

# Pressure transducers DMU 05 P

## Precision version



Vorgezogene Membrane



### Application

For electronic pressure measurement in applications requiring high accuracy of measurement and long-term stability. Application areas include: process technology, electroplating, water treatment, laboratory applications as well as measurements of gas consumption and heat energy.

### Description

The intelligent DMU 05 pressure transducers are equipped with digital amplifier electronics (micro-processor and 16 bit A/D converter). DMU 05 actively compensates for sensor-specific deviations (non-linearity and temperature error), allowing for superior measuring characteristics. DMU 05 can also be supplied with an optional digital RS 232 interface for setting offset, range and damping.

### Accuracy of measurement

Deviation characteristics according to IEC 60770 - limit point setting (non-linearity, hysteresis, repeatability):  $< \pm 0.1 \% \text{ FSO}$

### Long-term stability

$\leq \pm 0.1 \% \text{ FSO/year}$

### Measuring ranges

Relative: 0/160 mbar to 0/600 bar  
Absolute: 0/400 mbar to 0/600 bar

### Overpressure safety

$\leq 250 \text{ bar min. } 2 \times \text{FS}$   
 $> 250 \text{ bar min. } 1.5 \times \text{FS}$   
(burst pressure min.  $3 \times \text{FS}$ )

### Operating temperature range

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

### Temperature error band

In compensated range  
 $-20/+80^\circ\text{C} \leq 0.2 \% \text{ FSO}$

### Dynamic characteristics

Response time  $< 40 \text{ ms}$

### Process connection

$G^{1/2}B$  (EN 837-1/7.3) or  
 $G^{1/2}B$  DIN 3852 with flush mounted diaphragm (up to 0/25 bar)

### Materials

Housing: stainless steel 304  
Pressure-connection: stainless steel 316 Ti or 316 L  
Diaphragm: stainless steel 1.4435  
Seal: FKM (Viton), NBR for 40 bar and above

### Pressure transmission liquid

Silicone oil

### Output signal/supply voltage

4–20 mA DC 12–36 V  
2-wire  
Bei Ex-Ausführung DC 14–28 V

### Load

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

### Current input

4–20 mA  $< 25 \text{ mA}$

### 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

- RS 232 (interface and software required)
- Ex version (II 1 G EEx ia IIC T4)
- Other process connections
- Other electrical connections
- Other seal materials

# Pressure transducers DMU 05

## Dimensions (in mm) and electrical connections

Connection G1/2B EN 837

Connection G1/2B DIN 3852 with flush mounted diaphragm

Screw-in version for level measurement

Electrical connections

DIN 43650

„Binder“ plug 723 „Buccaneer“ plug

Pin assignment table

Electrical connections				
		DIN 43650	„Binder“ plug 723 (5 poles)	„Binder“ plug 723 (7 poles)
2-wire system:	Supply +	1	3	3
	Supply -	2	4	1
	Earth	Earth contact	5	2
RS 232 <sup>1)</sup>	RxD	-	-	4
	TxD	-	-	5
	CTS	-	-	6
	GND	-	-	7

<sup>1)</sup> Software, interface and cable must be ordered separately.

The units are supplied with a detailed wiring diagram.