

Pressure transducers DeltaFox® DMU 20 D

Version for differential pressure measurement



- Multiple-range transmitter with up to 3 switchable measuring ranges
- Easy parameterisation via 2-line LC display
- Min./Max. value indication
- Ideal for clean room and filter monitoring



Application The differential pressure transducer DMU 20 D can be used with all dry, gaseous, non-corrosive media. The device detects even smallest differential pressures and is particularly suitable for heating, air conditioning and ventilation applications. Clean rooms and filter monitoring are other application areas.

Description The devices are equipped with silicon sensors. 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. The 2-line LC display shows the measured value as well as the unit and optionally the status of the switching outputs. The customer can parameterise up to three measuring ranges.

Technical specifications

Display

2-line LC display
Visible area: 32.5 x 22.5 mm
5-digit 7-segment main display
(character height 8 mm, $\pm 9,999$)
8-digit 14-segment additional display
(height 5 mm, 52-segment bar chart)
Accuracy: 0.1 % ± 1 digit
Switchable pressure units: mbar, bar, Pa, hPa, kPa, psi, Atm, torr, mmHG

Supply voltage

DC 11–32 V / 2-wire
DC 19–32 V / 3-wire

Load

0(4)–20 mA, 3-wire, $R_{\max} = 330 \Omega$
4–20 mA, 2-wire, $R_{\max} = [(U_B - U_{Bmin}) / 0.02 A] \Omega$
0–10 V, $R_{\min} 10 k\Omega$

Output

0(4) – 20 mA / 3-wire
0 – 10(5) V / 3-wire

Housing

Plastic (ABS)
(H x W x D) 68.5 x 132 x 50 mm

Sensor:

Ceramic, silicone, epoxy, RTV

Process/pressure connection

Brass, nickel-plated
Hose olive $\varnothing 6.6 \times 11$ mm,
for flexible hoses with $\varnothing 6$ mm

Wetted parts

Pressure connection, PVC/silicone hose, sensor

Measuring accuracy

Deviation from the characteristic curve according to IEC 60770 – limit point calibration (non-linearity, hysteresis, repeatability)
 $\leq \pm 0.5$ % FSO BFSL
(measuring ranges < 6 mbar = $\leq \pm 1$ % FSO BFSL)
Long-term stability $\leq \pm 0.2$ % FSO / year
(measuring ranges < 6 mbar = $\leq \pm 0.5$ % FSO/year)
Mounting position: Vertical

Measuring ranges/overload safety

Nominal pressure PN diff.	Switchable	Max. static pressure
1.6 mbar	1.0 mbar	200 mbar
4 mbar	2.5 mbar	200 mbar
10 mbar	6 mbar	200 mbar
40 mbar	25 mbar	345 mbar
250 mbar	60/160 mbar	1,000 mbar
1,000 mbar	400/600 mbar	3,000 mbar

Operating temperature range:

Medium: 0 / +50 °C
Ambient: 0 / +50 °C
Storage: -10 / +70 °C

Electrical connection

Cable gland M16 x 1.5

Electrical protection

Protected against short circuit and reverse polarity

Degree of protection

IP 54 (EN 60529)

CE conformity

EMC Directive: 2014/30/EU
RoHS Directive 2011/65/EU

Options

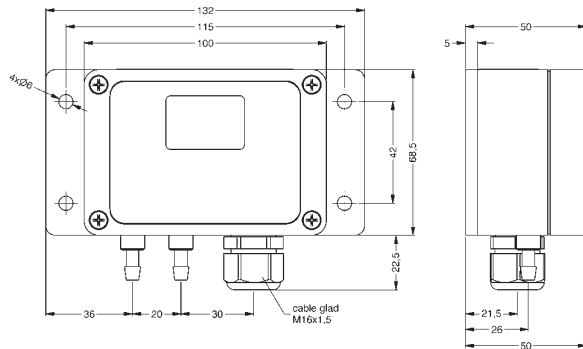
- Other process connections
- Other output signals

Pressure transducers DeltaFox® DMU 20 D

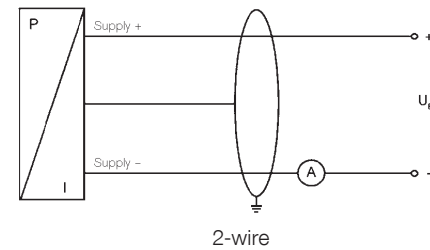
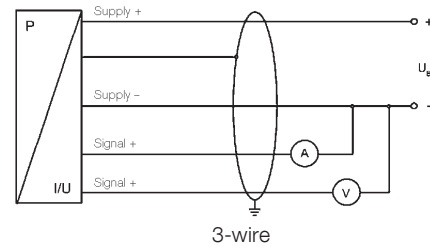
Version for differential pressure measurement

Dimensions (mm) and electrical connections

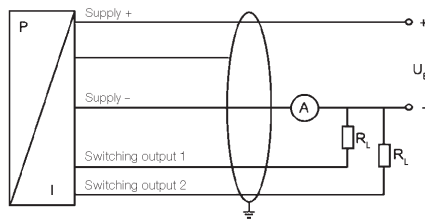
DMU 20 D



Wiring diagram



Wiring diagram 2-wire and 2 x PNP



Pin assignment table

Electrical connections	3-wire	2-wire
Supply +	VS +	IN +
Supply -	VS -	IN -
Signal + (for 3-wire only)	I_{out} / V_{out}	-
Switching output 1		S1
Switching output 2		S2

Pressure transducers DeltaFox® DMU 20 D

Version for differential pressure measurement

Ordering data

DG: H, PG: 4

Price €

1 Pressure transducer DMU 20 D

33409 DMU 20 D

2 Pressure type

- D** Differential pressure
- R** Relative pressure

3 Output

- 01** Analogue output 0 (4)–20 mA and 0–10 (5) V / 3-wire
- 02** Analogue output 4–20 mA / 2-wire and 2 x PNP open collector switching output
- 03** Analogue output 4–20 mA / 2-wire

4 Measuring range in mbar

- 053** 0/1.6
- 054** 0/4
- 002** 0/10
- 005** 0/40
- 009** 0/250
- 012** 0/1,000

5 Process connection

- 1** Hose olive Ø 6.6 x 11 mm, for flexible hoses with inner diameter 6 mm
- 2** Hose olive Ø 4.4 x 10 mm, for flexible hoses with inner diameter 4 mm

Ordering code

Example: 0/10 mbar,
Connection Ø 6.6 x 11 mm

33409	D	01	002	1
-------	---	----	-----	---