounting



The Econ controller is delivered as a set with the user manual and mounting accessories (connectors, screws).

1. Use a screwdriver, remove the screw from the front of the controller box.
2. Attach the back of the box to the wall, guide the cable and mark placement of the wall plugs.
3. Use 4mm diameter bit to drill holes, install the wall plugs and screw the rear side to the wall.

4. Connect the cable according to the wiring diagram on the right terminals.
5. Connect the flat cable on the cover of the regulator box.
6. Covering up of the box, screw up the cap screw and blinder.
7. Cover the screw a blinder.



Drilling diagram

## 4. Description of the controller features ECON CONTROL

### 4.1. Fan



The ECON CONTROL controller is used to control the air-handling units with hot water or electric heater. Four output levels (0-1-2-3) can be selected from with the button to select the fan speed. Level 0 = off » no LED light is on. Pressing the button switches the fan to higher fan speed up to maximum fan speed level (3). Press the button once again to switch off the controller (0).

### 4.2. Electric heater units



Three levels (0-1-2) can be selected from with the button to select the heating level:

- 0 = off
- 1 = 50% output
- 2 = 100% output

When heating is turned on to the first heating output without fan being turned on, the fan turns on automatically to the first speed level. When heating is turned on to the second heating level without fan being turned on, the fan turns on automatically to the third speed level. When the fan is reduced to first speed level, heating is automatically reduced to the first heating level (if it was at heating



**ATTENTION : The electric heater may not be operated without a fan.**

level 2).

**Cooling down:** Turning off the fan (0) when heating is activated results in activation of cooling down, which means that heating turns off and the fans turn on at speed level 2 for 60 seconds.

### 4.3. Heat exchanger units



Three heating levels (0-1-2) can be selected from with the button to select the heating output:

- 0 = valve off
- 1 = valve cycles = 2 minutes to open, 2 minutes to close; about 50% output level
- 2 = valve open; 100% output level

**The valve** – use only type „normally open – NO“!

The heating can be controlled independently even when the fans are turned off; no rundown of the fan occurs when turned off. A condition for the heater to run is closed contact for thermostat in the unit electronics or jumper made.

### 4.4. Door contact



The door contact enables turning the fan on; the fan may neither be turned on or its revolutions changed when the door contact is connected.

If the fan was turned on before and the door contact disconnects, the fan turns off only after 30 seconds from the set revolutions. When the door contact connects again, the fan turns on to the originally set revolutions. If the heater was turned on together with the fan, the heater turns off immediately with disconnecting of the door contact, and the fan turns off with 60-second delay (applies to electric heater version).

Signalling of the open-door contact on the controller occurs by indicating by flashing yellow LED (symbol of the contact) – this applies only when the previous fan level was set to more than 0. If you don't want to turn the unit with the door contact, it is necessary

to manage switching of the contact by a jumper according to electric wiring scheme on relevant terminals of the controller.

## 4.5. Room thermostat



The thermostat allows to turn the heating; neither heating can be turned on and its output level modified when no thermostat is connected. For the electric heater unit, the thermostat heating is connected only when the fan is on. If the heating was turned on before and the thermostat disconnects, the heating is turned off immediately (applies to the electric heater unit). The thermostat connects to the unit controller terminals according to the electric wiring scheme.

# 5. Description of the controller features ECON CONTROL EC

## 5.1. Fan



The ECON CONTROL EC controller is used to control the air-handling units with hot water or electric heater. Six output levels (0-1-2-3-4-5) can be selected from with the button to select the fan speed. Level 0 = off » no LED light is on. Pressing the button switches the fan to higher fan speed up to maximum fan speed level (5). Press the button once again to switch off the controller (0).

Other controller functions are the same as for controller ECON CONTROL.

Alternatively, air handling units with ECON EC 2 control can be controlled via MODBUS without the need for a connected wall controller. Please refer to the function manual for details:



## 6. Description of the controller features ECON CONTROL DUAL

With one ECON CONTROL DUAL controller, two units can be controlled simultaneously.

All functions of the controller are the same as the controller ECON CONTROL.

## 7. Safety measures

The controller has been manufactured in line with the government decrees and Czech standards harmonized with the EU regulations mentioned in the manufacturer's declaration of conformity.

The above-mentioned product complies with the following standards:

ČSN EN 60335-1 ed.3

ČSN EN 60335-2-30 ed. 3

ČSN EN IEC 61000-6-2 ed. 4

ČSN EN 61000-6-3 ed. 2

The above-mentioned product complies with the following directives:

- Directive 2009/125/EC of the European Parliament and of the Council establishing a framework for the setting of eco-design requirements for energy-related products.
- Government Decree No. 118/2016 Coll. Directive 2014/35/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits.
- Government Decree No. 117/2016 Coll. Directive 2014/30/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to electromagnetic compatibility.
- Government Decree No. 481/2012 Coll. (Regulation of the European Parliament and of the Council No. 2014/35/EU,



Regulation of the European Parliament and of the Council No. 2011/65/EU).

- Government Decree on restriction the use of some hazardous materials found in electrical and electronic products.

Observe generally applicable national provisions and other related regulations. Unplug the unit from mains before any service intervention. Connection and earthing of the electric device or components thereof must be in line with laws applicable in the country of use. Only qualified staff may carry out any electric service works.



Observe applicable laws, in particular:

- on safety of electric and thermal appliances,
- on central heat distribution systems,
- on fire safety.

## 8. Service



- Before all maintenance on the unit it is necessary to switch off the power supply. Current injury danger.
- Corresponding wiring diagram you will find in the unit. Wiring diagram for individual delivered product is valid, but it can be modified as optional or from production causes according to the specified request.
- If the regulator Econ will be eventually damaged, it is not necessary to disconnect the unit. Disconnect only the current supply of the unit and dismantle the regulator from the wall. Afterwards disconnect the cable connector and make the reverse connection. If the electronic is eventually damaged, it is always necessary to disconnect all voltage. Dismantle of the control unit you can make after disconnection of all wires and earth wires.

- Make inquiries at the producer or distributor about the servicing contract. You will achieve by this a regular service and a perfect care of your bought unit.
- All the units are tested and carefully checked by the producer before the expedition. The most common faults come from misunderstandings of the function or wrong connection. That's why keep exactly the producer regulations, you will prevent a difficult fault searching. Don't try to run the unit under different connections - the unit can run in a short-time as you want and expect, but this may cause irreversible losses and damages. There is no guarantee due to this operation.







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