



Pressure transducers DMU 05 P VM

Part no. 31771

Pressure transducer 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)
 $< \pm 0.1 \% \text{ FSO}$

Measuring range

0/160 mbar

Overpressure safety

$< 600 \text{ bar}$
 at least 2 x FS

Burst pressure

$< 400 \text{ bar}$
 at least 5 x FS

Operating temperature range

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

Temperature error band

$\leq \pm 0.02 \% \text{ FSO/10 K}$ In compensated range -20/+80 °C

dynamic characteristics

Response time: < 5 ms

Process connection

G½B 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)

pressure transmission liquid

Silicone oil

Supply voltage

DC 12 – 36 V

Output signal

2-wire, 0/4–20 mA

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)

Load

$$R_{\max} = [(UB - UB_{\min})/0.02 \text{ A}] \Omega$$

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

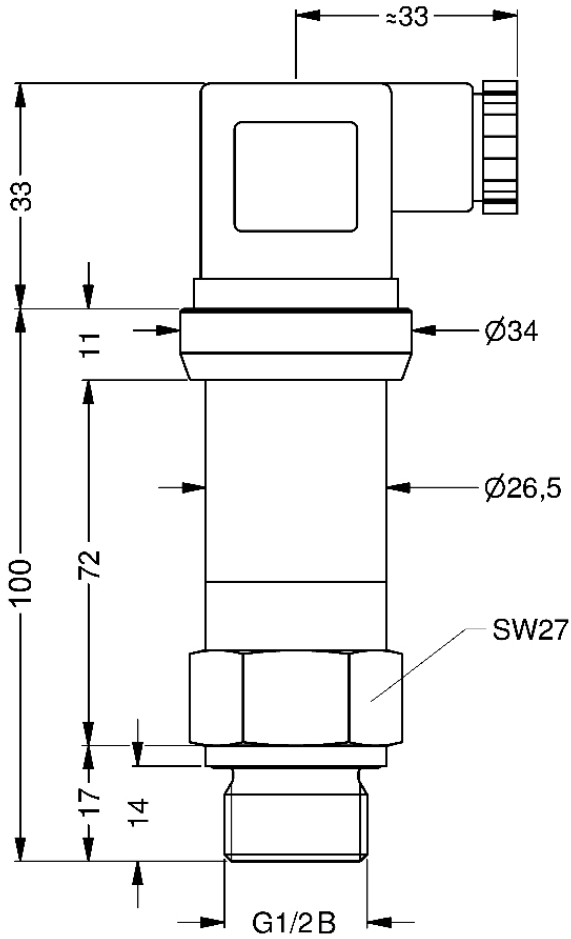
EMC Directive 2014/30/EU

RoHS Directive 2011/65/EU

Pressure Equipment Directive 2014/68/EU

Technical Drawings

**DMU 05 P VM - connection G1/2B DIN 3852 type E
with protruding diaphragm**



Dimensions (mm)

Versions

Range	Measuring range	Type	Version	Part no.
	0/160 mbar	DMU 05 P VM	●	31771

- in-stock items
- Non-stock items