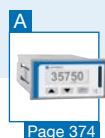


Pressure transducers HydroFox®

DMU 08 – level probe



- Compact and sturdy stainless steel design
- Integrated overvoltage protection
- Special calibration for all standard pressure units possible
- Optional ATEX version



3

Application For electronic, continuous level measurement, e.g. in wells, drilling holes, water, containers or in waste water systems. Suitable for groundwater, waste water (with optional FEP cable), diesel fuel and fuel oil.

Description Pressure transducers HydroFox® DMU 08 convert physical pressure into an electrical signal proportional to the pressure. HydroFox® DMU 08 uses a piezo-resistive silicon measuring cell.

Technical specifications

Measuring accuracy

Deviation from the characteristic curve according to IEC 60770 – limit point calibration (non-linearity, hysteresis, repeatability): $\leq \pm 0.35\%$ FSO (measuring ranges 0/100 mbar to 0/400 mbar $\leq \pm 0.5\%$ FSO)

Measuring ranges

Relative pressure: 0/100 mbar to 0/25 bar
Overpressure safety

Overpressure safety

See page 226.

Operating temperature range

Medium: $-10/+70\text{ }^{\circ}\text{C}$
Ambient: $-10/+70\text{ }^{\circ}\text{C}$
Storage: $-25/+70\text{ }^{\circ}\text{C}$
For EX version $-20/+60\text{ }^{\circ}\text{C}$
at P_{atm} 0.8 to 1.1 bar

Temperature error band

In compensated range
 $0/70\text{ }^{\circ}\text{C} \leq 400\text{ mbar} \leq \pm 1\%$ FSO/10 K
 $\geq 400\text{ mbar} \leq \pm 0.75\%$ FSO/10 K

Dynamic characteristics

Response time $\leq 10\text{ ms}$

Materials

Housing: Stainless steel 316 L
Diaphragm: Stainless steel 316 L
Seals: FKM (Viton)

Pressure transmission liquid

Silicone oil

Supply voltage

DC 8–32 V
EX version DC 10–28 V

Output signal

4–20 mA, 2-wire

Load

4–20 mA: $R_{\text{max}} = [(U_B - U_{B\text{min}}) / 0.02\text{ A}] \Omega$

Current input

4–20 mA $< 25\text{ mA}$

Electrical protection

Short circuit proof and protected against reverse polarity

Electrical connection (degree of protection)

PUR cable (IP 68)
With integrated breather tube for reference to the ambient atmospheric pressure

Accessories (options)

- Screw connector kit
- Junction box
- Anchor clamp
- Extended weight

Options

- EX version
(II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T 85 °C Da)
- Measuring accuracy 0.1 % FSO
- FEP cable
- SIL 2 (IEC 61508/61511)



SIL
Protect your process!



See chapter 5 for the complete "Level Measurement" range.

See page 235 for prices.

Pressure transducers HydroFox® DMU 08

Dimensions (mm) and electrical connections

Standard version

Diagram of the standard version pressure transducer. It is a vertical cylindrical device with a top diameter of 7.4 mm and a total height of 117 mm. The base has a diameter of 24 mm and a mounting flange with a diameter of 5 mm.

EX version, SIL, 3-wire 0–10 V, accuracy 0.1 % FSO

Diagram of the EX version pressure transducer. It is a vertical cylindrical device with a top diameter of 7.4 mm and a total height of 115 mm. The base has a diameter of 26.5 mm.

① Accuracy 0.1 % FSO 150 mm

Screw connector kit

Diagram showing the screw connector kit components: a cable gland (G18), a PG11 fitting, and a cable diameter (G18.8).

① Cable diameter

Anchor clamp

Diagram of the anchor clamp, showing a U-shaped clamp with a height of 175 mm and a base diameter of 5.5 mm to 10.5 mm.

①

Junction box with pressure relief port

Diagram of the junction box with pressure relief port. It is a rectangular box with dimensions 130 mm (width), 115 mm (depth), and 75 mm (height). It features a pressure relief port (3) and a cable gland (2). The base has a width of 55 mm and a height of 15 mm.

① Earth ② Cable gland ③ Pressure compensation element

Wiring diagram

2-wire

4–20 mA

Diagram of the 2-wire system. It shows a power supply (Supply +, Supply -) connected to a transducer (A) which outputs a signal (U_B) to a load (I).

3-wire

0–10 V

Diagram of the 3-wire system. It shows a power supply (Supply +, Supply -) connected to a transducer (V) which outputs a signal (U_B) to a load (U). The signal is also connected to a voltage source (V).

Pin assignment table

		Cable colours (DIN 47100)
2-wire system:	Supply + (4–20 mA) Supply – Earth	White Brown Yellow/green
3-wire system:	(0–10 V) (0–20 mA) Supply + Supply – Signal Earth	White Brown Green Yellow/green

The units are shipped with a detailed connection diagram.

Overpressure safety DMU 08

Measuring range	100 mbar	160 mbar	200 mbar	250 mbar	300 mbar	400 mbar	600 mbar	1 bar	1.6 bar	2 bar	2.5 bar	4 bar	6 bar	10 bar	16 bar	20 bar	25 bar
Overload	5 x	6 x	4 x	4 x	4 x	5 x	8 x	5 x	6 x	4 x	4 x	5 x	6 x	4 x	5 x	3 x	3 x
Burst pressure	15 x	9 x	6 x	6 x	6 x	7 x	12 x	7 x	9 x	6 x	6 x	6 x	8 x	5 x	7 x	4 x	4 x