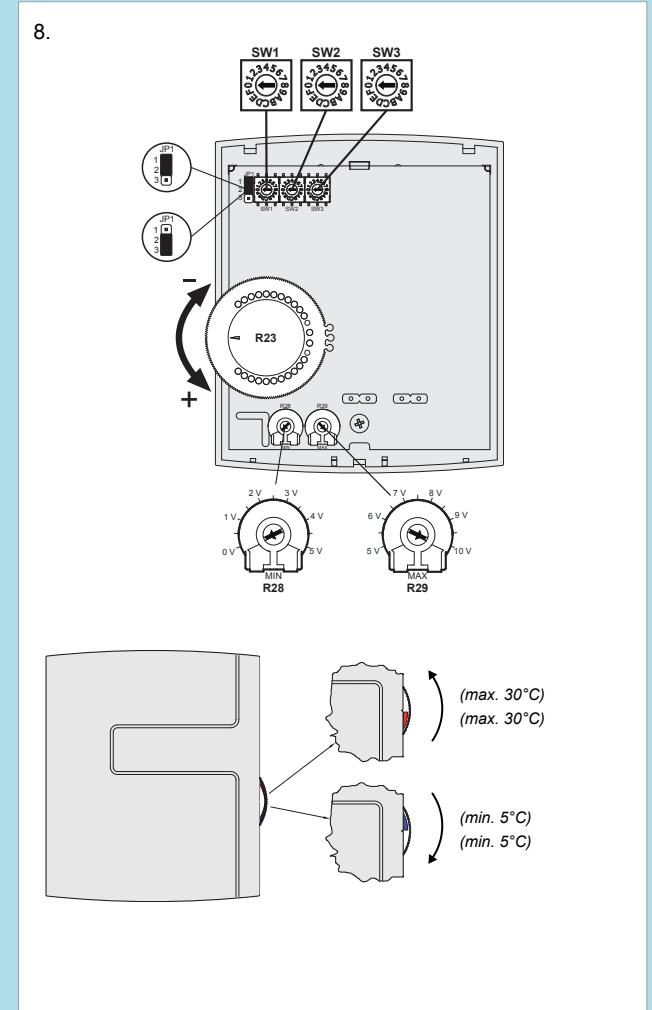
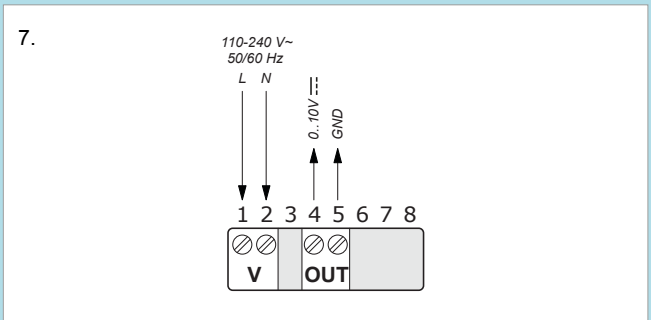
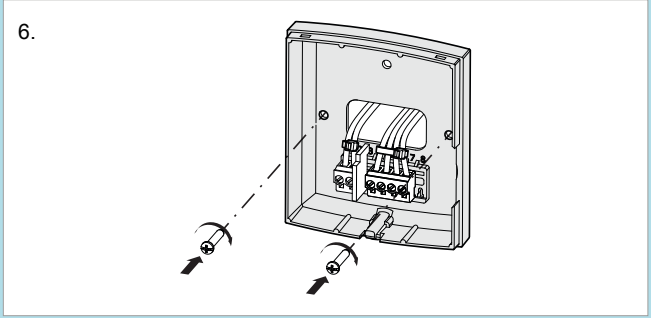
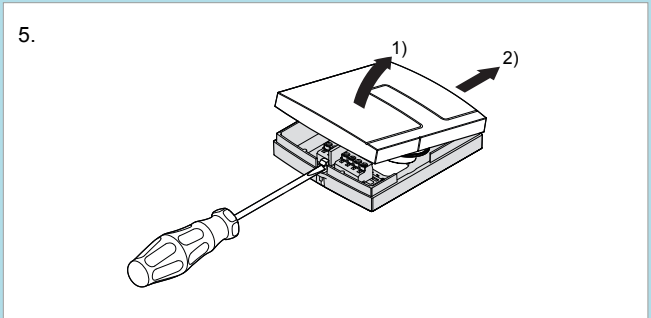
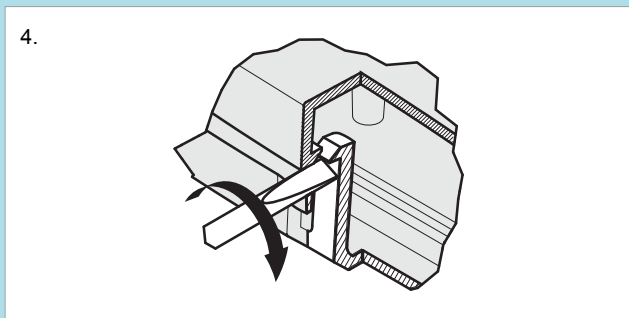
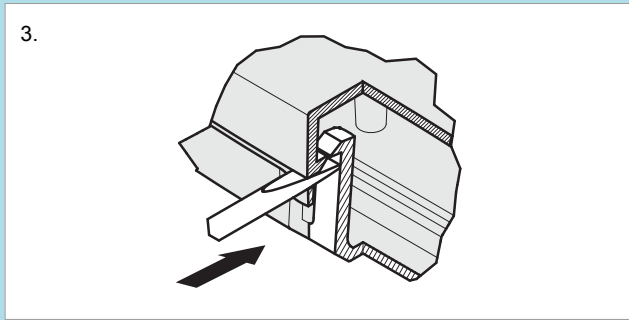
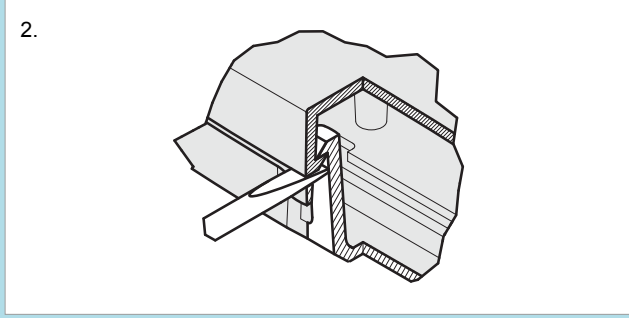
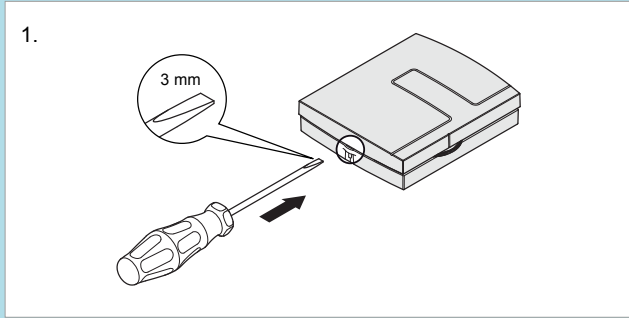




ALC230A



11069D FEB 16



Read this instruction before installation and wiring of the product. Subject to change without notice.



Consult documentation in all cases where this symbol is used, in order to find out the nature of the potential hazards and any actions to be taken. All installation, setting or maintenance of this unit must be performed with the supply voltage switched off and without any external loads on the unit! These operations should only be carried out by skilled workers. The manufacturer is not responsible for any damages caused by inadequate skills during installation and/or by any safety devices having been removed or tampered with.

Room temperature and CO₂ controller

ALC230A is a room temperature controller that controls a 0...10 V internal signal with a PI algorithm in direct or reverse action. The controller also compares current CO₂ levels with an adjustable setpoint and controls a 0...10 V proportional, secondary internal signal in direct action. The output signal consists of the max. difference between signal 1 and 2 and is applied to an air handling unit, e.g. a ventilator such as an EC fan or damper.

Technical data

Supply voltage	110...240 V AC, 50/60 Hz
Power consumption	Max. 1.25 W
Operating temperature	0...50°C, 10...90 % RH (non-condensing)
Outputs	1 analogue output 0...10 V (max. 1 mA)
Working range	0...2000 ppm
Manual activation	Min. 600 cycles
Automatic activation	> 100 000 cycles
Dimensions (WxHxD)	88 x 100 x 30.5 mm
Installation	*Wall mounting
Impulse voltage	2,5 kV
Pollution degree	2
Classification of unit	Type 1
Protection class	IP30
Insulation class	Class II

*The unit must be installed exclusively in contact with a wall. Installation with a spacer that would allow access to the back of the unit is forbidden.

Installation

Place the device in a location that has a temperature representative for the room. A suitable location is approx. 1.6 m above floor level in a place with unobstructed air circulation. To remove the front cover, use a 3 mm flatblade screwdriver to depress the locking tongue in the lower part of the casing (**picture 1**). Press and twist the screwdriver, and at the same time pull the bottom part of the front outwards (**pictures 2-4**). When the bottom end of the front cover is free from the bottom part of the casing, slide the cover towards the top of the casing to free the hooks holding the upper edge of the front cover (**picture 5**). Perform the connections according to electrical wiring diagram. Cables must be fixed using the 2 cable ties supplied as indicated in **picture 6**. Screw the bottom part of the casing to the wall.



Disconnection

ALC230A should be connected to a switch or circuit breaker in the building installation. This switch should be in close proximity to the controller and within easy reach of the operator, and should be marked as the disconnecting device for the equipment. Always use the circuit breaker to disconnect the controller from the mains supply during maintenance of the EC fan or damper.

Settings

The direction of the output signal is set using the JP1 jumper (**picture 8**):

SW1: Temperature proportional band (0.5...8.0°C)

SW2: CO₂ proportional band (10...1000 ppm)

SW3: CO₂ setpoint (350...1500 ppm)

JP1 closed 1-2: Heating

JP1 closed 2-3: Cooling

R23: Temperature setpoint (5...30°C)

R28: EC fan min. limit speed

R29: EC fan max. limit speed

The temperature proportional band and integral time are set using rotary switch **SW1**:

SW1	0	1	2	3	4	5	6	7
P-band (°C)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
I-time (s)	1800	1700	1600	1500	1400	1300	1200	1100

SW1	8	9	A	B	C	D	E	F*
P-band (°C)	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
I-time (s)	1000	900	800	700	600	500	400	300

The CO₂ proportional band is set using rotary switch **SW2**:

SW2	0	1	2	3	4	5	6	7
P-band (ppm)	10	25	50	75	100	125	150	175

SW2	8	9	A	B*	C	D	E	F
P-band (ppm)	200	300	400	500	600	700	800	1000

The CO₂ setpoint is set using rotary switch **SW3**:

SW3	0*	1	2	3	4	5	6	7
Setpoint (ppm)	350	400	450	500	550	600	650	700

SW3	8	9	A	B	C	D	E	F
Setpoint (ppm)	750	800	850	900	950	1000	1200	1500

* Factory setting

The range of the voltage applied to the ventilator is defined using the MIN and MAX knobs. MIN is used to define the minimum applicable voltage to the ventilator (0...5 V), while MAX defines the maximum voltage (5...10 V). The PI controller will then operate between the relevant MIN and MAX values.

Example 1:

If the MIN value is set to the minimum position and MAX to the maximum position, the PI controller will work from 0...10 V.

Example 2:

If MIN is set to 2 V and MAX is set to 7 V, the PI controller works from 2 to 7 V.

CE Low Voltage Directive (LVD) standards

This product conforms to the requirements of the European Low Voltage Directive (LVD) 2006/95/EC through product standard EN 60730-1.

EMC emissions & immunity standards

This product conforms to the requirements of the EMC Directive 2004/108/EC through product standards EN 61000-6-1, EN 61000-6-3, EN60730-1 and EN 60730-2-13.

RoHS

This product conforms to the Directive 2011/65/EU of the European Parliament and of the Council.

Contact

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