

DA30 || Differential Pressure Gauge

The DA30 measures and indicates pressure and differential pressure. It is suitable to work with gaseous and liquid media not affecting the materials used. Electrical and electronic accessory components (KE...) enable limiting of signal and transmitting of measurement.

Fields of Application

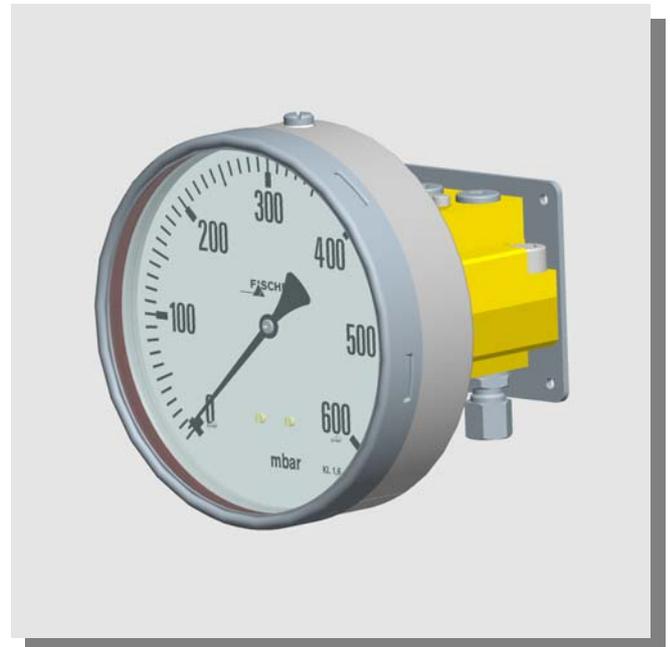
- Water treatment
- Level measurement
- Filter technics
- Flow measurement

Principles of Operation

The DA30 is based on a rugged and uncomplicated diaphragm movement, suitable for pressure and differential pressure measurements.

Operating principle of system is identical for all applications of this type. In a state of equilibrium, forces of springs on both sides of the diaphragm are balanced. The pressure or differential pressure to be measured creates an unbalanced force of springs for the measuring range until a new equilibrium is reached. When subjected to excessive pressure, the diaphragm rests on metal supporting plates. A centre-mounted torque rod transfers motion of the diaphragm system by an eccentric tilted axle through a torsional socket outwards.

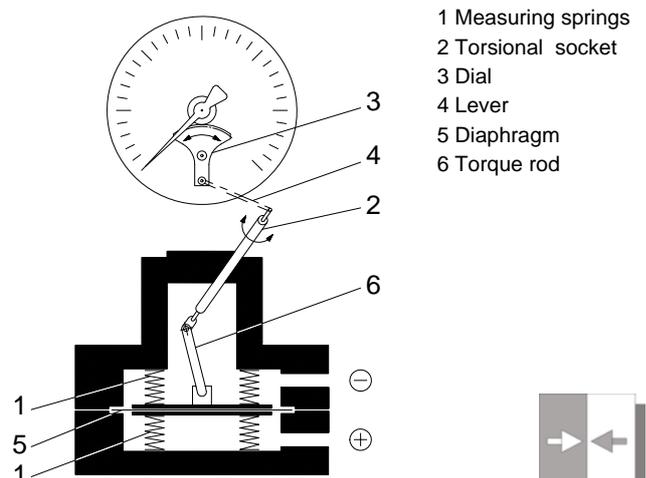
The axle rotation is transmitted to the dial by a lever.



Main Features

- Measuring system in rugged design
- Overpressure proof up to nominal pressure
- Slow-action and magnetic snap-action contacts
- Inductive contacts (NAMUR)
- Azimuth transmitter

Schematic Diagram

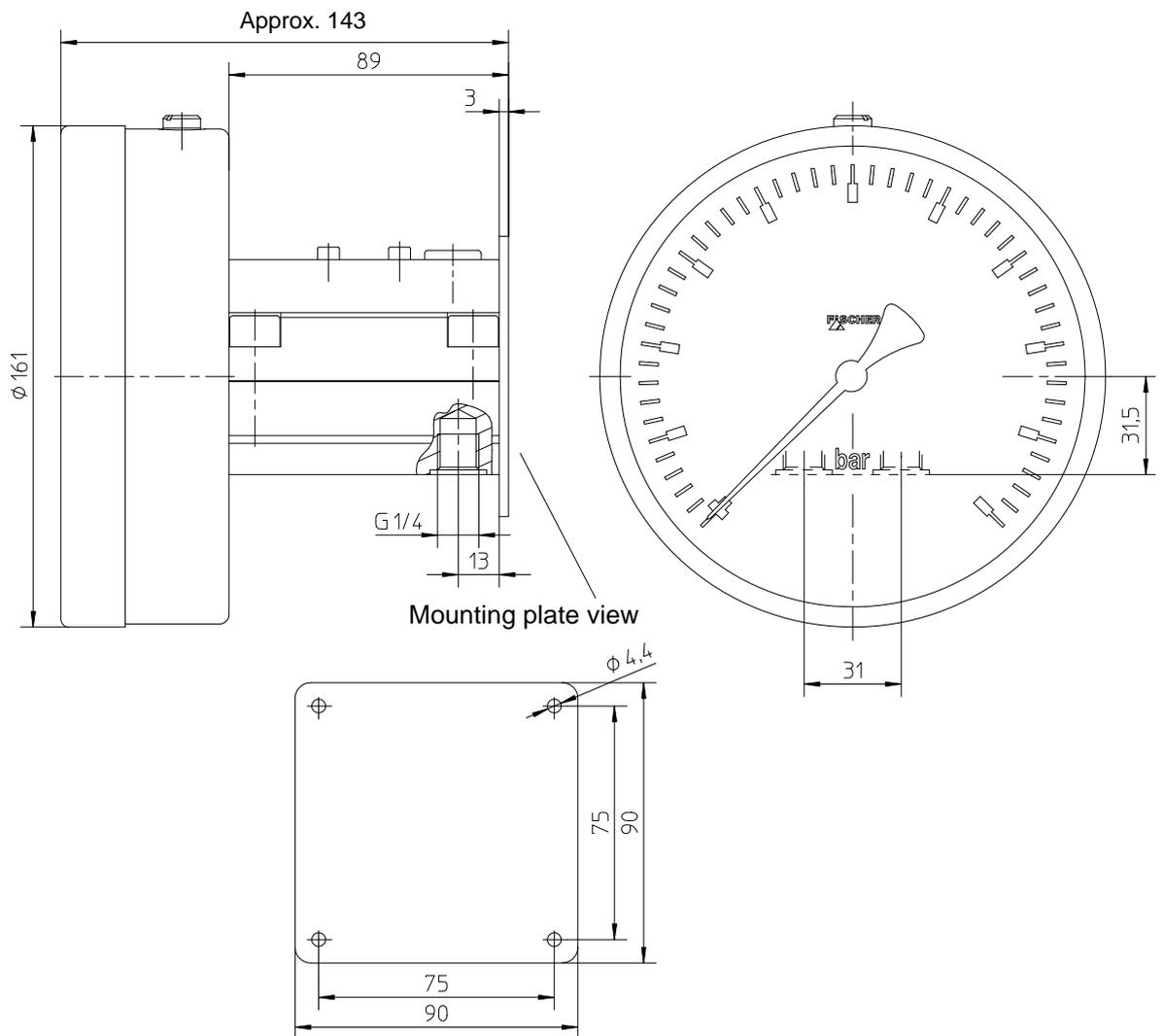


Technische Daten

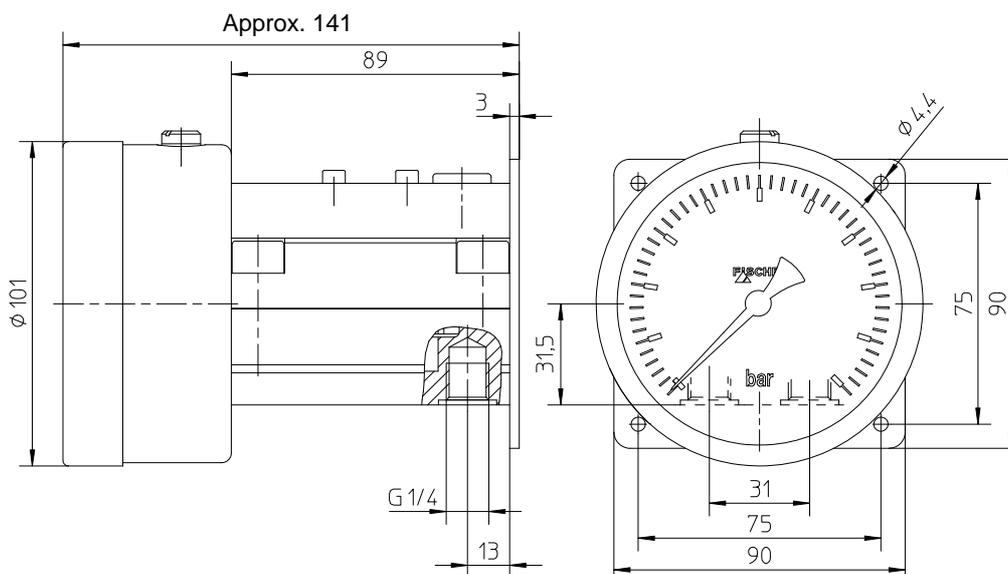
	<p>General</p> <p>Measuring ranges 0...160 mbar to 0...1.6 bar (see Ordering Code)</p> <p>Nominal pressure rating 50 bar (max. static pressure)</p> <p>Accuracy Measuring range 0...100 mbar $\pm 2.5\%$ FS Measuring range 0...160 mbar to 1.6 bar $\pm 1,6\%$ FS</p> <p>Max. differential overpressure One-sided overpressure protected up to nominal pressure, on (+)- and (-)-side of diaphragm, partial vacuum protected</p> <p>Indicator Circular dial type, 100 mm or 160 mm diameter</p> <p>Max. ambient temperature -20°C to $+80^{\circ}\text{C}$</p> <p>Max media temperature $+80^{\circ}\text{C}$</p> <p>Temperature coefficient Approx. 0.3% / 10°C</p> <p>Zero adjustment Screw through hole on top of dial housing. $\pm 25\%$ FS.</p> <p>Protection class IP 65, per DIN EN 60529</p> <p>Pressure connections Female thread G$\frac{1}{4}$, diverse connenction shanks, cutting ring fittings (see Ordering Code)</p>
	<p>Materials</p> <p>Pressure chamber (wetted part) Brass Cu Zn 40</p> <p>Diaphragm (wetted part) EPDM</p> <p>Dial mechanism, gauge housing Chrome nickel steel 1.4301</p> <p>Dial window Laminated safety glass</p> <p>Dial scale and pointer Aluminium</p> <p>Gaskets Viton[®] o-ring</p>
	<p>Options and Accessories</p> <p>Electrical accessories Limit signalling contacts: slow-action / magnetic snap-action / non-contact proximity type limit detector. Pointer rotation transducer: capacitance type, with output signal proportional to the pointer position (uses deeper gauge housing: see Dimensions) For details of electrical accessories, see Data Sheet KE.</p> <p>Liquid filling For operating conditions involving vibration, pressure fluctuations, and/or moisture condensation inside, the gauge can be supplied with glycerine or silicone oil filling. Approx. 141</p> <p>Reference pointer Adjustable pointer for visual marking of limit / reference value. Approx. 143</p> <p>Options (on request) Special dial scales</p> <p>Pressure connections Process pipe connection to be erected by using bite type ferrule connectors or direct fitting of pipe into G$\frac{1}{2}$ F thread. Make sure that the connection is firmly sealed.</p>
	<p>Mounting</p> <p>Wall mounting With mounting plate on back of instrument</p>

Dimensions (all units in mm unless stated otherwise)

DA30 with bayonet ring case \varnothing 160 mm



DA30 with bayonet ring case \varnothing 100 mm



Ordering Code

Differential Pressure Gauge	DA30			A	M				W			0	0
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Measuring Range

0 ... 100 mbar (on request)	>	8	0
0 ... 160 mbar	>	8	1
0 ... 250 mbar	>	8	2
0 ... 400 mbar	>	8	3
0 ... 0.6 bar	>	0	1
0 ... 1 bar	>	0	2
0 ... 1.6 bar	>	0	3

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Measuring Diaphragm / Gaskets

EPDM													
FKM	>				A								

Pressure Chamber

Brass	>					M							
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Pressure Connection

Female thread G $\frac{1}{4}$	>			0	1								
Male connection shank G $\frac{1}{4}$ B of brass	>			0	6								
Male connection shank G $\frac{1}{4}$ B of chrome-nickel-steel	>			1	1								
Cutting ring fitting of 1.4571 for 6 mm tube	>			2	4								
Cutting ring fitting of 1.4571 for 8 mm tube	>			2	5								
Cutting ring fitting of 1.4571 for 10 mm tube	>			2	6								
Cutting ring fitting of 1.4571 for 12 mm tube	>			2	7								
Cutting ring fitting of brass for 6 mm tube	>			2	8								
Cutting ring fitting of brass for 8 mm tube	>			2	9								
Cutting ring fitting of brass for 10 mm tube	>			3	0								

Dial Size

ø 100 mm	>											L	
ø 160 mm	>											M	

Mounting

Wall mounting	>												W
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Dial Liquid Filling

Without liquid filling	>												0
Dial with liquid filling: Glycerine	>												1
Dial with liquid filling: Silikone oil	>												5
Prepared for liquid filling	>												7

Additional Pointer

Without additional pointer	>												0
Adjustable reference pointer	>												1

*) other ranges available on request