

Air flow meter

For ventilation and air-conditioning

Model A2G-25

WIKA data sheet SP 69.04



for further approvals
see page 5



Applications

- For measuring the air flows of radial ventilators
- For measuring air flows in ventilation pipes and ducts in conjunction with the model A2G-FM measuring probe
- Measurement of differential pressures

Special features

- With analogue output signal (0 ... 10 V or 4 ... 20 mA, adjustable via jumpers) or MODBUS® protocol
- Output signal for air flow and differential pressure in one instrument
- Simple and fast installation and commissioning
- Maintenance-free
- Maximum operating pressure 20 kPa



Air flow meter, model A2G-25

Description

The model A2G-25 air flow meter is used for measuring air flows of gaseous media in ventilation and air-conditioning applications.

The air flow is measured by determining the differential pressure and multiplying it with the K factor. The K factor depends on the ventilator used or, when using pipe/duct measuring probes, on the size and number of probes. The K factors of all radial ventilators from common manufacturers are already programmed in the menu of the A2G-25. When using the model A2G-FM measuring probe or a different ventilator K factor, this can be quickly and easily entered in the menu of the instrument.

Electrical analogue output signals for both measurement parameters (DC 0 ... 10 V or 4 ... 20 mA; adjustable in the instrument via jumpers) or the digital Modbus® versions enable the direct connection to control systems or the building automation system.

The measured differential pressure is also shown on the LC display and transmitted via the analogue or digital output signals. Thus the A2G-25 combines two measurements in one instrument. The LC display and the clear menu navigation enable a time-saving and simple commissioning.

With the A2G-25, air flows up to 200,000 m³/h and differential pressures up to 7,000 Pa can be measured.

Specifications

Air flow meter, model A2G-25		
Measuring element	Piezo measuring cell	
Measuring range	0 ... 1,000, 0 ... 2,000, 0 ... 5,000, 0 ... 7,000 Pa	
<ul style="list-style-type: none"> ■ Analogue output signal (0 ... 10 V/4 ... 20 mA) ■ Modbus® version 	0 ... 2,500, 0 ... 7,000 Pa	
Accuracy	0 ... 7,000 Pa: ±2 Pa ±1.5 % 0 ... 5,000 Pa: ±2 Pa ±1.5 % 0 ... 2,500 Pa: ±2 Pa ±1.5 % 0 ... 2,000 Pa: ±2 Pa ±1.5 % 0 ... 1,000 Pa: ±2 Pa ±1.5 % All data refer to the above mentioned pressure range.	
Units (adjustable in the menu)	<ul style="list-style-type: none"> ■ Air flow ■ Differential pressure 	m ³ /h, m ³ /s, l/s, cfm Pa, kPa, mbar, inWC, mmWC
Process connection	For hoses with inner diameter 4 or 6 mm	
Power supply U_B	AC 24 V or DC 24 V ±10 %	
Output signal	V _{OUT} : DC 0 ... 10 V, load R minimum 1 kΩ linear to the set output unit P _{OUT} : DC 0 ... 10 V, load R minimum 1 kΩ linear to the set output unit V _{OUT} : 4 ... 20 mA, load R minimum 1 kΩ linear to the set output unit P _{OUT} : 4 ... 20 mA, load R minimum 1 kΩ linear to the set output unit	
Electrical connection	Cable gland M16 Cover: PG Screw terminals max. 1.5 mm ²	
Current consumption	< 1.0 W (DC 0 ... 10 V), < 1.2 W (4 ... 20 mA), < 1.3 W (Modbus®)	
Case	Plastic (ABS) Cover: Polycarbonate (PC)	
Type of mounting	Wall mounting	
Zero adjustment	Push button on the printed circuit board or via Modbus® register	
Permissible temperatures	<ul style="list-style-type: none"> ■ Ambient temperature ■ Medium temperature 	-20 ... +70 °C -10 ... +50 °C, version with automatic zero point setting: -5 ... +50 °C
Ingress protection	IP54	
Weight	150 g	

Options

- Automatic zero point setting
- Air flow measurement with pitot tube (model A2G-FM; see data sheet SP 69.10)
- 2 duct connectors
- 2 m PVC hose, inner diameter 4 mm

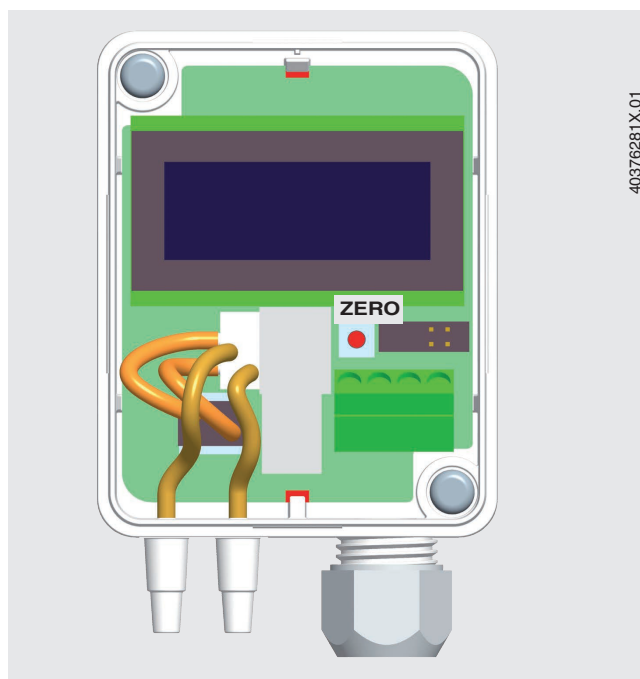
Modbus® version (option)

Modbus® communication	
Protocol	Modbus® via serial line
Transfer mode	RTU
Interface	RS-485
Byte format	(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
Baud rate	Adjustable in the configuration
Modbus® addresses	1 ... 247 addresses selectable in the configuration menu

Automatic zero point setting (option)

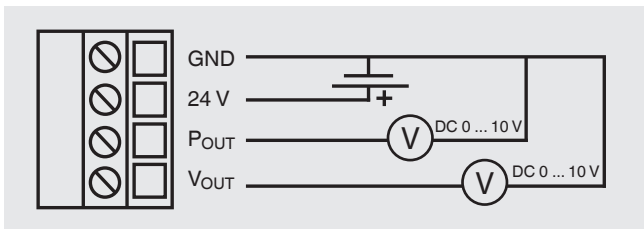
The automatic zero point setting aligns the zero point from time to time so that a manual zero point setting is not necessary.

During the zero point setting (3 seconds every 10 minutes), the output signal and the display show the last measured value.

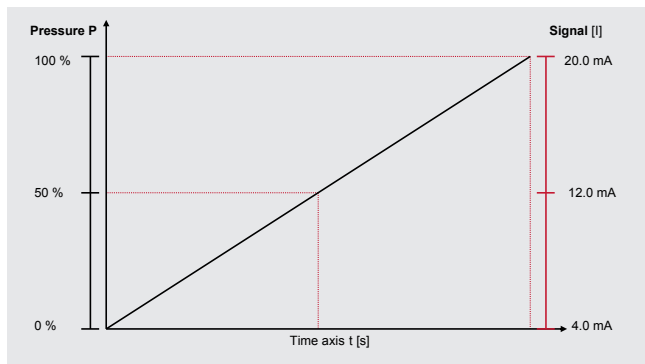
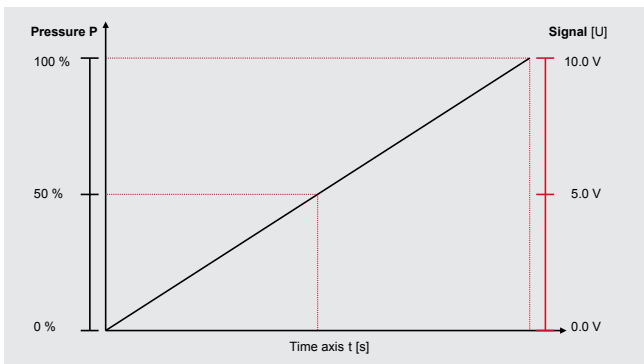
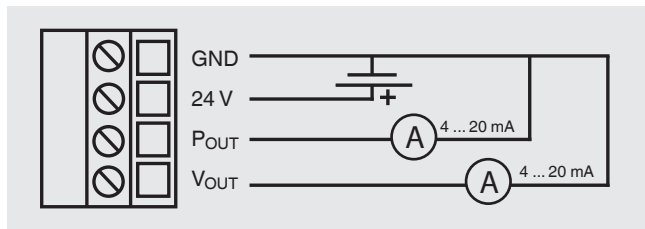


Electrical connection

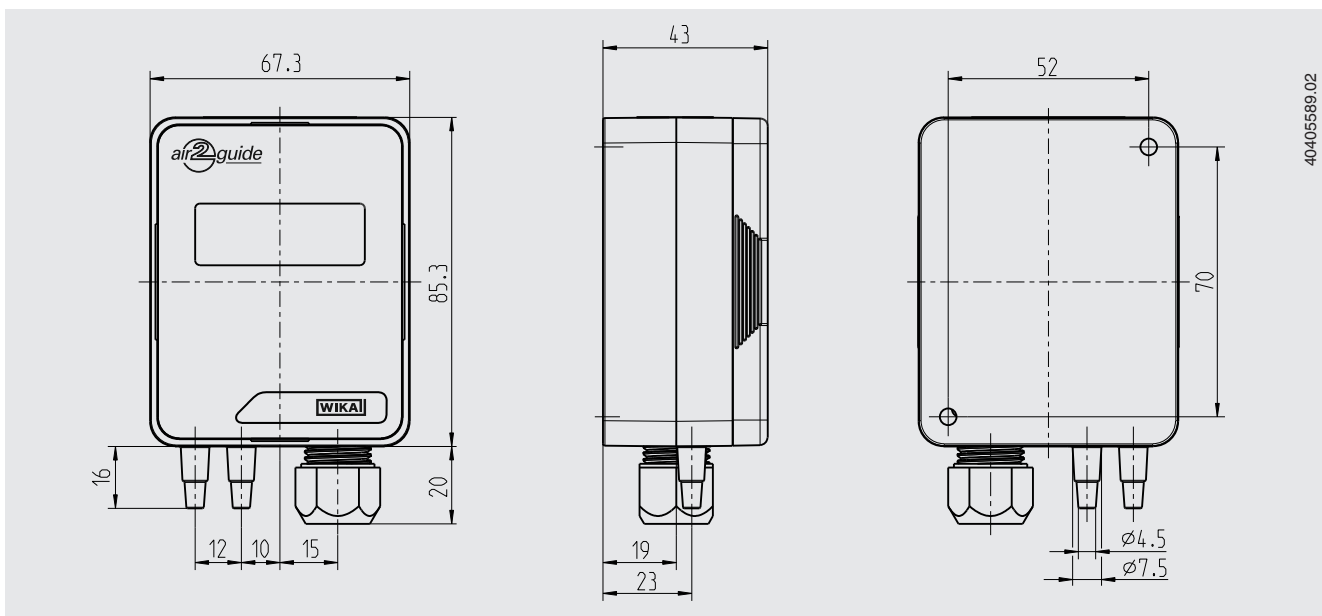
Output signal DC 0 ... 10 V



Output signal 4 ... 20 mA





Dimensions in mm







40405589.02

Accessories

Description	Order number	
Measuring hoses		
	PVC hose, inner diameter 4 mm, roll at 25 m	40217841
	PVC hose, inner diameter 6 mm, roll at 25 m	40217850
	Silicone hose, inner diameter 4 mm, roll at 25 m	40208940
	Silicone hose, inner diameter 6 mm, roll at 25 m	40208958
	Duct connector for hose 4 and 6 mm	40217507

Approvals

Logo	Description	Country
	EU declaration of conformity <ul style="list-style-type: none"> ■ EMC directive ■ RoHS conformity ■ WEEE directive 	European Union
	EAC (option) <ul style="list-style-type: none"> ■ Import certificate ■ EMC directive 	Eurasian Economic Community
	GOST (option) Metrology, measurement technology	Russia
	KazInMetr (option) Metrology, measurement technology	Kazakhstan
-	MTSCHS (option) Permission for commissioning	Kazakhstan

Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

Scope of delivery

- Air flow meter
- 2 mounting screws

Approvals and certificates, see website

Ordering information

Model / Measuring range / Options

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