

Pressure transducers DMU 01

Standard version



Flush mounted diaphragm



DMU 01 with DA 06 plug-in local display



Application

For electronic pressure measurement in industrial applications (such as hydraulic and pneumatic applications as well as machine and plant construction).

Description

The DMU 01 pressure transducers use proven ceramic measurement cell technology and feature calibrated, amplified sensor signals which are available as standardised voltage or current outputs.

DMU 01 features:

- High temperature resistance
- No mechanical ageing
- No transmission liquid

Accuracy of measurement

Deviation characteristics according to IEC 60770 – limit point setting (non-linearity, hysteresis, repeatability): $< \pm 0,5 \% \text{ FSO}$
(meas. ranges $-1/0 \text{ bar} < \pm 1 \% \text{ FSO}$)

Measuring ranges

Relative pressure: $-1/0$ to $0/400 \text{ bar}$
Absolute pressure: $0/1$ to $0/400 \text{ bar}$

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: $-40^\circ\text{C}/+85^\circ\text{C}$

Temperature error band

In compensated range
 $-25/+85^\circ\text{C} \leq \pm 0.3 \% \text{ FSO}/10 \text{ K}$

Dynamic characteristics

Response time
2-wire $< 10 \text{ ms}$
3-wire $< 3 \text{ ms}$

Process connection

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

Materials

Housing: stainless steel 1.4301
Pressure-connection: stainless steel 1.4571
Diaphragm: ceramic Al_2O_3 96 %
Seal: FKM (Viton)

Output signal/supply voltage

4–20 mA DC 8–36 V
2-wire
0–10 V DC 14–30 V
3-wire

Load

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

Current input

4–20 mA $< 25 \text{ mA}$
0–10 V $< 20 \text{ mA}$

Protective electrical measures

Short circuit proof and polarity protected

Electrical connection (protection)

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

CE conformity (EMC)

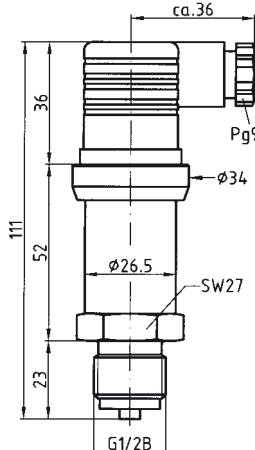
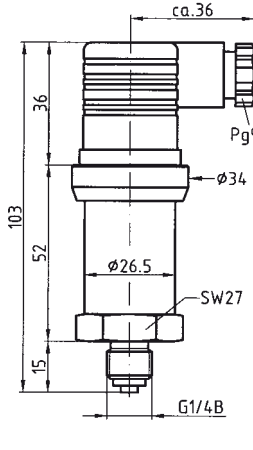
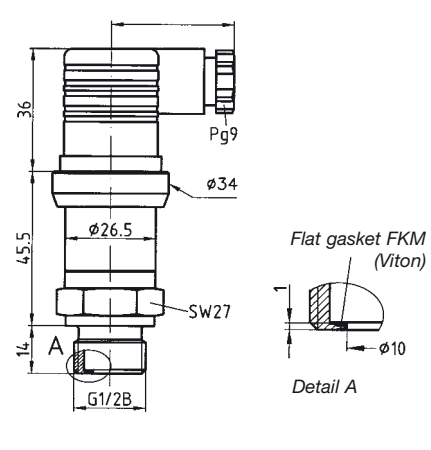
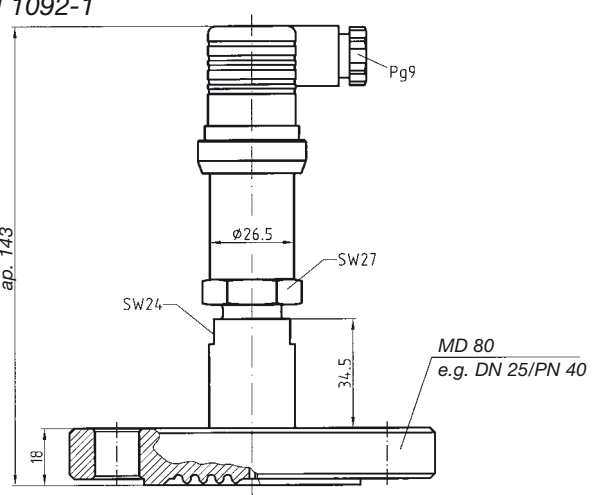
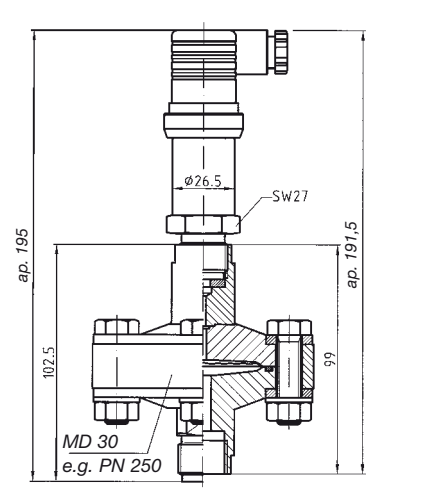
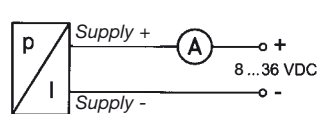
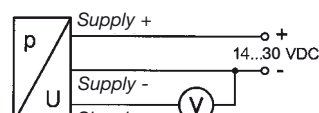
EMC directive 2004 / 108 / EG

Options

- Other connection threads
- Fixed cable connection
- Other plug-in connectors
- Fitting of diaphragm seals (measuring range $\geq 0/10 \text{ bar}$)

Pressure transducers DMU 01

Dimensions (in mm) and electrical connections

<p>Connection G1/2B EN 837</p> 	<p>Connection G1/4B EN 837</p> 	<p>Connection G1/2B DIN 3852 with flush mounted diaphragm</p> 																														
<p>With diaphragm seal MD 80 – flange connection EN 1092-1</p> 	<p>With diaphragm seal MD 30 – connection G1/2B</p> 																															
<p>Wiring diagrams</p> <p>4–20 mA</p> <p>2-wire</p>  <p>0–10 V</p> <p>3-wire</p> 																																
<p>Pin assignment table</p> <table><tr><th></th><th>Plug DIN 43650</th><th>Cable colours (DIN 47100)</th></tr><tr><td>2-wire system:</td><td></td><td></td></tr><tr><td>Supply</td><td>+</td><td>1</td></tr><tr><td>(4–20 mA) Supply</td><td>–</td><td>2</td></tr><tr><td>Earth</td><td></td><td>Earth pin</td></tr><tr><td>3-wire system:</td><td></td><td></td></tr><tr><td>Supply</td><td>+</td><td>1</td></tr><tr><td>(0–10 V) Supply</td><td>–</td><td>2</td></tr><tr><td>Signal</td><td>+</td><td>3</td></tr><tr><td>Earth</td><td></td><td>Earth pin</td></tr></table>				Plug DIN 43650	Cable colours (DIN 47100)	2-wire system:			Supply	+	1	(4–20 mA) Supply	–	2	Earth		Earth pin	3-wire system:			Supply	+	1	(0–10 V) Supply	–	2	Signal	+	3	Earth		Earth pin
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The units are shipped with a detailed wiring diagram.