



Pressure transducers DMU 01 standard version



Benefits

- Proven ceramic technology
- No mechanical ageing of the measuring cell
- No transmission liquid
- Versions for relative pressure and absolute pressure
- Small temperature error

Application

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

Description

Pressure transducers convert physical pressure into an electrical signal proportional to the pressure. DMU 01 is equipped with a piezo-resistive thick-film ceramic measuring cell.



Technical specifications

Measuring accuracy

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

-1/0 bar < ± 1 % FSO

< ± 0.5 % FSO

Measuring range

See ordering table

Overpressure safety

< 250 bar: At least 2 x FS

250 bar: 400 bar

400 bar: 650 bar

Burst pressure

< 400 bar: At least 3 x FS

400 bar: 1000 bar

Operating temperature range

Medium: -25/+125 °C

Ambient: -25/+85 °C

Storage: -40/+85 °C

Temperature error band

± 0.3 % FSO/10 K In compensated range -25/+85 °C

Dynamic characteristics

Response time: ≤ 10 ms

Process connection

G½B EN 837-1/7.3

G½B DIN 3852 type E with protruding diaphragm

G¼B DIN 3852 type E

Material

Housing: Stainless steel 304

Pressure connection: Stainless steel 304

Diaphragm: Ceramic (Al₂O₃ 96 %), silicon, glass

Seal: FKM (Viton), Silicone

Supply voltage

DC 8 – 32 V

DC 9 – 32 V

Output signal

2-wire, 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, EN 175301-803), 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

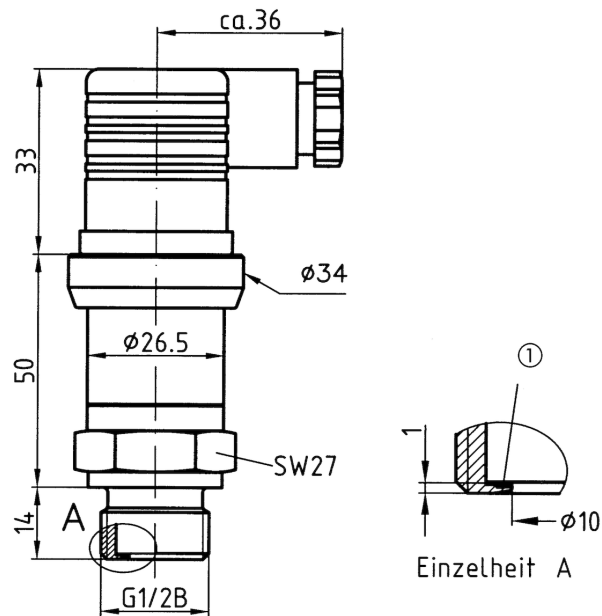
Options

- Other connection threads
- Fixed cable connection
- Other output signals
- SIL 2 (IEC 61508/61511) 2-wire, for DMU 01 VM
- Other measuring ranges
- Other process connections
- Other electrical connections
- Other output signals, e.g. 0–10 V, 1–5 V
- Absolute pressure version



Detail views

DMU 01 VM with connection G $\frac{1}{2}$ B DIN 3852 type E with protruding diaphragm

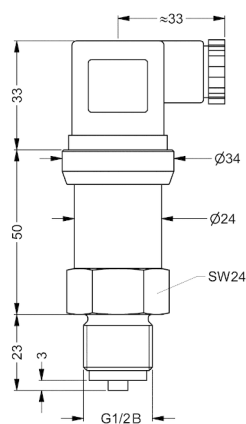


Dimensions (in mm)

1. Flat gasket FKM (Viton)

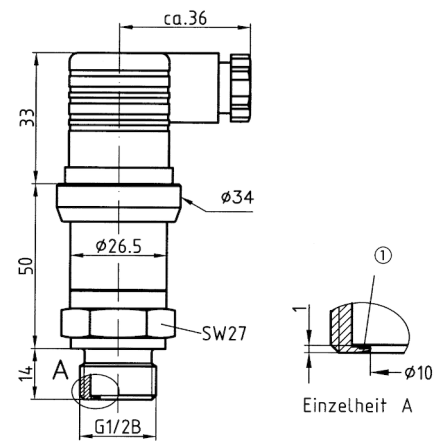
Technical drawings

DMU 01 - connection G $\frac{1}{2}$ B EN 837



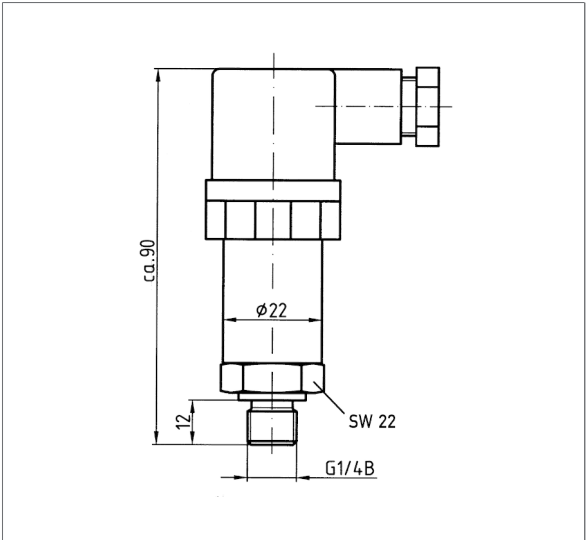
Dimensions (in mm)

DMU 01 VM with connection G $\frac{1}{2}$ B DIN 3852 type E with protruding diaphragm



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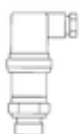
Versions

Type	Connection	Measuring range	Part no.
DMU 01	G½B EN 837-1/7.3	-1/0 bar	31114
DMU 01	G½B EN 837-1/7.3	-1/+1.5 bar	31616
DMU 01	G½B EN 837-1/7.3	-1/+3 bar	31617
DMU 01	G½B EN 837-1/7.3	-1/+5 bar	31618
DMU 01	G½B EN 837-1/7.3	0/1 bar	31115
DMU 01	G½B EN 837-1/7.3	0/1.6 bar	31116
DMU 01	G½B EN 837-1/7.3	0/2.5 bar	31117
DMU 01	G½B EN 837-1/7.3	0/4 bar	31118
DMU 01	G½B EN 837-1/7.3	0/6 bar	31119
DMU 01	G½B EN 837-1/7.3	0/10 bar	31120
DMU 01	G½B EN 837-1/7.3	0/16 bar	31121
DMU 01	G½B EN 837-1/7.3	0/25 bar	31122
DMU 01	G½B EN 837-1/7.3	0/40 bar	31123
DMU 01	G½B EN 837-1/7.3	0/60 bar	31124
DMU 01	G½B EN 837-1/7.3	0/100 bar	31125
DMU 01	G½B EN 837-1/7.3	0/160 bar	31126
DMU 01	G½B EN 837-1/7.3	0/200 bar	31878

Blue part no. = in-stock items



Type	Connection	Measuring range	Part no.
DMU 01	G $\frac{1}{2}$ B EN 837-1/7.3	0/250 bar	31127
DMU 01	G $\frac{1}{2}$ B EN 837-1/7.3	0/400 bar	31128
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	-1/0 bar	31619
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	-1/+1.5 bar	31620
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	-1/+3 bar	31621
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	-1/+5 bar	31622
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	0/1 bar	31623
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	0/1.6 bar	31624
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	0/2.5 bar	31625
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	0/4 bar	31626
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	0/6 bar	31627
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	0/10 bar	31628
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	0/16 bar	31629
DMU 01 VM	G $\frac{1}{2}$ B DIN 3852 type E	0/25 bar	31630
	G $\frac{1}{4}$ B DIN 3852 type E	0/4 bar	33005
	G $\frac{1}{4}$ B DIN 3852 type E	0/6 bar	33006
	G $\frac{1}{4}$ B DIN 3852 type E	0/10 bar	33007
	G $\frac{1}{4}$ B DIN 3852 type E	0/16 bar	33008
	G $\frac{1}{4}$ B DIN 3852 type E	0/25 bar	33009
	G $\frac{1}{4}$ B DIN 3852 type E	0/40 bar	33010



Blue part no. = in-stock items