

Air velocity meter

Model A2G-20

WIKA data sheet SP 69.06

Applications

- For measuring the air velocity and the temperature of air and other non-inflammable and non-aggressive gases in fresh and exhaust air ducts
- Designed for direct connection to control systems or the building automation system

Special features

- Electrical output signal DC 0 ... 10 V or 4 ... 20 mA or Modbus®
- Output signal for velocity and air temperature in one instrument
- With switching output
- Mounting flange for mounting on circular ventilation pipes or rectangular ventilation ducts
- Maintenance-free



Air velocity meter with LC display, model A2G-20

Description

The model A2G-20 air velocity meter is used for measuring flow rates of gaseous media in ventilation and air-conditioning applications. In addition, the A2G-20 features integrated temperature measurement.

Electrical output signals for both measurands (DC 0 ... 10 V or 4 ... 20 mA; adjustable at the instrument via jumpers) enable the direct connection to control systems or the building automation system.

The display version is also available with a Modbus® output signal and offers a freely selectable measuring range for air velocity.

The measuring ranges can be selected via the instrument menu (display).

The display version has a PID controller for the air velocity. The PID controller regulates the power in accordance with the air velocity set point specified for the controller.

An additional switching output enables flexible use for controlling further components of a ventilation and air-conditioning system.

The LC display and the clear menu navigation enable a time-saving and simple commissioning.

Specifications

Overview of versions	
Probe lengths	■ 112 mm [4.41 in] ■ 212 mm [8.35 in] (standard) ■ 412 mm [16.22 in]
Version	■ Without LC display ¹⁾ ■ With LC display ■ With LC display and relay version ²⁾

- 1) Not available for Modbus® and relay version
2) Not available for Modbus® version

Basic information	
Case	Plastic (ABS)
Cover	Plastic (PC)
Ingress protection per IEC 60529	IP54
Weight	220 g [0.49 lb]
Mounting type	Duct installation via mounting flange

Measuring element	
Type of measuring element	Pt1000 (air velocity) and NTC10k (temperature)

Accuracy specifications	
Accuracy	
Air velocity	Measuring range 0.15 ... 2 m/s [0.5 ft/s ... 6.6 ft/s]: < 0.2 m/s [0.3 ft/s] +2 % of reading Measuring range 2 ... 10 m/s [6.6 ft/s ... 33 ft/s]: < 0.5 m/s [1.6 ft/s] +3 % of reading Measuring range 10 ... 20 m/s [33 ft/s ... 66 ft/s]: < 1.0 m/s [3.3 ft/s] +3 % of reading
Temperature ¹⁾	±0.5 °C [0.9 °F] (v > 0.5 m/s)

- 1) The instrument is calibrated at 25 °C [77 °F].

Measuring range / Scale range	
Measuring range	
Air velocity	0 ... 2 m/s [0 ... 7 ft/s] 0 ... 10 m/s [0 ... 33 ft/s] (factory setting / default) 0 ... 20 m/s [0 ... 66 ft/s] 200 ... 4,000 ft/min Adjustable via display or jumper
Temperature ¹⁾	0 ... 50 °C [32 ... 122 °F] (factory setting / default) -25 ... +50 °C [-13 ... 122 °F]
Warm-up time	15 seconds
Digital indicator or digital display	
Display range	Size: 46.0 x 14.5 mm [1.81 x 0.57 in]
Type of display	LC display
Backlighting	Yes
Type of indication	2-line display (12 characters/line)

Output signal	
Air velocity	DC 0 ... 10 V (linear to m/s): load min. 1 kΩ 4 ... 20 mA (linear to m/s): load 20 ... 400 Ω
Temperature	DC 0 ... 10 V (linear to °C): load min. 1 kΩ 4 ... 20 mA (linear to °C): load 20 ... 400 Ω

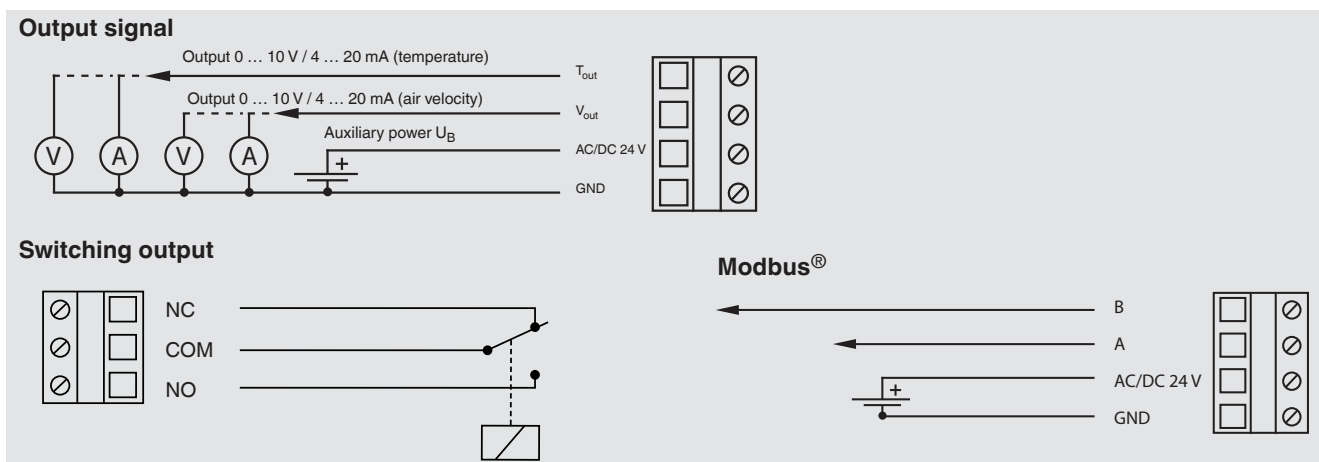
Output signal	
Auxiliary power U_B	AC/DC 24 V $\pm 10\%$
Switching output	3 screw terminals (NC, COM, NO) Relay (potential-free, change-over contact, max. AC 230 V, 6 A, DC 30 V, 6 A)

Electrical connection	
Connection type	M16 cable gland with screw terminals
Cable diameter	Max. 1.5 mm ²

Operating conditions	
Place of use	Indoor
Storage temperature range	-20 ... +70 °C [-4 ... +158 °F]
Ambient temperature range	
Transmitter case	0 ... 50 °C [32 ... 122 °F]
Probe	-25 ... +50 °C [-13 ... +10 °F]
Humidity	Max. 95 % relative humidity
Condensation	Non-condensing

Communication	
Modbus®	
Protocol	Modbus® RTU
Interface	RS-485

Electrical connection



Approvals

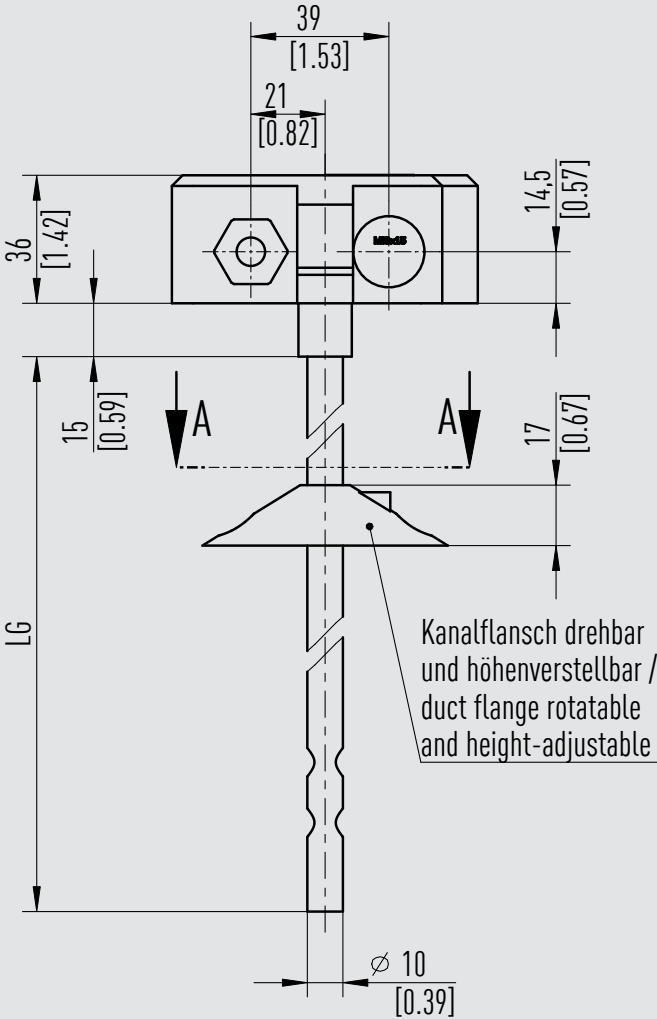
Logo	Description	Region
CE	EU declaration of conformity	European Union
	EMC Directive	
	RoHS directive	

Certificates

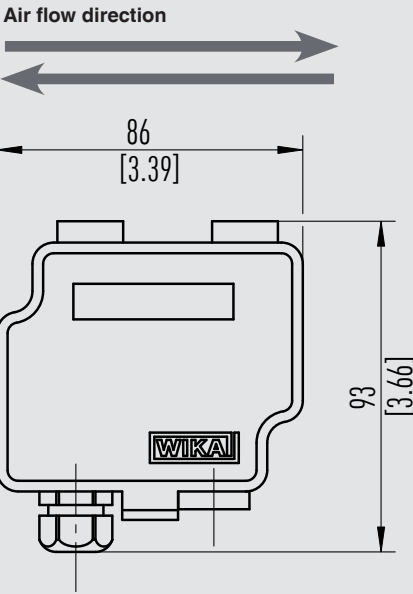
Description	
Certificates	2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)

Dimensions in mm [in]

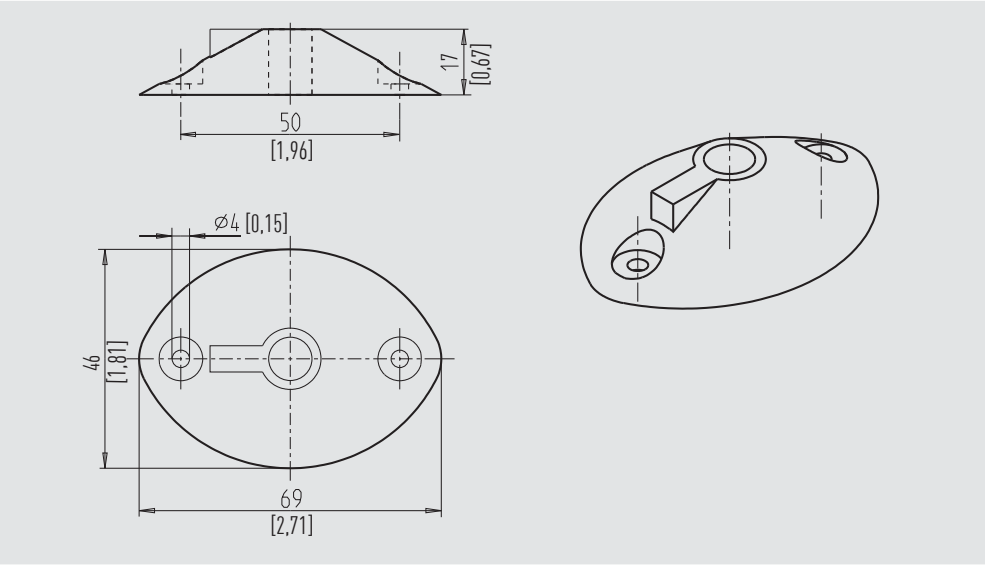
40340201.05



LG
112 (4.41)
212 (8.35)
412 (16.22)



Mounting flange



Accessories and spare parts

Model	Description	Order number
-	Mounting flange	40451780

Ordering information

Model / Version / Options

© 02/2011 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
The specifications given in this document represent the state of the art 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
info@wika.de
www.wika.de