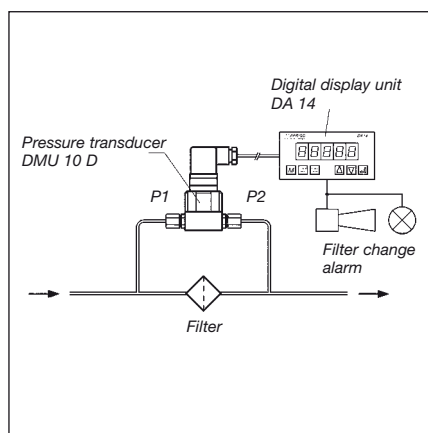


Pressure transducers DMU 10 D

Differential pressure version



Application

For electronic differential pressure measurements at very low differential pressure. For non-corrosive gaseous media. Particularly suitable for monitoring filters and fans in air moving and air conditioning equipment.

Description

The DMU 10 D pressure transducers feature piezo-resistive silicon measuring cells. When pressure is applied, the pressure difference between the positive side and the negative side is converted into a current or voltage signal which is proportional to the differential pressure.

DMU 10 features:

- Robust aluminium housing
- Compact design
- Long service life
- Excellent long-term stability
- High overpressure safety
- Plug-in display DA 06 for local indication on site and switching output (optional)

Accuracy of measurement

Deviation characteristics according to IEC 60770 – limit point setting (non-linearity, hysteresis, repeatability):

> 0/160 mbar: $\leq \pm 0.35\%$ FSO
 0/40–0/160 mbar: $\leq \pm 1\%$ FSO
 < 0/40 mbar: $\leq \pm 2\%$ FSO

Long-term stability

$\leq \pm 0.2\%$ FSO/year

Measuring ranges/overpressure safety

| Differential pressure range | Max. static pressure |
|-----------------------------|----------------------|
| 0/6 mbar bis 0/10 mbar | 100 mbar |
| 0/25 mbar | 200 mbar |
| 0/40 mbar bis 0/60 mbar | 350 mbar |
| 0/100 mbar bis 0/400 mbar | 1000 mbar |
| 0/600 mbar bis 0/1000 mbar | 3000 mbar |

Operating temperature range

Medium: $-25\text{ }^{\circ}\text{C}/+125\text{ }^{\circ}\text{C}$
 Ambient: $-25\text{ }^{\circ}\text{C}/+85\text{ }^{\circ}\text{C}$
 Storage: $-40\text{ }^{\circ}\text{C}/+100\text{ }^{\circ}\text{C}$

Temperature error band

| Differential pressure range | In compensated range 0/60 °C |
|-----------------------------|------------------------------|
| $\leq 0/10\text{ mbar}$ | $\leq \pm 2\%$ FSO |
| $\leq 0/25\text{ mbar}$ | $\leq \pm 1,5\%$ FSO |
| $\leq 0/250\text{ mbar}$ | $\leq \pm 1\%$ FSO |
| $> 0/250\text{ mbar}$ | $\leq \pm 0,5\%$ FSO |

Dynamic characteristics

Response time < 5 ms

Process connection

2 x G1/8 female thread

Materials

Housing: aluminium
 Process-connection: aluminium
 Sensor: silicon, glass, RTV, ceramic, Al₂O₃, nickel
 Seal: PUR glued

Output signal/supply voltage

4–20 mA DC 12–36 V
 2-wire
 0–20 mA DC 14–36 V
 3-wire
 0–10 V DC 14–36 V
 3-wire

Load

4–20 mA $\leq \frac{U_B - U_{Bmin}}{0,02\text{ A}}$
 0–20 mA = 500 Ohm
 0–10 V = 10 kOhm

Current input

0/4–20 mA max. 25 mA
 0–10 V max. 7 mA

Protective electrical measures

Short circuit proof and polarity protected

Electrical connection (protection)

Plug and junction box
 DIN 43650-A (IP 65)

CE conformity (EMC)

EN 61326

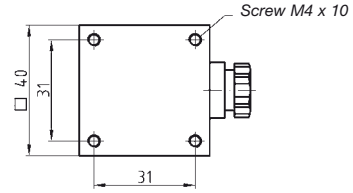
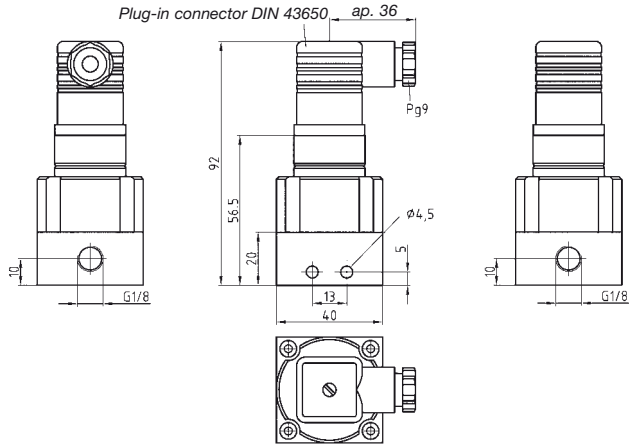
Options

- Other process connections
- Other electrical connections
- Digital plug-in display DA 06

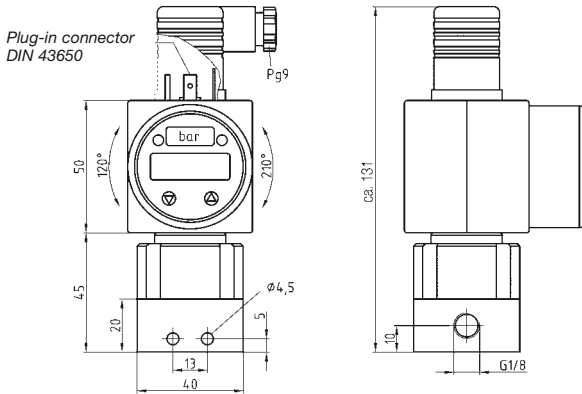
Pressure transducers DMU 10 D

Dimensions (in mm) and electrical connections

Connection 2 x G1/8 female thread



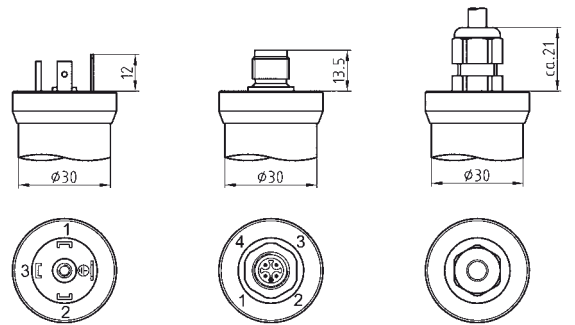
DMU 10 D with plug-in display DA 06



Electrical connections

Standard

Optional



DIN 43650 (IP 65)

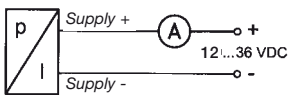
M12 x 1 4 poles (IP 67)

Cable gland (IP 67)

Wiring diagram

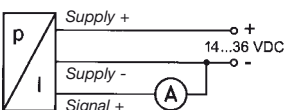
2-wire

4-20 mA

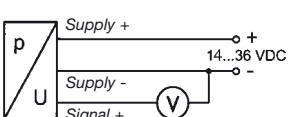


3-wire

0-20 mA



0-10 V



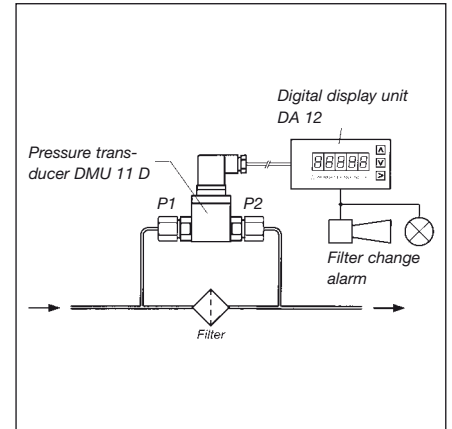
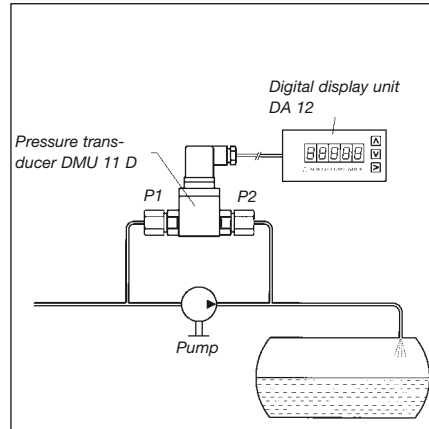
Pin assignment table

| Assignment | DIN 43650 |
|-------------------------|---------------|
| 2-wire system: Supply + | 1 |
| (4-20 mA) Supply - | 2 |
| Earth | Earth contact |

The units are supplied with a detailed wiring diagram.

Pressure transducers DMU 11 D

Differential pressure version



Application

For electronic differential pressure measurement in industrial applications. For aggressive gaseous and liquid media, which are not highly viscous and do not crystallize.

Description

The DMU 11 D pressure transducers feature two piezo-resistive stainless steel measuring cells. When pressure is applied, the pressure difference between the positive side and the negative side is converted into a current signal, which is proportional to the differential pressure.

Features:

- High overload safety
- Compact design
- Overvoltage protection
- Mechanically robust and reliable, suitable for use in applications where vibration or shocks occur

Accuracy of measurement

Deviation characteristics according to IEC 60770 - limit point setting (non-linearity, hysteresis, repeatability): < +0.5 % FSO

Measuring ranges/overload safety

| Nominal pressure (bar) | Diff. pressure range (bar) | Max. static pressure on one side (bar) |
|------------------------|----------------------------|--|
| 0.4 | 0/0.04 up to 0/0.4 | 1 |
| 1.0 | 0/0.1 up to 0/1.0 | 3 |
| 2.5 | 0/0.25 up to 0/2.5 | 6 |
| 6.0 | 0/0.6 up to 0/6.0 | 20 |
| 16 | 0/1.6 up to 0/16 | 60 |

Operating temperature range

Medium: -25 °C/+125 °C
 Ambient: -25 °C/ +85 °C
 Storage: -40 °C/+100 °C

Temperature error band

In compensated range
 0–70 °C ≤ 1.5 % FSO
 Nominal pressure 0.4 bar ≤ 2 % FSO

Dynamic characteristics

Response time < 5 ms

Process connection

2 x G¹/₂B (EN 837-1/7.3)

Materials

Housing: aluminium
 Pressure-connection: stainless steel 1.4571
 Diaphragm: stainless steel 1.4435
 Seal: FKM (Viton)

Output signal/supply voltage

4–20 mA DC 12–36 V
 2-wire

Load

4–20 mA ≤ $\frac{U_B - U_{Bmin}}{0,02 A}$

Current input

4–20 mA < 25 mA

Protective electrical measures

Short circuit proof and polarity protected

Electrical connections (protection)

Plug and DIN 43650-A (IP 65)

CE conformity (EMC)

EN 61326

Accessories

- Fixing bracket (included)

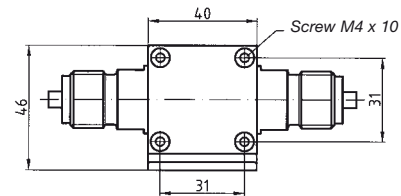
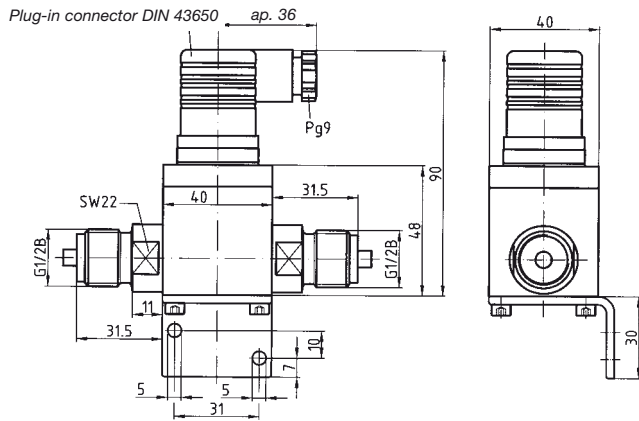
Options

- Other process connections
- Other electrical connections
- Other seal materials
- Fitting of diaphragm seal

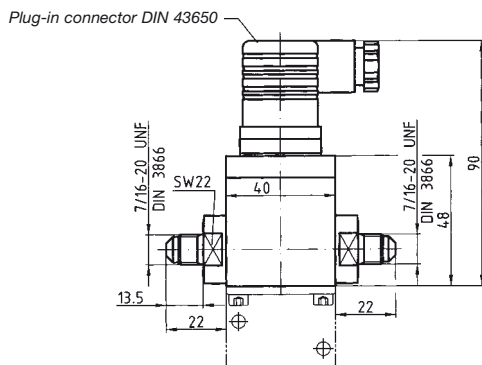
Pressure transducers DMU 11 D

Dimensions (in mm) and electrical connections

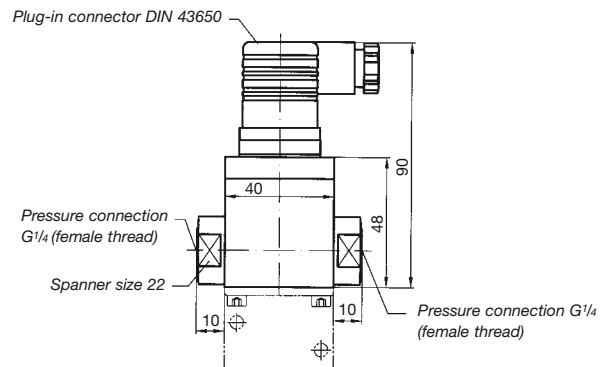
Connection 2 x G¹/₂B EN 837



Connection 2 x 7/16 UNF

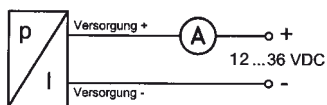


Connection 2 x G¹/₄ female thread



Wiring diagram

2-wire 4-20 mA



Pin assignment table

| Assignment | DIN 43650 |
|-------------------------|---------------|
| 2-wire system: Supply + | 1 |
| (4-20 mA) Supply - | 2 |
| Earth | Earth contact |