

# Ventilation duct sensor for CO<sub>2</sub> and temperature

## Model A2G-85

WIKA data sheet SP 69.07



### Applications

- For measuring the CO<sub>2</sub> content in the ventilation duct in accordance with the NDIR measuring principle

### Special features

- Simple installation and commissioning
- Compact and robust design
- Electrical output signal DC 0 ... 10 V
- Maintenance-free



Ventilation duct sensor for CO<sub>2</sub> and temperature, model A2G-85

### Description

The model A2G-85 ventilation duct sensor with an integrated temperature measurement is suitable for direct mounting on circular ventilation pipes or rectangular ventilation ducts.

The A2G-85 is a high-quality product solution for ventilation and air-conditioning applications. This ventilation duct sensor measures carbon dioxide (CO<sub>2</sub>) in accordance with the NDIR measuring principle, and in addition also temperature. Due to the combination of these two measurement parameters in one single instrument, the material and mounting cost is considerably reduced.

The adjustable mounting flange enables a quick installation. The illuminated display (option) provides good readability, even from a distance. The screwless cover enables fast wiring and commissioning.

The measurement of the CO<sub>2</sub> content and the air temperature as the basis of demand-orientated control/regulation is gaining ever more importance in the ventilation and air-conditioning industry. The sensor signals for both measurement parameters are transmitted to the control/regulation or building automation with analogue output signals (0 ... 10 V) or digital Modbus® protocol.

## Specifications

Ventilation duct sensor for CO <sub>2</sub> and temperature, model A2G-85	
<b>Measuring range</b> ■ CO <sub>2</sub> ■ Temperature	400 ... 2,000 ppm 0 ... 50 °C
<b>Accuracy</b> ■ CO <sub>2</sub> ■ Temperature	±40 ppm +2 % of reading value < 0.5 °C
<b>Insertion length</b>	183 mm
<b>Power supply U<sub>B</sub></b>	AC 24 V or DC 24 V ±10 %
<b>Power consumption</b>	Max. 150 mA
<b>Electrical connection</b>	Cable gland M16 Screw terminals max. 1.5 mm <sup>2</sup>
<b>Output signal</b>	DC 0 ... 10 V, load min. 1 kΩ
<b>Material</b> ■ Case ■ Cover ■ Sensor sleeve ■ Mounting flange	Plastic (ABS) PVC Plastic (ABS) LLPDP
<b>Permissible temperatures</b> ■ Ambient temperature ■ Operating temperature	-20 ... +70 °C 0 ... 50 °C (at sensor)
<b>Relative humidity</b>	0 ... 95 %, non-condensing
<b>Ingress protection</b>	IP54
<b>Weight</b>	150 g

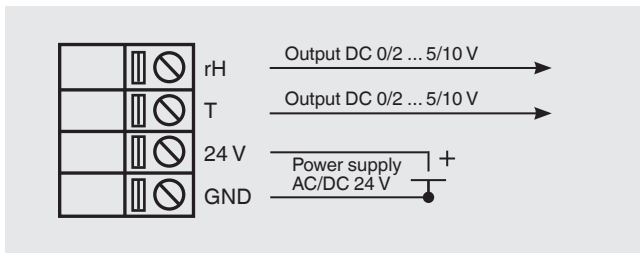
## Options

- LC display
- Modbus® version

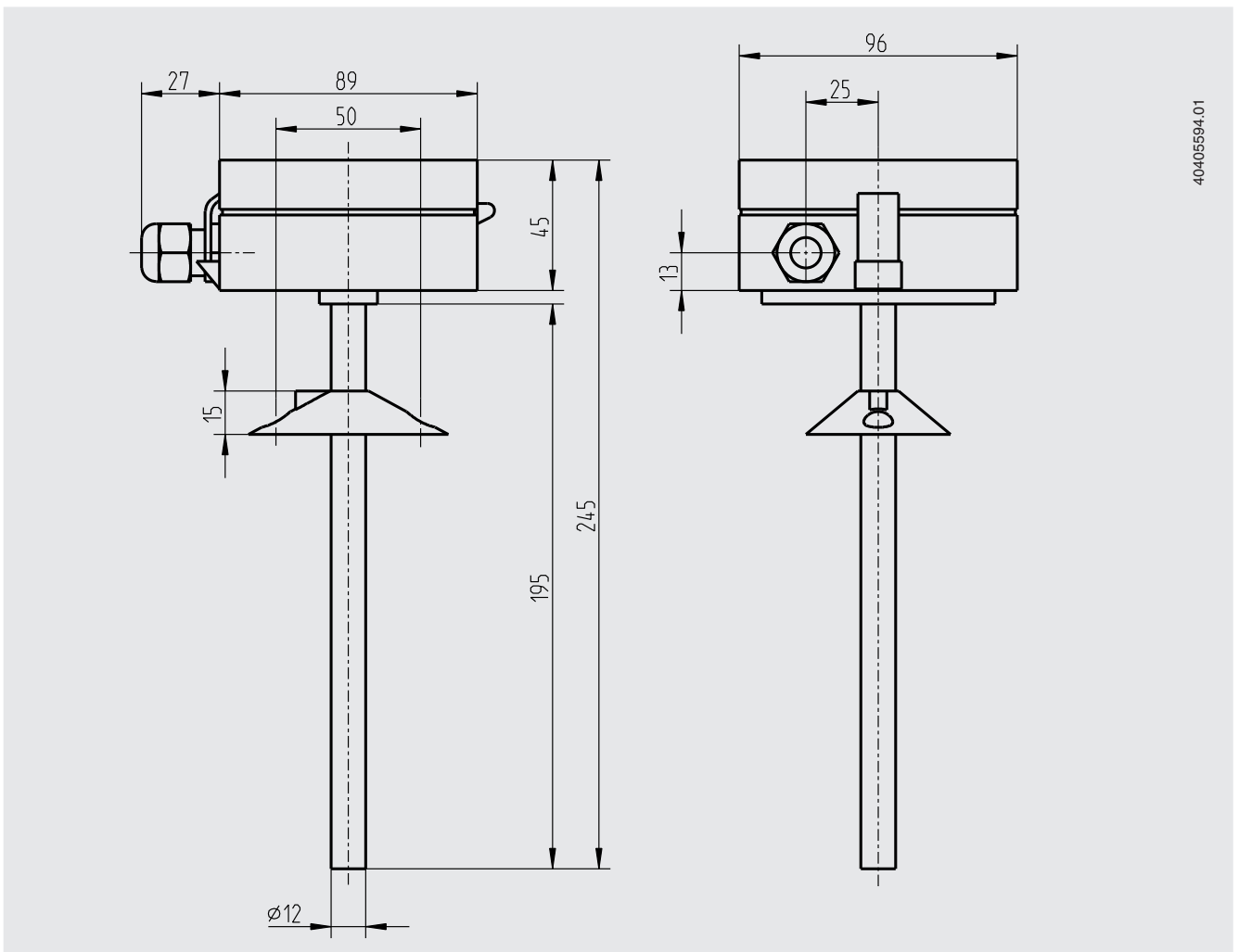
## Modbus® version (option)

Modbus® communication	
<b>Protocol</b>	Modbus® via serial interface
<b>Transfer mode</b>	RTU
<b>Interface</b>	RS-485
<b>Byte format</b>	(11 bits) in RTU mode Coding system: 8 bits binary  Bits per byte: - 1 start bit - 8 data bits, lowest-order bit is sent first - 1 bit for parity - 1 stop bit
<b>Baud rate</b>	9,600, 19,200, 38,400 - adjustable in the configuration
<b>Modbus® addresses</b>	1 ... 247 addresses - adjustable in the configuration

## Electrical connection




## Dimensions in mm



40405594.01

## Approvals

Logo	Description	Country
	<b>EC declaration of conformity</b> <ul style="list-style-type: none"><li>■ EMC directive</li><li>■ RoHS conformity</li><li>■ WEEE directive</li></ul>	European Community

## Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

Approvals and certificates, see website

## Scope of delivery

- Ventilation duct sensor
- Mounting flange

## Ordering information

Model / Options

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**WIKAL**  
**WIKAL Alexander Wiegand SE & Co. KG**  
Alexander-Wiegand-Straße 30  
63911 Klingenberg/Germany  
Tel. +49 9372 132-0  
Fax +49 9372 132-406  
info@wika.de  
www.wika.de