



Pressure transducers DMU 03 Industrial version



Benefits

- For low pressure ranges
- Versions for relative pressure and absolute pressure
- Excellent long-term stability
- Ex version (optional)
- Option SIL 2

Application

For electronic pressure measurement in mechanical and plant engineering as well as process engineering applications. With flush diaphragm, the pressure transducers are also suitable for use with viscous, highly viscous media.

Description

Pressure transducers convert physical pressure into an electrical signal proportional to the pressure. DMU 03 is equipped with an oil-filled piezo-resistive silicon measuring cell. DMU 03 has safety integrity level SIL 2 (IEC 61508/61511).



Technical specifications

Measuring accuracy

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

$< \pm 0.35\%$ FSO

0/100 – 0/400 mbar $< \pm 0.5\%$ FSO

0/1,000 – 0/2,200 bar $< \pm 0.5\%$ FSO

Measuring range

See ordering table

Overpressure safety

At least 3 x FS

40, 60 bar: 105 bar

> 400 bar: At least 1.5 x FS

Burst pressure

At least 5 x FS

25 bar: 120 bar

400 bar: 1,250 bar

> 600 bar: At least 3 x FS

Operating temperature range

Medium: $-40/+125\text{ }^{\circ}\text{C}$

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

Storage: $-40/+100\text{ }^{\circ}\text{C}$

Temperature error band

$P_N < 0.4\text{ bar}$: $\leq \pm 1\%$ FSO In compensated range 0/70 $^{\circ}\text{C}$

$P_N > 60\text{ bar}$: $\leq \pm 0.75\%$ FSO In compensated range 0/70 $^{\circ}\text{C}$

$P_N \leq 60\text{ bar}$: $\leq \pm 0.75\%$ FSO In compensated range $-20/+85\text{ }^{\circ}\text{C}$

Dynamic characteristics

Response time: $\leq 10\text{ ms}$

Process connection

G $\frac{1}{2}$ B EN 837-1/7.3

G $\frac{1}{2}$ B DIN 3852 type E

M20 x 1.5 female

Material

Housing: Stainless steel 316 L

Pressure connection

DMU 03: Stainless steel 316 L

DMU 03 VM: Stainless steel 316 L

DMU 03 HD: Stainless steel 630

Diaphragm

DMU 03: Stainless steel 316 L

DMU 03 VM: Stainless steel 316 L

DMU 03 HD: Stainless steel 630

Seal: FKM (Viton)

Pressure transmission liquid

Silicone oil

Supply voltage

DMU 03: DC 8 – 32 V

DMU 03 VM: DC 8 – 32 V

DMU 03 HD: DC 12 – 36 V

Output signal

2-wire, 4–20 mA

Load

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

Current input

$< 25\text{ mA}$

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

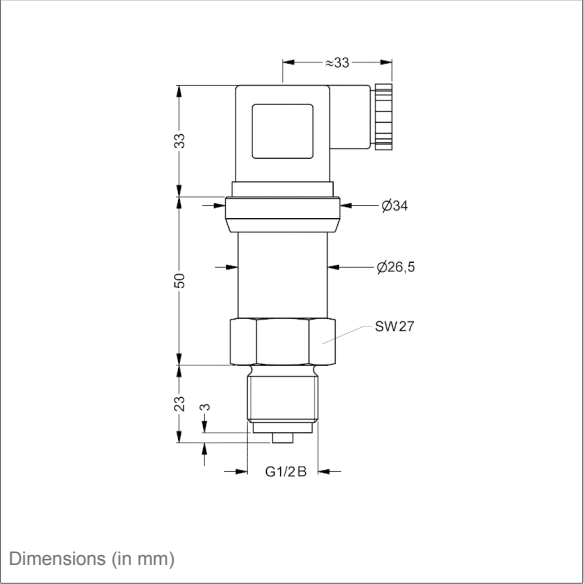
Options

- Other process connections
- Other electrical connections
- Field housing (stainless steel 303)
- Other seal materials
- Higher accuracy and overpressure safety
- Fitting of chemical seal
- EX version (II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T85 $^{\circ}\text{C}$ Da)
- SIL 2 (IEC 61508/61511) 2-wire

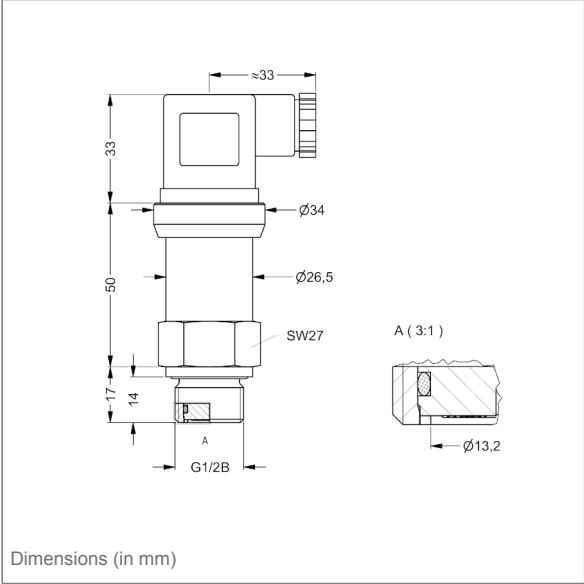


Technical drawings

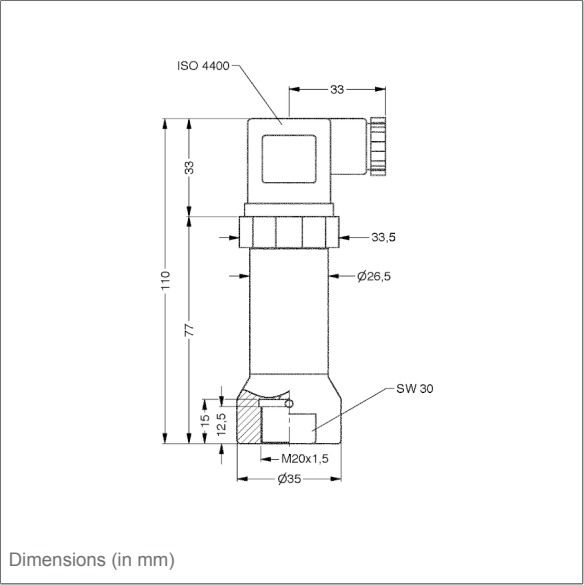
DMU 03 - connection G1/2B EN 837 and ISO 4400



DMU 03 VM - Connection G1/2B DIN 3852 type E with protruding diaphragm



DMU 03 HD with M20 x 1.5 female thread and ISO 4400





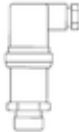
Versions

Type	Connection	Measuring range	Part no.
DMU 03	G½B EN 837-1/7.3	-1/0 bar	31634
DMU 03	G½B EN 837-1/7.3	-1/+1.5 bar	31635
DMU 03	G½B EN 837-1/7.3	-1/+3 bar	31636
DMU 03	G½B EN 837-1/7.3	-1/+5 bar	31637
DMU 03	G½B EN 837-1/7.3	0/40 mbar	32024
DMU 03	G½B EN 837-1/7.3	0/60 mbar	32025
DMU 03	G½B EN 837-1/7.3	0/100 mbar	31638
DMU 03	G½B EN 837-1/7.3	0/160 mbar	31639
DMU 03	G½B EN 837-1/7.3	0/250 mbar	31145
DMU 03	G½B EN 837-1/7.3	0/400 mbar	31146
DMU 03	G½B EN 837-1/7.3	0/600 mbar	31147
DMU 03	G½B EN 837-1/7.3	0/1 bar	31148
DMU 03	G½B EN 837-1/7.3	0/1.6 bar	31149
DMU 03	G½B EN 837-1/7.3	0/2.5 bar	31150
DMU 03	G½B EN 837-1/7.3	0/4 bar	31151
DMU 03	G½B EN 837-1/7.3	0/6 bar	31152
DMU 03	G½B EN 837-1/7.3	0/10 bar	31153
DMU 03	G½B EN 837-1/7.3	0/16 bar	31154
DMU 03	G½B EN 837-1/7.3	0/25 bar	31155
DMU 03	G½B EN 837-1/7.3	0/40 bar	31156
DMU 03	G½B EN 837-1/7.3	0/60 bar	31157
DMU 03	G½B EN 837-1/7.3	0/100 bar	31158
DMU 03	G½B EN 837-1/7.3	0/160 bar	31159
DMU 03	G½B EN 837-1/7.3	0/250 bar	31160
DMU 03	G½B EN 837-1/7.3	0/400 bar	31161
DMU 03	G½B EN 837-1/7.3	0/600 bar	31162



Blue part no. = in-stock items



	Type	Connection	Measuring range	Part no.
	DMU 03 VM	G½B DIN 3852 type E	0/100 mbar	31643
	DMU 03 VM	G½B DIN 3852 type E	0/160 mbar	31644
	DMU 03 VM	G½B DIN 3852 type E	0/250 mbar	31165
	DMU 03 VM	G½B DIN 3852 type E	0/400 mbar	31166
	DMU 03 VM	G½B DIN 3852 type E	0/600 mbar	31167
	DMU 03 VM	G½B DIN 3852 type E	0/1 bar	31168
	DMU 03 VM	G½B DIN 3852 type E	0/1.6 bar	31169
	DMU 03 VM	G½B DIN 3852 type E	0/2.5 bar	31170
	DMU 03 VM	G½B DIN 3852 type E	0/4 bar	31171
	DMU 03 VM	G½B DIN 3852 type E	0/6 bar	31172
	DMU 03 VM	G½B DIN 3852 type E	0/10 bar	31173
	DMU 03 VM	G½B DIN 3852 type E	0/16 bar	31174
	DMU 03 VM	G½B DIN 3852 type E	0/25 bar	31175
	DMU 03 VM	G½B DIN 3852 type E	0/40 bar	32026
	DMU 03 HD	M20 x 1.5 female	0/1,000 bar	33402
	DMU 03 HD	M20 x 1.5 female	0/1,600 bar	33403
	DMU 03 HD	M20 x 1.5 female	0/2,200 bar	33404

Blue part no. = in-stock items