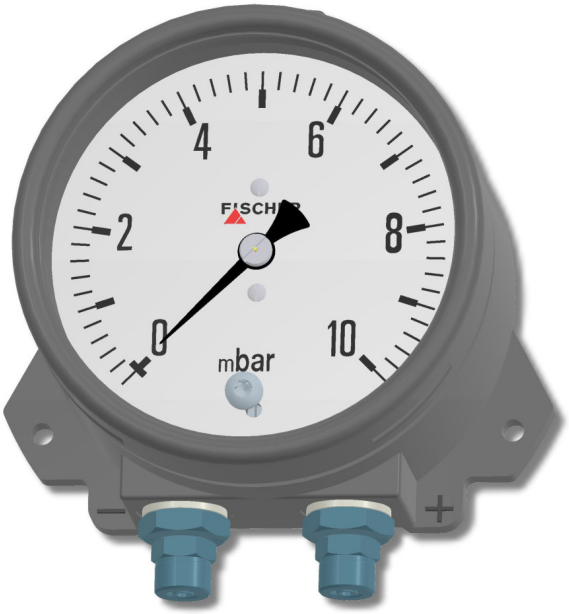
developing solutions

FISCHER
MESS- UND REGELTECHNIK




# Data sheet

## DA08

Differential pressure measuring unit

09005366 • DB_EN_DA08 • Rev. ST4-A • 07/18

# 1 Product and functional description

## 1.1 Performance characteristics

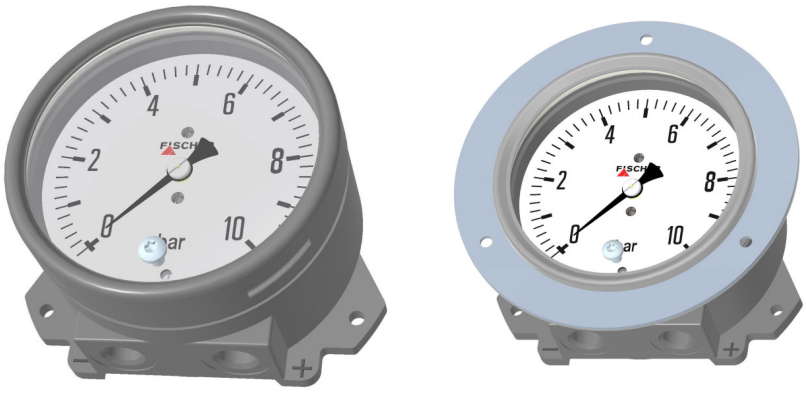
### Typical applications

- Process measuring equipment
- Ventilation technology
- Filter monitoring

### Important features

- Measuring range from 0…6 mbar
- Zero point correction on front side
- Protection class IP65

## 1.2 Equipment versions

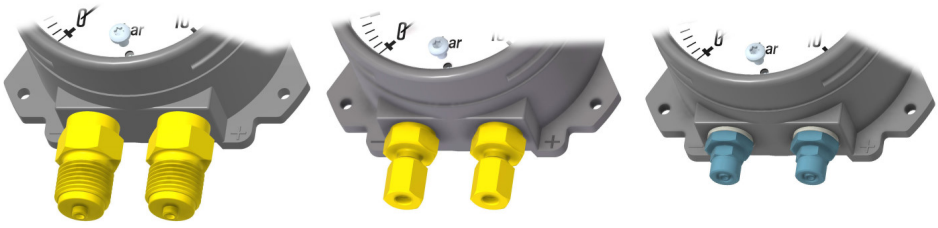


Wall mounting | Installation into the control panel

*Fig. 1:* Equipment versions

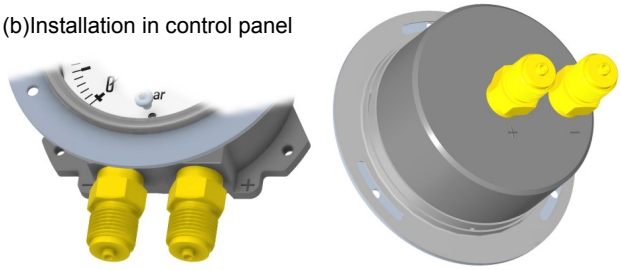
### Process connection

(a) Wall mounting



Connection pin | Cutting ring screw connection | Hose screw connection

(b)Installation in control panel



Connection bottom | Connection rear

*Fig. 2:* Process connections

**NOTICE! All named screw connections can also be used for installation in a control panel.**

## 1.3 Intended use

The DA08 serves to measure differential pressures in gaseous, non-aggressive, dry, oil and grease-free media. The unit can be used to monitor small and minute differential pressures on roller tape filters, fans, venturi nozzles etc.

## 1.4 Function diagram

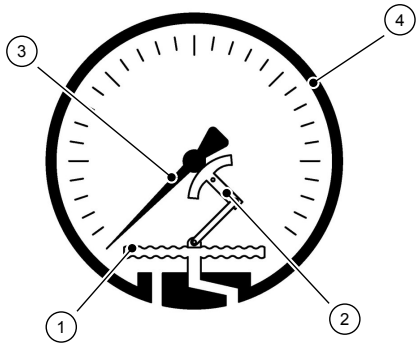



*Fig. 3:* Function diagram

| | | | |
|---|---|---|---|
| 1 | Diaphragm capsule | 2 | Motion train |
| 3 | Needle | 4 | Housing |

## 1.5 Design and mode of operation

A capsule measuring unit is installed in a pressure-resistant casing is fitted The higher pressure (+) acts on the inside of the capsule, the lower pressure (-) is exerted into the pressure-resistant casing.

The differential pressure created between the inside and outside of the measuring element changes the shape of the capsule. This is shown by a pointer mechanism.

# 2 Technical Data

## 2.1 General

| General information | |
|---|---|
| Type designation | DA08 |
| Pressure type | Differential pressure |
| Measuring principle | Diaphragm capsule |

| Reference conditions (acc. to IEC 61298-1) | | |
|---|---|---|
| Temperature | +15 … +25 °C | |
| Relative humidity | 45 … 75 % | |
| Air pressure | 86 … 106 kPa | 860 … 1060 mbar |
| Installation position | senkrecht | |

## 2.2 Input variables

| Measuring ranges | | Max. durability | |
|---|---|---|---|
| mbar | PA | mbar | kPa |
| 0 … 6 | 0 … 600 | 60 | 6 |
| 0 … 10 | 0 … 1000 | 100 | 10 |
| 0 … 16 | 0 … 1600 | 160 | 16 |
| 0 … 25 | 0 … 2500 | 200 | 20 |
| 0 … 40 | 0 … 4000 | 200 | 20 |
| 0 … 60 | --- | 200 | 20 |
| 0 … 100 | --- | 200 | 20 |

| | | |
|---|---|---|
| Maximum system pressure | 200 mbar | 20 kPa |

## 2.3 Measured value display

| | | |
|---|---|---|
| Measured value display | | Round housing Ø100 |
| Scale | 0 … 6 mbar | 162° |
| | 0 … 10 mbar | 169° |
| | All other measuring ranges | 270° |
| Display precision | | Class 1.6 gem. DIN EN 837 |

## 2.4 Operating conditions

| | |
|---|---|
| Ambient temperature range | -20 … +70 °C |
| Storage temperature range | -20 … +80 °C |
| Medium temperature range | Max. 50 °C |
| Protection class IP | IP65 acc. to DIN EN 60529 |

## 2.5 Construction design

| Process connection | Material |
|---|---|
| Inner thread G¼ | Aluminium |
| Connection shanks with external thread G¼ (DIN EN 837) | Brass |
| Connection shanks with external thread G½ (DIN EN 837) | Brass |
| Cutting ring connection in brass for 6 mm pipe | Brass |
| Cutting ring connection in brass for 8 mm pipe | Brass |
| Cutting ring connection in brass for 10 mm pipe | Brass |
| CK fast screw connection for 6/4 mm hose | Aluminium |
| CK fast screw connection for 8/6 mm hose | Aluminium |

| | |
|---|---|
| Installation position | senkrecht |
| Dimensions (H x W x D)*) | 118 x 118 x 61 |
| Weight | approx. 650 g |

*) Process connection inner thread G¼

### 2.5.1 Materials

| | | | |
|---|---|---|---|
| Process connection | M | U | Brass, aluminium |
| Seal for CK fast screw connection | M | U | Hard PVC |
| Measuring unit | M | | Brass, copper-beryllium |
| Needle | M | | Aluminium, black |
| Housing | M | | Aluminium, painted black |
| Bayonet ring | | U | St 1403, painted black |
| Seal | M | | NBR |
| Inspection disk | M | U | Acrylic glass |

M: contact with measuring medium
U: contact with environment

### 2.5.2 Dimensional drawings

All dimensions in mm unless otherwise stated

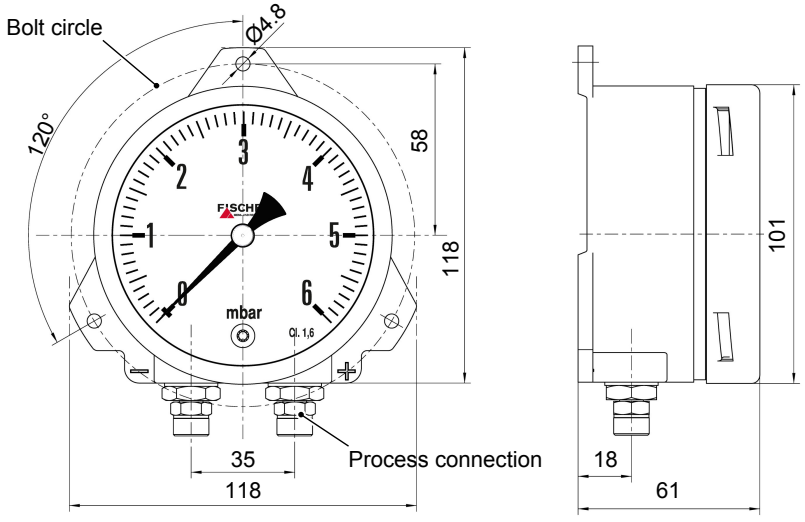
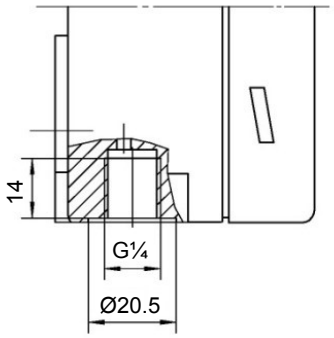



*Fig. 4:* Dimensional picture

## Process connection




Code 01

*Fig. 5:* Inner thread G¼

### Connection port with cylindrical external thread

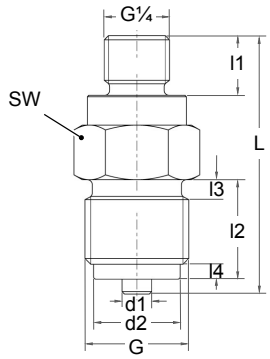



*Fig. 6:* Connecting port G

| G | d1 | d2 | L | l1 | l2 | l3 | l4 | SW |
|---|---|---|---|---|---|---|---|---|
| **Tol.** | *±0.1* | *±0.2* | *±0.3* | *±0.2* | *±0.2* | *±0.1* | *±0.1* | |
| **G½** | 6 | 17.5 | 52 | 12 | 23 | 4 | 3 | 22 |
| **G¼** | 5 | 9.5 | 39 | 12 | 15 | 3 | 2 | 19 |

SW:= Key width

### Cutting ring screw connection

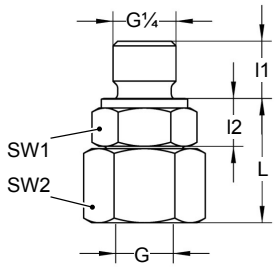



*Fig. 7:* Screw-in connection

| g | L | l1 | l2 | SW1 | SW2 |
|---|---|---|---|---|---|
| Ø tube | | *±0.2* | *±0.2* | | |
| 6 | 28 | 12 | 7 | 19 | 17 |
| 8 | 30 | 12 | 7 | 19 | 17 |
| 10 | 31 | 12 | 8 | 19 | 19 |

SW:= Key width

### Screw connection

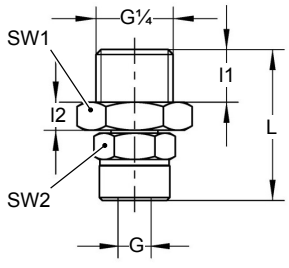



*Fig. 8:* CK fast screw connection

| g | L | l1 | l2 | SW1 | SW2 |
|---|---|---|---|---|---|
| Ø (outside / inside) | | *±0.2* | *±0.2* | | |
| 6/4 | 26 | 9 | 4.8 | 17 | 12 |
| 8/6 | 26 | 9 | 4.8 | 17 | 14 |

SW:= Key width

## Panel mounting set

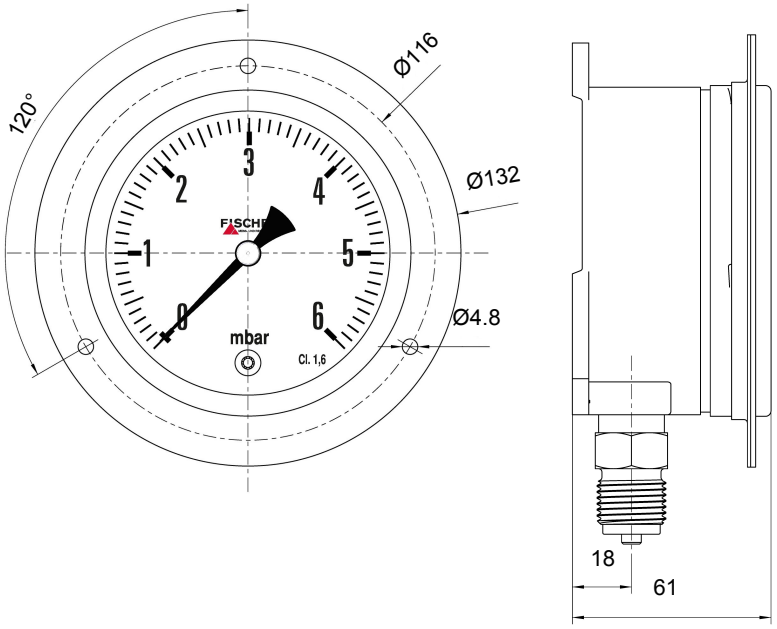



*Fig. 9:* Connections bottom

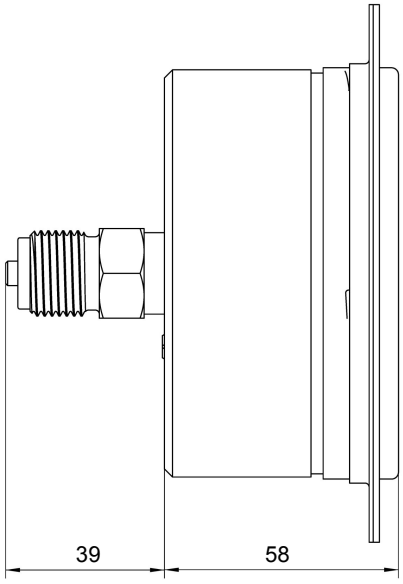
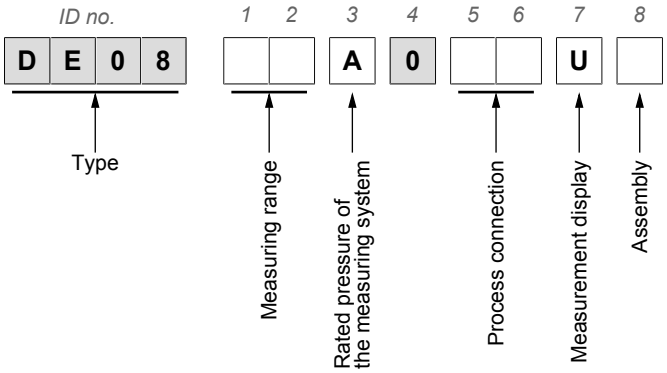



*Fig. 10:* Connections back

# 3 Order codes




| [1.2] | Measuring range |
|---|---|
| **53** | 0 … 6 mbar |
| **54** | 0 … 10 mbar |
| **55** | 0 … 16 mbar |
| **56** | 0 … 25 mbar |
| **57** | 0 … 40 mbar |
| **58** | 0 … 60 mbar |
| **59** | 0 … 100 mbar |
| **D8** | 0 … 600 Pa |
| **D9** | 0 … 1000 Pa |
| **E1** | 0 … 1600 Pa |
| **E2** | 0 … 2500 Pa |
| **E3** | 0 … 4000 Pa |

| [3] | Rated pressure of the measuring system |
|---|---|
| **A** | 200 mbar (20 kPa) |

| [5.6] | Process connection | Material |
|---|---|---|
| **01** | Inner thread G¼ | |
| **06** | Connection shanks with external thread G¼ | Brass |
| **08** | Connection shanks with external thread G½ | Brass |
| **28** | Cutting ring connection in brass for 6 mm pipe | Brass |
| **29** | Cutting ring connection in brass for 8 mm pipe | Brass |
| **30** | Cutting ring connection in brass for 10 mm pipe | Brass |
| **47** | Hose screw connection for 6/4 mm hose | Aluminium |
| **48** | Hose screw connection for 8/6 mm hose | Aluminium |

| [7] | Measured value display | Material |
|---|---|---|
| **U** | Bayonet ring housing Ø100 | Aluminium |

| [8] | Assembly | Process connection |
|---|---|---|
| **B** | Wall mounting | Bottom |
| **L** | Panel mounting set | Bottom |
| **g** | Panel mounting set | rear |