Control panel with integrated room sensor Model A2G-200

Applications

For the measurement of the temperature, carbon dioxide (CO_2) and relative humidity of room air and in ventilation systems

Special features

- Electrical output signal, DC 0 … 10 V, 4 … 20 mA or Modbus®
- Touchscreen
- Integrated switching output

Fig. top: with display
Fig. bottom: without display

Description

The model A2G-200 control panel with integrated room sensor was developed specifically for requirements in the ventilation and air-conditioning industry. Different versions measure the key parameters of relative humidity, room air temperature and carbon dioxide (CO_2).

The large touch LC display makes the operation and readability easy and clear. The integrated switching output enables a direct control command to higher-level systems or can be used for the direct switching on of a ventilation/ air-conditioning unit or fan. For this, the switch relay can be configured with all three parameters (relative humidity, ambient air temperature and CO_2).

The measuring results are transmitted with an analogue output signal (0 ... 10 V or 4 ... 20 mA) or digitally via Modbus® output.

To prevent incorrect operation or manipulation, the LC display can be locked via setting a jumper on the PCB and then only has the function of a display and measuring instrument.

Specifications

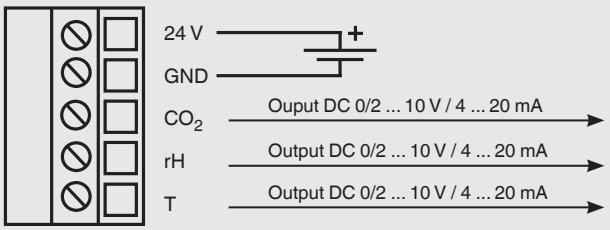
Control panel with integrated room sensor, model A2G-200			
	Parameter		
	CO_2	**Temperature**	**Relative humidity**
Version	■ With LC display ■ Without LC display ■ With LC display and switching output		
Measuring element	Non-dispersive infrared (NDIR)	Pt1000	Capacitive thermosetting polymer sensor element
Measuring range	400 … 2,000 ppm	0 … 50 °C [32 … 122 °F]	0 ... 90 %
Accuracy	±40 ppm + 2 % of reading value	< 0.5 °C [0.9 °F]	max. ±4 %
Units	ppm	5 °C	±4 % r. h.
Output signal	■ 0/2 ... 10 V, R >1 kΩ ■ 4 ... 20 mA, R <500 Ω ■ Modbus®		
Electrical connection	5 screw terminals (24 V, GND, CO_2, rH, T) Cable gland M20 Max. 1.5 mm^2		
Supply voltage U_B / Current consumption	AC/DC 24 V, ±10 % 90 mA, +10 mA for each voltage output / +20 mA for each current output		
LC display	77.4 x 52.4 mm [3.0 x 2.1 in]		
Case	Plastic (ABS)		
Permissible temperatures			
Ambient	-20 … +70 °C [-4 … 158 °F]		
Operating	0 … 50 °C [32 … 122 °F]		
Relative humidity	0 … 95 %, non-condensing		
Ingress protection per IEC/EN 60529	IP20		
Mounting	Via three screw holes (slotted screws) with Ø 3.8 mm [0.2 in]		
Weight	150 g		

Modbus® version

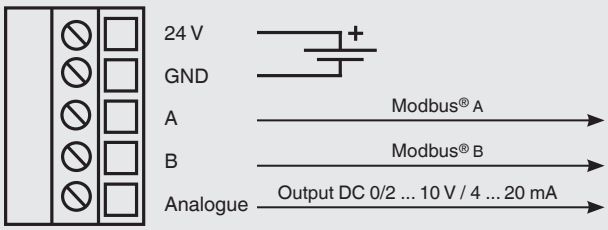
Modbus® communication	
Protocol	RTU mode, RS 485 An additional analogue output for a selected measured value 0 ... 10 V, 2 … 10 V, R > 1 kΩ 4 … 20 mA, R < 500 Ω
Transmission mode	RTU
Interface	RS-485
Switching output	SPDT relay, 250 … 30 V, 6 A 3 screw terminals (NC, COM, NO)
Power supply U_B	AC 24 V or DC 24 V ±10 %
Modbus® addresses	1 … 247 addresses selectable in the configuration menu

Electrical connection

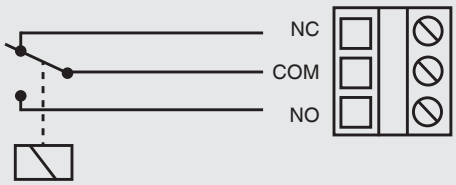
Analogue output



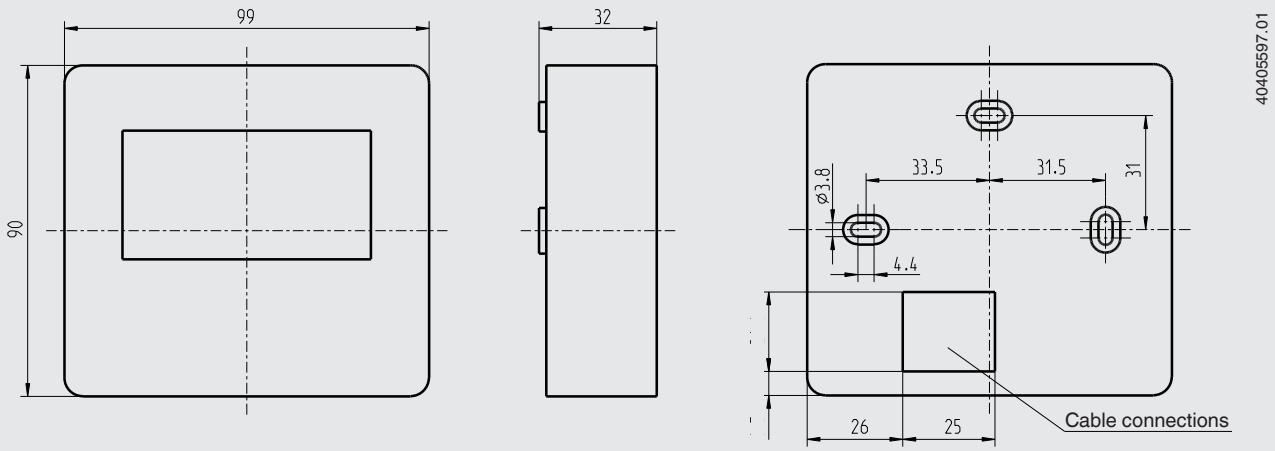
Digital Modbus® output



Switching output



Dimensions in mm



Approvals

Logo	Description	Country
CE	**EC declaration of conformity**	European Union
	EMC directive	
	Low voltage directive	
	RoHS conformity	
	WEEE directive	

Certificates (option)

2.2 test report

Approvals and certificates, see website

Ordering information

Model / Version / Measuring range / Options

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