



Arthur Grillo

measuring & controlling systems

Installation and operation manual Differential pressure manometer - DA2000 series



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I. General safety instructions

I.1 Signal words for safety instructions

The safety instructions in this operation manual are designed to prevent hazards. They can be found in the operation manual before an operation / task / activity is described, which can entail a possible hazard.

CAUTION

Identification of a hazard with a low risk, which can lead to material damage or minor or moderate bodily injuries.

NOTICE

Signal word for important information regarding the product, which needs to be specifically pointed out.

Hazard word



Type of hazard

Hazard source

Hazard prevention

I.2 Used pictograms and symbols

In this manual the following symbols are used:



General hazard symbol (danger, warning, caution)



General information

I.3 General notes

NOTICE



This manual contains information for installation and operation of the pressure controller and is exclusively for the operator and expert staff. The guidelines in this manual will help to avoid danger and downtime.

2. Product description

The differential pressure manometer of the DA2000 series are build to measures and display pressure, negative pressure or differential pressure of non-aggressive gases.

2.1 Intended use

This device is primarily intended for use with air conditioning systems, room pressure control or filter control. Our differential pressure manometers DA2000s are a simple solution to monitor pressure in for example filter systems of ventilation technologies.

2.3 Functional description

The differential pressure manometers DA2000s are low pressure indicator.

A soft silicone diaphragm is used as sensor. Under the influence of the differential pressure the diaphragm displaces a measuring spring until the spring force compensates pressure pushing on the diaphragm. The deflection is transferred to the display via a pointer engine.

To meet your needs, we offer the DA2000s with different measuring ranges and optional additional functions.

Optional additional functions are:

- Two limit indicator, in the colors red or green
- Analog outputs 0...10 V or 4...20 mA (DA2000-A)
- Combination with a pressure switch (DA2000-K)
- IP66 housing for each product version (DA2000-S, DA2000-A-S, DA2000-K-S)
- Root extracted output (rad-DA2000)
- Scaled in m³/h
- Double scale (e.g. in Pa and m³/h)
- Tone Scale in desired colors

3. Installation

The devices of the DA2000 series are intended for wall mounting or installation into a corresponding panel.

When choosing your location, please note that:

- The mounting surface must be solid enough and vibration-free.
- The environment has to fulfil the ambient climatic conditions as given in the technical data.

CAUTION



Material damage

Read the manual carefully before installation and operation
 Only experienced staff may connect the device and bring it into operation.

NOTICE



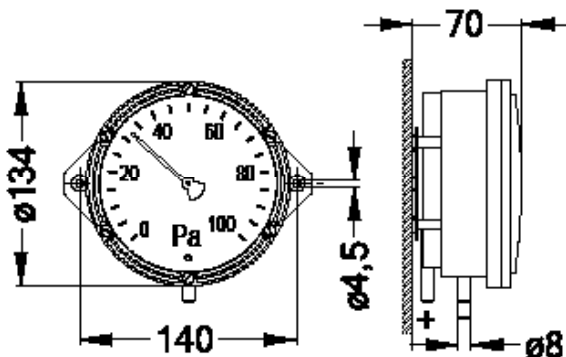
- The device is position depended.
- The DA2000 must be mounted vertically.
- The DA2000 can be mounted to a wall or panel

3.1 Dimensions

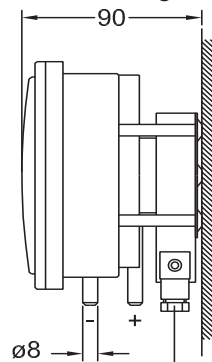
All dimensions in mm.

3.1.1 DA2000 & DA2000-A

Wall mounting DA2000

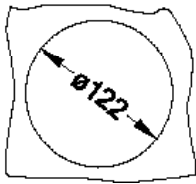


Wall mounting DA2000-A

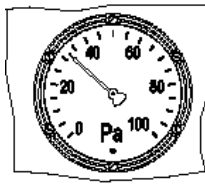
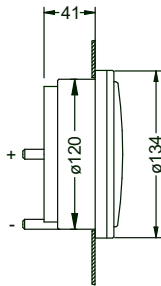


Winkelstecker
 16x16

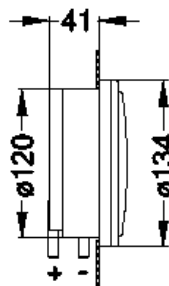
Panel mounting (in front of the panel)



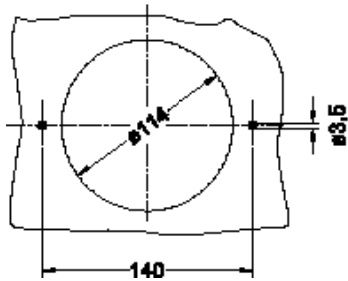
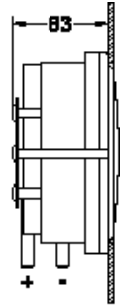
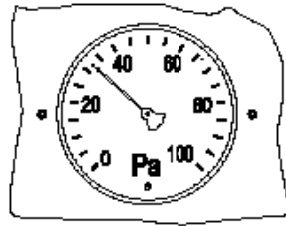
Anschlussstutzen
HINTEN



Anschlussstutzen
UNTEN

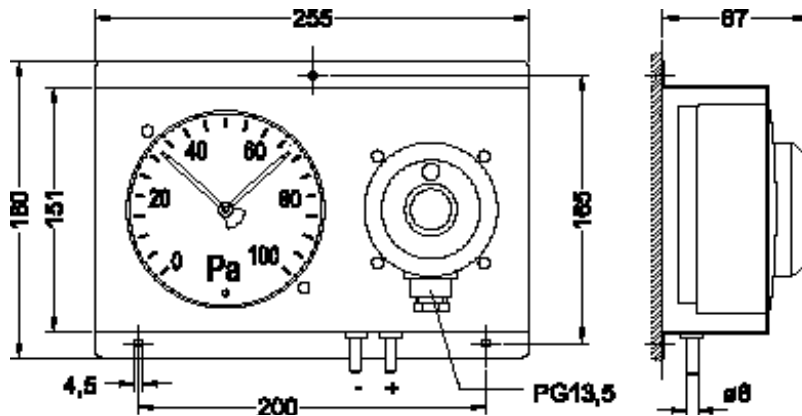


Panel mounting (behind the panel)



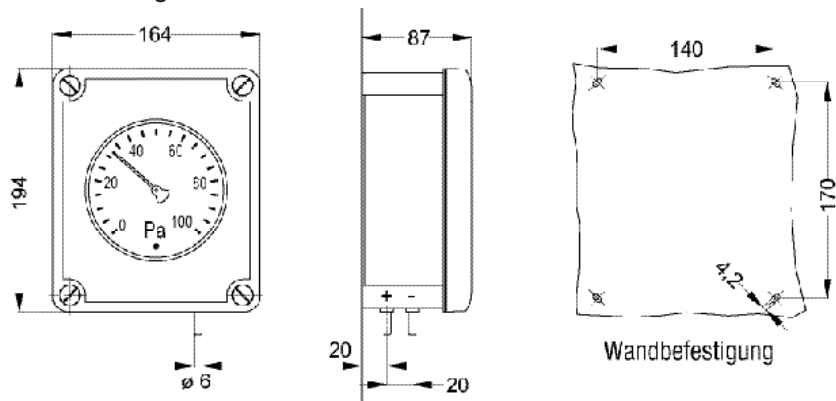
3.1.2 DA2000-K

Wall mounting

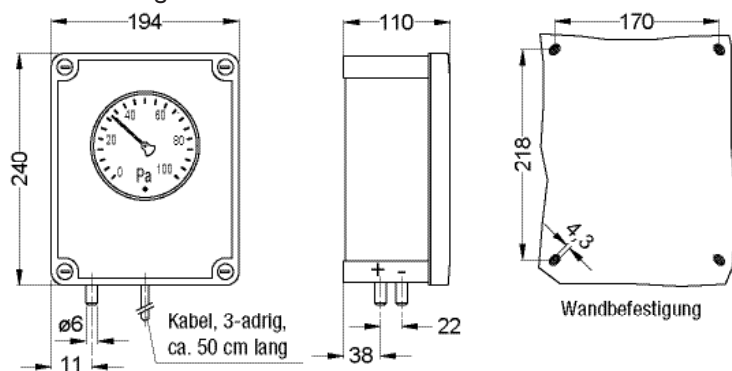


3.1.3 DA2000 series in IP66 protective housing

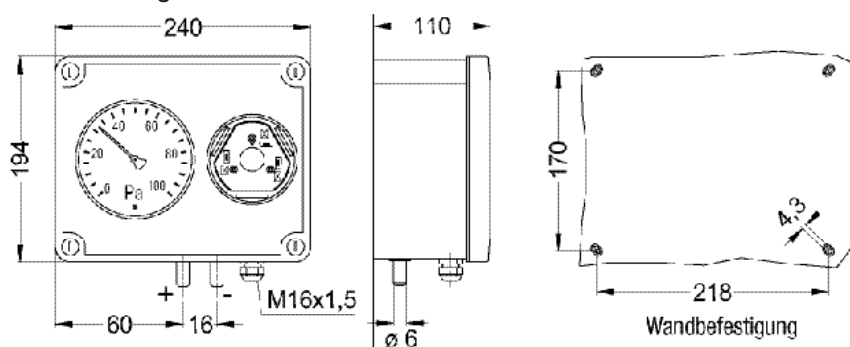
Wall mounting DA2000-S



Wall mounting DA2000-A-S



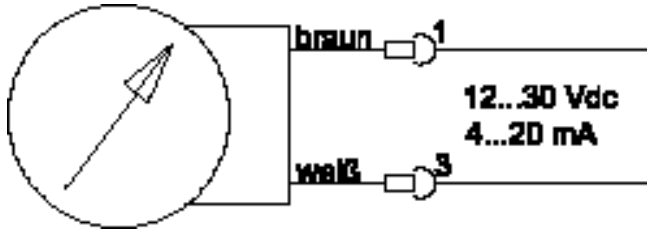
Wall mounting DA2000-K-S



4. Electrical connection

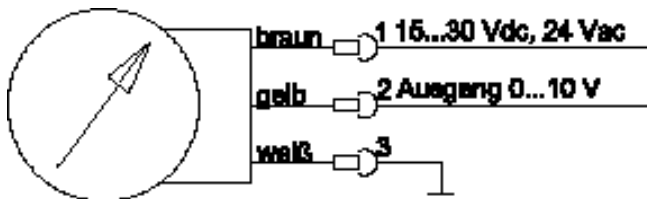
DA2000-A

Connection diagram two-wire circuit



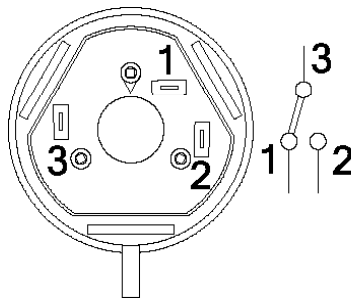
DA2000-A

Connection diagram three-wire circuit



DA2000-K

Connection diagram pressure switch



5. Maintenance

The DA2000 contains no wearing or consumable parts. Servicing is not required. On request, Arthur Grillo GmbH offers an annual calibration with factory certificate. For information, please contact:



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40878 Ratingen

Phone: 0 21 02 - 47 10 22
Fax: 0 21 02 - 47 58 82
E-Mail: info@grillo-messgeraete.de

6. Warranty

Warranty and liability claims for personal and property damage are excluded if they are caused by one or more of the following reasons:

- Improper use of the device.
- Improper installation, commissioning, operation and maintenance of the device.
- Unauthorized modifications to the device beyond the intended use.
- Disasters due to external influences and force majeure.

7. Disposal

Dispose of parts so as not to endanger the human health or environment. Follow the laws in the country of use for disposing of electronic components and devices during disposal.

8. Specification

Manometer

Measurement range:	0...100 Pa, 0...200 Pa, 0...500 Pa, 0...1000 Pa, 0...2000 Pa, 0...5000 Pa
Display:	Scale length 270° = approx. 250 mm
Overload protection:	not less than 10-times measurement span
Static pressure:	max. 0,2 bar
Pressure connection:	hose nozzle 8 mm \varnothing
Housing:	Ultramid/ABS, black, transparent cover round outside 134 mm \varnothing
Ambient temperature:	-10...50 °C
Protection class:	IP 65
Weight:	approx. 400 g
Tolerance:	$\pm 2 \%$

Pressure switch

Adjustable switching ranges:	20...300 Pa, 30...400 Pa 50...500 Pa, 200...1000 Pa, 500...2500 Pa, 1000...5000 Pa
Tolerance on the upper and lower switching point:	$\pm 15 \%$
Switching capacity:	max. 1,5 A / 250 Vac
Durability:	mechanical more than 10 ⁶ cycles
Contact arrangement:	normally closed contact - NC normally open contact - NO supply - COM

Analog output

Signal range:	0...10 V, 3-wire-circuit supply voltage 15...30 Vdc or 24 Vac 4...20 mA, 2-wire-circuit supply voltage 12...30 Vdc
Electrical connection:	rectangle plug connector 16 mm or color coded cable, approx. 50 cm long

Protection class:	IP54 - DA2000, DA2000-A, DA2000-K IP66 - DA2000-S, DA2000-A-S, DA2000-K-S
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8.1 CE-labelling

As an electric device the DPC200 falls within the scope of the directive 2004/108/EG (EMV-directive). In the scope of the EMV-directive the following norms were applied:

DIN EN 61000-6-2:2006-03 correction 1:2011-06	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
DIN EN 61000-6-3:2011-09	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light industrial environments

You can order the Declaration of Conformity at:

