

Differential pressure sensor For ventilation and air-conditioning Model A2G-50

WIKA data sheet PE 88.02



for further approvals
see page 5



Applications

- For measuring differential pressures and static pressures
- Monitoring of filters
- Overpressure monitoring in clean rooms and laboratories

Special features

- Electrical output signal 0 ... 10 V or 4 ... 20 mA, can be selected directly at the instrument via jumpers
- Modbus® output signal (option)
- LC display (option)
- Maintenance-free
- Maximum operating pressure 20 kPa



Differential pressure sensor, model A2G-50

Description

The model A2G-50 differential pressure sensor is used for measuring differential pressures of gaseous media in ventilation and air-conditioning applications.

It is based on the piezoresistive measuring principle. This compact differential pressure sensor offers excellent performance and high quality at an attractive price.

Electrical analogue output signals for both measurement parameters (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.

Specifications

Differential pressure sensor, model A2G-50				
	Variant 1	Variant 2	Variant 3	Variant 4
Measuring element	Piezo measuring cell			
Measuring range	0 ... 2,500 Pa ¹⁾ 0 ... 2,000 Pa ²⁾ 0 ... 1,500 Pa ²⁾ 0 ... 1,000 Pa ²⁾ 0 ... 500 Pa ²⁾ 0 ... 250 Pa ²⁾ 0 ... 100 Pa ²⁾ -100 ... +100 Pa ²⁾	0 ... 7,000 Pa ¹⁾ 0 ... 5,000 Pa ²⁾ 0 ... 4,000 Pa ²⁾ 0 ... 3,000 Pa ²⁾ 0 ... 2,500 Pa ²⁾ 0 ... 2,000 Pa ²⁾ 0 ... 1,500 Pa ²⁾ 0 ... 1,000 Pa ²⁾	-250 ... +250 Pa ¹⁾ -100 ... +100 Pa ²⁾ -50 ... +50 Pa ²⁾ -25 ... +25 Pa ²⁾ 0 ... 250 Pa ²⁾ 0 ... 100 Pa ²⁾ 0 ... 50 Pa ²⁾ 0 ... 25 Pa ²⁾	0 ... 12,000 Pa ¹⁾ 0 ... 10,000 Pa ²⁾ 0 ... 9,000 Pa ²⁾ 0 ... 8,000 Pa ²⁾ 0 ... 7,500 Pa ²⁾ 0 ... 7,000 Pa ²⁾ -1,000 ... +1,000 Pa ²⁾ -500 ... +500 Pa ²⁾
	8 measuring ranges can be selected via jumpers (measuring ranges < 250 Pa: automatic zero point setting (AZ) recommended)			
	Option: Digital indicator (D), automatic zero point setting (AZ), digital indicator and automatic zero point setting (AZ-D)			
Accuracy	0 ... 12,000 Pa: ±2 Pa ± 1.5 % 0 ... 7,000 Pa: ±2 Pa ± 1.5 % 0 ... 2,500 Pa: ±2 Pa ± 1.5 % -250 ... +250 Pa: ±2 Pa ± 1.5 % All data refer to the above mentioned pressure range.			
Units (adjustable in the menu)	■ Air flow m ³ /h, m ³ /s, l/s, cfm ■ Differential pressure Pa, kPa, mbar, inWC, mmWC			
Process connection	Connecting nozzle (ABS), lower mount, for hoses with inner diameter 4 or 6 mm			
Power supply U_B	■ With automatic zero point setting (AZ) AC 24 V or DC 24 V ±10 % ■ Without automatic zero point setting (AZ) Output signal 0 ... 10 V: DC 14 ... 30 V or AC 24 V ±10 % Output signal 4 ... 20 mA: DC 9 ... 30 V or AC 24 V ±10 %			
Electrical connection	Cable gland M16 Screw terminals max. 1.5 mm ²			
Output signal	DC 0 ... 10 V (3-wire) or 4 ... 20 mA (3-wire)			
Current consumption	< 1.0 W (DC 0 ... 10 V), < 1.2 W (4 ... 20 mA), < 1.3 W (Modbus®)			
Case	Plastic (ABS)			
Permissible temperatures	■ Ambient temperature -20 ... +70 °C ■ Storage temperature -50 ... +70 °C ■ Medium temperature -10 ... +50 °C			
Ingress protection	IP54			
Weight	150 g			

1) Standard

2) Jumpers

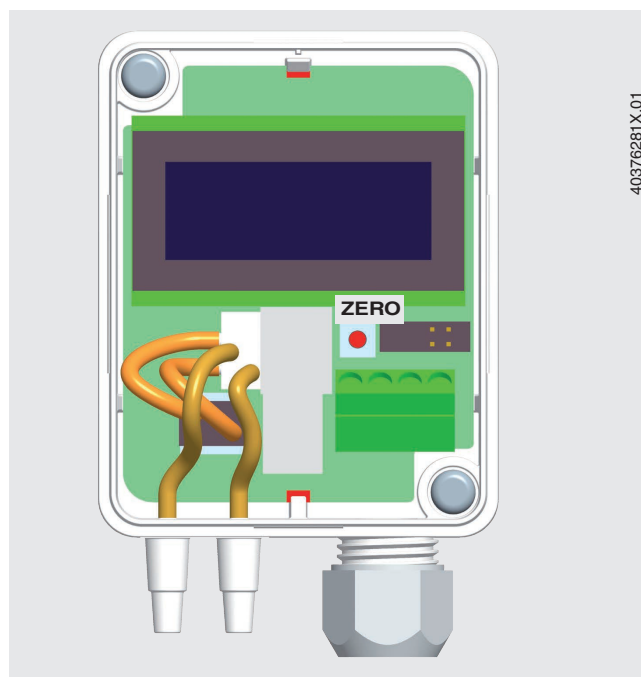
Modbus® version (option)

Modbus® communication	
Protocol	Modbus® via serial interface
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	9,600, 19,200, 38,400 - adjustable in the configuration
Modbus® addresses	1 ... 247 addresses - adjustable in the configuration

Automatic zero point setting (option)

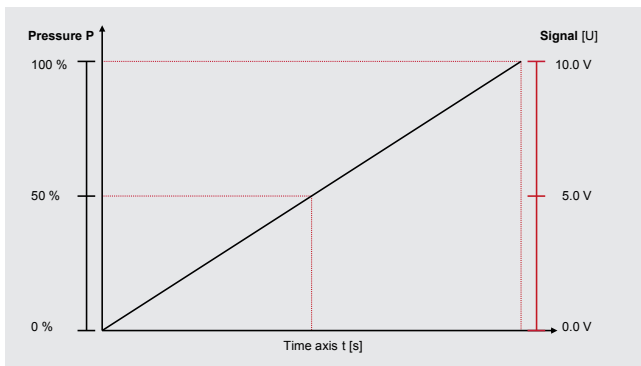
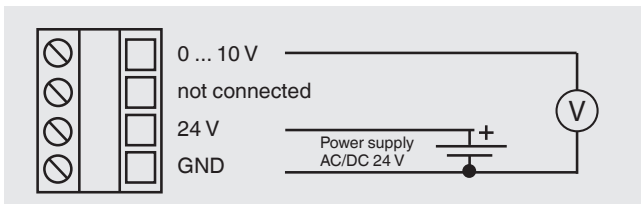
The automatic zero point setting aligns the zero point from time to time so that a manual zero point setting is not necessary.

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

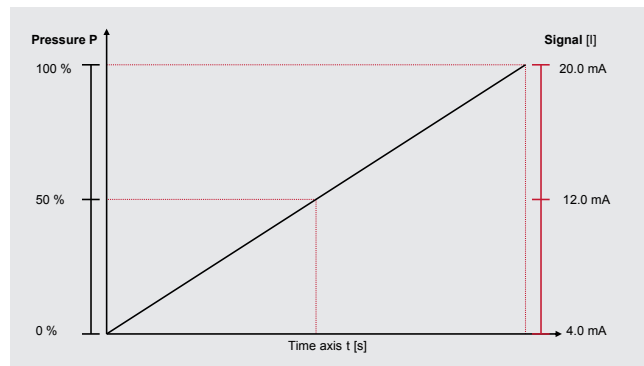
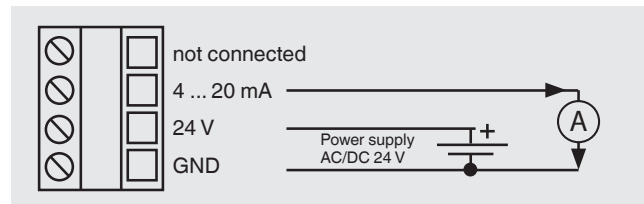


Electrical connection

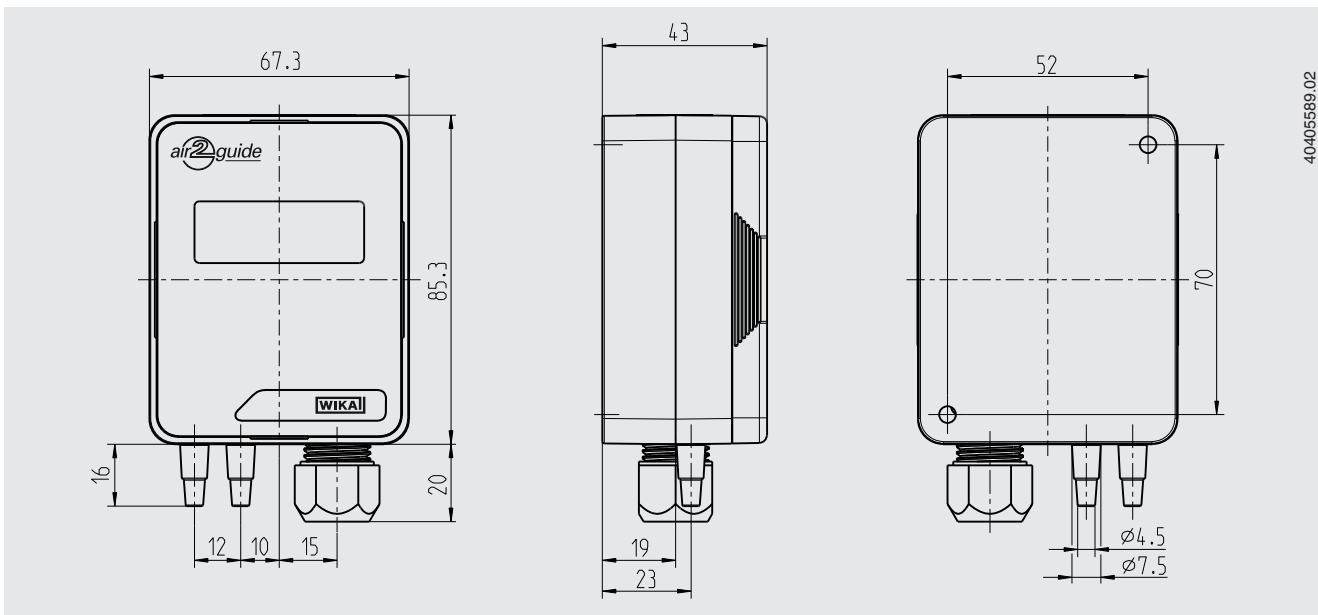
Output signal DC 0 ... 10 V



Output signal 4 ... 20 mA



Dimensions in mm



Accessories

Description	Order number
Connections for static duct probes for 1/4" pipes	
	Insertion length 100 mm
	Insertion length 150 mm
	Insertion length 200 mm
Measuring hoses	
	PVC hose, inner diameter 4 mm, roll at 25 m
	PVC hose, inner diameter 6 mm, roll at 25 m
	Silicone hose inner diameter 4 mm, roll at 25 m
	Silicone hose inner diameter 6 mm, roll at 25 m
Duct connector for hose 4 and 6 mm	
	

Approvals

Logo	Description	Country
	EC declaration of conformity ■ EMC directive ■ RoHS conformity ■ WEEE directive	European Union
	EAC (option) Import certificate	Eurasian Economic Community
	GOST (option) Metrology, measurement technology	Russia
	KazInMetr (option) Metrology, measurement technology	Kazakhstan
-	MTSCHS (option) Permission for commissioning	Kazakhstan
	UkrSEPRO (option) Metrology, measurement technology	Ukraine
	Uzstandard (option) Metrology, measurement technology	Uzbekistan

Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

Scope of delivery

- Differential pressure transmitter
- 2 mounting screws

Approvals and certificates, see website

Ordering information

Model / Measuring range / Options

© 08/2008 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.



WIKA 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