

Pressure Transducer LPS

The pressure transducers of the LPS type series are suitable for detection of excess pressure, lowpressure or differential pressure of non-aggressive gasses. These robust versions can be applied in laboratories and under industrial conditions. Important criteria such as long-term stability, linearity and good reproducibility are guaranteed through their sturdy mechanical construction. Temperature drift is minimised through targeted compensation of every sensor. The wear-free inductive measurement system allows for almost maintenance-free operation.

The integrated electronic system provides a pressure-proportional voltage signal of 0 to 10 V in the output (option: current signal 0 (4) to 20 mA). This allows for interference-free transmission of signal even over comparatively large distances. For strongly varying pressures a dampening function is included.



APPLICATIONS

Heating
Ventilation
Air condition
Clean room technology
Finishing pass measurement
Filter monitoring

HIGHLIGHTS

Supply influence < 0.05 %
Up to 80 % relative humidity
Temperature range 10 ... 70 °C
Approx. 0.3 kg of weight

Technical characteristics

Measuring range, relative	0,1/0,2/0,3/0,4/0,5/0,6/1/1,6/2,5/4/5/6/10/16/20/25/50/100/160/200/250/400/500/600/1000 hPa excess pressure, low pressure, differential pressure, other measurement ranges on request
Measuring principle	inductive
Overload capacity	Measurement ranges up to 400 hPa 5-fold; measurement over 400 hPa 2-fold For delta p measurements maximum system pressure 1 bar. Higher overload capacities on request
Medium	Non-aggressive gasses
Max. system pressure	680 hPa
Parts in contact with the medium	Ni, Al, CuBe, PU
Linearity	± 1 % of f.v.
Hysteresis	± 0,1 % max. of f.v.
Output signal	0 to 10 V (load ≥ 2 kOhm) Option: ± 5 V, ± 10 V (load ≥ 2 kOhm) 0 – 20 mA, 4 – 20 mA (load ≤ 500 Ohm) 4 – 20 mA twin-core UB = 12 to 32 V; load (OHM) = UB (V) · 12 / I _{max} (A)
Power consumption	Approx. 10 mA (without load)
Polarity reversal protection	Yes
Supply influence	< 0,05 %



Technical characteristics

Load	19 to 31 VDC Option: 230 VAC, 115 VAC, 24 VAC, ($\pm 10\%$, 50-60 Hz)
Position influence	Dependent from adjusted measurement range, max, 2%
Time constant	T90 approx. 0,02 sec.
Temperature drift	Zero point $\pm 0,3\%$ of f.v./ K from adjusted measurement range Span $\pm 0,3\%$ of f.v./ K from adjusted measurement range
Temperature range	Specified range + 10 °C to + 50 °C
Humidity	Up to 80 % relative humidity
Storage temperature	- 10... + 70 °C
Long-term stability	$\pm 0.5\%$ from adjusted measurement range per year (typical)
Housing	122 x 120 x 105 mm (H x W x D)
Pressure connections	$\varnothing 6,6 \times 10$ mm (for flexible hoses $\varnothing 6$ mm)
Electrical connections	Screw-type terminals, diameter max. 1.5 mm
Screwed connection	M 12 x 1.5
Protection class	II
Protection type	IP54
Standards	EN 50081-1; EN 50081-2; EN 50082-1; EN 50082-2; EN 61010
Weight	Approx. 0.3 kg
Option: LCD	LC-display, 3 1/2-digits

