



Pressure transducers DMU 05 P precision version



Benefits

- Precision version with outstanding measurement performance
- For applications requiring superior measuring accuracy and long-term stability
- Options: ATEX version or RS 232 interface

Application

For electronic pressure measurement in applications requiring high measuring accuracy and long-term stability, such as process engineering, water treatment, laboratory applications as well as measurements of gas consumption and heat energy.

Description

Pressure transducers convert physical pressure into an electrical signal proportional to the pressure. DMU 05 P is equipped with an oil-filled piezo-resistive silicon measuring cell. The intelligent DMU 05 P pressure transducers are equipped with digital amplifier electronics (microprocessor and 16 bit A/D converter). DMU 05 P actively compensates for sensor-specific deviations (non-linearity and temperature error), allowing for superior measuring characteristics. DMU 05 P can also be supplied with optional digital RS 485 Modbus RTU for setting offset, range and damping.



Technical specifications

Measuring accuracy

Deviation from the characteristic curve according to IEC 60770 – limit point calibration (non-linearity, hysteresis, repeatability)
< ± 0.1 % FSO

Measuring range

See ordering table

Overpressure safety

< 600 bar: At least 2 x FS
≥ 600 bar: At least 3.5 x FS

Burst pressure

< 400 bar: At least 5 x FS
≥ 400 bar: At least 2 x FS

Operating temperature range

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

Temperature error band

± 0.02 % FSO/10 K in compensated range -20/+80 °C

Dynamic characteristics

Response time: < 5 ms

Process connection

G $\frac{1}{2}$ B EN 837-1/7.3
G $\frac{1}{2}$ B DIN 3852 type E with protruding diaphragm

Material

Housing: Stainless steel 316 L
Pressure connection: Stainless steel 316 L
Diaphragm: Stainless steel 316 L
Seal: FKM (Viton)

Options

- Other process connections
- Other electrical connections
- Other seal materials
- Other output signals
- RS 232 interface in conjunction with Binder connector 723, 7-pin (interface and software required)
- EX version (II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T85°C Da)

Pressure transmission liquid

Silicone oil

Supply voltage

DC 12 – 36 V

Output signal

2-wire, 0/4–20 mA

Load

$R_{Max} = [(UB - UB_{Min})/0.02 A] \Omega$

Current input

< 25 mA

Electrical protection

Short circuit proof and protected against reverse polarity

Electrical connection

Connector and junction box as per ISO 4400 (DIN 43650-A)

Degree of protection

IP 65 (EN 60529)

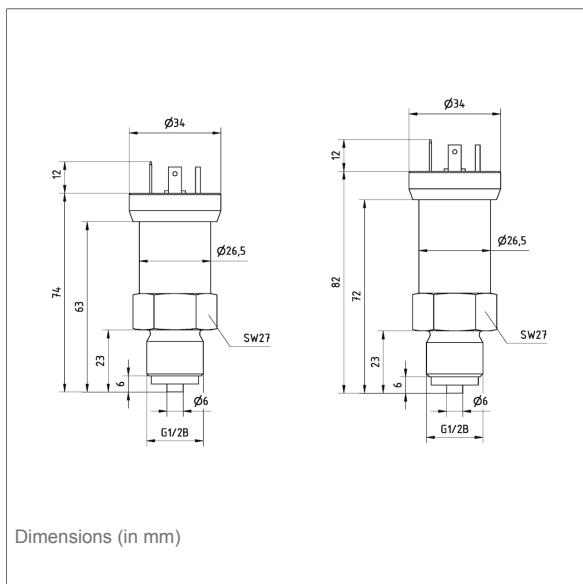
CE conformity

EMC Directive 2014/30/EU
RoHS Directive 2011/65/EU
Pressure Equipment Directive 2014/68/EU

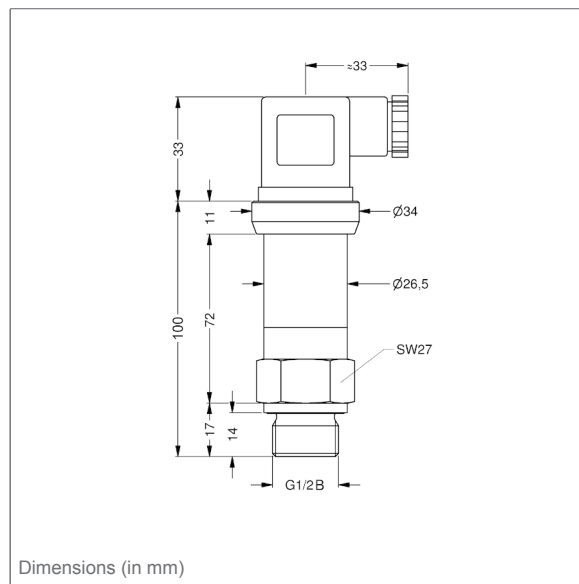


Technical drawings

DMU 05 P - connection G $\frac{1}{2}$ B EN 837

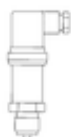


DMU 05 P VM - connection G $\frac{1}{2}$ B DIN 3852 type E – with protruding diaphragm



Versions

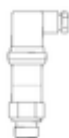
Type	Connection	Measuring range	Part no.
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	-1/0 bar	31742
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	-1/+1.5 bar	31743
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	-1/+3 bar	31744
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	-1/+5 bar	31745
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/100 mbar	33026
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/160 mbar	31747
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/250 mbar	31748
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/400 mbar	31749
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/600 mbar	31750
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/1 bar	31751
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/1.6 bar	31752
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/2.5 bar	31753
DMU 05 P	G $\frac{1}{2}$ B EN 837-1/7.3	0/4 bar	31754



Blue part no. = in-stock items



Type	Connection	Measuring range	Part no.
DMU 05 P	G½B EN 837-1/7.3	0/6 bar	31755
DMU 05 P	G½B EN 837-1/7.3	0/10 bar	31756
DMU 05 P	G½B EN 837-1/7.3	0/16 bar	31757
DMU 05 P	G½B EN 837-1/7.3	0/25 bar	31758
DMU 05 P	G½B EN 837-1/7.3	0/40 bar	31759
DMU 05 P	G½B EN 837-1/7.3	0/60 bar	31760
DMU 05 P	G½B EN 837-1/7.3	0/100 bar	31761
DMU 05 P	G½B EN 837-1/7.3	0/160 bar	31762
DMU 05 P	G½B EN 837-1/7.3	0/250 bar	31763
DMU 05 P	G½B EN 837-1/7.3	0/400 bar	31764
DMU 05 P	G½B EN 837-1/7.3	0/600 bar	31765
DMU 05 P VM	G½B DIN 3852 type E	0/100 mbar	33027
DMU 05 P VM	G½B DIN 3852 type E	0/160 mbar	31771
DMU 05 P VM	G½B DIN 3852 type E	0/250 mbar	31772
DMU 05 P VM	G½B DIN 3852 type E	0/400 mbar	31773
DMU 05 P VM	G½B DIN 3852 type E	0/600 mbar	31774
DMU 05 P VM	G½B DIN 3852 type E	0/1 bar	31775
DMU 05 P VM	G½B DIN 3852 type E	0/1.6 bar	31776
DMU 05 P VM	G½B DIN 3852 type E	0/2.5 bar	31777
DMU 05 P VM	G½B DIN 3852 type E	0/4 bar	31778
DMU 05 P VM	G½B DIN 3852 type E	0/6 bar	31779
DMU 05 P VM	G½B DIN 3852 type E	0/10 bar	31780
DMU 05 P VM	G½B DIN 3852 type E	0/16 bar	31781
DMU 05 P VM	G½B DIN 3852 type E	0/25 bar	31782
DMU 05 P VM	G½B DIN 3852 type E	0/40 bar	33028



Blue part no. = in-stock items