



## Pressure transducers DMU 05 P VM

**Part no. 31780**

**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

0/10 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**

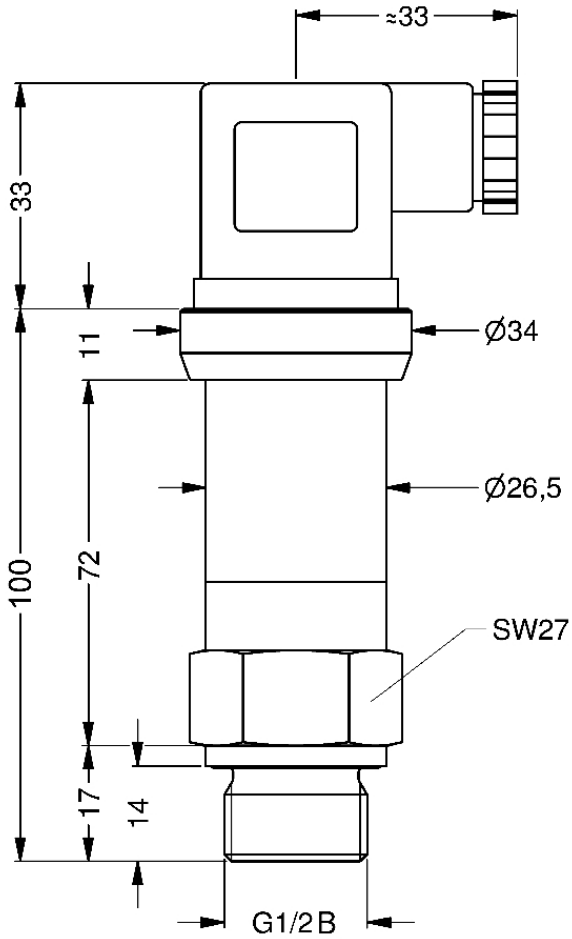
EMC Directive 2014/30/EU

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. |
|-------|-----------------|-------------|---------|----------|
|       | 0/10 mbar       | DMU 05 P VM | ●       | 31780    |

- in-stock items
- Non-stock items