Operating instructions
Betriebsanleitung
Mode d´emploi
Manual de instrucciones
Manuale d'uso

Differential pressure gauges models A2G-10/15	**GB**
Differenzdruckmessgeräte Typen A2G-10/15	**D**
Manomètres pour pression différentielle types A2G-10/15	**F**
Manómetros de presión diferencial modelos A2G-10/15	**E**
Manometri per pressione differenziale modellos A2G-10/15	**I**

Differential pressure gauge model A2G-10

Part of your business

Prior to starting any work, read the operating instructions!
Keep for later use!

Vor Beginn aller Arbeiten Betriebsanleitung lesen!
Zum späteren Gebrauch aufbewahren!

Lire le mode d'emploi avant de commencer toute opération !
A conserver pour une utilisation ultérieure !

¡Leer el manual de instrucciones antes de comenzar cualquier trabajo!
¡Guardar el manual para una eventual consulta!

Prima di iniziare ad utilizzare lo strumento, leggere il manuale d'uso!
Conservare per future consultazioni!

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Contents

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1. General information

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- The pressure gauge described in the operating instructions has been designed and manufactured using state-of-the-art technology. All components are subject to stringent quality and environmental criteria during production. Our management systems are certified to ISO 9001 and ISO 14001.
- These operating instructions contain important information on handling the instrument. Working safely requires that all safety instructions and work instructions are observed.
- Observe the relevant local accident prevention regulations and general safety regulations for the instrument's range of use.
- The operating instructions are part of the product and must be kept in the immediate vicinity of the instrument and readily accessible to skilled personnel at any time.
- Skilled personnel must have carefully read and understood the operating instructions, prior to beginning any work.
- The manufacturer's liability is void in the case of any damage caused by using the product contrary to its intended use, non-compliance with these operating instructions, assignment of insufficiently qualified skilled personnel or unauthorised modifications to the instrument.
- The general terms and conditions contained in the sales documentation shall apply.
- Subject to technical modifications.
- Further information:
  - Internet address: www.wika.de / www.wika.com
    www.air2guide.com
  - Relevant data sheet: PM 07.40 and PV 17.40

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Explanation of symbols

WARNING!
... indicates a potentially dangerous situation which can result in serious injury or death if not avoided.

Information
… points out useful tips, recommendations and information for efficient and trouble-free operation.

2. Safety

WARNING!
Before installation, commissioning and operation, ensure that the appropriate pressure gauge has been selected in terms of measuring range, design and specific measuring conditions.
Non-observance can result in serious injury and/or damage to the equipment.

Further important safety instructions can be found in the individual chapters of these operating instructions.

2.1 Intended use

This pressure gauge is designed for measuring very low pressures in dry, clean, non-aggressive gases, primarily air.

The instrument has been designed and built solely for the intended use described here, and may only be used accordingly.

The manufacturer shall not be liable for claims of any type based on operation contrary to the intended use.

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2.2 Personnel qualification

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WARNING!
Risk of injury if qualification is insufficient!
Improper handling can result in considerable injury and damage to equipment.

- The activities described in these operating instructions may only be carried out by skilled personnel who have the qualifications described below.

Skilled personnel
Skilled personnel are understood to be personnel who, based on their technical training, knowledge of measurement and control technology and on their experience and knowledge of country-specific regulations, current standards and directives, are capable of carrying out the work described and independently recognising potential hazards.

Explanation of symbols

CE

CE, Communauté Européenne
Instruments bearing this mark comply with the relevant European directives.

3. Specifications

Pressure limitation
Steady: Full scale value
Fluctuating: Full scale value

Overpressure safety
Plus and minus side 20 kPa

Max. working pressure (static pressure)
20 kPa

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Process connection
In accordance with the general technical regulations for pressure gauges (e.g. EN 837-2 "Selection and installation recommendations for pressure gauges"), plastic, G 1/8 female threads

Permissible temperature
Ambient: -30 … +80 °C
Medium: -16 … +50 °C

Temperature effect
When the temperature of the measuring system deviates from the reference temperature (+20 °C): max. ±0.5 %/10 K of full scale value

Ingress protection
IP 54 per EN 60529 / IEC 529, optional IP 65

EMC directive
Per EN 61000-6-4 and EN 61000-6-2 (cable length max 30 m)

For further specifications see WIKA data sheet PM 07.40, PV 17.40 and the order documentation.

4. Design and function

Description

- Nominal size 110 mm
- The instruments measure the pressure by means of diaphragms (silicone)
- The measuring characteristics are in accordance with the EN 837-3 standard and ventilation and air conditioning (VAC) regulations

Scope of delivery

Cross-check the scope of delivery with the delivery note.

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5. Transport, packaging and storage

5.1 Transport

Check the pressure gauge for any damage that may have been caused by transport. Obvious damage must be reported immediately.

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5.2 Packaging

Do not remove packaging until just before mounting.
Keep the packaging as it will provide optimum protection during transport (e.g. change in installation site, sending for repair).

5.3 Storage

Permissible conditions at the place of storage
Storage temperature: -30 ... +80 °C
Protect the instruments from moisture and dust.

6. Commissioning, operation

Installation and mechanical connection

In accordance with the general technical regulations for pressure gauges (e.g. EN 837-2 "Selection and installation recommendations for pressure gauges").

- Process connection lower mount (LM) or back mount (BM)
- Protect measuring instruments from contamination, high temperature changes and vibrations
- air2guide standard gauges are calibrated in vertical position and should be installed in the same position to avoid loss of class accuracy. If a different installation position is required please specify when ordering. Gauges with high pressure ranges can be installed in different non-vertical mounting position, by simply adjusting the zero point.

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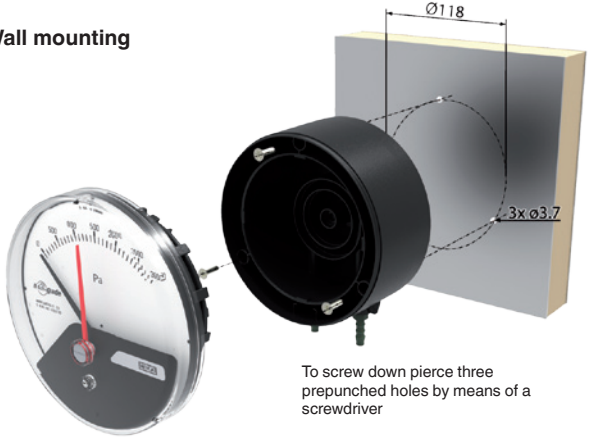
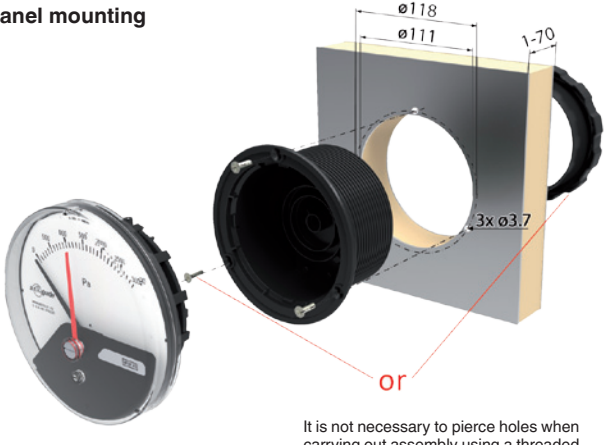
Wall mounting



To screw down pierce three prepunched holes by means of a screwdriver

Panel mounting



It is not necessary to pierce holes when carrying out assembly using a threaded bezel

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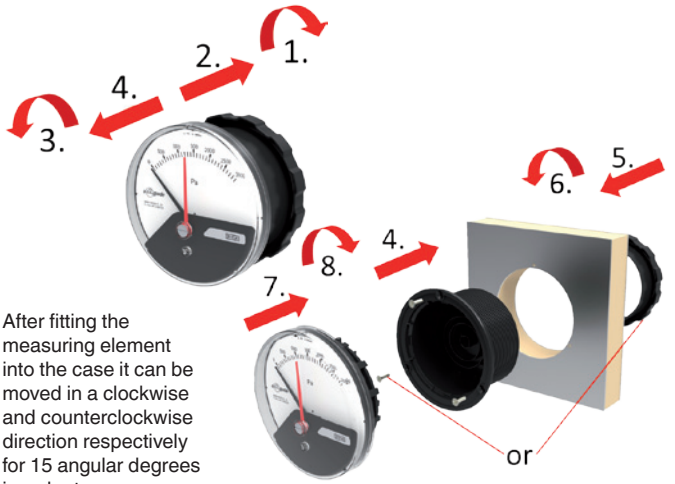
Detailed mounting steps for surface mounting

Detailed mounting steps for panel mounting



After fitting the measuring element into the case it can be moved in a clockwise and counterclockwise direction respectively for 15 angular degrees in order to ensure precise horizontal positioning of the instrument.

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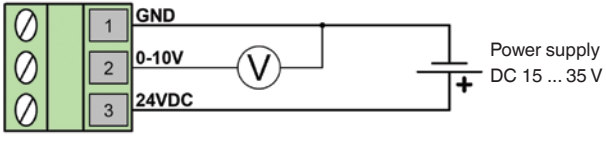
Commissioning

- During the commissioning process pressure surges must be avoided at all costs
- Install the pressure connection according to the symbols
  ⊕ high pressure ⊖ low pressure
- Use the pressure gauge only if the diaphragm is undamaged and if it is in perfect condition with regard to safety.

7. Output signal (model A2G-15)

Output signal 0 … 10 V, 3-wire
Power supply U_B DC 15 ... 35 V
Measuring accuracy of sensor ±3 % of end value of measuring range
Electrical connection M12 cable gland with screw terminals

Terminal configuration



8. Zero point adjustment

In general, the zero point should only be checked and adjusted after the system has been depressurised.

Mechanical and electrical zero point

If there is a zero point deviation (in depressurised condition), the mechanical as well as the electrical zero point can be adjusted simultaneously by turning the adjustment screw located in the front.

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9. Options and accessories

Mark pointer
The mark pointer indicates the maximum allowable differential pressure on the dial. It can be adjusted manually to the desired value.

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Standard accessories
- 3 mounting screws
- for wall mounting straight threaded pressure connection G 1/8 for inner diameter 4 or 6 mm
- for panel mounting angled threaded pressure connection G 1/8 for inner diameter 4 or 6 mm

Measuring hose
Plastic, for inner diameter 4 or 6 mm, reels available at 25 m

10. Maintenance and cleaning

WIKA differential pressure gauges are maintenance-free and offer long service life provided they are handled and operated properly.

Clean the instruments with a moist cloth (soap water).

Repairs must only be carried out by the manufacturer or appropriately qualified skilled personnel.

11. Disposal

Incorrect disposal can put the environment at risk.

Dispose of instrument components and packaging materials in an environmentally compatible way and in accordance with the country-specific waste disposal regulations.

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